RESIDENTIAL LAND & HOUSING NEEDS ASSESSMENT

Golden Plains Shire

June 2022

Final

Spatial Economics

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EXECUTIVE SUMMARY

The following report provides a detailed assessment of the historic, current and future residential land supply and housing need across the Golden Plains Shire. This assessment reflects the situation as at December 2021 .

Population Growth

Golden Plain's population growth rate has varied since the turn of the century. Relative to the two adjacent regional cities, and to regional Victoria as a whole, population growth rates in Golden Plains have been consistently high (albeit from a relatively low population base).

From 2016 to 2021, the Shire's population grew on an average annual rate of 2.38%. Within the context of negative population growth across Victoria in 2020/21, the Shire achieved a population growth rate of 2.16%.

Population growth has been disparate within the Shire. As measured from 2016 to 2021, the northern region of the Shire grew on an average annual basis by 1.47%, whilst the southern region grew by 2.63%

From 2016 to 2021, population growth within Golden Plains has been composed of:

- 27% from natural increase (net births and deaths)
- 69% from migration from within Australia; and
- 4% from overseas migration.

The decrease in the growth rates in Australia and Victoria in 2019/20 and 2020/21 can be attributed to Covid. However, regional centres such as Ballarat and Geelong have been more resilient to the impacts of Covid compared to Melbourne (or the average for Victoria which is very heavily influenced by Melbourne). This presumably reflects the attractiveness of regional cities for the population of Australia's capital cities during a period of Covid outbreaks and lockdowns.

The neighbouring municipalities of Ballarat and Geelong have both relatively much larger population bases and recently have been experiencing strong rates of population growth. As at 2021, the resident population for these two municipalities were:

- Ballarat – 113,000; and
- Geelong – 270,000.

The proximity of Ballarat and Geelong to the northern and southern regions of the Golden Plains Shire presents opportunities for Golden Plains to attract/capture a component of the future population growth of these centres. The extent of such 'growth capture' will depend on the land use policy choices made by the Golden Plains Council and community.

Residential Development Activity - Building Approvals

As measured over the last two financial years for which data is available, residential building approval activity across regional Victoria has increased by 51% (from 12, 300 approvals to 18,540). In comparison, approvals in metropolitan Melbourne over the same time period increased by only 3%.

Residential building approval has significantly increased across virtually all regional municipalities. Building approvals in Golden Plains increased by 26%, from 218 approvals in 2019/20 to 274 in 2020/21. This was, however, significantly below the growth experienced in Ballarat (69%) and Geelong (54%).

An examination of ABS data on building approvals at the sub local government area (SA2) level over the last six financial years (ending with the 2021/22 – February - ytd) illustrates that the bulk (76% or 930. approvals) of residential development activity was located in the southern region of the Shire. The residual was located the northern region of the Shire (293 approvals).

Residential Lot Construction

Since 2013, residential lot construction activity has averaged 182 per annum.

Of the lot construction activity measured since 2013:

- 31% was urban (56 lots per annum); and
- 69% was rural residential (126 lots per annum).

Of the urban residential lot construction activity:

- 85%, or 48 lots per annum, was in areas zoned General Residential (GRZ); and
- the residual, or 8 lots per annum, was in areas zoned Township (TZ).

Of the rural residential lot construction activity:

- 85%, or 107 lots per annum, was in areas zoned Low Density Residential (LDRZ); and
- the residual, or 19 lots per annum, was in areas zoned Rural Living (RLZ).

Rural residential lot construction activity was primarily located in the southern region of the Shire, averaging around 107 lots per annum. Rural residential lot construction in the south was predominantly zoned LDRZ.

Creation of Rural Living (RLZ) lots was virtually solely located in the northern region of the Shire.

At a township level residential lot construction activity is primarily located in Bannockburn (87 lots per annum) and Teesdale (31 lots per annum).

Other townships with relatively significant construction activity include:

- Batesford with 16 lots per annum;
- Lethbridge - 12 lots per annum;
- Inverleigh - 10 lots per annum;
- Smythes Creek - 6 lots per annum; and
- Ross Creek - 5 lots per annum.

There was negligible residential subdivision activity within the remaining townships across Golden Plains.

Of the urban lot construction activity since 2013:

- Only 1% were compact (sized less than 300 sqm);
- 8% were typical suburban sized (300 to 500 sqm);
- 75% were large suburban (500 to 1,000 sqm); and
- 16% were low density suburban (over 1,000 sqm).

In 2021 the median sales price (preliminary) of vacant residential lots was significantly lower in Golden Plains than in the two adjacent cities and in regional Victoria as a whole and have increased only relatively moderately over-time:

- $197,500 in Golden Plains.
- $230,000 in Ballarat;
- $315,000 in Geelong; and
- $235,000 across regional Victoria;

Residential development activity has been disparate across the Golden Plains Shire. Nearly 90% of residential lot construction activity was located in the southern region of the Shire (i.e in areas within commuting distance of Geelong).

Based upon Spatial Economics understanding of demand trends in regional Victoria, the imbalance of residential lot construction activity between the northern and southern regions of the Shire is attributed to a lack of diversity in land supply opportunities in the northern region. Given the proximity of the northern region to the City of Ballarat, we would have expected to see a higher volume of residential development activity.

Recent residential lot construction activity within the Shire is dominated by rural residential development. It is expected than this dominance will be reduced in the short to medium term once Precinct Structure Plans are completed for the unzoned urban greenfield lands located in Bannockburn

There has been heightened residential development activity across regional Victoria, including significant growth in activity in Golden Plains. This has been measured in terms of building approvals and residential subdivision activity. This is in the context of a) the Covid pandemic; b) subdued growth across metropolitan Melbourne and c) minimal overseas migration. The key issue is to whether this surge of development activity will be sustained or whether it is a short-term trend.

Residential Land Supply

Broadhectare Urban Land Stocks

As at December 2021, there was a capacity of approximately 1,100 residential lots within zoned urban broadhectare sites across Golden Plains.

All of the undeveloped urban broadhectare land supply stocks are located in the southern region of the Shire. No undeveloped urban broadhectare land supply stocks have been identified within the northern region of the Shire.

In addition, there are approximately 1,450 hectares of land (with an estimated potential yield of 10,100 dwellings) identified, but not yet zoned, for potential future broadhectare residential development. The vast majority of this identified land is located in Bannockburn/Gheringhap[1] and to a lesser degree Lethbridge.

There is no zoned or unzoned urban broadhectare land stocks in the northern region of the Shire.

Spatial Economics believes that the lack of urban land supply stocks within the northern region of Golden Plains is a key factor in the historic and current subdued levels of residential development activity in this part of the Shire. Based on current residential supply opportunities in the northern region, it is likely that this subdued development trend will continue.

[1] Land supply opportunities identified in Gheringhap border the locality of Bannockburn. From a functional perspective, the land supply opportunities are essentially located in Bannockburn.

Rural Residential Land Stocks

As at December 2021, there was a capacity within broadhectare sites zoned rural residential for creation of approximately 1,600 residential lots across Golden Plains. Of this zoned lot potential, 90% (1,471 lots) is zoned Low Density Residential (LDRZ) and the remainder (144 lots) is zoned Rural Living (RLZ).

The majority of zoned rural residential broadhectare land stocks (nearly 1,100 lots) is located in the southern region of Golden Plains . The northern region has a zoned broadhectare rural residential lot potential of nearly 530. All of the Rural Living zoned lot potential is located in the northern region of the Shire.

There are approximately 1,470 hectares of land (with an estimated yield of 2,250 dwellings) identified for potential future broadhectare rural residential development across Golden Plains. The current planning intention is for this land stock to be low density residential development.

This identified future land stock is primarily located in:

- Inverleigh (970 lot potential);
- Teesdale (700 lots);
- Meredith (270 lots); and
- Batesford (154 lots).

There is currently minimal (only 28 potential lots located in Napoleons) unzoned rural residential stocks in the northern region of the Shire.

In summary residential supply opportunities within the northern region of the Shire are largely limited to existing vacant allotments. Compounding this issue, the lack of reticulated waste-water infrastructure (with the exception to Smythesdale) restricts the scope for creating smaller lots.

The northern region is dominated by 'larger' Rural Living (RLZ) zoned lots. Spatial Economics have observed that, across regional Victoria, over the last decade the demand for larger rural residential lots has been diminishing. The market preference is increasingly for 'smaller' rural residential lots. The growing trend, is particularly for smaller serviced (water and waste-water) rural residential allotments within master-planned style estates.

In Spatial Economics opinion the lack of:

a) undeveloped broadhectare sites; and

b) the lack of diverse residential land supply opportunities

has historically resulted in suppression of demand in the northern region of the Shire – and importantly this suppression of demand will continue to occur unless current planning policies in the north of the Shire are changed.

Spatial Economics considers that the southern region currently has ample residential land supply opportunities to cater for medium to longer term demand. The southern region has diverse supply opportunities that are well distributed across the various townships.

Spatial Economics also believes that it is likely that the land identified for future urban broadhectare residential development in Bannockburn will capture a growing share of the regional population growth in the Greater Geelong region market.

Current Projections of Population Growth and Housing Demand

There are currently two published demographic projections for Golden Plains:

1. the Victorian Government's official population projections *'Victoria in Future 2019' (VIF 2019*). This sets out population, household and dwelling growth projections to 2036 for all regions and local government areas in Victoria; and
2. the idForecast demographic forecasts commissioned by the Golden Plains Shire which set out population, household and dwelling growth projections to 2041.

As measured from 2021 to 2036:

- VIF2019 project the average annual percentage change in population at 2.0%, compared to 2.7% from idForecast; and
- VIF2019 project the average annual change in population at 559, compared to 798 from idForecast.

Spatial Economics consider the VIF2019 projections are essentially a (recent) trend-based growth scenario. This trend-based scenario does not consider:

a) the recent and expected continued strong population growth in Geelong and, to a lesser extent, Ballarat;

b) the effect of introduction of permanent settlement boundaries (restricting future urban growth on the Bellarine Peninsula) and the associated shift in future residential development within the City of Greater Geelong to areas immediately adjacent to the boundary of Golden Plains Shire; and

c) the potential for land use policy changes in the northern region of Golden Plains Shire that could result in the provision of more diverse land supply sources – and potentially lead to significantly higher housing demand and population growth

An Alternative (assuming land use policy intervention) Population Growth Projection

As outlined in the body of this report, at this stage there is limited value in seeking to review existing published demographic projections until the full details of the 2021 Population and Housing Census are released later this year.

Instead, Spatial Economics have developed an alternative, higher, population and housing growth scenario based on a realistic assessment of the likely impact on growth of strategic land use policy choices that could be made by the Golden Plains Council and community. These choices are based primarily on increasing the housing choices available in the northern region of the Shire and ensuring a sufficient and diverse land supply in both the north and south to enable Golden Plains to 'capture' a greater share of regional population growth from both the Ballarat and Geelong markets.

Spatial Economics believes that, given these types of policy changes, the current growth forecasts are unduly conservative from both a potential demand and supply perspective.

Over the period from 2021 to 2051 the policy intervention scenario results in:

- a 41% increase in the residential dwelling requirement across the Shire(or an average annual dwelling requirement of nearly 500 compared to 270 under the (extended) VIF 19 forecast;
- a 21% increase in the residential dwelling requirement across the southern region of the Shire or an average annual dwelling requirement of 302 compared to 216 under VIF2019 forecast; and

- a 89% increase in the residential dwelling requirement across the northern region of the Shire or an average annual dwelling requirement of 190 compared to 42 under the (extended) VIF 19 forecast.

Spatial Economics' opinion is that the Golden Plains Council and community face strategic land use policy choices that have the potential to significantly impact the quantum, type and location of future housing development across the Shire.

Golden Plains Shire is in a unique geographic position – positioned between two of Victoria's largest and fastest growing regional cities - Ballarat in the north and Geelong in the south. This unique geographical positioning can allow the Shire to capture a proportion of the growth of these two cities - if additional residential opportunities are provided in suitable forms and locations to complement those available within the two cities. In particular Spatial Economics believes that there is potential for a significant increase in housing demand in the north of the Shire if suitable provision is made for, serviced, low density residential development and potentially also for forms of greenfield urban housing that are differentiated from those likely to be available in Ballarat.

1.0 Introduction

1.1 Context

The following report is a residential land supply and housing demand assessment for the Golden Plains Shire.

The assessment includes:

- the identification of historical and current residential lot construction activity by supply type and location;
- identification of all zoned and unzoned broadhectare residential land supply stocks including estimates of lot yields on a project by project basis;
- estimation of the stock (lots) of rural residential land – including likely dwelling capacities;
- examination of the quantum of future residential demand; and
- presentation of potential future demand scenario based on a direct land use policy intervention, that aims to 'capture' regional population growth.

The following provides a robust and transparent assessment of the supply and demand for residential land across Golden Plains. The assessment will facilitate informed decision making in terms of the existing and future residential land supply requirements and importantly a sound basis to inform the municipal wide Settlement Strategy.

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

2.0 Approach & Scope

The following provides a brief outline of the major methodologies and approach in the assessment of recent residential lot construction, residential land supply stocks, capacity assessment and housing need scenarios.

The methodology that Spatial Economics has employed for this project is based on the simple premise of matching the supply type with demand. This methodology assesses recent construction and future supply using the same criteria with the supply type definitions based on outcomes and on a lot by lot basis rather than administrative boundaries.

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

Future Dwelling Requirements

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

Spatial Economics have modified the VIF2019 Forecasts based on recent and updated population estimates from the Australian Bureau of Statistics and extended the demand scenario to 2051.

In addition, an alternative dwelling demand scenario is presented based on the potential of capturing regional population growth from the neighbouring municipalities of Ballarat and Geelong via strategic land use policy intervention.

Land Supply Type Definitions

1. ***Zoned Broadhectare (urban)*** is defined as greenfield sites (sites that have not been used previously for urban development purposes or previously subdivided for normal/urban density development) and typically located on/or near the urban fringe. This land supply type maybe zoned Township (TZ) and General Residential (GRZ)
2. ***Zoned Broadhectare (rural residential)*** is defined as residential land zoned Rural Living (RLZ) and Low Density Residential (LDRZ) that has multi-lot subdivision potential, it can be both occupied or vacant. In the context of Golden Plains it is assumed:
    a LDRZ Lands – minimum size of ten hectares
    b RLZ lands – minimum size of
        i 10 hectares within areas that have a minimum 2 hectares subdivision size
        ii 50 hectares within areas that have a minimum 8 hectares subdivision size
3. ***UnZoned Broadhectare (rural and urban)*** Sites for future residential development identified within various Council strategy planning documents. Structure planning, and rezoning processes are required before residential development can proceed on such sites. These sites are identified for either future urban or rural residential development purposes.
4. ***Rural Residential*** all land zoned Rural Living (RLZ) and Low Density Residential (LDRZ).
5. ***Vacant Lot*** a land parcel that has no evidence of a habitable dwelling or significant capital intensive use. Vacant lots for this assessment have been identified for lands zoned Township (TZ), Rural Living (RLZ) and Low Density Residential (LDRZ).

Geography

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

Localities/Townships: Locality boundaries are as defined by Local Governments and registered by the Registrar of Geographic Names (GeoNames).There are 31 localities within the Golden Plains Shire that have residential land stocks.

ABS SA2: Statistical Areas Level 2 (SA2s) are medium-sized general purpose areas built up from whole Statistical Areas Level 1 (SA1s). Their purpose is to represent a community that interacts together socially and economically. There are four SA2's within the Golden Plains Shire, these include:

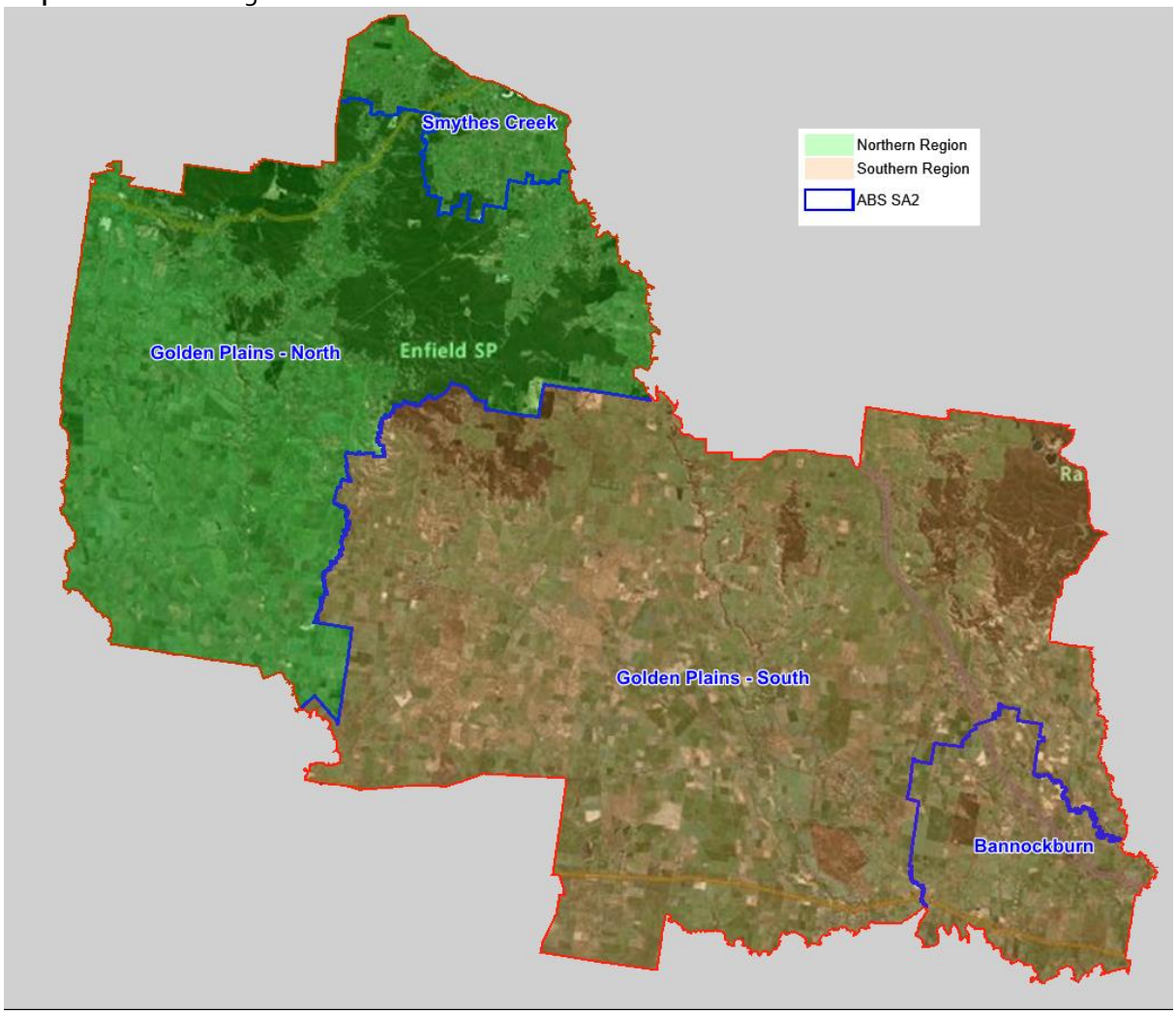
1. Bannockburn;
2. Golden Plains South;
3. Golden Plains North; and
4. Smythes Creek.

Region: Spatial Economics have defined two broad regions within the Golden Plains Shire, namely the southern and northern regions. The regions are composed of ABS SA2 boundaries.

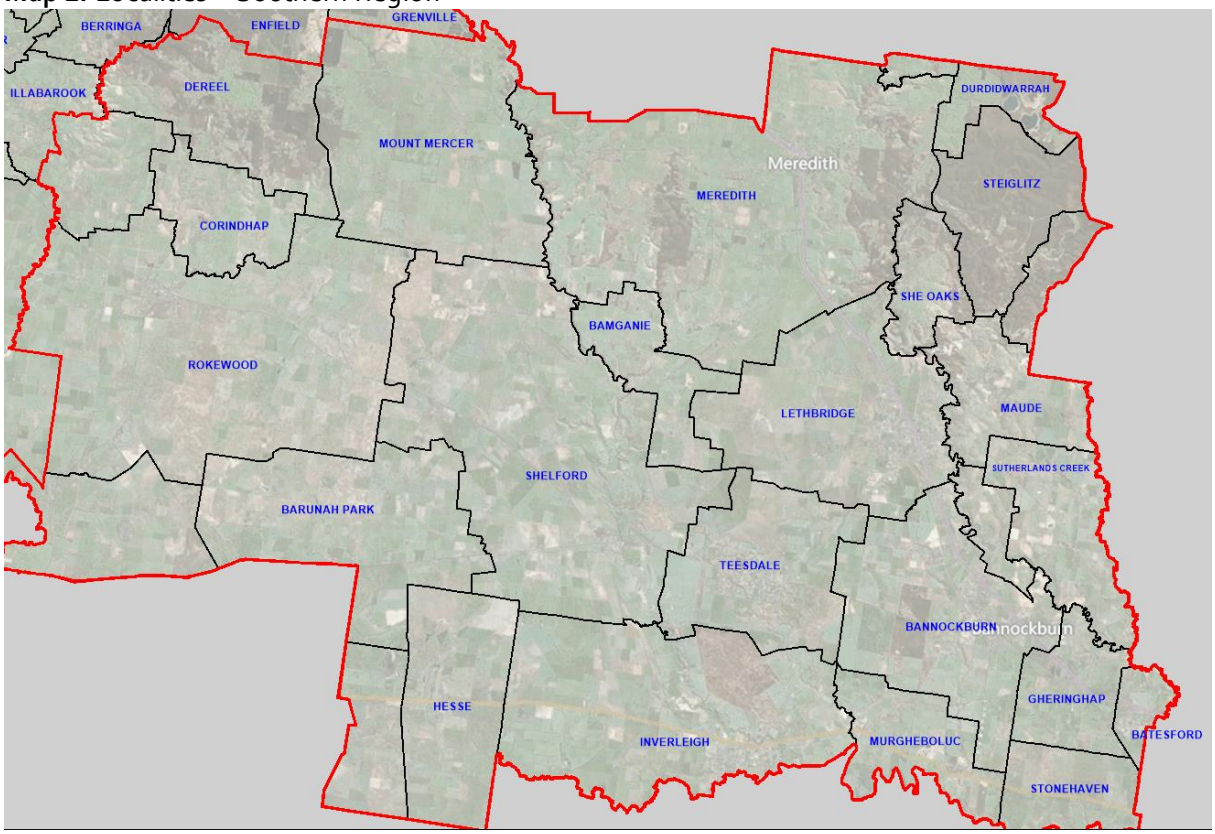
The southern region includes the SA2's of Bannockburn and Golden Plains South. The northern region includes the SA2's of Golden Plains North and Smythes Creek.

The maps below illustrate the location of the localities, ABS SA2's and regions with the Golden Plains Shire.

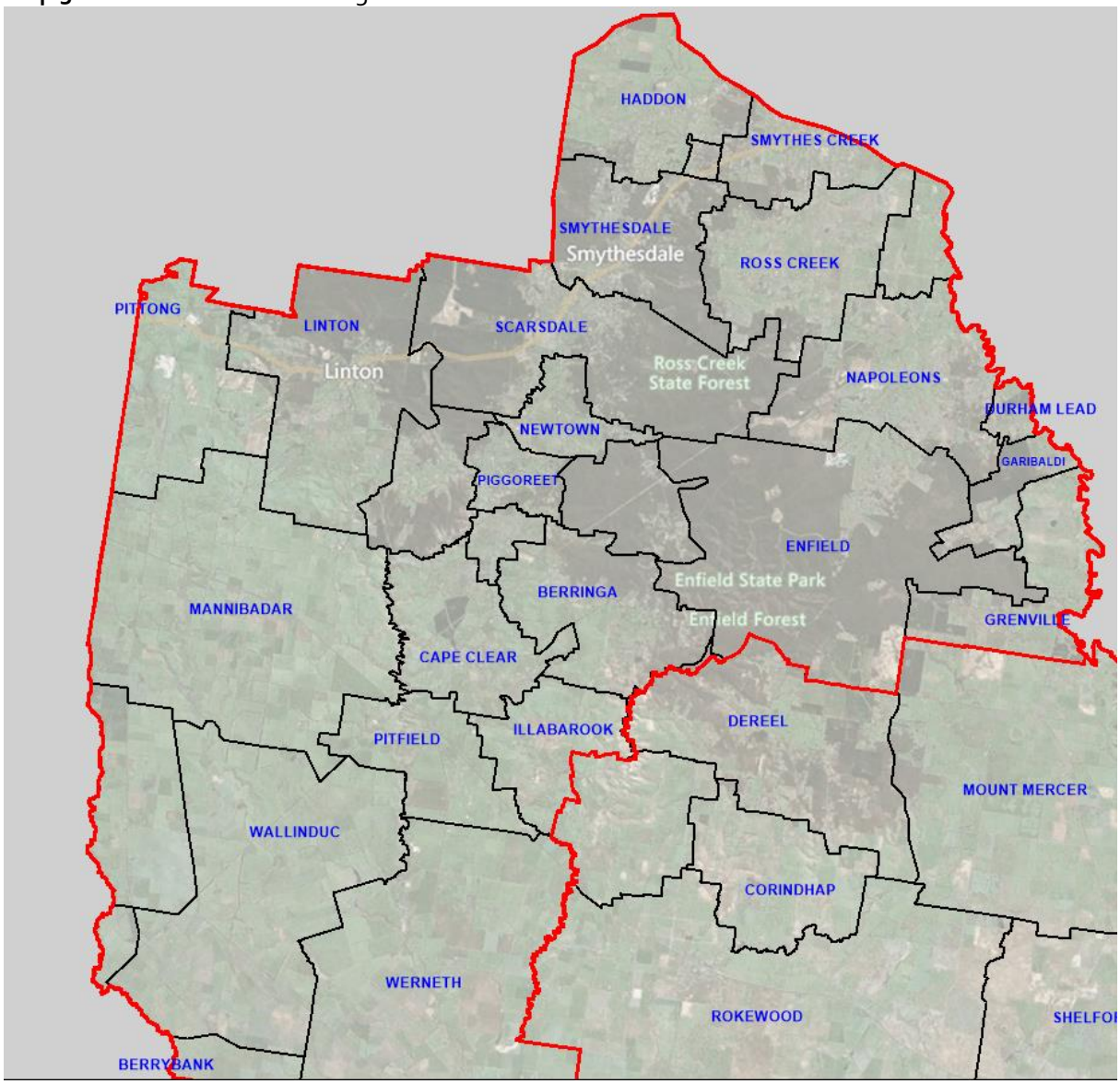
Map 1: SA2's and Regions – Golden Plains Shire



Map 2: Localities – Southern Region



Map 3: Localities – Northern Region



Residential Lot Construction

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

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

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

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

Construction activity has been assessed on an annual financial year basis from July 2013 to December 2021.

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

- Rural Residential (land zoned Low Density Residential - LDRZ and Rural Living – RLZ); and
- Urban (land zoned General Residential – GRZ and Township – TZ).

Dwelling Construction

Lot construction activity is usually a robust indicator of residential dwelling construction activity. However, in certain instances lot construction activity under-estimates the quantum of new dwelling construction activity. Spatial Economics pre-assessment for Golden Plains indicated that this issue was apparent for land zoned Township (TZ) and rural residential (particularly within the northern region of the Shire).

New dwelling construction was identified on a lot by lot basis utilising:

- time series aerial imagery;
- new refuse collection services;
- Council's valuation information; and
- Council's building certification data.

Construction activity has been assessed on an annual financial year basis from July 2013 to December 2021.

Lot Yields

Lot yields on a site basis has been undertaken for:

1. zoned and unzoned broadhectare urban and rural residential supply types; and
2. vacant residential lots (rural residential and lots zoned Township).

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.

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

Within the report, additional methodological approaches/assumptions are presented.

3.0 Overview – Residential Development Activity

Key Findings

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

Golden Plains has also seen significant growth in building approval activity, increasing by 26%, from 218 approvals in 2019/20 to 274 in 2020/21. However, this is significantly below the growth experienced in Ballarat (69%) and Geelong (54%).

Since 2013, residential lot construction activity has averaged 182 per annum. Residential lot creation as measured from 2013 to 2021 was primarily concentrated within the southern region of Golden Plains with this region accounting for 89% of all lot construction activity or 163 lots per annum. Since 2013 there were 20 lots constructed per annum within the northern region of Golden Plains.

Of the total residential lot construction since 2013:

- 31% was urban (averaging 56 lots per annum); and
- 69% was rural residential (averaging 126 lots per annum).

Of the urban residential lot construction activity:

- 85%, or an average of 48 lots per annum, was in areas zoned General Residential (GRZ); and
- the residual, or 8 lots per annum, was in areas zoned Township (TZ).

Of the rural residential lot construction activity:

- 85%, or an average of 107 lots per annum, was in areas zoned Low Density Residential (LDZ); and
- the residual, or 19 lots per annum, was in areas zoned Rural Living (RLZ).

Residential lot construction activity at a township level has been primarily located in Bannockburn (an average of 87 lots per annum) and Teesdale (an average of 31 lots per annum). Other townships with relatively significant construction activity include:

- Batesford with an average of 16 lots per annum;
- Lethbridge – an average of 12 lots per annum;
- Inverleigh – an average of 10 lots per annum;
- Smythes Creek. - an average of 6 lots per annum; and
- Ross Creek - an average of 5 lots per annum.

There was negligible residential subdivision activity within the remaining townships across Golden Plains.

A preliminary estimate of comparative median sales prices of vacant residential lots in 2021 was:

- $197,500 in Golden Plains.
- $230,000 - Ballarat;
- $315,000 in Geelong; and
- $235,000 across regional Victoria.

Sales values for vacant residential lots across Golden Plains have increased only relatively moderately over-time and are currently relatively affordable compared to both regional Victoria as a whole and especially the two adjacent regional cities.

3.1 Residential Building Approval Activity

Building Approval Activity in Context

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

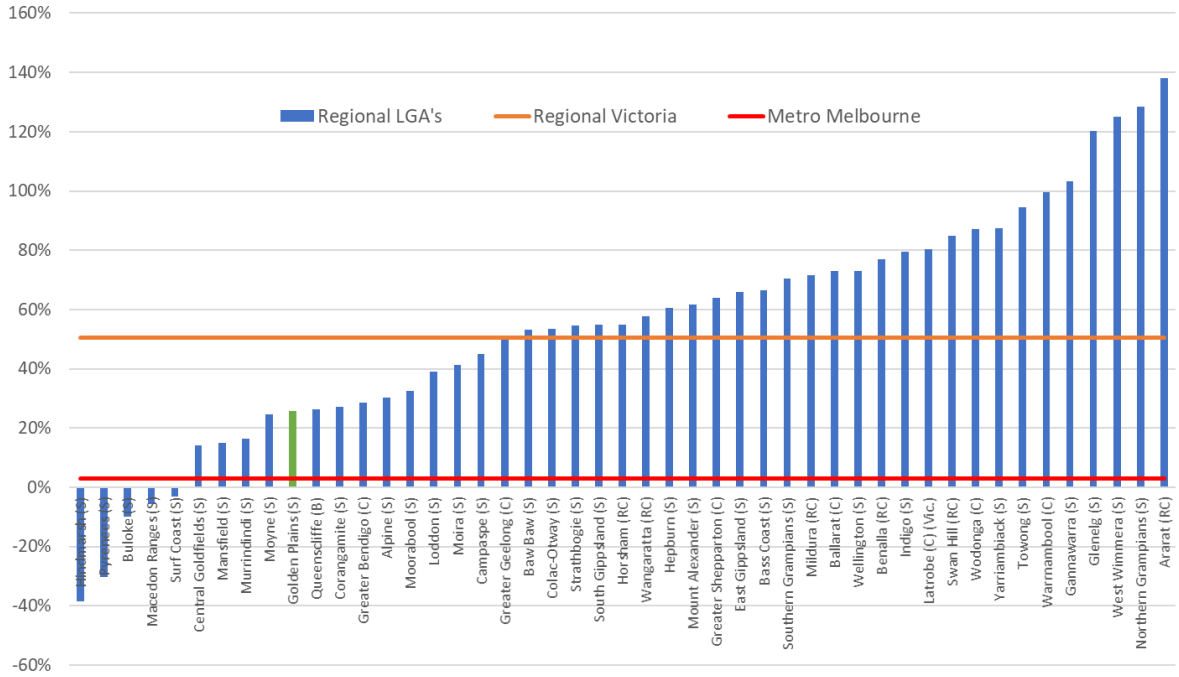
As measured over the two financial years, residential building approval activity has significantly increased across regional Victoria, increasing by 51% (from 12, 300 approvals to 18,540). In comparison, metropolitan Melbourne over the same time period increased by 3%.

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

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

Golden Plains has illustrated significant growth in building approval activity, increasing by 26%, from 218 approvals in 2019/20 to 274 in 2020/21. However, significantly, below the growth experienced in Ballarat (69%) and Geelong (54%).

Graph 1: Percentage Change in Residential Building Approval Activity by Regional Municipal Areas, 2019/20 to 2020/21



Source: Australian Bureau of Statistics

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

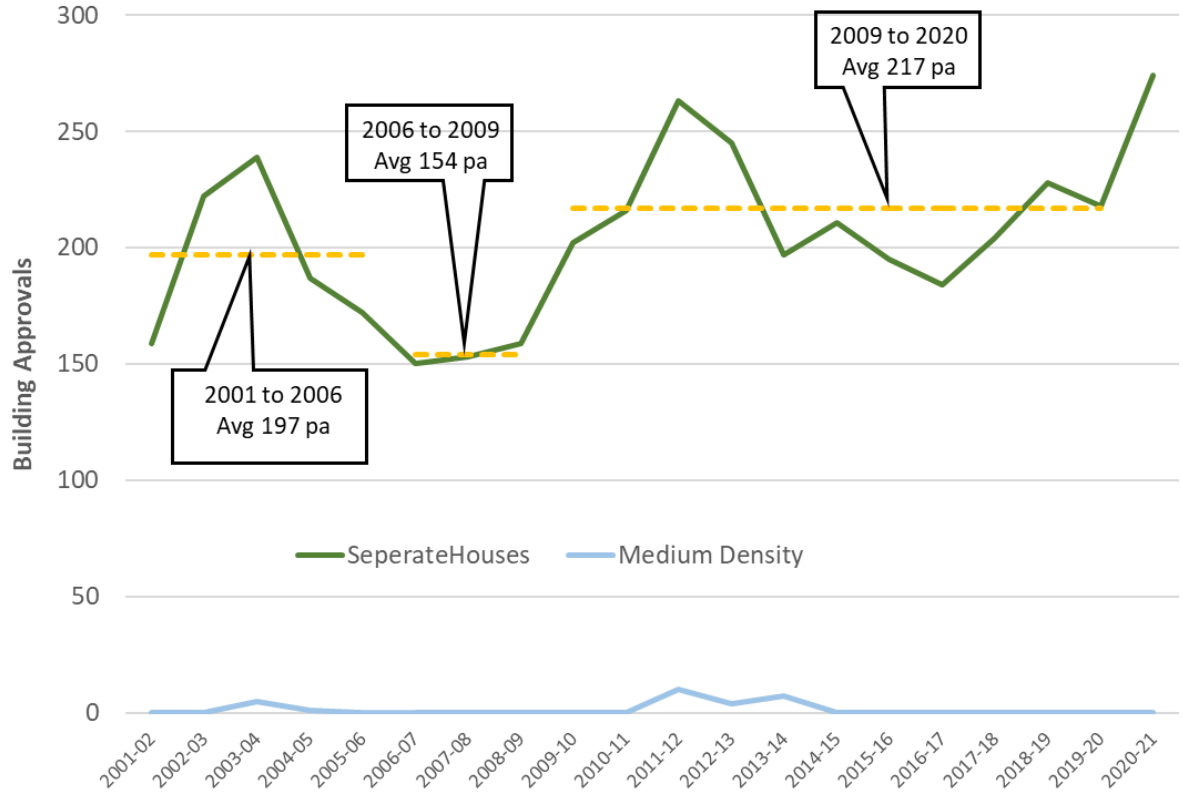
The pandemic and the subsequent work from home phenomenon is having significant impacts on the residential construction industry. With presales in greenfield estates extending out further than ever before, sometimes into multiple years' worth of supply, there will be a backlog of construction requirements.

3.1.1 Residential Building Approvals - Golden Plains

As measured from 2001/02 to 2020/21, residential building approvals within Golden Plains averaged 205 per annum. Of which, 99% were for separate dwellings whilst 1% were for medium density housing.

Between 2001 and 2006, the annual number of residential buildings approvals averaged around 197 per annum. The preceding three years was comparatively subdued, averaging 154 per annum. From 2009 to 2020 approval activity was relatively consistent, averaging around 217 per annum, increasing to 274 in 2021.

Graph 2: Residential Building Approvals by Type – Golden Plains, 2001 to 2021



Source: Australian Bureau of Statistics

An examination of ABS SA2 residential building approvals data over the last six financial years (2021/22 Feb ytd) illustrates the bulk of residential development activity (76%) was located in the southern region of the Shire. The residual was located the northern region of the Shire (293 approvals).

By specific SA2 as measured from July 2016 to February 2022:
Northern Region

- Smythes Creek – 26 per annum
- Golden Plains North – 27 per annum

Southern Region

- Bannockburn – 93 per annum
- Golden Plains South – 74 per annum

3.2 Residential Lot Construction

Analysis has been undertaken to determine, on a lot by lot basis, the location, supply type and quantum of residential lot construction across Golden Plains by financial year from 2013 to December 2021. Lot construction activity has been classified into distinct supply types and/or supply locations. Since 2013, residential lot construction activity has averaged 182 per annum.

Of the lot construction activity measured since 2013:

- 31% was urban (56 lots per annum); and
- 69% was rural residential (126 lots per annum).

Of the urban residential lot construction activity:

- 85%, or 48 lots per annum, was zoned General Residential (GRZ); and
- the residual, or 8 lots per annum, was zoned Township (TZ).

Of the rural residential lot construction activity:

- 85%, or 107 lots per annum, was zoned Low Density Residential (LDZ); and
- the residual, or 19 lots per annum, was zoned Rural Living (RLZ).

Table 1 below summaries the annual average volume of residential lot construction activity from 2013 by zone type and location.

Table 1: Average Annual Residential Lot construction Activity, 2013 to 2021

Sa2/Locality/Region/LGA	GRZ1	TZ	Urban Lots	LDRZ1	RLZ	Rural Residential	Grand Total
BANNOCKBURN SA2	**47.8**		**47.8**	**54.9**		**54.9**	**102.7**
BANNOCKBURN	47.8		**47.8**	38.8		**38.8**	**86.6**
BATESFORD			**0.0**	16.1		**16.1**	**16.1**
GOLDEN PLAINS SOUTH SA2		**8.1**	**8.1**	**50.8**	**0.9**	**51.8**	**59.9**
CORINDHAP		0.1	**0.1**	0.2		**0.2**	**0.4**
DEREEL		0.2	**0.2**	0.5	0.9	**1.4**	**1.6**
INVERLEIGH		1.8	**1.8**	8.5		**8.5**	**10.2**
LETHBRIDGE		3.5	**3.5**	8.5		**8.5**	**12.0**
MEREDITH		0.8	**0.8**	0.8		**0.8**	**1.6**
ROKEWOOD		0.7	**0.7**				**0.7**
SHELFORD			**0.0**	2.1		**2.1**	**2.1**
TEESDALE		0.9	**0.9**	30.2		**30.2**	**31.2**
SOUTHERN REGION	**47.8**	**8.1**	**55.9**	**105.8**	**0.9**	**106.7**	**162.6**
GOLDEN PLAINS NORTH SA2	**0.0**	**0.1**	**0.1**	**0.9**	**4.8**	**5.8**	**5.9**
HAPPY VALLEY					0.2	**0.2**	**0.2**
ILLABAROOK					0.1	**0.1**	**0.1**
LINTON					0.1	**0.1**	**0.1**
NAPOLEONS		0.1	**0.1**		0.6	**0.6**	**0.7**
NEWTOWN				0.1	1.1	**1.2**	**1.2**
SCARSDALE				0.8	2.1	**2.9**	**2.9**
SMYTHESDALE					0.6	**0.6**	**0.6**
SMYTHES CREEK SA2				**0.1**	**13.5**	**13.6**	**13.6**
CAMBRIAN HILL				0.1	1.3	**1.4**	**1.4**
HADDON					1.2	**1.2**	**1.2**
ROSS CREEK					5.1	**5.1**	**5.1**
SMYTHES CREEK					6.0	**6.0**	**6.0**
NORTHERN REGION		**0.1**	**0.1**	**1.1**	**18.4**	**19.4**	**19.5**
GOLDEN PLAINS SHIRE	**47.8**	**8.2**	**56.0**	**106.8**	**19.3**	**126.1**	**182.1**

Source: Spatial Economics

3.2.1 Location of Residential Lot Construction Activity

Residential lot construction activity as measured from 2013 to 2021 at a regional level was primarily concentrated within the southern region of Golden Plains at 89% of all lot construction activity or 163 lots per annum. Within the northern region of Golden plains since 2013 there were 20 lots constructed per annum.

It is highlighted that residential subdivision activity relative to residential building approvals in the northern region, that around 50% of residential building approval activity is located on existing vacant lots (subdivided prior to 2013) and around 50% of building approval activity is located on recently subdivided lots.

Residential lot construction activity at a township level is primarily located in Bannockburn (87 lots per annum) and Teesdale (31 lots per annum).

Other townships with relatively significant construction activity include:

- Batesford with 16 lots per annum;
- Lethbridge - 12 lots per annum;
- Inverleigh - 10 lots per annum;
- Smythes Creek - 6 lots per annum; and
- Ross Creek - 5 lots per annum.

On a township basis, there was negligible residential subdivision activity within the remaining townships across the municipal area of Golden Plains.

3.2.2 Composition of Urban Residential Lot Construction Activity

As noted above, urban residential subdivision activity represented 31% of all residential subdivision activity across Golden Plains from 2013 to 2021 or an average of 56 lots per annum.

The vast majority of urban residential lot construction activity (85%) was zoned General Residential (GRZ), all of which was located in the township of Bannockburn.

There was virtually no urban residential subdivision activity the northern region of the Shire. Urban residential development in the northern region occurred on existing vacant urban allotments, as will be illustrated later.

Of the urban lot construction activity since 2013:

- 1% were compact (sized less than 300 sqm);
- 8% were suburban (sized 300 to 500 sqm);
- 75% were large suburban (500 to 1,000 sqm); and
- 16% were low density suburban (over 1,000 sqm).

Almost exclusively, all urban lots constructed that were sized over 1,000 sqm were zoned Township (TZ).

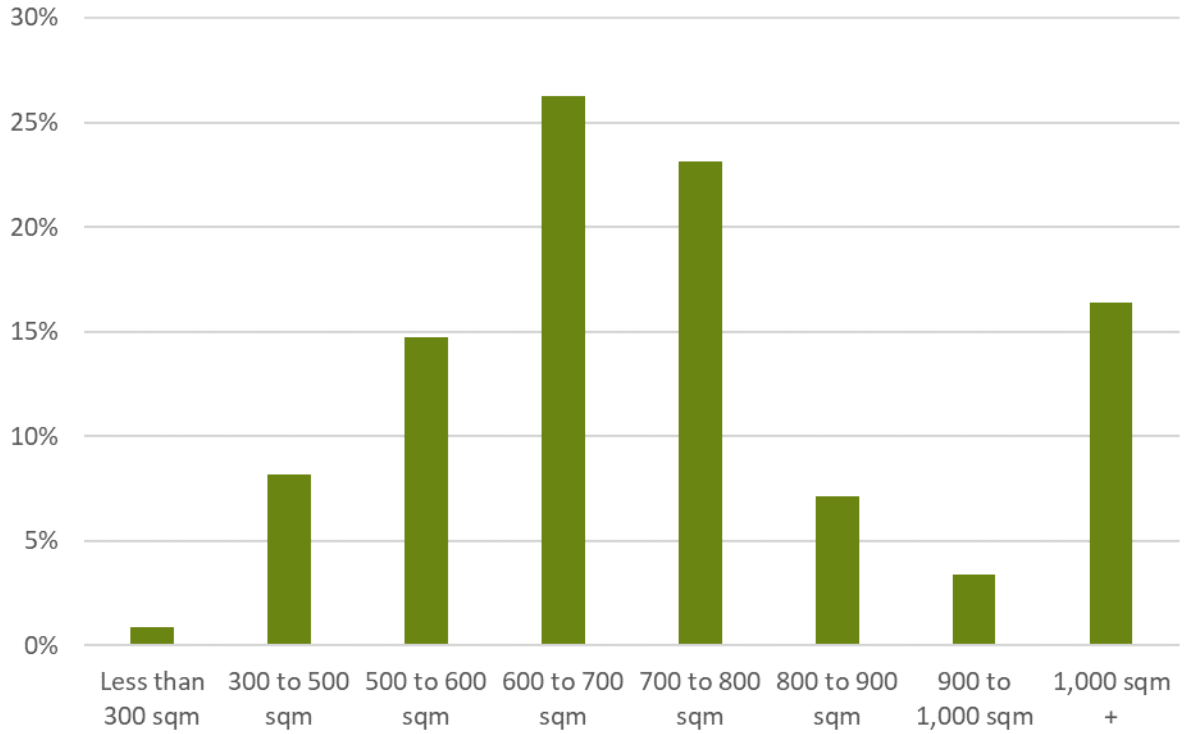
The construction of larger lots has been a response by the development industry to consumer preferences. In consultation with the local land development industry it was constantly stated that there was "*minimal consumer demand for smaller lots sized below 500 sqm*."

Graphs 3 below illustrate the diversity of urban residential lot construction. The median lot size of constructed urban lots has remained relatively consistent over-time, typically being around 700 sqm.

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

Across Golden Plains however urban lot construction has seen developers able to provide consumers with their preferred land product (larger lots), while maintaining relative and absolute levels of broadhectare land affordability.

Graph 3: Urban Residential Lot Construction Size Distribution, 2013 to 2021



Source: Spatial Economics

3.2.3 Rural Residential Lot Construction Activity

As mentioned previously, rural residential lot subdivision has averaged 126 lots per annum since 2013. This represents nearly 70% of the total lot construction activity across the Shire.

Of the rural lot construction activity, the vast majority (85%) was zoned Low Density Residential (LDRZ) at 107 lots per annum, the residual zoned Rural Living (RLZ) at 19 lots per annum.

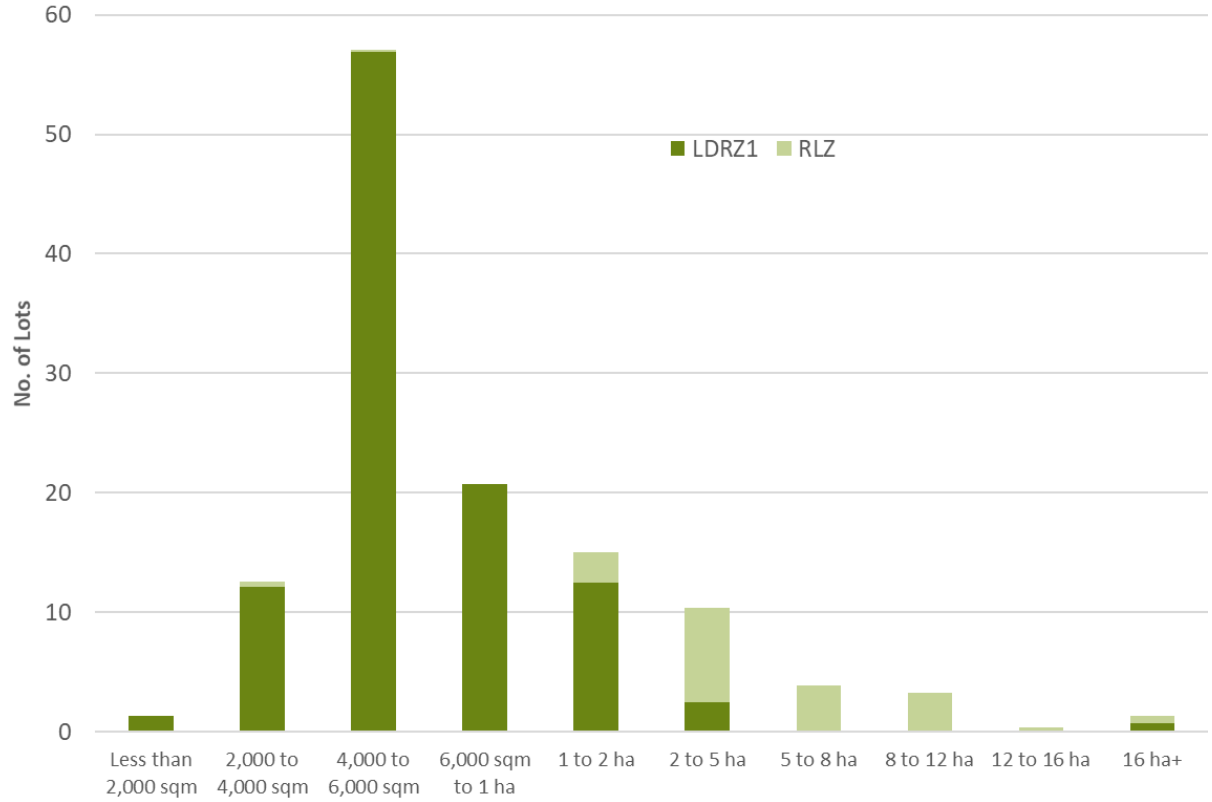
Rural residential lot construction activity was primarily located in the southern region of the Shire, averaging around 107 lots per annum. Predominantly, rural residential lot construction in the southern region of Shire was zoned Low Density Residential (LDRZ).

Rural residential lot construction in the form of land zoned Rural Living (RLZ) was virtually solely located in the northern region of the Shire.

Graph 4 illustrates the size distribution of rural residential lot construction activity.

The median size of a constructed Low Density Residential lot as measured from 2013 to 2021 was 4,800 sqm, compared to 4.2 hectares for lots zoned Rural Living (RLZ).

Graph 4: Average annual rural residential lot construction activity, by zone type and lot size distribution, 2013 to 2021



Source: Spatial Economics

3.3 Residential Dwelling Construction

Spatial Economics have analysed internal Council data to establish on a parcel by parcel basis the location and quantum of new dwelling construction from 2013 to 2021 for select zone types.

Typically, residential subdivision activity is a robust indicator of residential development activity. However if there are residential land shortages an imbalance may result i.e. dwelling construction being greater than subdivision activity.

The assessment specifically examined dwelling construction on land zoned rural residential (LDRZ and RLZ) and Township (TZ).

Rural Residential Lands

Overall, the balance of rural residential lot construction relative to dwelling construction (on rural residential lands) is in balance. On an average annual basis from 2013 to 2021 there was 126 rural residential lots constructed compared to 110 dwellings constructed.

However, there is a slight imbalance when examined by region. Within the northern region of the Shire, there were 19 lots per annum produced compared to 22 dwellings constructed.

Urban Lands – Township Zone

There is a significant imbalance of lot production relative to dwelling construction on lands zoned Township (TZ). On an average annual basis from 2013 to 2021 there was only eight TZ lots constructed compared to 16 dwellings.

Approximately 50% of dwelling construction since 2013 has been on existing vacant allotments.

3.4 Vacant Residential Lot Sales Pricing

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

The Valuer General Victoria sales price data for vacant residential lot sales includes all vacant land sized below 4,000 sqm. Therefore, the median sales value is highly influenced by size distribution of the vacant allotments. The vast majority of vacant residential lot production/sales in both Ballarat and Geelong will be 'urban' in size i.e. below 500 sqm. Whereas, in Golden Plains, there is a high proportion relatively of lots sold/produced that are sized from 500 to 4,000 sqm. This is detailed further in the comparative sales price assessment of vacant residential allotments in Armstrong Creek and Bannockburn.

As measured over the longer term from 2010 to 2021[2] the median sales price of vacant residential lots has increased on an average annual bass by 5% across Golden Plains, compared to 11% respectively in Ballarat and Geelong and 9% across regional Victoria.

Since 2019, the median sales value of vacant residential lands has declined from $240,000 to $197,500 in 2021 across Golden Plains. This significant decline in the median sales value is most likely due to compositional changes in residential sales activity, specifically smaller versus larger lots being sold.

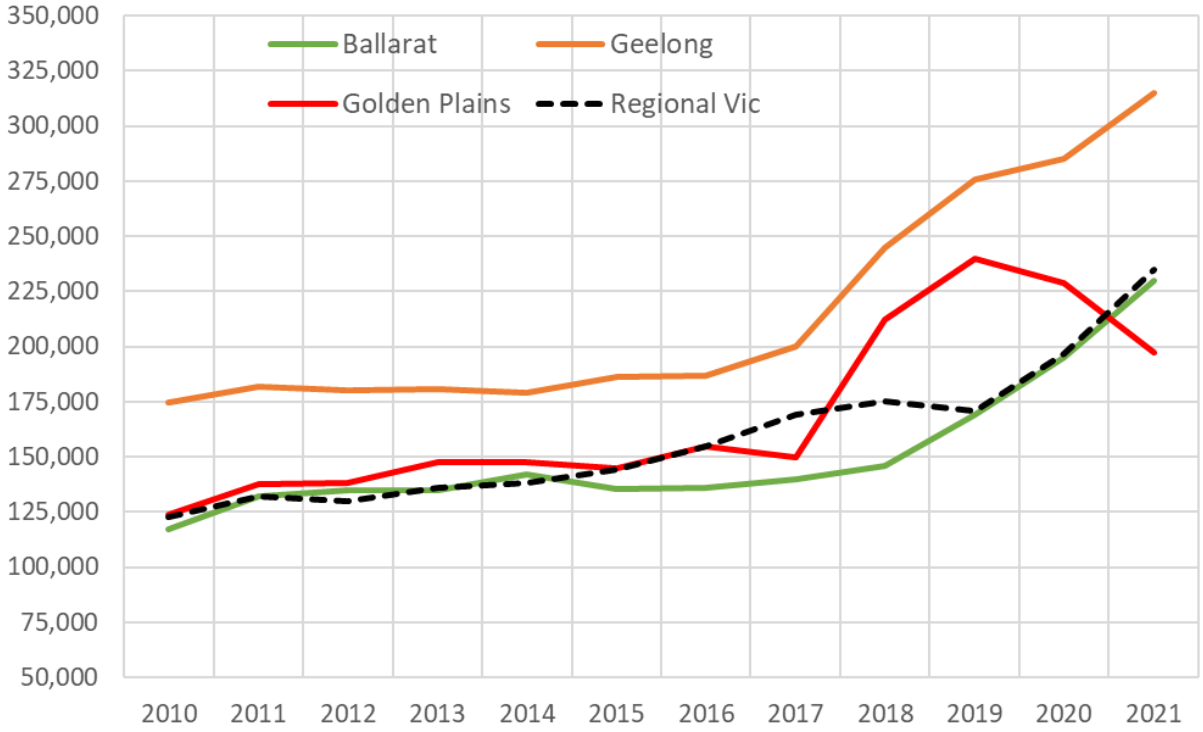
The median sales price (preliminary) of a vacant residential lot in 2021 was:

- $230,000 - Ballarat;
- $315,000 in Geelong;
- $235,000 across regional Victoria; and
- $197,500 in Golden Plains.

Vacant residential land sales values across Golden Plains have increased only relatively moderately over-time. In addition residential sales values are currently relatively affordable to both regional Victoria and especially the neighbouring major regional centres.

[2] 2021 based on preliminary data from the Victorian Valuer Generals Office

Graph 5: Median Sales Values – Vacant residential lots, 2010-2021 – Golden Plains Vs Selected Jurisdictions



Source: Valuer General Victoria
Note: 2021 data is preliminary and will change once final data is released

From 2010 to 2016, the median sales price in Golden Plains closely corelated with that of regional Victoria. From 2018 to 2020, the median sales value significantly increased, peaking at $240,000, compared to $171,000 for regional Victoria.

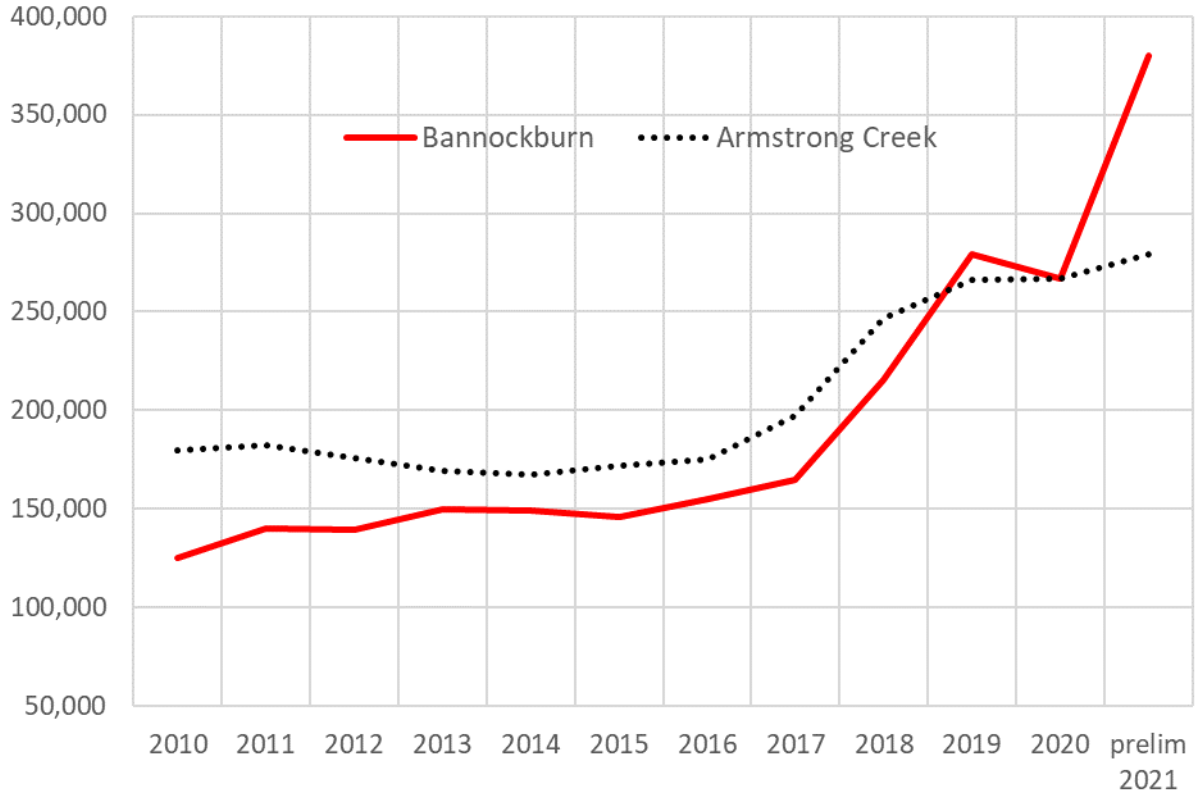
Similarly, the median sales value closely aligned to the prices achieved in the municipal area of Ballarat until 2018, when there was a 46% premium in Golden Plains.

In comparison since 2010 Geelong has constantly achieved a price premium relative to Golden Plains. This price premium ranged from a low of 15% in 2019 to a high of 59% in 2021.

Graph 6 illustrates the median sales value of vacant residential allotments within the localities of Armstrong Creek (City of Greater Geelong) and Bannockburn.

From 2010 to 2018, land sales values in Armstrong Creek consistently achieved price premiums compared to Bannockburn. Price differentials ranged from 44% in 2010 to a low of 12% in 2013. In 2019, the median sales value in Bannockburn surpassed that of Armstrong Creek at $279,000 and reached parity in 2020. Preliminary sales vale data indicates the median value of vacant residential land in Bannockburn is $380,000, compared to $279,000 in Armstrong Creek.

Graph 6: Median Sales Values – Vacant residential lots, 2010-2021 – Bannockburn Vs Selected Armstrong Creek



Source: Valuer General Victoria
Note: 2021 data is preliminary and will change once final data is released

The vast majority of vacant residential lot production/sales in both Ballarat and Geelong will be 'urban' in size i.e. below 500 sqm. Whereas, in Golden Plains, there is a high proportion relatively of lots sold/produced that are sized from 500 to 4,000 sqm. This is detailed further in the comparative sales price assessment of vacant residential allotments in Armstrong Creek and Bannockburn.

As mentioned previously, the composition of land sales in terms of the size distribution will heavily impact the median sales value. The graph above is somewhat misleading.

Spatial Economics have assessed lot production in terms of size distribution from 2019 to 2021 within the localities of Bannockburn and Armstrong Creek. This was correlated with the sales values achieved for vacant land over the same period. The assessment broadly estimated that residential land sales value on a per square meter basis was:

- $441 in Bannockburn; and
- $680 in Armstrong Creek.

This represents a 54% price premium for vacant residential allotments in Armstrong Creek compared to Bannockburn.

Broadly, it would appear there is a trade-off for residential lots. Specifically, similar pricing for a larger allotment in Bannockburn compared to a smaller lot that is closer to higher order urban amenities found in Geelong.

Key Issues

There has been heightened residential development activity (measured in terms of building approvals and residential subdivision activity) across regional Victoria, including significant growth in activity in Golden Plains. This has occurred in the context of:

a) the Covid pandemic and associated lockdowns especially in Melbourne;

b) subdued growth across metropolitan Melbourne; and

c) minimal overseas migration resulting in a sharp fall in population growth both for Australia as a whole and the major metropolitan areas including Melbourne.

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

For strategic planning purposes when faced with this kind of uncertainty it is best to 'lean' on the side of assuming stronger growth overall and in any given market segment. That is to ensure that (within reason) there is scope to meet any unexpected upturn in demand. Secondly, to plan for a diversity of supply types and locations. Planning that locks in controls, based on one set of demand projections, is likely to make it very difficult for the market to adjust supply to cater for unexpected changes in housing demand. The result can be supply shortages leading to unnecessary increases in prices and declining housing affordability.

Results from the 2021 Population and Housing Census are due to be released mid 2022. This will provide some, short-term, insights into growth trends. However this will not lessen the importance pf planning for a range of plausible demand scenarios.

Residential development activity has varied widely across the Golden Plains Shire. Nearly 90% of recent residential lot construction activity has been located in the southern region of the Shire. The imbalance of residential lot creation between the northern and southern region of the Shire is attributed to the lack of a diversity of residential land supply opportunities in the northern region. Given the proximity of the northern region to the City of Ballarat, a significantly higher volume of residential development activity would be expected.

Over recent years residential lot creation has been dominated by rural residential development. It is expected than this dominance will be reduced in the short to medium term once Precinct Structure Plans are completed for the unzoned urban greenfield lands in Bannockburn

4.0 Residential Land Stocks

Section 4.0 of the report details the stock (measured in lot capacity) of broadhectare (urban) residential and rural residential land across Golden Plains Shire as at December 2021.

Key Findings

Urban Land – Undeveloped Broadhectare Sites

As at December 2021, there was a capacity for creation of approximately 1,100 residential lots within zoned urban broadhectare sites across Golden Plains.

All of the undeveloped urban broadhectare land supply stocks are located in the southern region of the Shire. No undeveloped urban broadhectare land supply stocks have been identified within the northern region of the Shire.

Approximately 70% of the zoned broadhectare land stocks (with 780 lot potential) are located within the township boundary of Lethbridge. The remainder (333 lots) is essentially located in Bannockburn.

In addition, as at December 2021, there was approximately 1,450 hectares of broadhectare land (with an estimated potential yield of 10,100 dwellings) identified for potential future residential development across the municipal area. The vast majority of this identified but unzoned land is located in Bannockburn/Gheringhap and to a lesser degree Lethbridge.

Rural Residential Land – Undeveloped Broadhectare Sites

As at December 2021, there was an estimated capacity for creation of approximately 1,600 residential lots within sites zoned for rural residential development across Golden Plains.

Of this zoned lot potential, 90% (1,471 lots) is zoned Low Density Residential (LDRZ) and the remainder (144 lots) is zoned Rural Living (RLZ).

The southern region of Golden Plains has the majority (nearly 1,100 lots) of zoned rural residential broadhectare land stocks. The northern region has a zoned rural residential broadhectare lot potential of nearly 530. All of the zoned supply of potential Rural Living lots is located in the northern region of the Shire

In addition there is approximately 1,470 hectares of additional, but currently unzoned, land (with an estimated yield of 2,250 dwellings) identified, but currently unzoned, for potential future broadhectare rural residential development across the Shire. The current planning intention for this land stock is low density residential development. This identified future land stock is primarily located in:

- Inverleigh (970 lot potential);
- Teesdale (700 lots);
- Meredith (270 lots); and
- Batesford (154 lots).

Rural Residential Land – Lot Stock

Low Density Residential (LDRZ)

As mentioned previously, as at December 2021, the Shire has a total of 4,200 hectares of LDRZ zoned land of which 786 hectares was vacant. This equates to approximately 3,263 low density residential (LDRZ) lots. Of these 2,665 lots are located within the southern region of the Shire, with only 598 lots in the northern region. An estimated 489 lots (363 in the south and 126 in the north) are currently vacant – a 15% lot vacancy rate. This is a relatively low lot vacancy rate when compared to other regional municipalities across Victoria.

Rural Living (RLZ)

As at December 2021, the Shire had a total of nearly 12,000 hectares of RLZ land, of which 4,538 hectares was vacant. This equates to 3,240 rural living (RLZ) lots. Of this potential lot stock an estimated 1,029 are vacant – a 32% lot vacancy rate. This is a relatively high lot vacancy rate when compared to other regional municipalities across Victoria.

RLZ lot stock is primarily located within the northern region of the Shire with 2,950 lots (91%), compared to 290 lots (9%) in the southern region.

4.1 Stock of Broadhectare Land (Urban)

Urban broadhectare land is defined as land zoned General Residential (GRZ), Township (TZ) or land identified for future residential urban development but is currently not zoned for this intention. All land parcels are sized 5,000 sqm or above.

As at December 2021, there was a residential lot capacity within zoned broadhectare sites of approximately 1,100 across Golden Plains. Of this zoned lot potential, 70% (779 lots) is zoned Township (TZ) and the remainder zoned General Residential (GRZ) – 333 lots.

All of the undeveloped urban broadhectare land supply stocks are located in the southern region of the Shire. No undeveloped urban broadhectare land supply stocks are identified within the northern region of the Shire.

Approximately 70% of the zoned broadhectare land stocks are located within the urban centre (township boundary) of Lethbridge, with 780 lot potential. Whilst essentially the remainder (333 lots) is located in Bannockburn.

There is minimal undeveloped urban broadhectare land supply stocks in the remaining townships within the southern region of the Shire.

Maps 4 to 6 illustrates the location/distribution of undeveloped residential broadhectare land stocks across selected urban centres (zoned and unzoned).

Table 2 identifies the lot yield of zoned and unzoned urban broadhectare land stocks by township.

Table 2: Estimated Broadhectare Lot Capacity, 2021

	Zoned				
SA2/Locality/LGA	**GRZ1**	**TZ**	**Zoned Total**	**Potential Residential (unzoned)**	**Total**
BANNOCKBURN	333		**333**	8,885	**9,218**
GHERINGHAP				878	**878**
Bannockburn	**333**		**333**	**9,763**	**10,096**
CORINDHAP		6	**6**		**6**
DEREEL		2	**2**		**2**
LETHBRIDGE		750	**750**	356	**1,106**
MEREDITH		15	**15**		**15**
ROKEWOOD		2	**2**		**2**
SHELFORD		4	**4**		**4**
Golden Plains - South		**779**	**779**	**356**	**1,135**
Golden Plains LGA	**333**	**779**	**1,112**	**10,119**	**11,231**

Source: Spatial Economics Pty Ltd

Note: The yield estimate for zoned Township land in Lethbridge assumes the provision of reticulated waste-water infrastructure

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

There are approximately 1,450 hectares of land (with an estimated yield of 10,100 dwellings) identified for potential future broadhectare residential development across the municipal area. This future identified land is located in:

- Bannockburn (9,800 lots); and
- Lethbridge (360 lots).

4.2 Stock of Broadhectare Land (Rural Residential)

Rural residential broadhectare land is defined as land zoned Low Density Residential (LDRZ), Rural Living (RLZ) or land identified for future rural residential development but currently not zoned for this purpose. Zoned rural residential broadhectare land is also defined by the lot size required before we consider that the landholding has realistic potential for subdivision. Specifically:

- LDRZ - lots above five hectares (either occupied or vacant); and
- RLZ (either occupied or vacant)
    - areas with a subdivision schedule for a minimum size of 8 hectares – 50 hectares
    - areas with a subdivision schedule for a minimum size of 2 hectares – 10 hectares.

As at December 2021, there was a residential lot capacity within zoned rural residential broadhectare sites of approximately 1,600 across Golden Plains. Of this zoned lot potential, 90% (1,471 lots) is zoned Low Density Residential (LDRZ) and the remainder zoned Rural Living (RLZ) – 144 lots.

The southern region of Golden Plains is the location of the majority of zoned rural residential broadhectare land stocks with nearly 1,100 lots. The northern region has a zoned rural residential broadhectare lot potential of nearly 530. All of the Rural Living zoned lot potential is located in the northern region of the Shire.

The zoned lot potential is spread across numerous localities across the Shire. However, there are particular greater levels of stock in:

- Teesdale - 332 lot potential;
- Inverleigh – 267 lots; and
- Dereel – 222 lots. -

Maps 4 to 36 illustrates the location/distribution of undeveloped rural residential broadhectare land stocks across selected localities (zoned and unzoned).

Table 3 identifies the lot yield of zoned and unzoned rural residential broadhectare land stocks by urban township.

Table 3: Estimated Rural Residential Broadhectare Lot Capacity, 2021

Sa2/Locality/Region/LGA	LDRZ	RLZ	Zoned Total	Potential Residential - LDRZ (unzoned)	Total
BANNOCKBURN	40		**40**		**40**
BATESFORD	95		**95**	154	**249**
BANNOCKBURN SA2	**135**		**135**	**154**	**289**
CORINDHAP	24		**24**		**24**
DEREEL	222		**222**		**222**
INVERLEIGH	267		**267**	970	**1237**
LETHBRIDGE	106		**106**	62	**168**
MEREDITH				270	**270**
ROKEWOOD				24	**24**
SHELFORD				40	**40**
TEESDALE	332		**332**	700	**1032**
GOLDEN PLAINS SOUTH SA2	**953**		**953**	**2066**	**3019**
SOUTHERN REGION	**1087**		**1087**	**2220**	**3307**
ENFIELD	41		**41**		**41**
LINTON	67		**67**		**67**
NAPOLEONS				28	**28**
NEWTOWN	10		**10**		**10**
SCARSDALE	79		**79**		**79**
SMYTHESDALE	140	27	**167**		**167**
GOLDEN PLAINS NORTH SA2	**337**	**27**	**364**	**28**	**392**
CAMBRIAN HILL	47	12	**59**		**59**
HADDON		62	**62**		**62**
SMYTHES CREEK		43	**43**		**43**
SMYTHES CREEK SA2	**47**	**117**	**164**		**164**
NORTHERN REGION	**384**	**144**	**528**	**28**	**556**
GOLDEN PLAINS SHIRE	**1471**	**144**	**1615**	**2248**	**3863**

Source: Spatial Economics Pty Ltd

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

There are approximately 1,470 hectares of land (with an estimated yield of 2,250 dwellings) identified for potential future broadhectare rural residential development across the municipal area. The current intention of this land stock is for low density residential development.

This identified future land stock is primarily located in:

- Inverleigh (970 lot potential);
- Teesdale (700 lots);
- Meredith (270 lots); and
- Batesford (154 lots).

There is minimal (28 potential lots located in Napoleons) unzoned rural residential stocks in the northern region of the Shire.

4.3 Vacant Urban Lots

A source of residential land supply across Golden Plains is existing vacant allotments zoned Township (TZ). As a residential supply source it is comparatively minor, contributing around 16 dwellings per annum since 2013 .

An assessment has been undertaken to establish the vacant lot stock across the municipality as at December 2021 on a lot by lot basis for zoned land The definition of a vacant lot is an allotment where there is no evidence of a habitable dwelling or commercial enterprise. The information was sourced from both aerial imagery interrogation and the rates/valuation database from the Shire of Golden Plains.

The identification of vacant TZ allotments sized does not provide an estimated dwelling yield. Rather it simply identifies the quantum of vacant allotment by lot size and location.

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

- a 3,000sqm allotment within a township zone (un-sewered) would result no additional dwelling;
- a 4,000sqm allotment within a township zone (un-sewered) would result one additional dwelling; and
- a 3,000sqm allotment within a township zone (sewered) could result in one to five dwellings.

Later in this report, an assessment of the likely dwelling yield from vacant and occupied Township zoned land stocks is presented.

Graph 7 below summarises the quantum and size distribution of lots zoned Township across the Shire by region.

In total there are 525 vacant TZ lots distributed across the Shire. The majority (76% or 354 lots) re located within the northern region, the residual (171 lots) in the southern region.

Vacant TZ lots in the northern region are primarily located in:

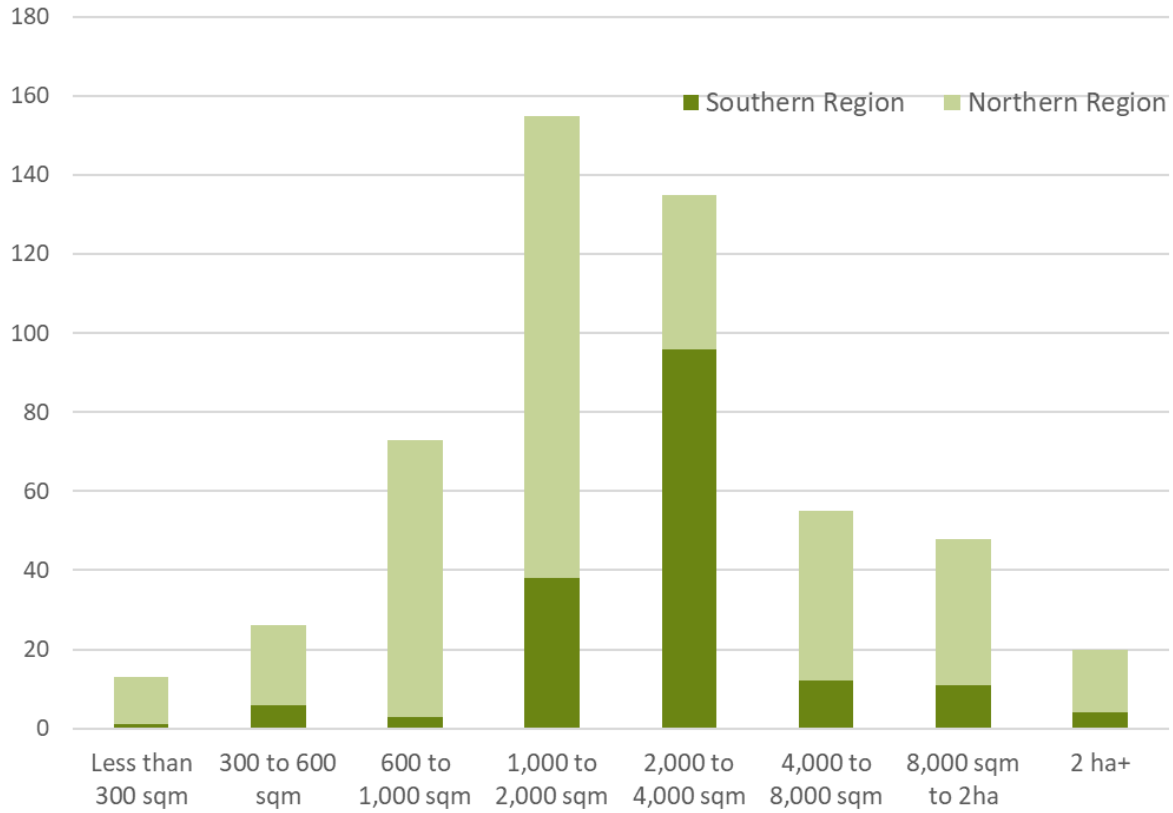
- Smythesdale – 126 lots;
- Linton – 91 lots; and
- Berringa.

Vacant TZ lots are relatively evenly spread across the townships in the southern region.

Over 77% of the Vacant TZ lots are sized below 4,000 sqm. This poses issues in terms of this land being a source for housing construction without access to reticulated waste water infrastructure. It is estimated that approximately 190 lots sized below 4,000 sqm has access reticulated waste water infrastructure.

There are 123 lots sized greater than 4,000 sqm across the Shire, equating to a total area of nearly 184 hectares. Of this lot stock, approximately 10 hectares have access to reticulated waste water infrastructure.

Graph 7: Stock of Vacant Lots - Township (TZ), 2021



Source: Spatial Economics Pty Ltd

4.4 Rural Residential Lot Stocks

The stock of both occupied and vacant rural residential allotments have been determined on a lot by lot basis as at December 2021 (based on the availability of small area aerial imagery and Council rates and rubbish collection data). Occupied is defined as having evidence of a 'habitable' dwelling, commercial use, or other significant capital-intensive land use. Vacant is defined as having no evidence of a significant capital-intensive use.

Across Golden Plains there was a total stock of 6,500 rural residential allotments. Of this stock, 1,520 lots (23%) were vacant. The lot vacancy rate of rural residential lots as a supply type in Golden Plains is comparable to other regional municipalities in Victoria.

Rural residential lot stock is widely distributed across the Shire. At a regional level, there are nearly 3,000 rural residential allotments in the southern region and 3,550 in the northern region. Of the localities that have relatively higher levels of stock in the municipality include:

- Bannockburn – 863 lots;
- Teesdale – 785 lots;
- Scarsdale – 536 lots; and
- Smythesdale – 488 lots.

Table 4 summarises the stock of rural residential lot stock by zone type, location and status.

There is approximately 16,164 hectares of rural residential land across the municipality. Of this lot stock, 4,200 hectares is zoned Low Density Residential (LDRZ), the remaining 11,962 hectares is zoned Rural Living (RLZ).

Of the 4,200 hectares of Low Density Residential (LDRZ) land 786 hectares are vacant. Of the 11,962 hectares Rural Living (RLZ) land 4,538 hectares are vacant

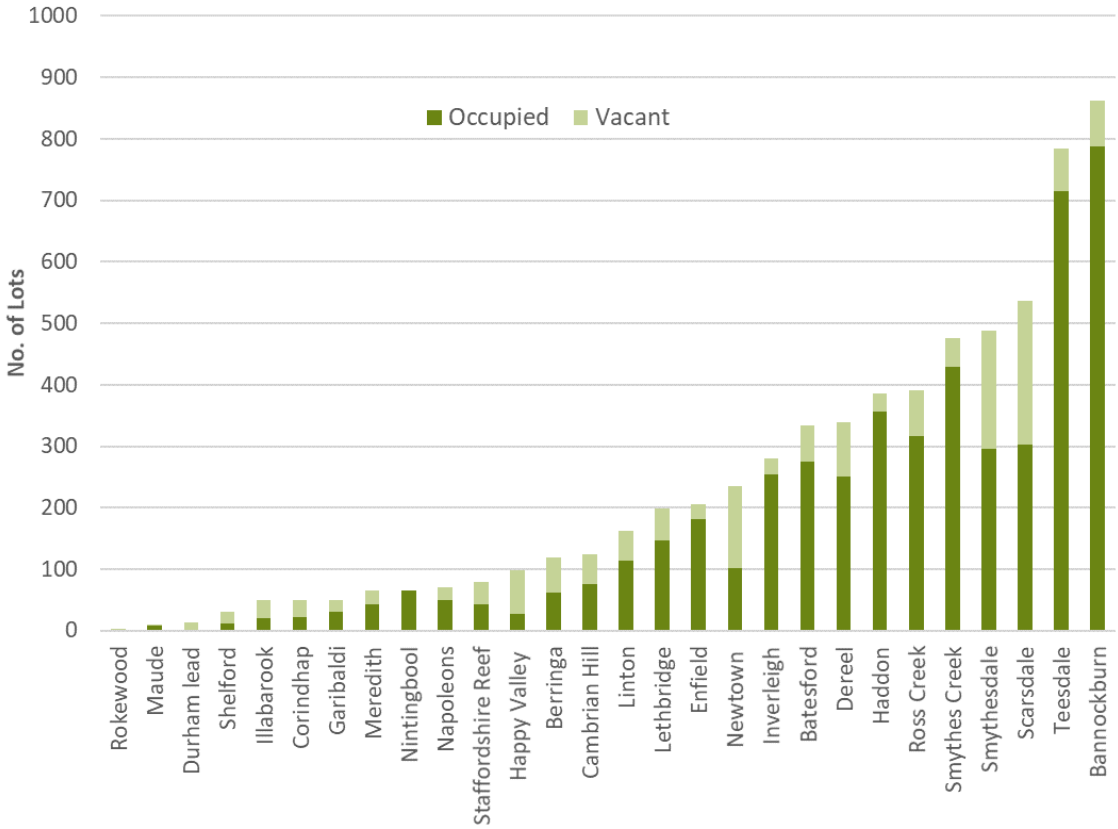
Table 4: Rural Residential Lot Stock by Status, 2021

Locality/SA2/Region/LGA	LDRZ1 Occupied	LDRZ1 Vacant	LDRZ1 Total	RLZ Occupied	RLZ Vacant	RLZ Total	Total
BANNOCKBURN	787	76	**863**				**863**
BATESFORD	275	58	**333**				**333**
BANNOCKBURN SA2	**1,062**	**134**	**1,196**				**1,196**
CORINDHAP	22	28	**50**				**50**
DEREEL	38	11	**49**	212	78	**290**	**339**
INVERLEIGH	255	25	**280**				**280**
LETHBRIDGE	146	52	**198**				**198**
MAUDE	8	1	**9**				**9**
MEREDITH	43	22	**65**				**65**
ROKEWOOD	1	2	**3**				**3**
SHELFORD	12	18	**30**				**30**
TEESDALE	715	70	**785**				**785**
GOLDEN PLAINS SOUTH SA2	**1,240**	**229**	**1,469**	**212**	**78**	**290**	**1,759**
SOUTHERN REGION	**2,302**	**363**	**2,665**	**212**	**78**	**290**	**2,955**
BERRINGA				62	57	**119**	**119**
DURHAM LEAD				2	11	**13**	**13**
ENFIELD	181	24	**205**				**205**
GARIBALDI				30	20	**50**	**50**
HAPPY VALLEY				27	71	**98**	**98**
ILLABAROOK				21	28	**49**	**49**
LINTON	50	7	**57**	64	41	**105**	**162**
NAPOLEONS				50	20	**70**	**70**
NEWTOWN	44	16	**60**	58	117	**175**	**235**
SCARSDALE	164	55	**219**	139	178	**317**	**536**
SMYTHESDALE	1		**1**	294	193	**487**	**488**
STAFFORDSHIRE REEF				42	38	**80**	**80**
GOLDEN PLAINS NORTH SA2	**440**	**102**	**542**	**789**	**774**	**1,563**	**2,105**
CAMBRIAN HILL	32	24	**56**	43	26	**69**	**125**
HADDON				356	30	**386**	**386**
NINTINGBOOL				66		**66**	**66**
ROSS CREEK				316	75	**391**	**391**
SMYTHES CREEK				429	46	**475**	**475**
SMYTHES CREEK SA2	**32**	**24**	**56**	**1,210**	**177**	**1,387**	**1,443**
NORTHERN REGION	**472**	**126**	**598**	**1,999**	**951**	**2,950**	**3,548**
GOLDEN PLAINS SHIRE	**2,774**	**489**	**3,263**	**2,211**	**1,029**	**3,240**	**6,503**

Source: Spatial Economics Pty Ltd

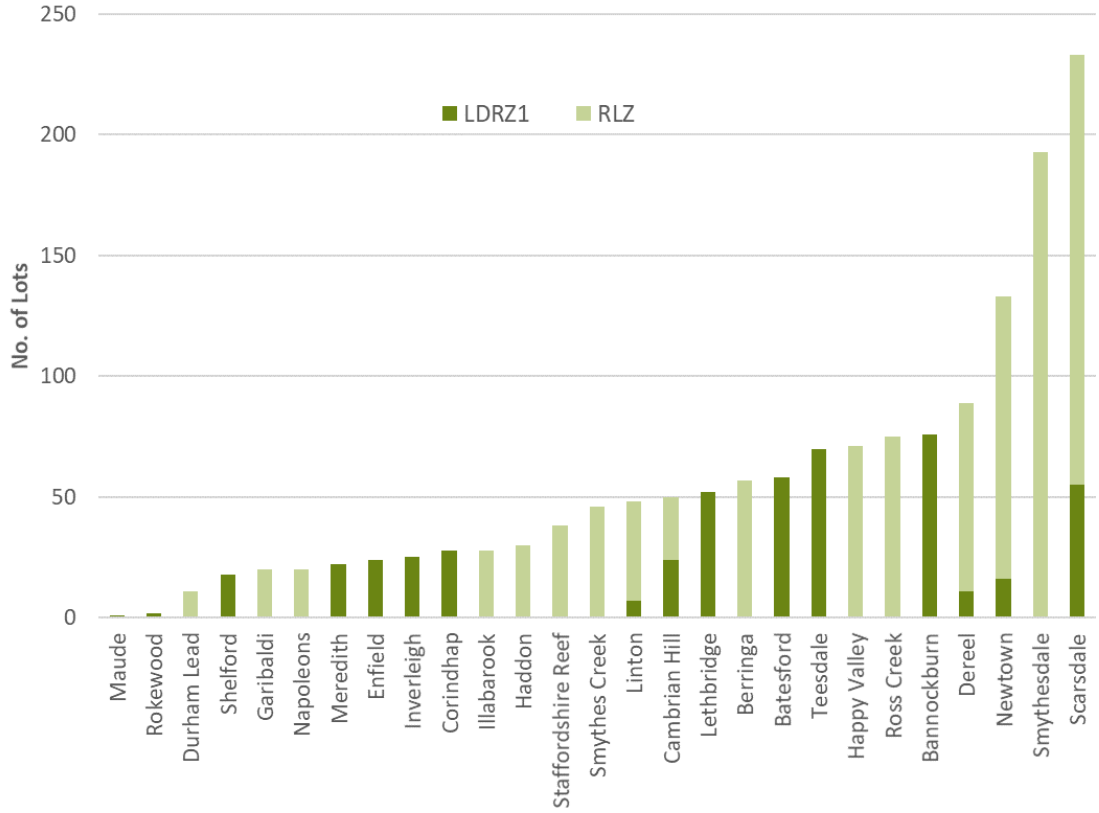
Graphs 8 to 11 summarise various characteristics of the rural residential land stocks across Golden Plains, by zone type, size, location and status.

Graph 8: Stock of Rural Residential Allotments, 2021



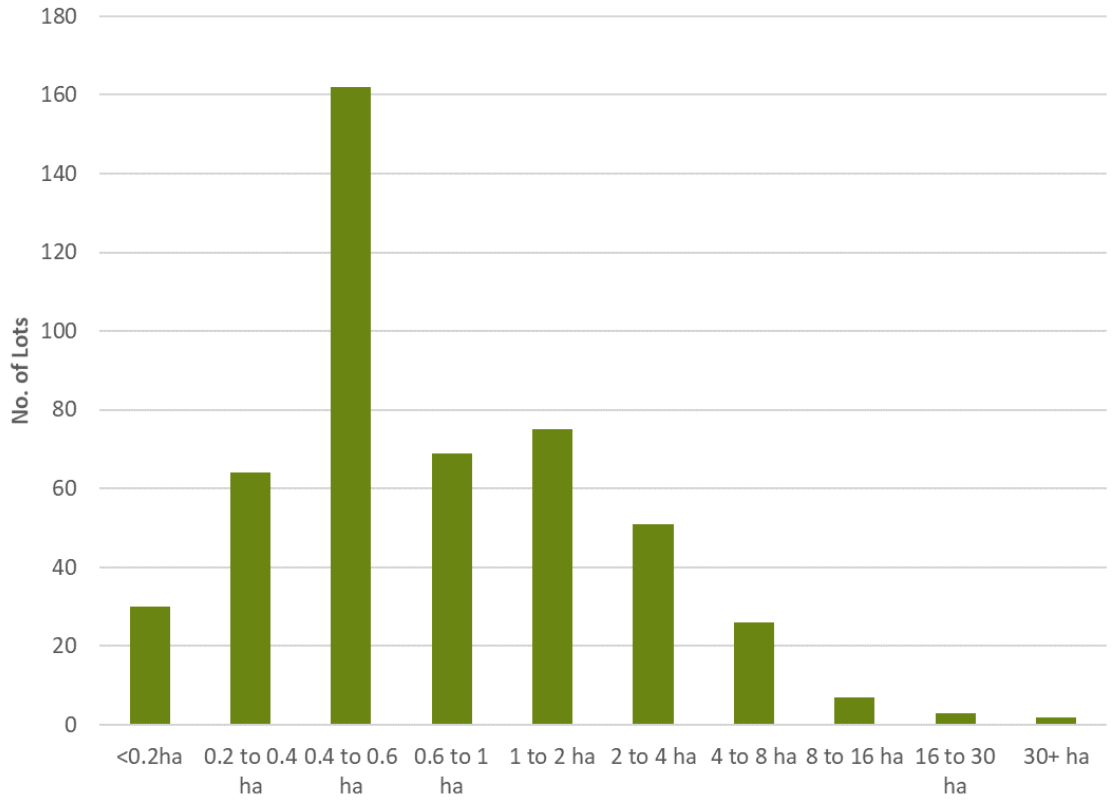
Source: Spatial Economics Pty Ltd

Graph 9: Stock of Vacant Rural Residential Allotments, 2021



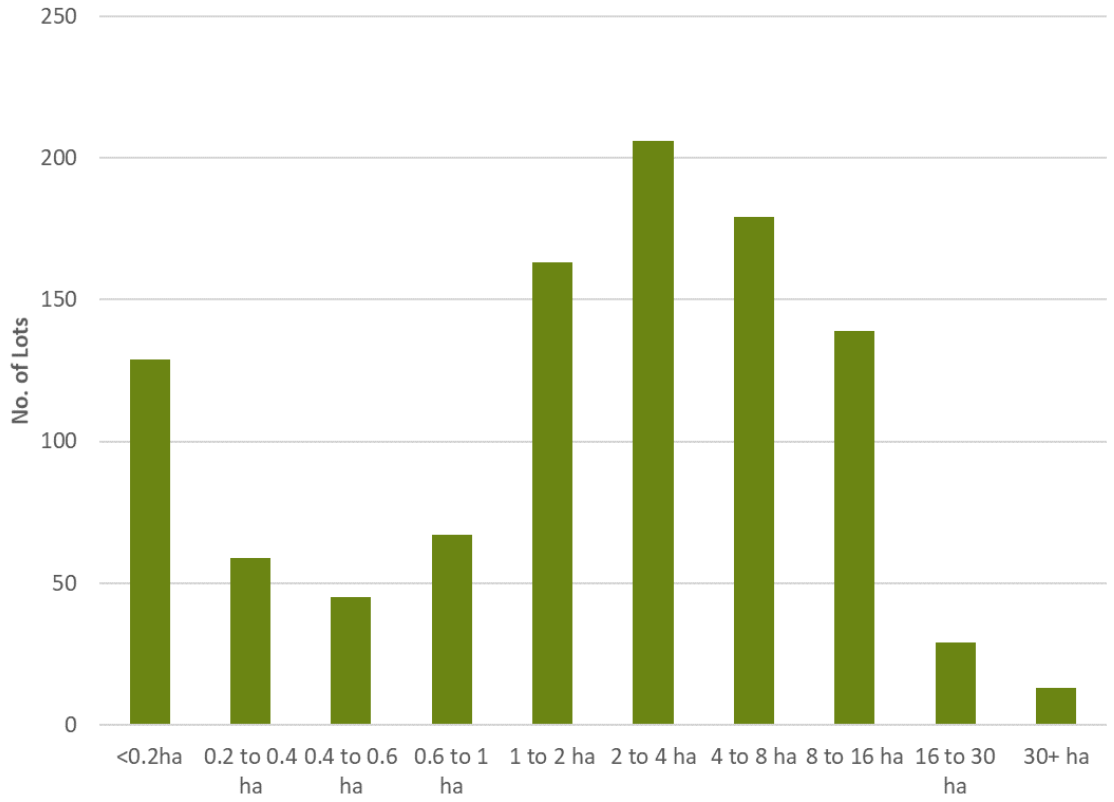
Source: Spatial Economics Pty Ltd

Graph 10: Stock of Low Density Residential (LDRZ) Allotments by Lot Size Cohort (vacant), 2021



Source: Spatial Economics Pty Ltd

Graph 11: Stock of Rural Living (RLZ) Allotments by Lot Size Cohort (vacant), 2021



Source: Spatial Economics Pty Ltd

Low Density Residential

As mentioned previously, there is a total Low Density Residential (LDRZ) lot stock of 3,263 of which 489 are vacant – a 15% lot vacancy rate. This is a relatively low lot vacancy rate when compared to other regional municipalities across Victoria.

As at December 2021, there was a total of 4,200 hectares of LDRZ lot stock, of which 786 hectares was vacant.

LDRZ lot stock is primarily located within the southern region of the Shire with 2,665 lots, compared to 598 lots in the northern region. Of the vacant LDRZ lot stock, 363 lots are in the southern region and 126 are in the northern region.

Of the existing vacant LDRZ lot stock, the majority (67%) are sized less than one hectare, the remainder:

- 26% are sized 1 to 4 hectares; and
- 7% are sized over 4 hectares.

Rural Living

As mentioned previously, there is a total Rural Living (RLZ) lot stock of 3,240 of which 1,029 are vacant – a 32% lot vacancy rate. This is a relatively high lot vacancy rate when compared to other regional municipalities across Victoria.

As at December 2021, there was a total of nearly 12,000 hectares of RLZ lot stock, of which 4,538 hectares was vacant.

RLZ lot stock is primarily located within the northern region of the Shire (91%) with 2,950 lots, compared to 290 lots in the southern region. Of the vacant RLZ lot stock, 78 lots are in the southern region and 177 in the northern region.

Of the existing vacant RLZ lot stock, 65% are sized less than four hectares. Of the remainder:

- 31% are sized 4 to 16 hectares; and
- 4% are sized over 16 hectares.

Key Issues

There is very limited supply (in effect no supply) of zoned broadhectare land (i.e. land in large parcels capable of subdivision to create significant numbers of lots), both urban and rural residential, within the northern region of the Golden Plains Shire. Residential supply opportunities within the northern region of the Shire are largely limited to existing vacant allotments.

Compounding this issue is the stock of vacant urban allotments is restricted in terms of potential for re-subdivision to create smaller lots due to the lack of reticulated waste-water infrastructure (with the exception to Smythesdale).

The northern region is dominated by 'larger' Rural Living (RLZ) zoned lots. Spatial Economics have observed that over the last decade, across regional Victoria, the demand for larger rural residential lots is diminishing. The market preference for 'smaller' rural residential lots is increasing significantly in terms of market share. In particularly, the growing demand is for smaller rural residential allotments that are serviced by hydraulic infrastructure (water and waste-water) within master-planned style estates.

The lack of:

a) undeveloped broadhectare sites; and

b) diversity in residential land supply opportunities

in the northern region of the Shire has historically resulted in reduced demand for residential development. This continues to be the case.

Spatial Economics consider that currently the southern region has ample residential land supply opportunities to cater for medium term demand. The southern region has diverse supply opportunities and is well distributed across the various townships. In the longer term it is likely to be necessary to identify additional supplies – especially of rural residential land.

The land identified for future urban broadhectare residential development in Bannockburn will likely capture a growing share of the regional population growth associated with the continuing development of Geelong.

5.0 Dwelling Capacity – Residential Lands

Key Findings

The stock of vacant allotments does not necessarily represent the final lot or dwelling yield or capacity. Larger vacant allotments may have significant subdivision capacity while some existing vacant allotments may have land development constraints that will impact the potential yield. In addition smaller allotments that do not have access to reticulated sewerage may not have the capacity to yield a dwelling.

Two core capacity scenarios have therefore been developed to assess the scope for construction of additional dwellings across the Shire. One (Scenario 1) illustrates the potential minimum additional capacity of the Shire's residentially zoned land. The second (Scenario 2), while still making fairly conservative assumptions, takes a somewhat more optimistic view of the potential lot/dwelling capacity of both zoned and unzoned residential land stocks across the Shire.

In terms of existing zoned allotments that are either **vacant or have re-subdivision** potential there is an estimated potential dwelling yield of approximately 1,400 for Scenario 1 and 3,400 for Scenario 2. This potential is comprised of:

- Scenario 1:
    - 360 LDRZ lots
    - 810 Rural Living lots
    - 230 Township lots.
- Scenario 2:
    - 923 LDRZ lots
    - 1,170 Rural Living lots
    - 1,270 Township lots.

The stock of vacant allotments does not represent the final lot/dwelling yield or capacity. Particularly the larger vacant allotments have significant subdivision capacity and existing vacant allotments may have land development constraints that will impact the potential yield. Smaller allotments that do not have access to reticulated sewerage may not have the capacity to yield a dwelling.

It is also highlighted that not all vacant lot stock will be subdivided down to their minimum legal size. , Rather, due to such factors as consumer preference (i.e. a preference for larger allotments) some lots will remain un-subdivided. Similarly some existing occupied allotments are able to be subdivided and have the potential to add additional lot/dwelling capacity.

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

Two core capacity scenarios have been developed. One illustrates the potential minimum additional capacity of the Shire's residentially zoned land. The second, while still making fairly conservative assumptions, takes a somewhat more optimistic view of the likely lot/dwelling capacity of zoned and unzoned residential land stocks across the Shire.

The capacity assessment methodologies are based on actual lot/dwelling construction activity trends, existing lot stock size/configuration, zoning and location, current land use planning policies. It has been undertaken at a lot by lot level.

The lot/dwelling capacity scenarios consider all the residential land covered under the four land use

zones: General Residential (GRZ), Township (TZ), Low Density Residential (LDRZ) and Rural Living (RLZ). In addition, all unzoned land identified for future residential development is included.

The two capacity scenarios include:

1. **Scenario One: Conservative** - assumes the following supply sources.
    a. Zoned broadhectare residential lands (urban and rural residential)
    b. Unzoned broadhectare residential lands (urban and rural residential)
    c. Vacant rural residential (RLZ and LDRZ) and urban (TZ) lots equates to one additional dwelling per lot i.e. there is no further subdivision (subject to land size and reticulated waste water availability/septic tank requirements)
2. **Scenario Two: Trend Subdivision** - assumes the following supply sources.
    a. Zoned broadhectare residential lands (urban and rural residential)
    b. Unzoned broadhectare residential lands (urban and rural residential)
    c. Vacant rural residential (RLZ and LDRZ) are subdivided to the minimum size allowed under the pertinent land use planning subdivision schedules; and
    d. Vacant and occupied TZ lots are subdivided to a minimum of 4,000 sqm where reticulated water infrastructure is not available and 600 sqm if it is available.

Capacity Scenario Assumptions – Detailed Assumptions
Scenario One (Conservative)
This scenario includes all estimated yields from both broadhectare urban and rural residential sites (zoned and unzoned).

In terms of occupied and vacant rural residential lots (RLZ and LDRZ), it assumes:

- Occupied lots that are not identified as broadhectare sites are excluded (i.e. no additional subdivision potential is assumed);
- Vacant lots that are not identified as broadhectare sites are assumed to yield one dwelling with no additional subdivision potential;
- Vacant LDRZ lots that are sized less than 4,000 sqm are assumed to have a zero dwelling capacity; and
- Vacant RLZ lots that are sized less than 4,000 sqm are assumed to have a zero dwelling capacity.

In terms of occupied and vacant urban lots (TZ and GRZ), it assumes:

- Occupied lots that are not identified as broadhectare sites are excluded (i.e., no additional subdivision potential is assumed);
- Vacant lots that are not identified as broadhectare sites are assumed to yield one dwelling and assumes no additional subdivision potential, with the following characteristics:
    - Lots sized less than 4,000 sqm are assumed to have a zero dwelling yield, with the exception to lots located in both Bannockburn and Smythesdale (where sewer connections are assumed to be available);
    - Lots sized less than 4,000 sqm in Bannockburn and Smythesdale are assumed to yield one dwelling if it is sized greater than 300 sqm
- Vacant TZ lots that are sized less than 4,000 sqm that do not have access to reticulated waste water infrastructure are assumed to have a zero dwelling capacity; and

- Vacant TZ lots that are sized less than 4,000 sqm that do have access to reticulated waste water infrastructure are assumed to yield one dwelling (minimum size of 300 sqm).

This to some degree this reflects the reality of vacant TZ, RLZ and LDRZ land stocks that are not identified as broadhectare. The vast majority of dwelling construction that was not broadhectare in nature was on existing vacant lots. In addition, there was a wide and even spread from small, medium to large lots - where housing was constructed. To some degree, this can be seen as a conservative, but realistic, capacity assessment based on the existing (substantial) stock of vacant allotments.

Scenario Two (Trend Subdivision)
This scenario includes all estimated yields from both broadhectare urban and rural residential sites (zoned and unzoned).

In terms of existing occupied and vacant rural residential lots (RLZ and LDRZ), it assumes:

- Occupied and vacant sites that are identified as broadhectare are included in the capacity estimates;
- Occupied lots that are not identified as broadhectare sites are excluded and assumed to have no additional subdivision potential;
- Vacant lots that are not identified as broadhectare sites are assumed to be subdivided to the minimum size pertinent to the relevant planning scheme schedule. Where relevant, standard land development take-outs and planning overlays are considered. Minimum subdivision sizes include
    - LDRZ - 4,000 sqm where reticulated sewerage is not connected; and
    - RLZ – 2 hectares for all land marked A on Map 1 for the Schedule to Clause 35.03 and 8 hectares for all land except land marked A on Map 1 for the Schedule to Clause 35.03
- Vacant LDRZ and RLZ lots that are sized less than 4,000 sqm are assumed to have a zero dwelling capacity.

In terms of occupied and vacant urban lots (TZ and GRZ), it assumes:

- Occupied and vacant sites that are identified as broadhectare are included in the capacity estimates;
- Vacant or occupied TZ lots that are sized less than 4,000 sqm that do not have access to reticulated waste water infrastructure are assumed to have a zero dwelling capacity;
- Vacant or occupied TZ lots that are sized less than or greater than 4,000 sqm that do have access to reticulated waste water infrastructure are assumed to be able to be subdivided at accommodate dwellings. The assumed minimum subdivision size is 600 sqm; and
- Vacant or occupied TZ lots that are sized greater than 4,000 sqm that do not have access to reticulated waste water infrastructure are assumed to be able to be subdivided at a minimum of 4,000 sqm.

This scenario reflects more of a theoretical maximum that could be achieved through the re-subdivision of existing lots. It is for example, highly improbable that all TZ lots that have the capacity to be subdivided will be over a thirty plus year time frame.

5.1 Dwelling Capacity – Outcomes

The following provides a summary of the various residential supply opportunities in the Golden Plains Shire. Tables 5 and 6 detail the supply opportunities by supply type, location and supply scenario (as described previously).

In terms of **zoned** undeveloped broadhectare residential land stocks there is an estimated lot/dwelling yield of approximately 2,700. This potential is comprised of:

- 1,100 urban lots;
- 1,470 Low Density Residential (LDRZ) lots; and
- 144 Rural Living (RLZ) lots.

In terms of **unzoned** undeveloped broadhectare residential land stocks there is an estimated lot/dwelling yield of nearly 12,400. This potential is comprised of:

- 10,100 urban lots; and
- 2,250 Low Density Residential (LDRZ) lots.

In terms of existing zoned allotments that are either **vacant or have re-subdivision** potential there is an estimated lot/dwelling yield of approximately 1,400 for Scenario 1 and 3,400 for Scenario 2. This potential is comprised of:

- Scenario 1:
    - 360 LDRZ lots
    - 810 Rural Living lots
    - 230 Township lots.
- Scenario 2:
    - 923 LDRZ lots
    - 1,170 Rural Living lots
    - 1,270 Township lots.

Of the total identified residential land supply opportunities across the Shire (16,500 based on Scenario 1), 90% of these opportunities are located within the southern region of the Shire.

In the northern region only 1,570 lots were identified as potential residential supply opportunities. Of this potential, over 1,000 lots are sourced from existing vacant lots which were typically zoned Rural Living (RLZ).

All zoned and unzoned undeveloped urban broadhectare land are located in the southern region of the Shire.

In terms of undeveloped broadhectare rural residential lands (unzoned and zoned) the vast majority (86%) are located with the southern region of the Shire. The northern region of the Shire has only 556 lot potential of broadhectare rural land opportunities.

The northern region within the Shire is heavily reliant on existing vacant lots zoned Rural Living as a supply source and to a lesser degree vacant lots zoned Township. There is no urban broadhectare stocks and minimal rural residential broadhectare stocks.

Residential land supply opportunities within the northern region includes:

- 384 zoned broadhectare LDRZ lots;
- 144 zoned broadhectare RLZ lots;

- 28 lots identified for future LDRZ development; and
- 1, 015 vacant existing zoned lots, of which:
    - 733 are zoned RLZ
    - 200 are zoned TZ
    - 82 are zoned LDRZ

The southern region within the Shire has a broad mix of residential supply opportunities. Relatively, the reliance on existing vacant lots is minimal. There are significant stocks of zoned and unzoned broadhectare residential lands for both urban and rural residential purposes.

Residential land supply opportunities within the southern region includes:

- over 11,000-lot potential for urban broadhectare lands (zoned and unzoned); and
- over 3,300-lot potential for rural residential broadhectare lands (zoned and unzoned);

Table 5: Residential Land Supply Opportunities – Scenario 1, 2021

	Zoned Broadhectare				Unzoned Broadhectare			Vacant Lots/Re-subdivision				
Locality/SA2/Region/LGA	**Urban**	**LDRZ**	**RLZ**	**Total**	**Urban**	**LDRZ**	**Total**	**LDRZ**	**RLZ**	**TZ**	**Total**	**Grand Total**
BANNOCKBURN	333	40		**373**	8,885		**8,885**	62		2	**64**	**9,322**
BATESFORD		95		**95**		154	**154**	52			**52**	**301**
GHERINGHAP					878		**878**					**878**
BANNOCKBURN SA2	**333**	**135**		**468**	**9,763**	**154**	**9,917**	**114**		**2**	**116**	**10,501**
CORINDHAP	6	24		**30**				17		3	**20**	**50**
DEREEL	2	222		**224**				7	77	4	**88**	**312**
INVERLEIGH		267		**267**		970	**970**	21		1	**22**	**1,259**
LETHBRIDGE	750	106		**856**	356	62	**418**	28		5	**33**	**1,307**
MAUDE								1			**1**	**1**
MEREDITH	15			**15**		270	**270**	18		3	**21**	**306**
ROKEWOOD	2			**2**		24	**24**	2		10	**12**	**38**
SHELFORD	4			**4**		40	**40**	15			**15**	**59**
STEIGLITZ										1	**1**	**1**
TEESDALE		332		**332**		700	**700**	58			**58**	**1,090**
GOLDEN PLAINS SOUTH SA2	**779**	**953**		**1,732**	**356**	**2,066**	**2,422**	**167**	**77**	**27**	**271**	**4,425**
SOUTHERN REGION	**1,112**	**1,087**		**2,199**	**10,119**	**2,220**	**12,339**	**281**	**77**	**29**	**387**	**14,925**

Table 5: Residential Land Supply Opportunities – Scenario 1, 2021 – (continued)

	Zoned Broadhectare				Unzoned Broadhectare			Vacant Lots/Re-subdivision				
Locality/SA2/Region/LGA	**Urban**	**LDRZ**	**RLZ**	**Total**	**Urban**	**LDRZ**	**Total**	**LDRZ**	**RLZ**	**TZ**	**Total**	**Grand Total**
BERRINGA									55	18	**73**	**73**
CAPE CLEAR										23	**23**	**23**
DURHAM LEAD									11		**11**	**11**
ENFIELD		41		**41**				22		2	**24**	**65**
GARIBALDI									20		**20**	**20**
HAPPY VALLEY									36		**36**	**36**
ILLABAROOK									21		**21**	**21**
LINTON		67		**67**				7	40	18	**65**	**132**
NAPOLEONS						28	**28**		20	10	**30**	**58**
NEWTOWN		10		**10**				8	103		**111**	**121**
SCARSDALE		79		**79**				34	127	7	**168**	**247**
SMYTHESDALE		140	27	**167**					103	114	**217**	**384**
STAFFORDSHIRE REEF									30		**30**	**30**
GOLDEN PLAINS NORTH SA2		**337**	**27**	**364**		**28**	**28**	**71**	**566**	**192**	**829**	**1,221**
CAMBRIAN HILL		47	12	**59**				11	24		**35**	**94**
HADDON			62	**62**					26	8	**34**	**96**
NINTINGBOOL												
ROSS CREEK									73		**73**	**73**
SMYTHES CREEK			43	**43**					44		**44**	**87**
SMYTHES CREEK SA2		**47**	**117**	**164**				**11**	**167**	**8**	**186**	**350**
NORTHERN REGION		**384**	**144**	**528**		**28**	**28**	**82**	**733**	**200**	**1,015**	**1,571**
GOLDEN PLAINS SHIRE	**1,112**	**1,471**	**144**	**2,727**	**10,119**	**2,248**	**12,367**	**363**	**810**	**229**	**1,402**	**16,496**

Source: Spatial Economics Pty Ltd

Table 6: Residential Land Supply Opportunities – Scenario 2, 2021

	Zoned Broadhectare				Unzoned Broadhectare			Vacant Lots/Re-subdivision				
Locality/SA2/Region/LGA	**Urban**	**LDRZ**	**RLZ**	**Total**	**Urban**	**LDRZ**	**Total**	**LDRZ**	**RLZ**	**TZ**	**Total**	**Grand Total**
BANNOCKBURN	333	40		**373**	8,885		**8,885**	103		7	**110**	**9,368**
BATESFORD		95		**95**		154	**154**	91			**91**	**340**
GHERINGHAP				**0**	878		**878**				**0**	**878**
BANNOCKBURN SA2	**333**	**135**		**468**	**9,763**	**154**	**9,917**	**194**		**7**	**201**	**10,586**
CORINDHAP	6	24		**30**				49		17	**66**	**96**
DEREEL	2	222		**224**				38	77	193	**308**	**532**
INVERLEIGH		267		**267**		970	**970**	40		1	**41**	**1,278**
LETHBRIDGE	750	106		**856**	356	62	**418**	56		27	**83**	**1,357**
MAUDE								2		0	**2**	**2**
MEREDITH	15			**15**		270	**270**	76		14	**90**	**375**
ROKEWOOD	2			**2**		24	**24**	2		23	**25**	**51**
SHELFORD	4			**4**		40	**40**	15		1	**16**	**60**
STEIGLITZ										1	**1**	**1**
TEESDALE		332		**332**		700	**700**	158		2	**160**	**1,192**
GOLDEN PLAINS SOUTH SA2	**779**	**953**		**1,732**	**356**	**2,066**	**2,422**	**436**	**77**	**279**	**792**	**4,946**
SOUTHERN REGION	**1,112**	**1,087**		**2,199**	**10,119**	**2,220**	**12,339**	**630**	**77**	**286**	**993**	**15,531**

Table 6: Residential Land Supply Opportunities – Scenario 2, 2021 – (continued)

	Zoned Broadhectare				Unzoned Broadhectare			Vacant Lots/Re-subdivision				
Locality/SA2/Region/LGA	**Urban**	**LDRZ**	**RLZ**	**Total**	**Urban**	**LDRZ**	**Total**	**LDRZ**	**RLZ**	**TZ**	**Total**	**Grand Total**
BERRINGA									57	39	**96**	**96**
CAPE CLEAR										98	**98**	**98**
DURHAM LEAD									12		**12**	**12**
ENFIELD		41		**41**				39		26	**65**	**106**
GARIBALDI									20		**20**	**20**
HAPPY VALLEY									41		**41**	**41**
ILLABAROOK									23		**23**	**23**
LINTON		67		**67**				28	44	30	**102**	**169**
NAPOLEONS						28	**28**		25	153	**178**	**206**
NEWTOWN		10		**10**				12	103		**115**	**125**
SCARSDALE		79		**79**				161	356	56	**573**	**652**
SMYTHESDALE		140	27	**167**					121	473	**594**	**761**
STAFFORDSHIRE REEF									34		**34**	**34**
GOLDEN PLAINS NORTH SA2		**337**	**27**	**364**		**28**	**28**	**240**	**836**	**875**	**1,951**	**2,343**
CAMBRIAN HILL		47	12	**59**				53	29		**82**	**141**
HADDON			62	**62**					53	112	**165**	**227**
NINTINGBOOL												
ROSS CREEK									94		**94**	**94**
SMYTHES CREEK			43	**43**					82		**82**	**125**
SMYTHES CREEK SA2		**47**	**117**	**164**				**53**	**258**	**112**	**423**	**587**
NORTHERN REGION		**384**	**144**	**528**		**28**	**28**	**293**	**1,094**	**987**	**2,374**	**2,930**
GOLDEN PLAINS SHIRE	**1,112**	**1,471**	**144**	**2,727**	**10,119**	**2,248**	**12,367**	**923**	**1,171**	**1,273**	**3,367**	**18,461**

Source: Spatial Economics Pty Ltd

Key Issues

From a land supply perspective, the northern region of the Golden Plains Shire has an imbalanced reliance on existing vacant residential lots as a supply source.

Compared to the southern region of the Shire, the northern region has:

a) no zoned urban broadhectare land stocks;

b) no identified future (unzoned) urban broadhectare land stocks; and

c) minimal identified future (unzoned) broadhectare rural residential land stocks.

These existing supply constraints within the northern region of the Shire will be likely to limit housing demand and keep population growth in the northern region significantly lower than could be expected if a more diverse range of housing opportunities were made available.

6.0 Population Growth

Key Findings

Historical Population Growth

Population growth in Golden Plains has been consistently relatively high (albeit from a relatively low population base). However the growth rate has varied since the turn of the century. growth rates peaked (at 3%) in the 2011 to 2016 inter-censal period before declining somewhat (to an average annual rate of 2.38%) over the 2016 to 2021 period. In 2020/21, the Shire achieved a population growth rate of 2.16% - within the context of negative population growth in Melbourne and for Victoria as a whole.

Population growth rates have varied substantially across the Shire. As measured from 2016 to 2021, the northern region of the Shire (i.e. the area within commuting distance of Ballarat) grew at an average annual rate of 1.47%, whilst the southern region (i.e the area within commuting distance of Geelong) grew by 2.63%. Areas of the Shire that are more remote from the two major regional cities saw little growth.

From 2016 to 2021, population growth within Golden Plains has been composed of:

- 27% natural increase (births minus deaths)
- 69% migration from within Australia; and
- 4% overseas migration.

Existing Population Growth Projections

There are currently two published demographic projections for Golden Plains:

3. the Victorian Government's official population projections *'Victoria in Future 2019' (VIF 2019)* which sets out population, household and dwelling growth projections to 2036 for all regions and local government areas in Victoria; and
4. idForecast demographic forecasts commissioned by the Golden Plains Shire. These forecasts set out population, household and dwelling growth projections for the Shire to 2041.

As measured from 2021 to 2036:

- VIF2019 projects the average annual percentage change in population at 2.0%, compared to 2.7% from idForecast; and
- VIF2019 project the average annual numeric change in population at 559, compared to 798 from idForecast.

An Alternative Population Growth Projection (assuming land use policy change)

As outlined in the body of this report, at this stage there is limited value in seeking to review existing published demographic projections until the full details of the 2021 Population and Housing Census are released later this year

Instead, Spatial Economics have developed an alternative, higher, population and housing growth scenario based on a realistic assessment of the likely impact on growth of strategic land use policy choices that could be made by the Golden Plains Council and community. These choices are based primarily on increasing the housing choices available in the northern region of the Shire and ensuring a sufficient and diverse land supply in both the north and south to enable Golden Plains to 'capture' a greater share of regional population growth from both the Ballarat and Geelong markets.

Spatial Economics believes that, given these types of policy changes, the presented growth forecasts are unduly conservative from both a potential demand and supply perspective.

Over the period from 2021 to 2051 the policy intervention scenario results in:

- a 41% increase in the residential dwelling requirement across the Shire(or an average annual dwelling requirement of nearly 500 compared to 270 under the (extended) VIF 19 forecast;
- a 21% increase in the residential dwelling requirement across the southern region of the Shire or an average annual dwelling requirement of 302 compared to 216 under VIF2019 forecast; and
- a 89% increase in the residential dwelling requirement across the northern region of the Shire or an average annual dwelling requirement of 190 compared to 42 under the (extended) VIF 19 forecast.

The 2021 census has only recently been undertaken and won't be published until mid-2022. Consequently, we are now near the end of the five yearly inter-censal cycle when population estimates are most reliant on changes in Medicare registrations rather than census counts. However, Covid and the vaccination program have compromised the reliability of Medicare data in estimating resident populations

The population estimates for 2017 onwards will be revised in mid-2022 once 2021 census data become available.

6.1 Recent Population Growth Trends

Golden Plain's population growth rate has varied since the turn of the century. Population growth in Golden Plains comparatively has been consistently relatively high (albeit from a relatively low population base).

Since 2016 the growth rate for Victoria has slowed while Regional Victoria's has increased, mainly due to increased spill overs from Melbourne into adjacent municipalities beyond the Greater Melbourne boundary. Greater Geelong has experienced a remarkable rejuvenation attracting more migrants from overseas, interstate, other parts of Regional Victoria and, most significantly, from Melbourne, thereby pushing up the Regional Victoria growth rate.

In the context of the recent regional population surge, Golden Plains has equally experienced population growth in the context of negative growth for Victoria.

Table 7: Long Term Population Growth: Average Annual Population Growth Rates (%), 2001-2021

	2001-06	2006-11	2011-16	2016-21
Golden Plains	**2.30%**	**2.61%**	**3.04%**	**2.38%**
Southern Region	***3.61%***	***3.78%***	***4.09%***	***2.94%***
Northern Region	***0.84%***	***1.10%***	***1.49%***	***1.47%***
Ballarat	1.00%	1.90%	1.70%	1.80%
Greater Geelong	1.00%	1.50%	2.10%	1.86%
Regional Victoria	0.60%	1.00%	1.30%	1.26%
Greater Melbourne	1.50%	2.10%	2.50%	1.57%
Victoria	1.20%	1.80%	2.20%	1.50%
Australia	1.20%	1.80%	1.60%	1.25%

Source: ABS.net (Beta)

Table 8: Impacts of Covid? Short Term Population Growth: Average Annual Population Growth Rates (%), 2016-21

	2016-17	2017-18	2018-19	2019-20	2020-21
Golden Plains	**2.51%**	**2.44%**	**2.61%**	**2.19%**	**2.16%**
Southern Region	**3.37%**	**2.97%**	**2.95%**	**2.78%**	**2.63%**
Northern Region	**1.14%**	**1.58%**	**2.05%**	**1.21%**	**1.37%**
Ballarat	1.90%	1.80%	2.00%	1.70%	1.67%
Greater Geelong	2.60%	2.70%	2.70%	2.30%	1.78%
Regional Victoria	1.30%	1.30%	1.40%	1.30%	1.02%
Greater Melbourne	2.80%	2.50%	2.30%	1.60%	-1.17%
Victoria	2.40%	2.20%	2.10%	1.50%	-0.67%
Australia	1.70%	1.60%	1.50%	1.30%	0.02%

Source: ABS.net (Beta)

The decrease in the growth rates in Australia and Victoria in 2019/20 and 2020/21 can be attributed to Covid. However the above comparisons suggest that regional centres such as Ballarat and Geelong have been more resilient to the impacts of Covid compared to the average for Victoria or for Melbourne. This presumably reflects the attractiveness of regional cities for the population of Australia's capital cities during a period of Covid outbreaks and lockdowns.

The population growth rate has been disparate within the Golden Plains Shire. From 2016 to 2021, the southern region of the Shire experienced strong growth at nearly 2.4% pr annum, compared to nearly 1.5% per annum in the northern region.

As at 2021, the Golden Plains Shire had an estimated resident population of approximately 25,800. Approximately 63% of the resident population (15,600) were located in the southern region, the remaining 9,200 were located in the northern region

The neighbouring municipalities of Ballarat and Geelong have both relatively large population bases and experiencing strong rates of recent population growth. As at 2021, the resident population for these two municipalities were:

- Ballarat – 113,000; and
- Geelong – 270,000.

Sources of population growth

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

Pre Covid 92% of overseas arrivals to Victoria settled in Melbourne. Closed international borders cut those gains and are therefore the main reason why Melbourne's population has declined for the first time in living memory. But longer lockdowns in Victoria compared to other states has led to Victoria losing population to other states, a reversal of trends of the last 25 years. But Melbourne's long lockdowns and changed work regimes have also led to a greater flight of people from Melbourne to regional Victoria and to fewer people such as students, job seekers and urban lifestyle seekers moving to Melbourne.

Table 9: Internal Migration, Regional Victoria, 2006-2021

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

Source: Provisional Regional Migration Estimates, ABS, August 2021

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

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

Table 10: Components of population change, Golden Plains 2016-21

	Natural Increase	Net migration within Australia	Net overseas migration	Total population growth
2016-17	129	390	33	552
2017-18	171	349	30	550
2018-19	139	433	32	604
2019-20	157	339	23	519
2020-21	147	382	-5	524

Source: Provisional Regional Migration Estimates, ABS,

The position for Golden Plains is similar to that of regional Victoria. Population losses to Melbourne and other parts of Regional Victoria have been reduced, compensating for lower gains from overseas.

From 2016 to 2021, population growth within Golden Plains has been composed of:

- 27% from natural increase (net births and deaths)
- 69% from migration from within Australia; and
- 4% from overseas migration.

Population changes within Golden Plains

The ABS publishes annual population estimates for SA2s which are areas defined by the ABS to assist with local planning and service delivery. There are four SA2s in Golden Plains. These have been grouped into: 1) the northern region; and 2) the southern region. Broadly the southern region is strongly linked to the Geelong region in terms of employment, higher order health and education services. Similarly, the northern region has similar connections to Ballarat.

Importantly, housing markets of these regions have strong connections to their respective neighbouring regional cities

Table 11: Population Growth within Golden Plains: Average Annual Growth Rates

	2001-06	2006-11	2011-16	2016-21
Bannockburn	6.90%	5.80%	6.62%	3.36%
Golden Plains - South	1.78%	2.40%	2.00%	2.54%
SOUTHERN REGION	**3.61%**	**3.78%**	**4.09%**	**2.94%**
Smythes Creek	1.32%	1.52%	0.88%	0.87%
Golden Plains - North	0.41%	0.73%	2.05%	1.98%
NORTHERN REGION	**0.84%**	**1.10%**	**1.49%**	**1.47%**
GOLDEN PLAINS SHIRE	**2.30%**	**2.61%**	**3.04%**	**2.38%**

Source: ABS.net (Beta)

Table 12: Population Growth within Golden Plains: Average Annual Population Growth

	2001-06	2006-11	2011-16	2016-21
Bannockburn	204	233	359	235
Golden Plains - South	94	140	131	186
SOUTHERN REGION	**298**	**374**	**490**	**421**
Smythes Creek	45	55	34	35
Golden Plains - North	16	29	88	94
NORTHERN REGION	**61**	**85**	**122**	**129**
GOLDEN PLAINS SHIRE	**359**	**458**	**612**	**550**

Source: ABS.net (Beta)

In terms of population growth rates, the southern region of Golden Plains is nearly double that of the northern region, as measured from 2016 to 2021. Historically, this differential was even more pronounced. As measured from 2016 to 2021, on an average annual basis, the southern region grew by 430 person per annum compared to 130 per annum in the northern region.

Population growth within the Golden Plains regions is also disparate.

Within the northern region, the Smythes Creek SA2 had historically higher growth rates and quantum of population growth compared to the Golden Plains SA2. Since 2011, this trend reversed.

From 2016 to 2021, population growth by SA2 was:

- an increase of 94 persons per annum or a 2% growth rate in the Golden Plains North SA2; and
- an increase of 35 persons per annum or a 0.9% growth rate in the Smythes Creek SA2.

The majority of the population growth within the northern region within the last five years was located in Smythesdale, Scarsdale and Linton. This is primarily due to land supply opportunities located within the respective SA2's.

Within the southern region, the Bannockburn SA2 has had since 2001 significant population growth rates and population growth rates that until 2016 significantly surpassed the Golden Plains South SA2. Since 2016, population growth rates are becoming closer between the composite SA2's within the southern region at 3.4% per annum for Bannockburn and 2.5% for Golden Plains South.

The majority of the population growth within the southern region within the last five years was located in Bannockburn, Teesdale and Batesford. This is primarily due to land supply opportunities located within proximity to Geelong.

7.0 Growth Projections & Scenarios

There are currently two published demographic projections for Golden Plains, these include:

5. the Victorian Government's official population projections *'Victoria in Future 2019' (VIF 2019)*. This publication sets out population, household and dwelling growth projections to 2036 for all regions and local government areas in Victoria; and
6. idForecast. Demographic forecasts commissioned by the Golden Plains Shire. These forecasts set out population, household and dwelling growth projections to 2041.

Population and dwelling forecasts of these two projections are summarised below.

As Graph 12 illustrates, the major difference between the two population projections is that VIF2019 essential assumes a continuation of recent trends in population growth. Whereas, the idForecasts illustrated increasing growth rates until 2036.

Spatial Economics perceive a growing rate of population is more likely than a continuation of recent trend growth numbers, particularly given the Shire's proximity to two major regional centres being Ballarat and Geelong.

As measured from 2021 to 2036:

- VIF2019 project the average annual percentage change in population at 2.0%, compared to 2.7% from idForecast; and
- VIF2019 project the average annual change in population at 559, compared to 798 from idForecast.

Table 13: Average annual change on the number of the resident population - Golden Plains Shire

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041
idForecast	390	852	1,152	1,186
VIF2019	554	564	558	

Source: Department of Environment, Lands, Water & Planning
idForecast

Table 14: Average annual percentage change on the number of resident population - Golden Plains Shire

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041
idForecast	1.6%	3.1%	3.5%	3.1%
VIF2019	2.1%	2.0%	1.8%	

Source: Department of Environment, Lands, Water & Planning
idForecast

As measured from 2021 to 2036:

- VIF2019 project the average annual percentage change in dwellings at 2.2%, compared to 2.7% from idForecast; and
- VIF2019 project the average annual change in dwellings at 247, compared to 301 from idForecast.

Table 15: Average annual change on the number of residential dwellings - Golden Plains Shire

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041
idForecast	176	311	416	433
VIF2019	240	250	250	

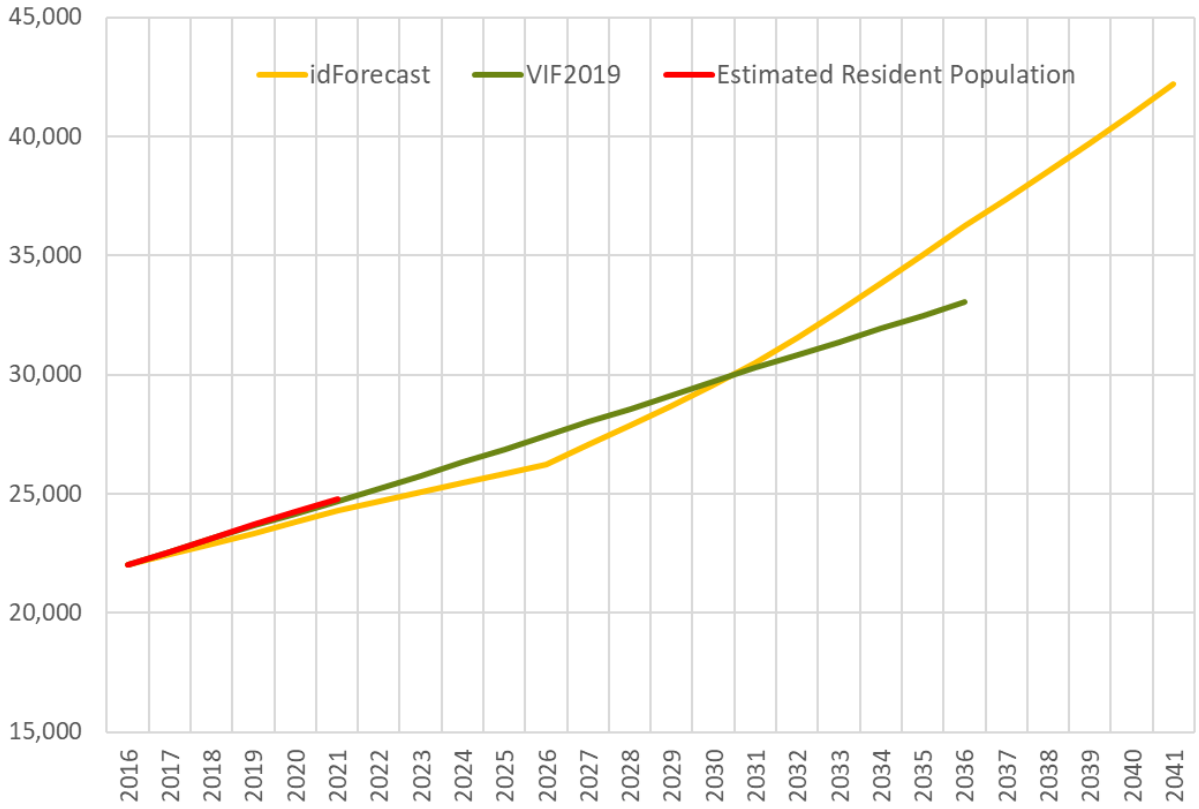
Source: Department of Environment, Lands, Water & Planning
idForecast

Table 16: Average annual percentage change on the number of residential dwellings - Golden Plains Shire

	2021 to 2026	2026 to 2031	2031 to 2036	2036 to 2041
idForecast	1.8%	2.9%	3.4%	3.0%
VIF2019	2.4%	2.2%	2.0%	

Source: Department of Environment, Lands, Water & Planning
idForecast

Graph 12: Estimated resident population and population projections



Source: Australian Bureau of Statistics
Department of Environment, Lands, Water & Planning
idForecast

7.1 Should a single view or growth forecast be relied upon for longer term strategic planning?

The forecasts prepared by the State Government and idForecast are prepared using a well-established and accepted methodology and incorporate sound assumptions. Differences often lie in the view of attracting growth from other areas, the availability and location of supply opportunities and overall growth at regional, State and National levels.

However, it is reasonable to question whether a single set of growth forecasts should be used in preparing a long-term strategic plan, such as the Golden Plains Settlement Strategy.

Importantly, particularly in the context of a Settlement Strategy, the outcomes will directly impact the quantum and location of growth. Restricting supply in a geographic location will reduce 'expressed' demand. Similarly, providing supply opportunities can 'capture' demand from regional housing markets. Land use policy has a direct impact on likely future growth scenarios.

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

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

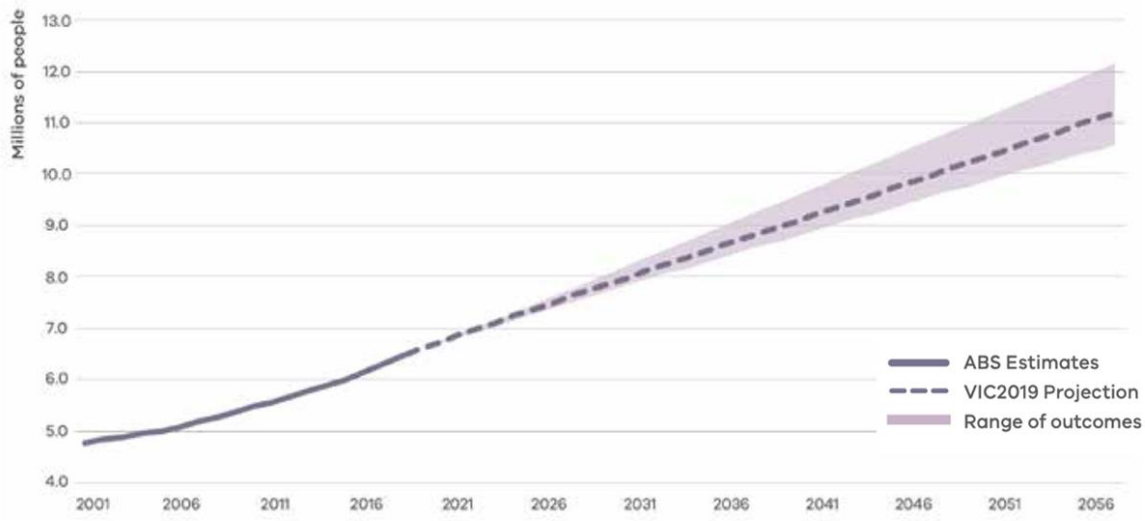
For example, VIF2019 presents a range of growth forecasts for Victoria and, in its introduction says:

> *"Population projections are estimates of the future size, distribution and characteristics of the population. They are developed by applying mathematical models and expert knowledge of the likely population trends to the base population.*
>
> *Projections provide information about population change over space and time but they are not predictions of the future. They are not targets nor do they reflect the expected effects of current and future policies.*
>
> *The projections give an idea of what is likely to happen if current trends continue. They may indicate a need to manage change to achieve preferred outcomes or to mitigate the impacts of no-preferred outcomes"*

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

> *"Under the VIF2019 assumptions Victoria is projected to add 4.7 million people from 2018 to 2056, reaching a population of 11.2 million. This represents annual average growth of 125,000 people, at a rate of 1.5% per annum.*
>
> *Conditions and trends may change in the future, however, and if other assumptions were used, different growth levels would result. Migration levels are more sensitive to changes in policy or economic conditions than births or deaths. Graph 13* (see below) *shows population growth outcomes with different migration assumptions, illustrating average annual growth in each scenario, not the volatility of growth in individual years."*

Graph 13: Projected population, Victoria" range of outcomes



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

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

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

The question must still be addressed - how robust can we expect population projections for a municipality as diverse and geographically wide such as Golden Plains?

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

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

population change.

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

Table 17: Shelf life of population projections

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

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

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

As noted in the preceding section of this report uncertainty is unavoidable when considering medium to longer term population growth – especially at a regional and small area (i.e. regional city) level.

It is equally difficult to predict medium to longer changes in housing preferences and therefore in the demand for newly serviced (or 'greenfield') residential land. Over time there will be changes in the relative demand for dwelling types (detached housing versus townhouses), locations (established suburbs versus greenfield housing estates), urban versus rural residential land/housing products and type and size of allotment (smaller versus larger lots).

Variation in demand for particular types of housing and residential land may result from demographic change (smaller and older households), from the preferences of purchasers and renters (for locations closer to jobs and facilities versus dwelling size), or from increased costs and ability to pay (leading, for example, the choice of smaller dwellings and allotments).

From a housing location and land/housing perspective the Shire of Golden Plains is particularly diverse and unique. Geographically, it borders two major regional centres , Ballarat to the north and Geelong to the south. It has expansive farming lands central and west of the Shire. It is also characterised by extensive native forests and open plains. It has numerous settlements spread across the Shire.

Land and housing products are also similarly diverse. Rural residential land products range from large rural living allotments that are often heavily forested, to smaller rural residential low density products. Urban housing choice is all varied, ranging from traditional broadhectare greenfield lots, housing in the township areas and smaller townhouse/units within the established urban areas.

Housing trends may change more slowly in smaller cities and regional areas than in larger, and higher cost, metropolitan areas. But changes will still occur and will add to the uncertainties that must be addressed in longer term strategic plans. Planning that is based on one set of demand projections, or that locks in controls based upon current dwelling preferences, make it difficult for the market to adjust supply to cater for unexpected changes in housing demand.

There are two key approaches that can help ensure that strategic plans have the best chance to cope effectively with this kind of uncertainty:

- the first is to err on the side of assuming stronger growth overall and in any given market segment. That is to ensure that (within reason) there is scope to meet any unexpected

upturn in demand; and

- secondly, to plan for a diversity of supply types and locations.

It may not seem obvious why planning should err on the side of assuming stronger rather than weaker growth. However, in summary, the experience in other places is underestimating future housing demand has more serious effects (for example, limiting growth or leading to unnecessary increases in housing costs) and takes longer to correct.

7.1.1 Should the current published projections be reviewed?

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

In the case of Golden Plains and most other parts of Regional Victoria, the evidence suggests that there is no need to update population projections at present.

The 2021 census is published in July 2022 which will give us a final resident population for 30th June 2021. It may be higher or lower than the preliminary 2021 estimate published last week (29th March).

That is the base number for new projections. At present there is no case for reviewing the assumptions behind the projections.

The census will contain updated data on internal migration trends, household formation and dwelling occupancies. The full set of data should be available in October 2022. That is the time to critically review projections and the assumptions behind them.

By then it should become a little clearer what the longer term impacts of Covid will be. Will greater and more permanent working from home arrangements lead a more sustained decentralisation of people and jobs out of Melbourne? If so, to what extent will this happen and to where in Regional Victoria will this growth be channelled?

The Commonwealth and State Governments' views on the impact of Covid:
In December 2020 the Commonwealth Government's Centre for Population published a preliminary view on the impacts of COVID:

> *"The impact of COVID-19 is expected to be long lasting. Australia's population is expected to be smaller and older than projected prior to the onset of the pandemic.*
>
> *Australia's population is estimated to be around 4 per cent smaller (1.1 million fewer people) by 30 June 2031 than it would have been in the absence of COVID-19. The population will also be older as a result of reduced net overseas migration and fewer births. Despite COVID-19, Australia's population is still growing and is expected to reach 28 million during 2028–29, three years later than estimated in the absence of COVID-19.*
>
> *COVID-19 is projected to slow population growth across all geographic areas analysed, with the duration and magnitude linked to the importance of net overseas migration to different parts of the country.*
>
> *Capital cities are projected to bear the heaviest impacts, with total population across capital cities estimated to be around 5 per cent lower by 30 June 2031 than in the absence of COVID-19. By contrast, population outside the capital cities is estimated to be around 2 per cent smaller than it would otherwise have been.*

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

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

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

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

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

The Victorian Treasury's short term forecasts

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

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

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

An important note for users

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

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

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

The ERP is published by the ABS, quarterly for States and Territories and annually for regions, Local Government Areas and for State and Territories. . The annual estimate is for the 30th June, the end of the financial year. The finest geographical level for which ERPs are published is the SA2. There are 461 SA2s in Victoria.

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

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

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

The latest 'preliminary' population estimate for Golden Plains was for 30th June 2021, which was published in March 2022. But this estimate is still based on the 2016 census. With the publication of the 2021 census in July 2022, the ABS will publish 'final' ERPs for each year from 2017 to 2021.

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

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

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

As of April 2022, the best advice to users is to (a) be aware of these issues, (b) keep a watching brief on revisions and, (c) be prepared to adjust business models once 2021 census data becomes available and projections can be revised.

7.2 Growth Scenario – Policy Intervention

As outlined previously, at this stage it would be less than optimum to: a) review existing published demographic projections; and b) present alternative/revised demographic projections until details of the 2021 Population and Housing Census is released.

Instead, Spatial Economics have developed an alternative, higher, population/housing growth scenario based on realistic strategic land use policy choices. These choices are based primarily on the identification of residential land releases that would increase the housing choices available in the Shire and 'capture' a greater share of regional population growth.

This growth scenario is detailed further below in terms of both the major assumptions and the likely population/housing outcomes.

The Growth Scenario uses VIF2019 (modified & extended) as the lower growth scenario base for comparison purposes. Spatial Economics view the outcomes of VIF2019 projections for Golden Plains as simply a continuation of current trends.

Spatial Economics perceive the growth scenario as 'conservative' from both a supply and demand potential perspective.

Growth Scenario Assumptions

The following details the major assumptions utilised in developing the 'policy intervention' growth scenario.

VIF2019 is used as a base case population growth scenario. Spatial Economics perceive that the projections contained in VIF2019 are essentially a continuation of recent growth trends, not in terms of growth rates, but the actual quantum of population growth.

Spatial Economics have modified VIF2019 in terms of:

- updating the base year of the projection (2021) with recent preliminary estimated resident population from the Australian Bureau of Statistics;
- subsequently up-dating the projection to 2036 utilising the same growth and demographic assumptions used by VIF2019; and
- extended the projections from 2036 to 2051 assuming the same growth rate and demographic assumptions from 2036 to 2051.

The VIF2019 modified and extended forecasts were then utilised as a 'base' case growth scenario. From this, residential supply and demand opportunities were applied. The demographic assumptions contained in VIF2019 (Golden Plains) were applied to the population associated with the take-up of identified residential land supply opportunities.

Such demographic assumptions applied, include: household size, vacancy rates and population within non-private dwellings.

Housing demand within the Shire is influenced by and influences its neighbouring municipalities within the region. Any opening or restriction of supply opportunities within specific parts of the region will see the transfer of demand between these municipalities. Population and dwelling growth across the municipal area of Golden Plains will largely be driven by regional population growth, specifically from the Geelong wider area in the south of the municipality and from Ballarat in the north-west

Growth Scenario Assumptions – Northern Region

Rural Residential

Across all major regional centres in Victoria, typically 7% of all residential housing demand is supplied by rural residential allotments, this is very consistent across regional centres with exception to centres that have a pro-active policy to discourage such a development form.

Spatial Economics undertook an assessment of residential lot construction activity by supply type from 2006 to December 2021 to ascertain the expressed demand levels for rural residential land products in Ballarat. In addition, it undertook an assessment of the stock of rural residential lands across the municipal area of Ballarat.

In summary of rural residential subdivision activity in Ballarat:

- from 2006 to 2009, 5% of all subdivision activity was for rural residential purposes;
- from 2009 to 2016, 3.5% of all subdivision activity was for rural residential purposes; and
- from 2016 to March 2022, 2.7% of all subdivision activity was for rural residential purposes.

The decline in the contribution of rural residential lot construction activity is not an outcome of declining demand levels, it is a direct outcome of the composition and availability of rural residential lands in the municipal area of Ballarat.

An assessment of the stock of rural residential lands illustrate:

- a predominance of Rural Living zoned residential lands, that largely has been subdivided and has existing uses;

- few 'broadhectare' rural residential land opportunities; and
- comparatively, few low density (LDRZ) residential land opportunities, particularly sites that are broadhectare in nature.

Based on undertaking residential land supply assessments across most of regional Victoria, Spatial Economics estimate the underlying demand for rural residential lands range from 5 to 7% of total residential development activity.

Spatial Economics have also observed a growing trend and demand for 'smaller' rural residential land products. Sizes typically range from 2,000 sqm to 2,500 sqm, are serviced with hydraulic infrastructure (water/waste water) and are within 'master planned' estates.

The trend for larger (2ha+ and or 8ha+) rural living land products is declining across regional Victoria.

This opportunity to capture a component of projected demand from the City of Ballarat is evidenced by:

- existing strong linkages to Ballarat (employment, education and health services);
- decline in the provision of rural residential allotment construction across the City of Ballarat – assumed to be based on a policy of discouraging further rural residential expansion; and
- a strong underlying demand for rural residential allotments that is currently not being met across the region with broadhectare rural residential land opportunities (including Golden Plains – northern region).

Spatial Economics assume that the northern region of Golden Plains could capture a minimum of 3% of Ballarat's projected population growth if rural residential lands are identified/released within suitable locations and density forms.

The population capture is assumed to begin in 2026.

The population growth scenario for Ballarat is based on VIF2019, modified for the most recent population estimates from the Australian Bureau of Statistics and assumed to extended from 2036 to 2051 based on the average annual growth rate from 2031 to 2036.

Spatial Economics perceive this as a conservative assumption.

Urban Broadhectare Lands

The City of Ballarat's residential growth area (Ballarat West) raises opportunities for the Golden Plains Shire to develop and promote residential growth in the northern part of the Shire.

The existing residential areas which are dominated by the Rural Living Zone in Golden Plains that are adjacent to the Ballarat West Growth area have already been largely subdivided into the allowable sizes with only limited subdivision under existing planning schedules feasible.

There are substantial numbers of vacant allotments that will allow for growth but when these are developed there will be limited opportunities due to the cost of providing land development dependent infrastructure, particularly in the context or urban densities.

The land within Golden Plains Shire directly south of Ballarat in the vicinity of Cambrian Hill borders the Ballarat West Growth Area. Currently the land abutting Cambrian Hill (Golden Plains) within the Ballarat West Growth Area is estimated to be the last to be developed.

Development is staged to fold down from the north primarily due to existing and planned infrastructure provision, in particular waste water and road infrastructure. There is a need to build a substantial sewerage pumping station in the southern section of the Ballarat West Growth Area to service the area whereas lots to the north can be currently serviced through existing/upgraded infrastructure.

If the land in Golden Plains adjacent to the Ballarat West Growth Area (Cambrian Hill & Ross Creek) is developed at higher densities the construction of the pump station would serve the area but importantly construction could be bought forward.

The development of sewered lots in Golden Plains would also help defray the infrastructure costs. Further enhancing the desirability of the Golden Plains land (Cambrian Hill & Ross Creek) that could be developed is the proposed Ballarat link road (stages 2 and 3) that feeds into the freeway and runs along the border of Golden Plains and Ballarat municipalities providing excellent road access.

Currently there is a major activity centre that has been developed that is only a few kilometres from Cambrian Hill & Ross Creek that would provide higher order retail opportunities. Sections of the Cambrian Hill & Ross Creek area are largely zoned Rural Living but has larger landholdings meaning that land assembly/subdivision should be relatively easy.

There are vast tracts of land that are already assigned to rural living (RLZ) in the Golden Plains northern region and this allows for the opportunity to provide a different type of product to the housing market.

Recently constructed lots in the Ballarat West Growth Area achieved a median size of 511 sqm, as measured over the calendar year of 2020 and the first six months of 2021 . It is possible that with the development of the link road and the pumping station that the Golden Plains land will become viable and in essence become an extension of the Ballarat West Growth Area to be developed over time with similar lot sizes.

There is also the opportunity to provide an alternative style of residential lot product. Providing a different type of product particularly focused on larger blocks would probably lead to quicker development area but that will clearly be less yield for a given land area.

It is also possible to develop the area in a similar way to that of the Ballarat West Growth Area.

As to the optimum size for product differentiation, that should be determined to a large extent by the market and by Council setting minimum lot sizes allowable within the development.

The State Government estimated that there is between 7 to 9 years of zoned residential broadhectare land in the Ballarat West Growth Area.

The City of Ballarat has initiated investigation into the future locations of residential greenfield land expansion. One of the options is the expansion of the Ballarat West Growth Area towards the west. This has two-fold implications for residential land supply opportunities for Golden Plains:

1. enhancing low density residential supply opportunities to the west of the Ballarat West Growth Area (previous growth assumption); and
2. providing urban density greenfield lands within Golden Plains that has greater access to central Ballarat than the existing fringe of the existing Ballarat West Growth Area and any expansion west of the existing growth area

Spatial Economics have assumed a modest estimate of potential greenfield development in Ross Creek/Cambrian Hill. It was assumed a total yield of 3,670 lots and a lot/dwelling density of 550 sqm and the land release commencing in 2031.

Growth Scenario Assumptions – Southern Region

Spatial Economics have assumed that Golden Plains will capture 2.5% of the City of Greater Geelong's population growth. It is assumed that this capture will begin from 2026 and continue over the time frame of the growth scenario (2051).

This is premised on two major factors:

1. capturing a proportion of the underlying demand for rural residential land products from Geelong; and

2. the recent (and assumed continued) expansion of greenfield urban residential lands in Bannockburn.

The City of Greater Geelong have an active policy to not extend the existing extent of rural residential lands. This policy has seen the gradual decline of rural residential land development activity. This does not negate the underlying demand for rural residential land demand.

As measured from 2017 to March 2022, rural residential lot construction activity represented only 0.6% of the total residential development activity.

The stock of rural residential lands in Geelong is limited in terms of a) lots suitable for re-subdivision and b) no 'broadhectare' style land stocks.

As urban greenfield densities are continually increasing in Geelong, there will be a segment of the market that will demand lower density land products, particularly with good access major regional centres, such as Geelong. In the current financial year (2021/22 March), the median density of a constructed greenfield lot across Geelong was 352 sqm.

Currently, the Armstrong Creek Growth Area supplies approximately 53% of the demand for greenfield urban lots in Geelong. It is estimated, the Armstrong Creek Growth Area will be effectively depleted within eight years.

Within this period there will be a spatial shift of urban greenfield development activity within the Western and Northern Growth areas of Geelong. The northern and western growth area of Geelong are approximately a 15 to 20 minute drive to Bannockburn.

Again, Spatial Economics perceive the assumption of capturing 2.5% of the City of Geelong's' population growth as a conservative assumption.

Growth Scenario Outcomes

Population – Golden Plains Shire

For the Golden Plains Shire, the VIF2019 Modified Policy scenario results in an additional population growth of approximately 17,000 persons compared the VIF2019 (modified and extended) trend scenario. This equates to an average annual population growth rate of 3% compared to 1.9%.

Population growth for the VIF2019 Modified Policy scenario is not linear. From 2021 to 2036, the population growth rate is 2.9% per annum, increasing to 3.2% per annum from 2036 to 2051.

Over a thirty year period from 2021, the trend scenario (VIF2019 modified & extended) results in an average growth of 622 persons, compared to nearly 1,200 for the VIF2019 Modified Policy scenario.

Graph 14 below summarise the total estimated resident population for the Shire of Golden Plains for the two differing growth scenarios

Table 18: Population Growth Outcomes by Scenario, 2021 to 2051

Southern Region - Population	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified & extended	15,590	17,944	20,345	22,743	25,423	28,420	31,769
VIF2019 Modified+ Policy	15,590	18,130	21,533	25,064	29,027	33,474	38,465

Northern Region - Population	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified & extended	9,175	9,587	10,002	10,391	10,796	11,217	11,654
VIF2019 Modified+ Policy	9,175	9,654	10,535	12,732	16,292	19,893	22,083

Golden Plains - Population	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified & extended	24,765	27,531	30,347	33,135	36,220	39,637	43,423
VIF2019 Modified+ Policy	24,765	27,785	32,068	37,796	45,318	53,366	60,547

Source: Spatial Economics Pty Ltd

Population – Southern Region

From 2021 to 2051, the VIF2019 Modified Policy scenario results in an average annual population growth rate of 3.1% per annum or 762 persons per annum. From 2021 to 2036 the population growth rate equates to 3.2% per annum (632 persons pa) compared to the VIF2019 modified and extended scenario of 2.5% per annum or 477 persons pa.

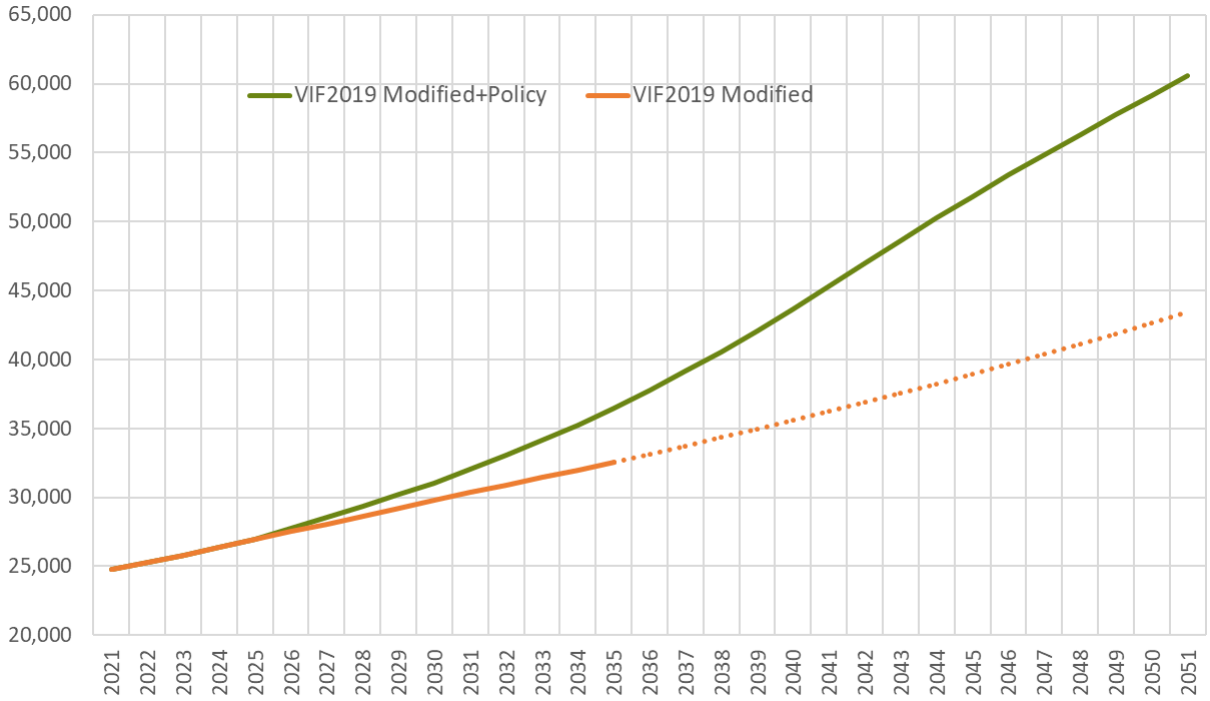
From 2036 to 2051 the population growth rate equates to 2.9% per annum (893 persons pa) compared to the VIF2019 modified and extended scenario of 2.3% per annum or 602 persons pa.

Population – Northern Region

From 2021 to 2051, the VIF2019 Modified Policy scenario results in an average annual population growth rate of 3.0% per annum or 430 persons per annum. From 2021 to 2036 the population growth rate equates to 2.2% per annum (237 persons pa) compared to the VIF2019 modified and extended scenario of 0.8% per annum or 81 persons pa.

From 2036 to 2051, the population growth rate in the northern region accelerates to 3.7% per annum or 623 per pa. This is primarily due to the assumption of increasing urban greenfield land supply opportunities.

Graph 14: Total Population, Population Growth Scenarios - Golden Plain, 2021 to 2051



Source: Spatial Economics Pty Ltd

Growth Scenario Outcomes – Golden Plains

Dwellings

For the Golden Plains Shire, the VIF2019 Modified Policy scenario results in an additional dwelling requirement of approximately 7,000 compared the VIF2019 (modified and extended) trend scenario. This equates to an average annual dwelling growth rate of 3.2% compared to 2.0%.

On an average annual basis, the dwelling requirements for differing time periods and scenarios include:

- 2021 to 2036
  - VIF 2019 modified and extended – 247 dwellings
  - VIF 2019 Modified Policy – 373 dwellings
- 2036 to 2051
  - VIF 2019 modified and extended – 269 dwellings
  - VIF 2019 Modified Policy – 611 dwellings

Under the VIF 2019 modified and extended growth scenario, 84% of the future dwelling requirements would be located in the southern region of the Shire, as measured from 2021 to 2051. In comparison, the VIF 2019 Modified Policy scenario results in increased dwellings requirements as a proportion in the northern region, at approximately 40% as opposed to 16%.

Dwellings – Southern Region

From 2021 to 2051, the VIF2019 Modified Policy scenario results in an average annual dwelling growth rate of 3.2% per annum or an annual dwelling requirement of around 300. From 2021 to 2036 the dwelling growth rate equates to 3.5% per annum (259 dwellings pa) compared to the VIF2019 modified and extended scenario of 2.8% per annum or 199 dwellings pa.

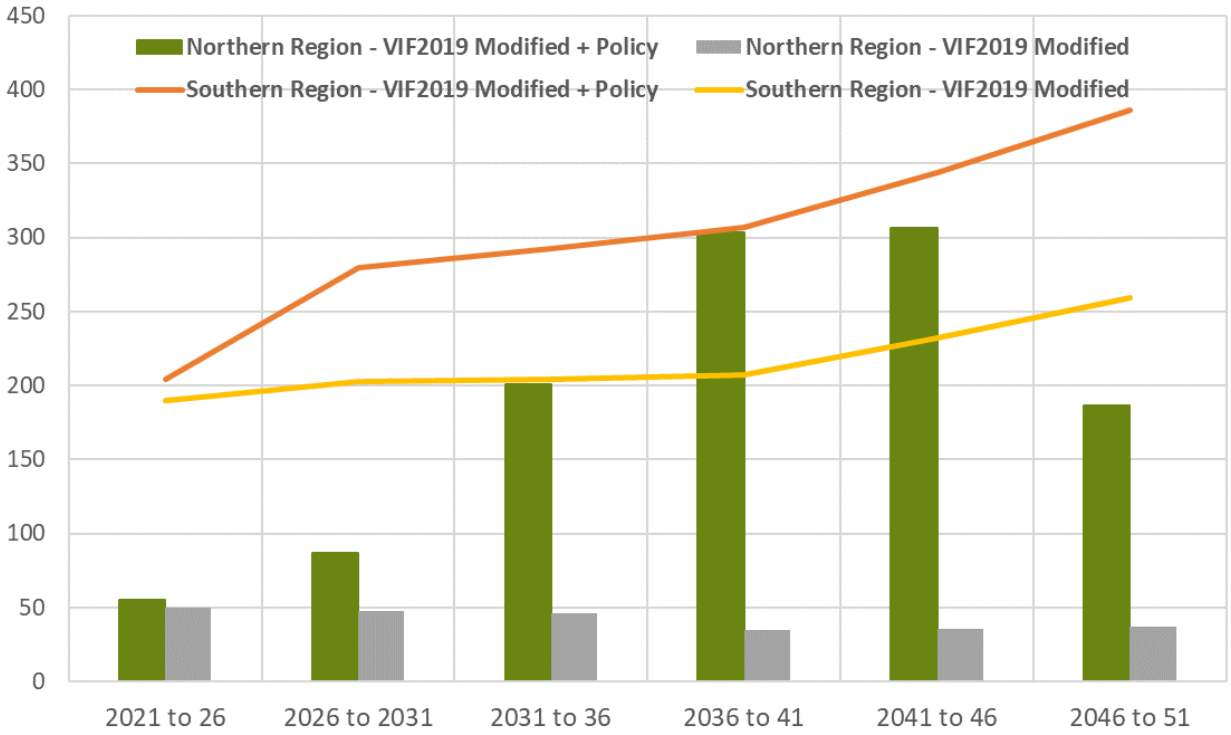
From 2036 to 2051 the dwelling growth rate equates to 2.9% per annum (346 dwellings pa) compared to the VIF2019 modified and extended scenario of 2.3% per annum or 233 dwellings pa.

Dwellings – Northern Region

From 2021 to 2051, the VIF2019 Modified Policy scenario results in an average annual dwelling growth rate of 3.2% per annum or an annual dwelling requirement of around 190. From 2021 to 2036 the dwelling growth rate equates to 2.6% per annum (114 dwellings pa) compared to the VIF2019 modified and extended scenario of 1.2% per annum or 48 dwellings pa.

From 2036 to 2051 the dwelling growth rate equates to 3.7% per annum (266 dwellings pa) compared to the VIF2019 modified and extended scenario of 0.8% per annum or 36 dwellings pa.

Graph 15: Average Annual Dwelling Change by Population Growth Scenarios – by Region, 2021 to 2051



Source: Spatial Economics Pty Ltd

Table 19: Dwelling Growth Outcomes by Scenario, 2021 to 2051

Southern Region - Dwellings	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified & extended	5,819	6,770	7,784	8,803	9,841	11,000	12,297
VIF2019 Modified + Policy	5,819	6,840	8,238	9,702	11,235	12,957	14,888

Northern Region - Dwellings	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified& extended	3,710	3,959	4,196	4,427	4,599	4,778	4,965
VIF2019 Modified + Policy	3,710	3,987	4,420	5,424	6,940	8,474	9,407

Golden Plains - Dwellings	2021	2026	2031	2036	2041	2046	2051
VIF2019 Modified& extended	9,529	10,729	11,980	13,230	14,440	15,779	17,261
VIF2019 Modified + Policy	9,529	10,827	12,658	15,126	18,176	21,431	24,296

Source: Spatial Economics Pty Ltd

Key Issues

Spatial Economics consider the VIF2019 population and household projections essentially assume a continuation of recent growth trends and do adequately recognise either:

a) the effect of current limitations on housing choices in the north of Golden Plains in limiting development and population growth; and
b) the likely impact of Geelong's strong ongoing growth, and the city's Settlement Strategy, in increasing future growth pressures on the southern region of Golden Plains.

Ballarat's ongoing growth will see increased residential development along the border with Golden Plains. Much of this will be greenfield suburban development characterised by relatively small lots and high prices. Given the availability of attractive alternative housing options in the north of Golden Plains this could see a significant increase in housing demand and population growth within the Shire.

Similarly the introduction of a permanent settlement boundary within the City of Greater Geelong as part of the City's Settlement Strategy will restrict future growth on the Bellarine Peninsula and redirect medium to longer term residential development to areas immediately adjacent to the border of Golden Plains Shire. The decision of Surf Coast Shire to adopt a similar permanent settlement boundary for Torquay will further reinforce this shift in focus of residential development in the Geelong region towards Golden Plains.

Spatial Economics believes that Golden Plains Shire is facing a strategic land use policy choice in terms of how it should respond to these changed circumstances. Golden Plains unique geographic position between two major regional cities will allow the Shire, should it so choose, to capture a proportion of housing and population growth in the wider region.

The Golden Plains Council, and community, need to address these choices in preparing the Shire's longer term growth strategy.

8.0 Residential Land Supply Profiles by Municipality, Region and Locality

The following section of the report provides land supply and recent residential development activity summary profiles for the municipal area of Golden Plains, northern and southern regions of the Golden Plains Shire and for each township/locality within the Shire.

Locality/township profiles are presented in order alphabetically.

Golden Plains Shire

Map 4: Land Supply Profile – Golden Plains Shire

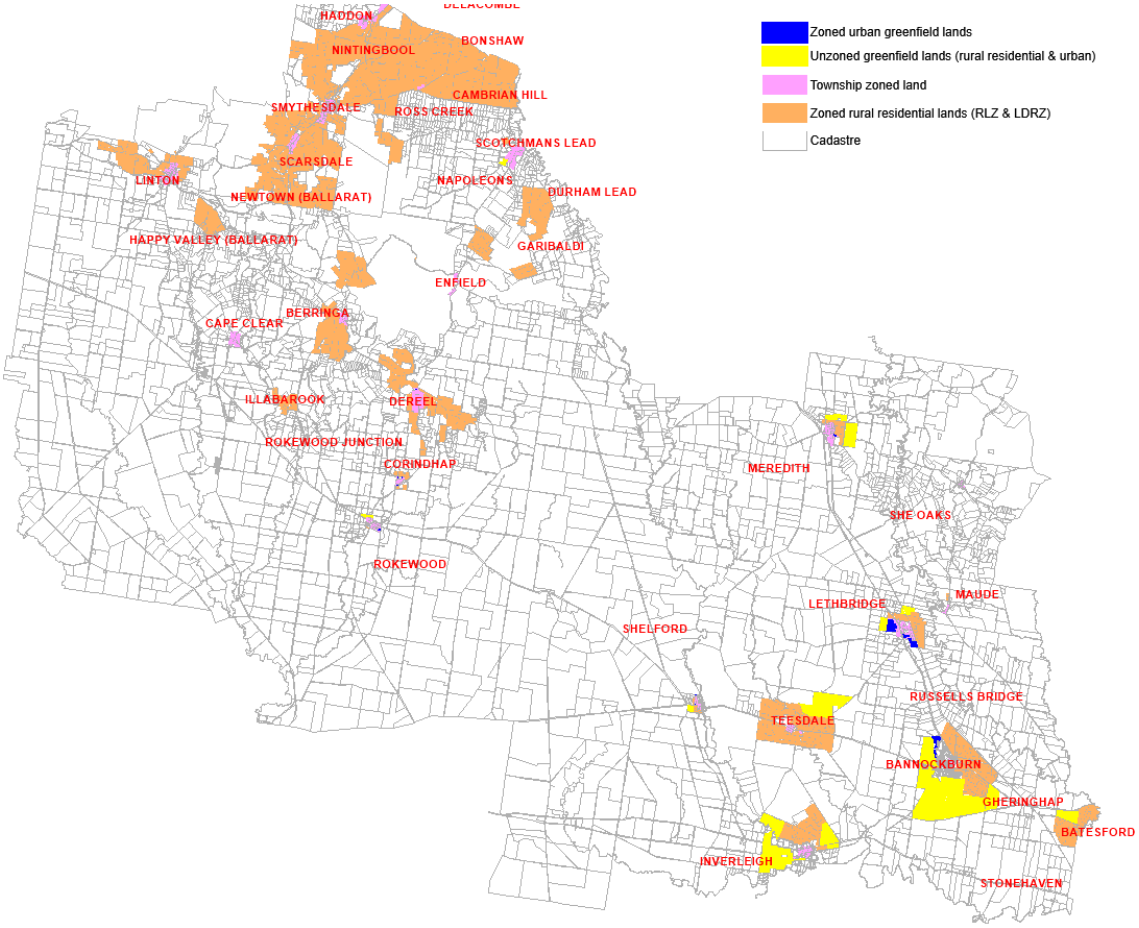


Table 20: Residential Land Supply Summary – Golden Plains Shire

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	489	1029	525	**2043**
Occupied (lots) [1]	2774	2211	1694	**6679**
Lot Stock Area (ha)				
Vacant (ha) [1]	786	4538	246	**5570**
Occupied (ha) [1]	3415	7424	671	**11510**
Average Annual Lot Production (2013 to 19)	95.7	23.7	70.5	**190**
Average Annual Lot Production (2019 to 21)	133.6	8.8	21	**163**
Average Annual Dwelling Production (2013 to 19)	74.2	19.5	15	**109**
Average Annual Dwelling Production (2019 to 21)	126.8	21.6	18.8	**167**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	1471	144	1112	**2727**
Dwelling Capacity - Potential Residential (unzoned)	2248		10119	**12367**
Dwelling Capacity - Scenario 1	4082	954	11460	**16496**
Dwelling Capacity - Scenario 2	4642	1315	12504	**18461**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Northern Region

Map 5: Land Supply Profile – Northern Region

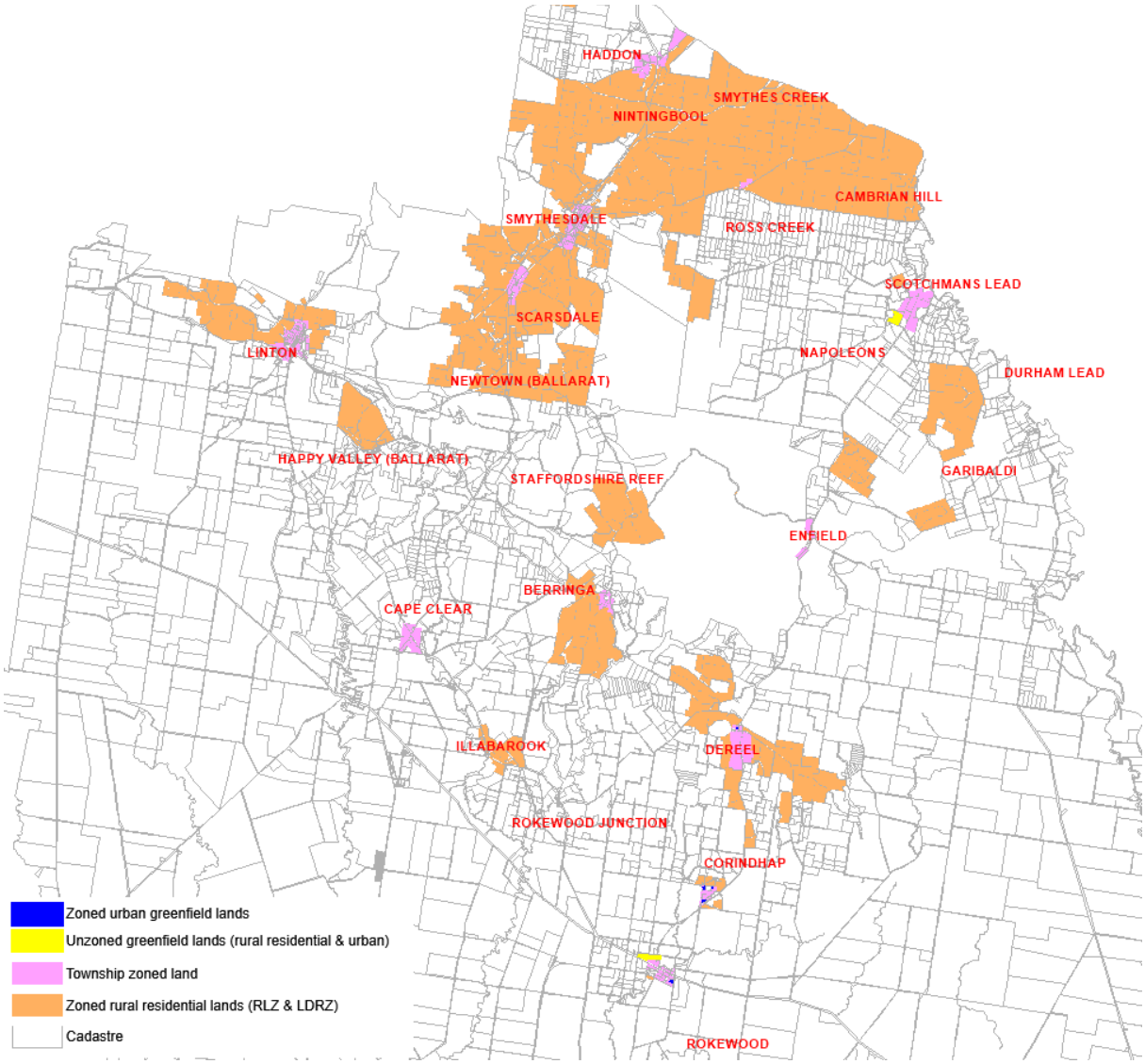


Table 21: Residential Land Supply Summary – Northern Region

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	126	951	354	**1431**
Occupied (lots) [1]	472	1999	727	**3198**
Lot Stock Area (ha)				
Vacant (ha) [1]	177	4326	163	**4666**
Occupied (ha) [1]	766	6853	289	**7908**
Average Annual Lot Production (2013 to 19)	0.8	23.3	0.2	**24**
Average Annual Lot Production (2019 to 21)	1.6	8.8		**10**
Average Annual Dwelling Production (2013 to 19)	3.5	17.7	9.3	**31**
Average Annual Dwelling Production (2019 to 21)	6	18.4	9.6	**34**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	384	144		**528**
Dwelling Capacity - Potential Residential (unzoned)	28			**28**
Dwelling Capacity - Scenario 1	494	877	200	**1571**
Dwelling Capacity - Scenario 2	705	1238	987	**2930**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Southern Region

Map 6: Land Supply Profile – Southern Region

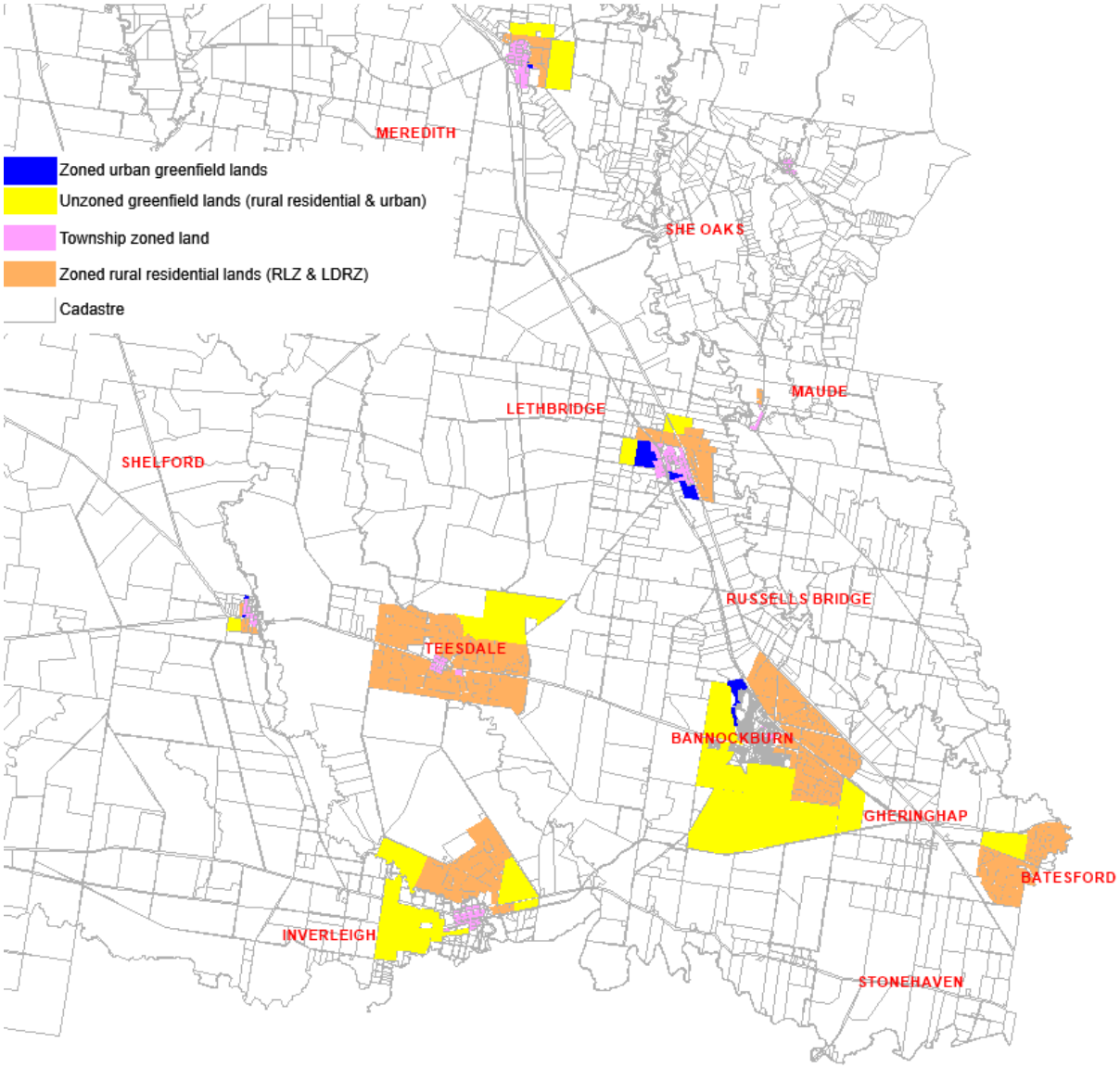


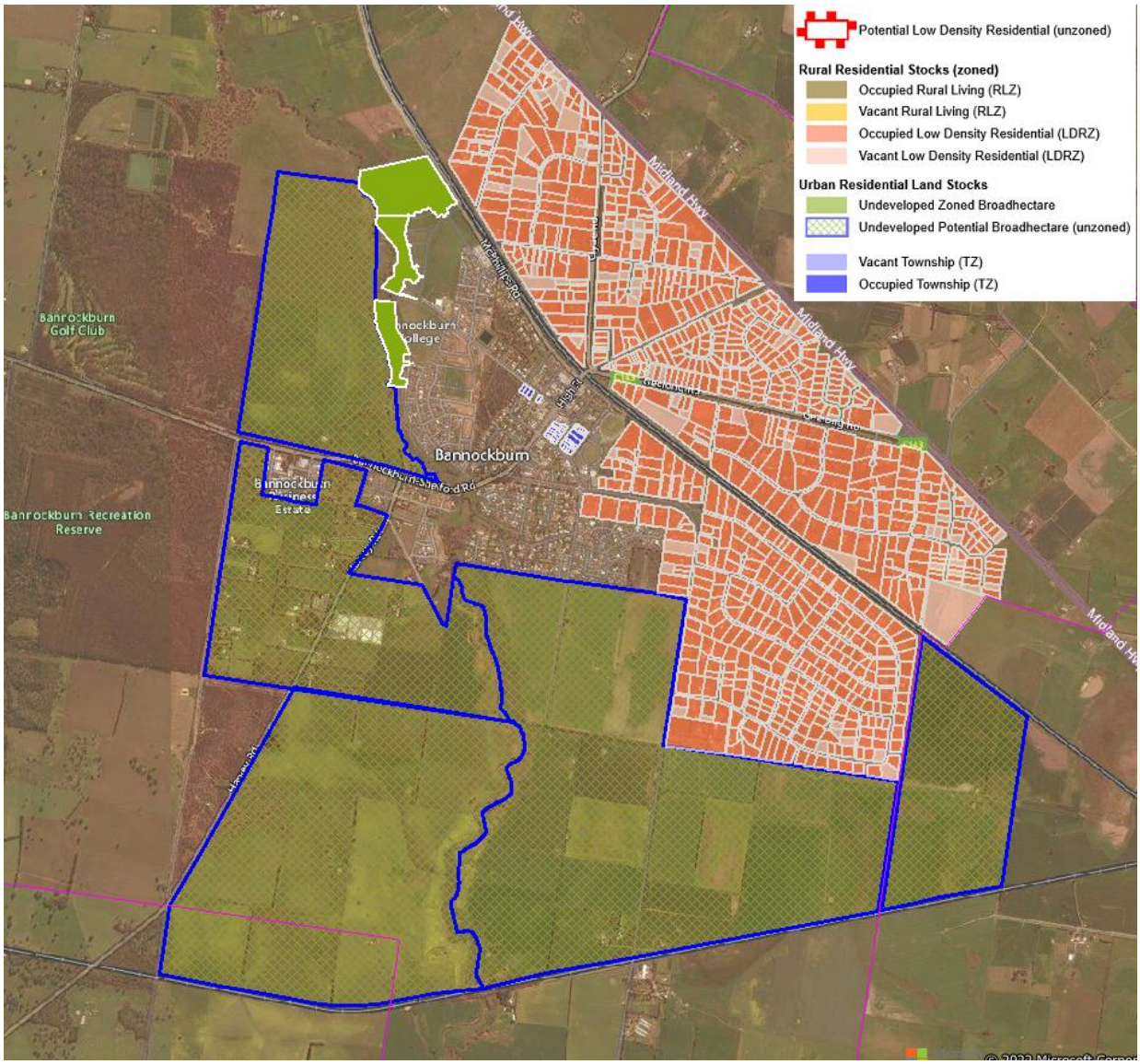
Table 22: Residential Land Supply Summary – Southern Region

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	363	78	171	**612**
Occupied (lots) [1]	2302	212	967	**3481**
Lot Stock Area (ha)				
Vacant (ha) [1]	609	212	83	**904**
Occupied (ha) [1]	2649	571	382	**3602**
Average Annual Lot Production (2013 to 19)	94.8	1.3	70.3	**166**
Average Annual Lot Production (2019 to 21)	132		21	**153**
Average Annual Dwelling Production (2013 to 19)	70.7	1.8	5.7	**78**
Average Annual Dwelling Production (2019 to 21)	120.8	3.2	9.2	**133**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	1087		1112	**2199**
Dwelling Capacity - Potential Residential (unzoned)	2220		10119	**12339**
Dwelling Capacity - Scenario 1	3588	77	11260	**14925**
Dwelling Capacity - Scenario 2	3937	77	11517	**15531**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Bannockburn/ Gheringhap

Map 7: Land Supply Profile – Bannockburn/ Gheringhap



Map 7a: Land Supply Profile – Bannockburn – urban area

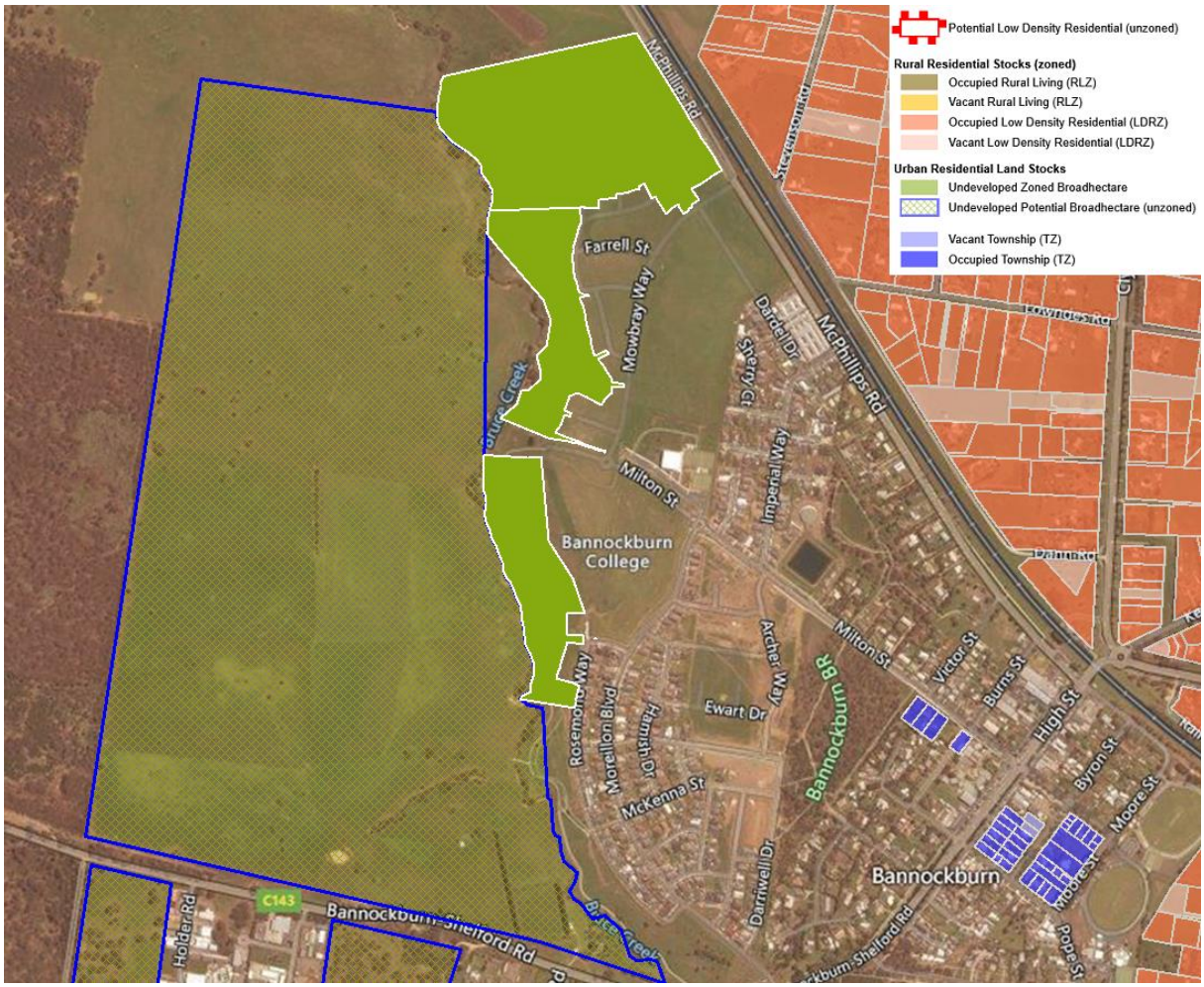


Table 23: Residential Land Supply Summary – Bannockburn/ Gheringhap

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	76		2	**78**
Occupied (lots) [1]	787		34	**821**
Lot Stock Area (ha)				
Vacant (ha) [1]	63.2		0.2	**63**
Occupied (ha) [1]	656.1		3.9	**660**
Average Annual Lot Production (2013 to 19)	38.3		61.5	**100**
Average Annual Lot Production (2019 to 21)	40		14.8	**55**
Average Annual Dwelling Production (2013 to 19)	29.5			**30**
Average Annual Dwelling Production (2019 to 21)	37.6			**38**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	40		333	**373**
Dwelling Capacity - Potential Residential (unzoned)			9763	**9763**
Dwelling Capacity - Scenario 1	102	0	10098	**10200**
Dwelling Capacity - Scenario 2	143	0	10103	**10246**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Batesford

Map 8: Land Supply Profile – Batesford

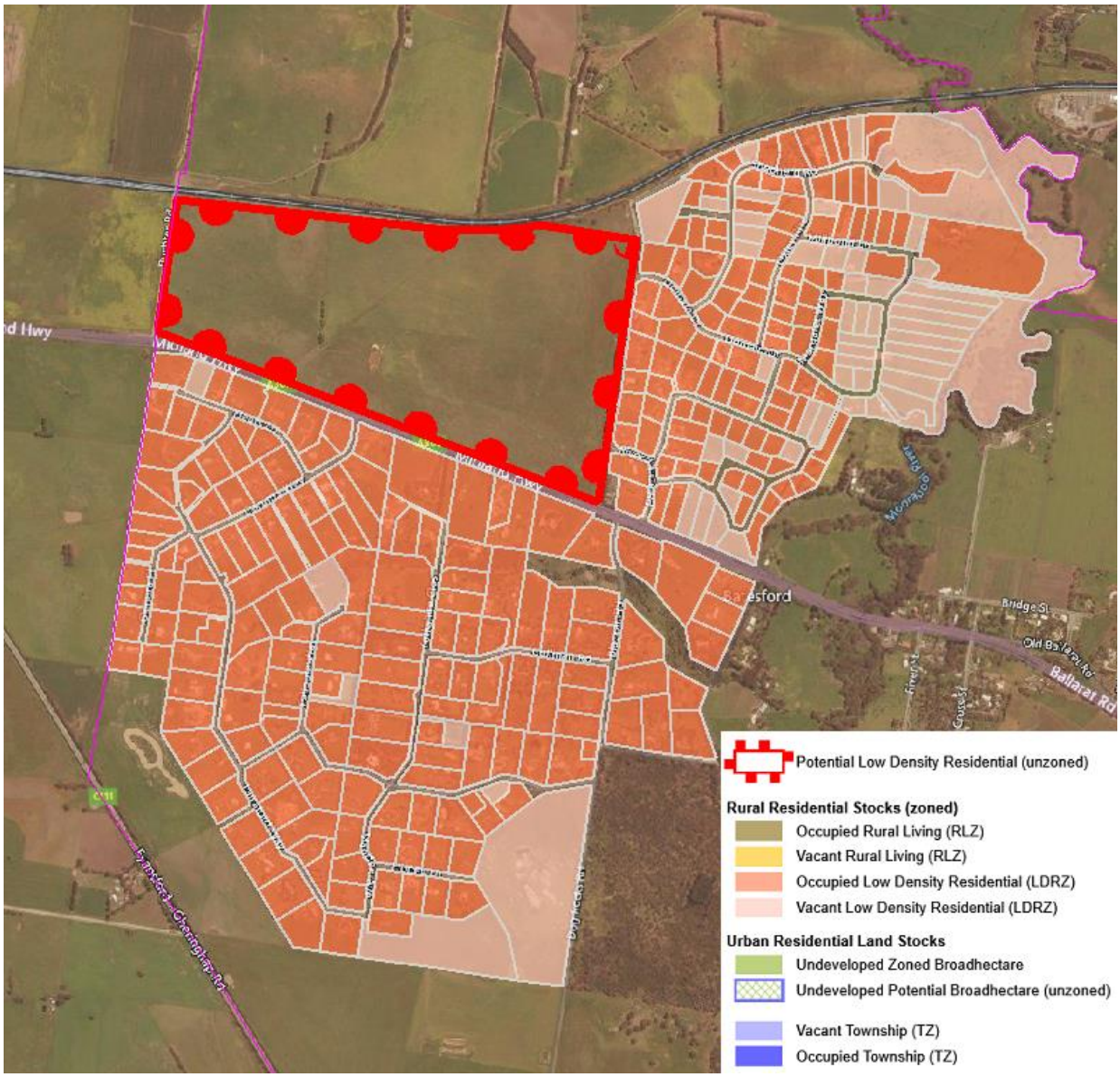


Table 24: Residential Land Supply Summary – Batesford

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	58			**58**
Occupied (lots) [1]	275			**275**
Lot Stock Area (ha)				
Vacant (ha) [1]	85.4			**85**
Occupied (ha) [1]	288.4			**288**
Average Annual Lot Production (2013 to 19)	12			**12**
Average Annual Lot Production (2019 to 21)	26			**26**
Average Annual Dwelling Production (2013 to 19)	10			**10**
Average Annual Dwelling Production (2019 to 21)	14.8			**15**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	95			**95**
Dwelling Capacity - Potential Residential (unzoned)	154			**154**
Dwelling Capacity - Scenario 1	301	0	0	**301**
Dwelling Capacity - Scenario 2	340	0	0	**340**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Berringa

Map 9: Land Supply Profile – Berringa

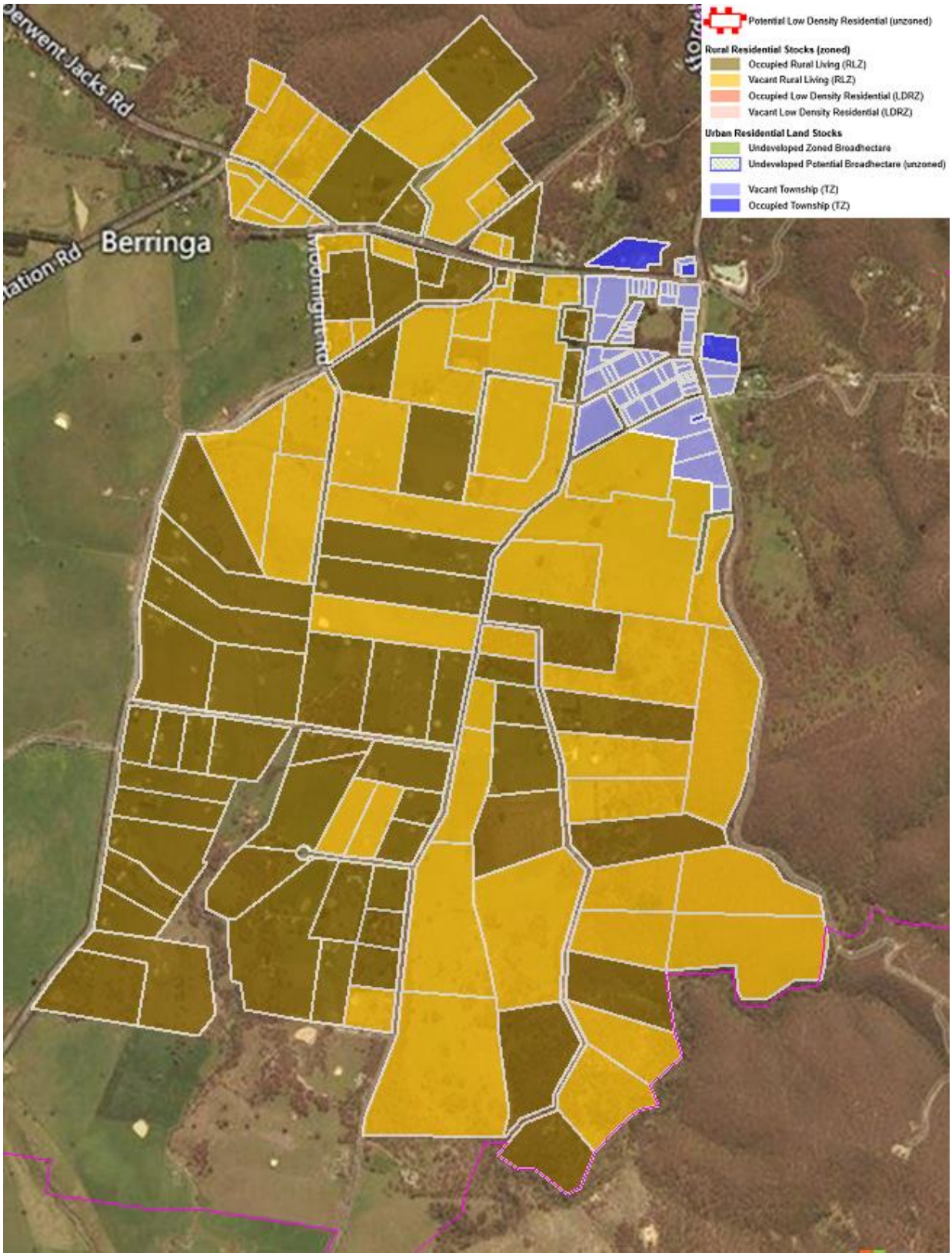


Table 25: Residential Land Supply Summary – Berringa

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		57	58	**115**
Occupied (lots) [1]		62	5	**67**
Lot Stock Area (ha)				
Vacant (ha) [1]		317	21.6	**339**
Occupied (ha) [1]		302	3.6	**306**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		0.5	0.2	**1**
Average Annual Dwelling Production (2019 to 21)		0.8		**1**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	55	18	**73**
Dwelling Capacity - Scenario 2	0	57	39	**96**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Cambrian Hill

Map 10: Land Supply Profile – Cambrian Hill

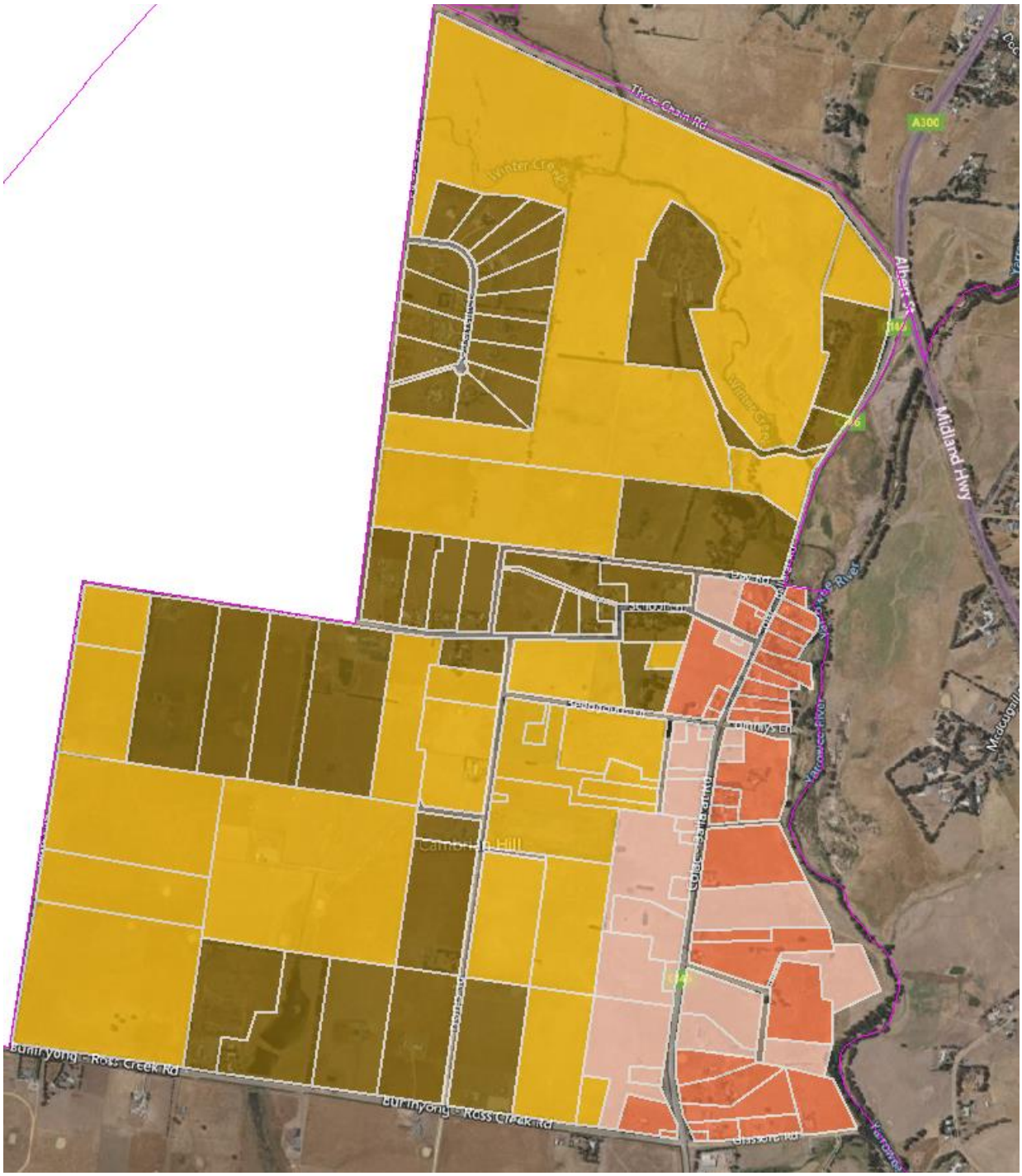


Table 26: Residential Land Supply Summary – Cambrian Hill

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	24	26		**50**
Occupied (lots) [1]	32	43		**75**
Lot Stock Area (ha)				
Vacant (ha) [1]	44	290		**334**
Occupied (ha) [1]	47	184		**231**
Average Annual Lot Production (2013 to 19)		1.8		**2**
Average Annual Lot Production (2019 to 21)	0.4			**0**
Average Annual Dwelling Production (2013 to 19)	0.2	0.7		**1**
Average Annual Dwelling Production (2019 to 21)	0.8	0.8		**2**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	47	12		**59**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	58	36	0	**94**
Dwelling Capacity - Scenario 2	100	41	0	**141**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Cape Clear

Map 11: Land Supply Profile – Cape Clear

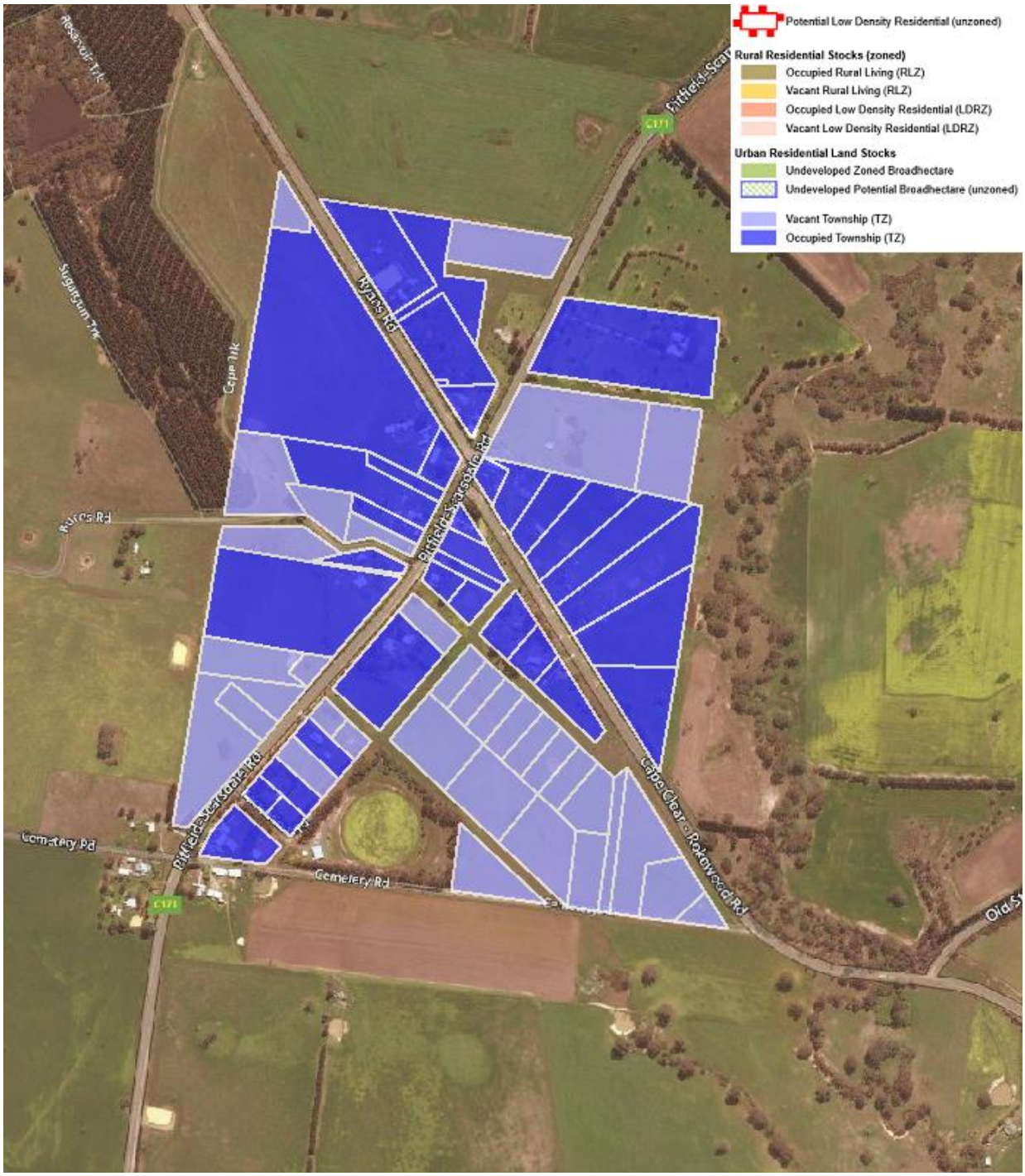


Table 27: Residential Land Supply Summary – Cape Clear

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]			33	**33**
Occupied (lots) [1]			35	**35**
Lot Stock Area (ha)				
Vacant (ha) [1]			24.3	**24**
Occupied (ha) [1]			36.1	**36**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)			0.2	**0**
Average Annual Dwelling Production (2019 to 21)			0.4	**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	0	23	**23**
Dwelling Capacity - Scenario 2	0	0	98	**98**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Corindhap

Map 12: Land Supply Profile – Corindhap

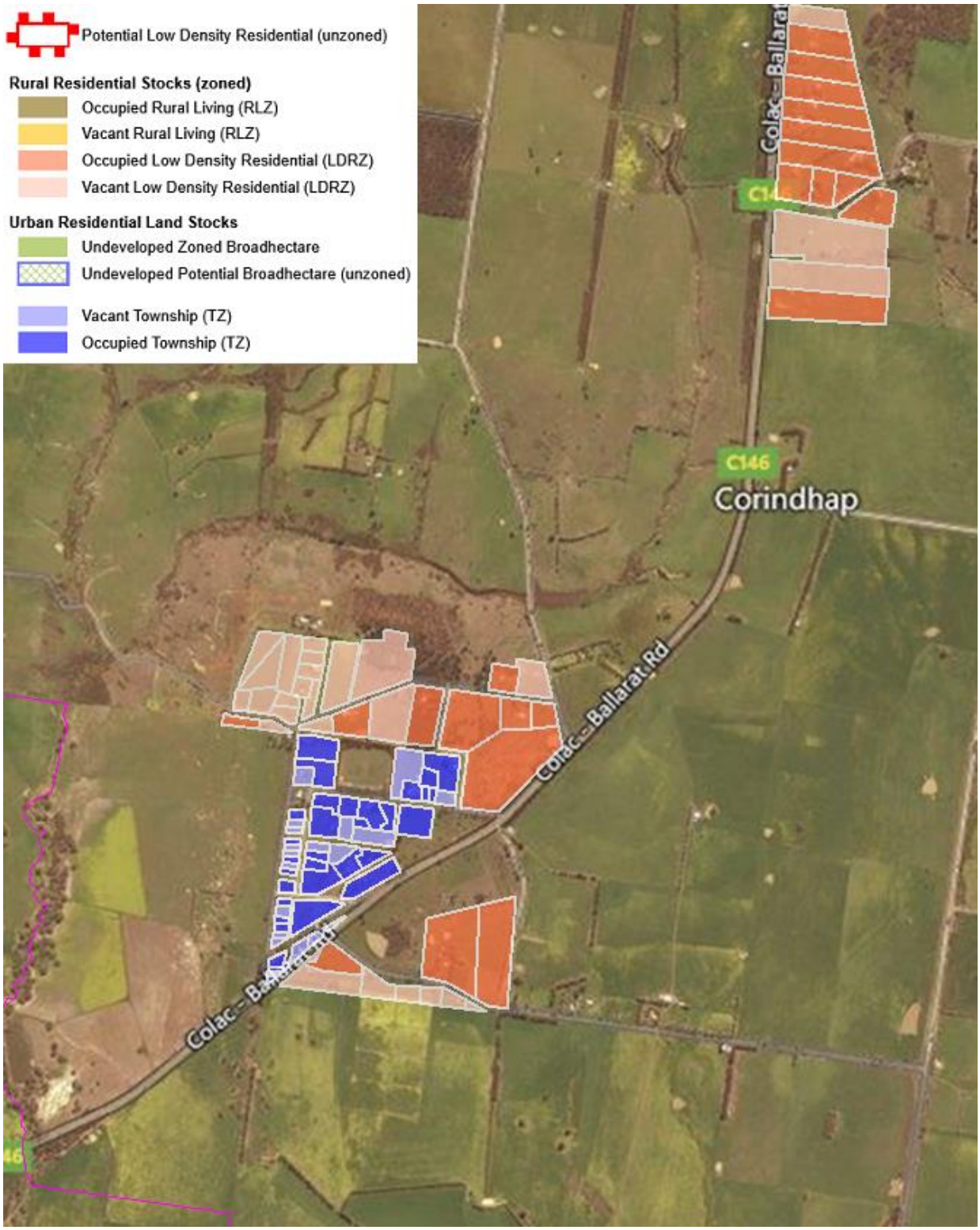


Table 28: Residential Land Supply Summary – Corindhap

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	28		18	**46**
Occupied (lots) [1]	22		35	**57**
Lot Stock Area (ha)				
Vacant (ha) [1]	31.6		5.1	**37**
Occupied (ha) [1]	48.8		15.5	**64**
Average Annual Lot Production (2013 to 19)	0.3		0.2	**1**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)	0.3			**0**
Average Annual Dwelling Production (2019 to 21)	0.4		0.4	**1**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	*24*		6	**30**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	41	0	9	**50**
Dwelling Capacity - Scenario 2	73	0	23	**96**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Dereel

Map 13: Land Supply Profile – Dereel

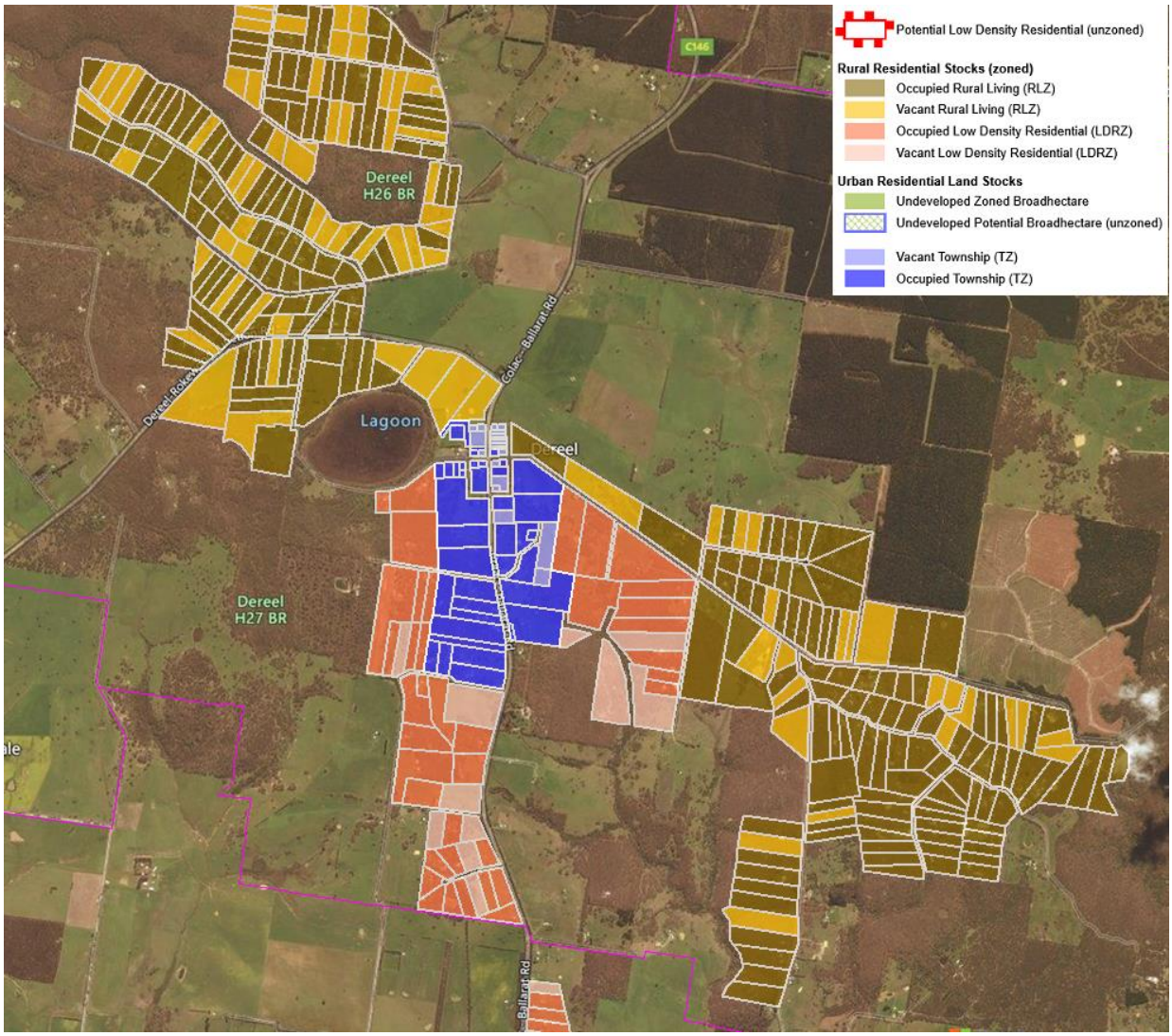


Table 29: Residential Land Supply Summary – Dereel

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	11	78	19	**108**
Occupied (lots) [1]	38	212	35	**285**
Lot Stock Area (ha)				
Vacant (ha) [1]	45.6	212	7.1	**265**
Occupied (ha) [1]	154	571	91.9	**817**
Average Annual Lot Production (2013 to 19)	0.3	1.3	0.3	**2**
Average Annual Lot Production (2019 to 21)	0.8			**1**
Average Annual Dwelling Production (2013 to 19)	0.8	1.8	0.2	**3**
Average Annual Dwelling Production (2019 to 21)	1.2	3.2	0.4	**5**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	222		2	**224**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	229	77	6	**312**
Dwelling Capacity - Scenario 2	260	77	195	**532**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Durham Lead

Map 14: Land Supply Profile – Durham Lead

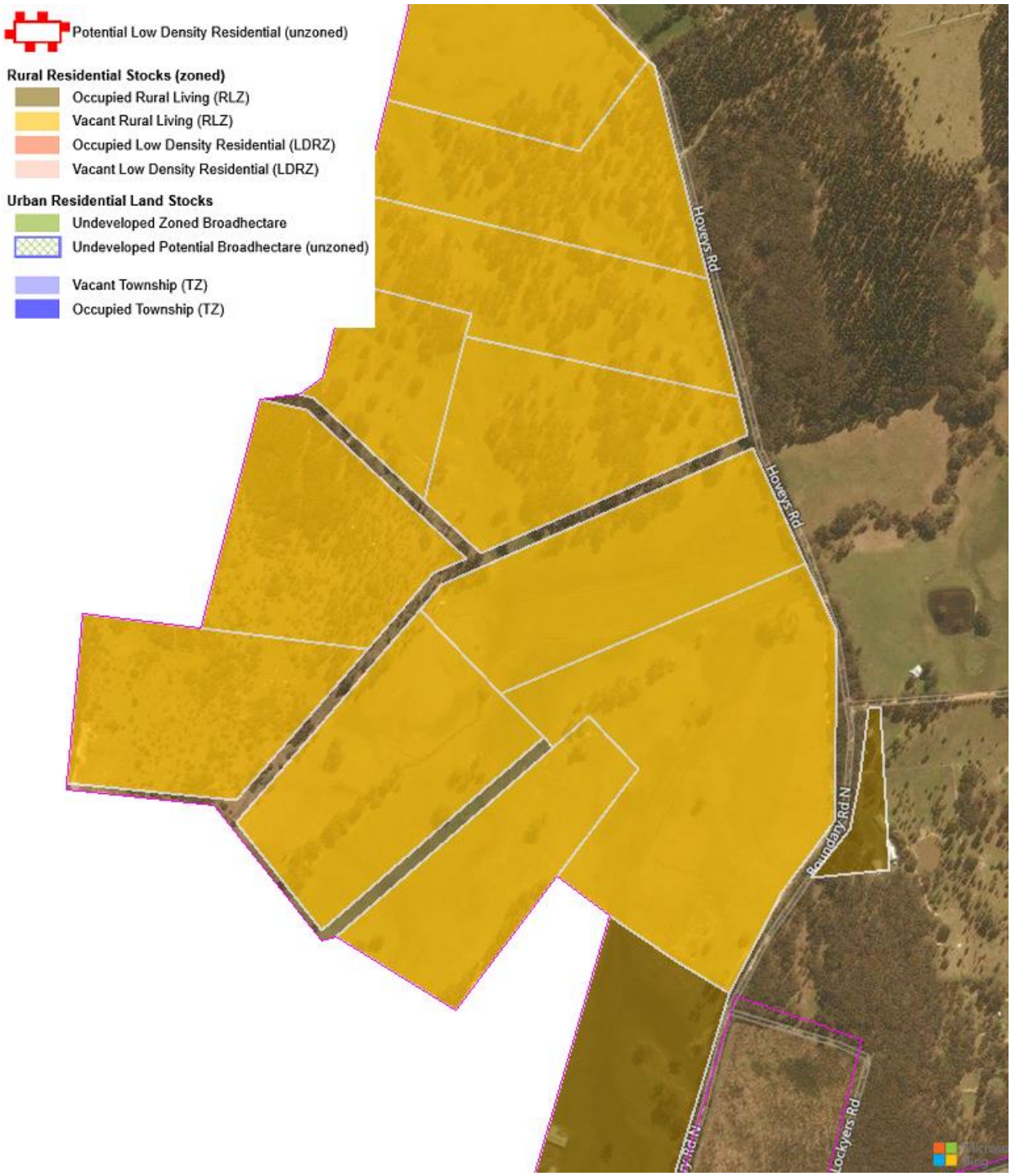


Table 30: Residential Land Supply Summary – Durham Lead

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		11		**11**
Occupied (lots) [1]		2		**2**
Lot Stock Area (ha)				
Vacant (ha) [1]		94		**94**
Occupied (ha) [1]		9		**9**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	11	0	**11**
Dwelling Capacity - Scenario 2	0	12	0	**12**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Enfield

Map 15: Land Supply Profile – Enfield

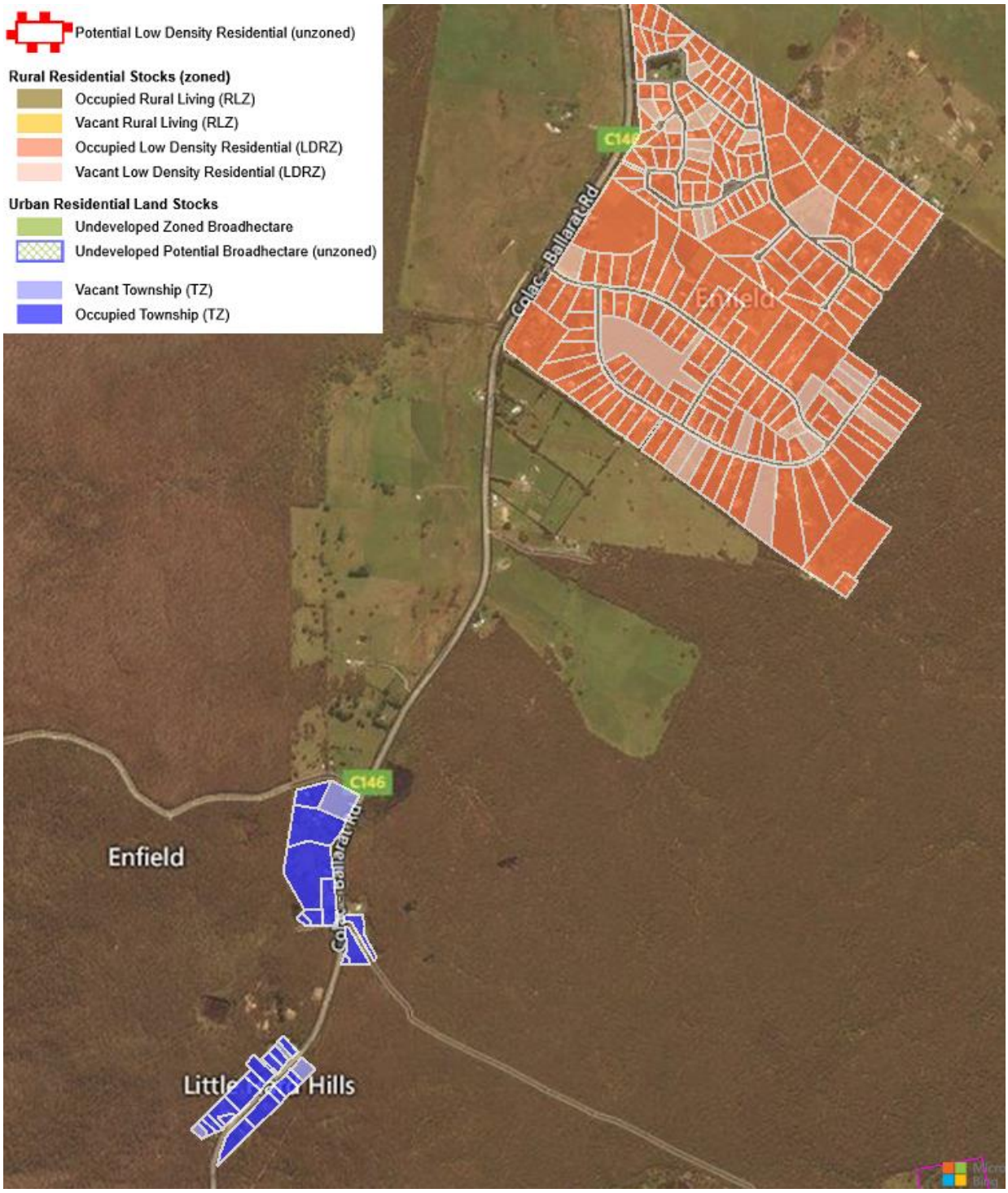


Table 31: Residential Land Supply Summary – Enfield

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	24		4	**28**
Occupied (lots) [1]	181		26	**207**
Lot Stock Area (ha)				
Vacant (ha) [1]	26.1		2.6	**29**
Occupied (ha) [1]	189.9		19.2	**209**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)	1.5			**2**
Average Annual Dwelling Production (2019 to 21)	1.2			**1**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	*41*			**41**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	63	0	2	**65**
Dwelling Capacity - Scenario 2	80	0	26	**106**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Garibaldi

Map 16: Land Supply Profile – Garibaldi

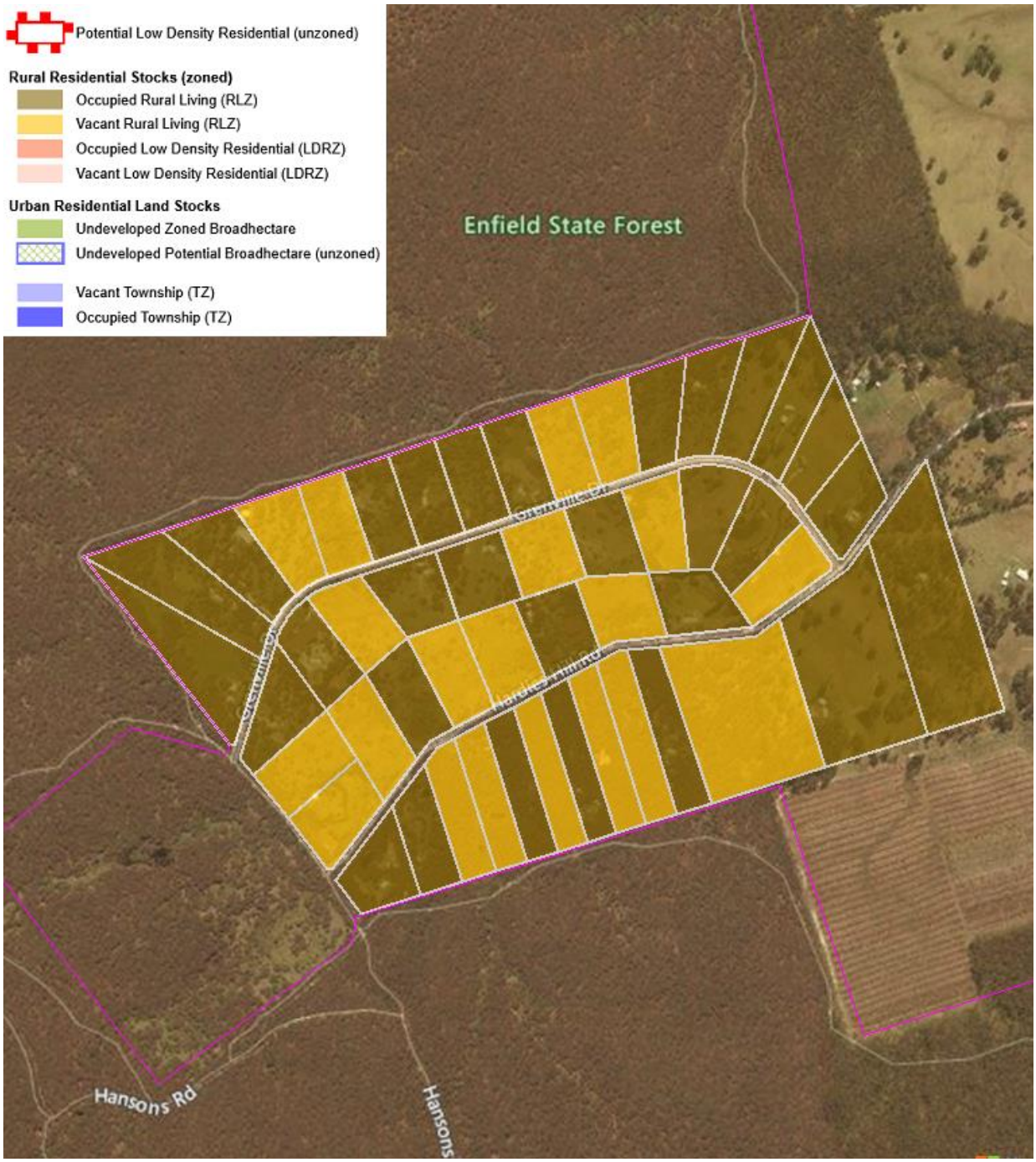


Table 32: Residential Land Supply Summary – Garibaldi

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		20		**20**
Occupied (lots) [1]		30		**30**
Lot Stock Area (ha)				
Vacant (ha) [1]		48		**48**
Occupied (ha) [1]		80		**80**
Average Annual Lot Production (2013 to 19)		0.3		**0**
Average Annual Lot Production (2019 to 21)		0.8		**1**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	20	0	**20**
Dwelling Capacity - Scenario 2	0	20	0	**20**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Haddon

Map 17: Land Supply Profile – Haddon

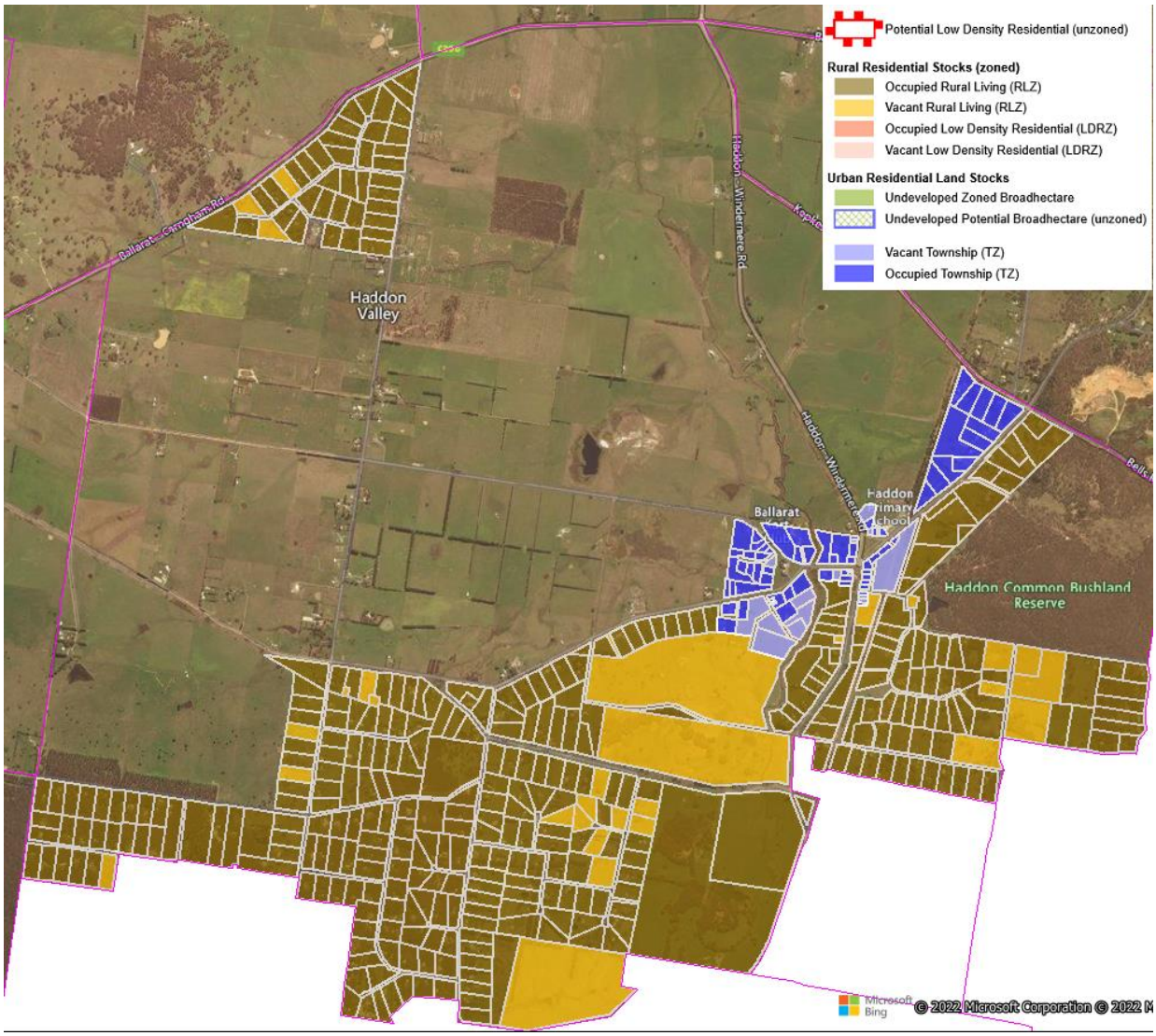


Table 33: Residential Land Supply Summary – Haddon

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		30	14	**44**
Occupied (lots) [1]		356	73	**429**
Lot Stock Area (ha)				
Vacant (ha) [1]		212	21	**233**
Occupied (ha) [1]		931	61	**992**
Average Annual Lot Production (2013 to 19)		1.7		**2**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		1.7	1.5	**3**
Average Annual Dwelling Production (2019 to 21)		2	1.6	**4**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)		62		**62**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	88	8	**96**
Dwelling Capacity - Scenario 2	0	115	112	**227**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Happy Valley

Map 18: Land Supply Profile – Happy Valley

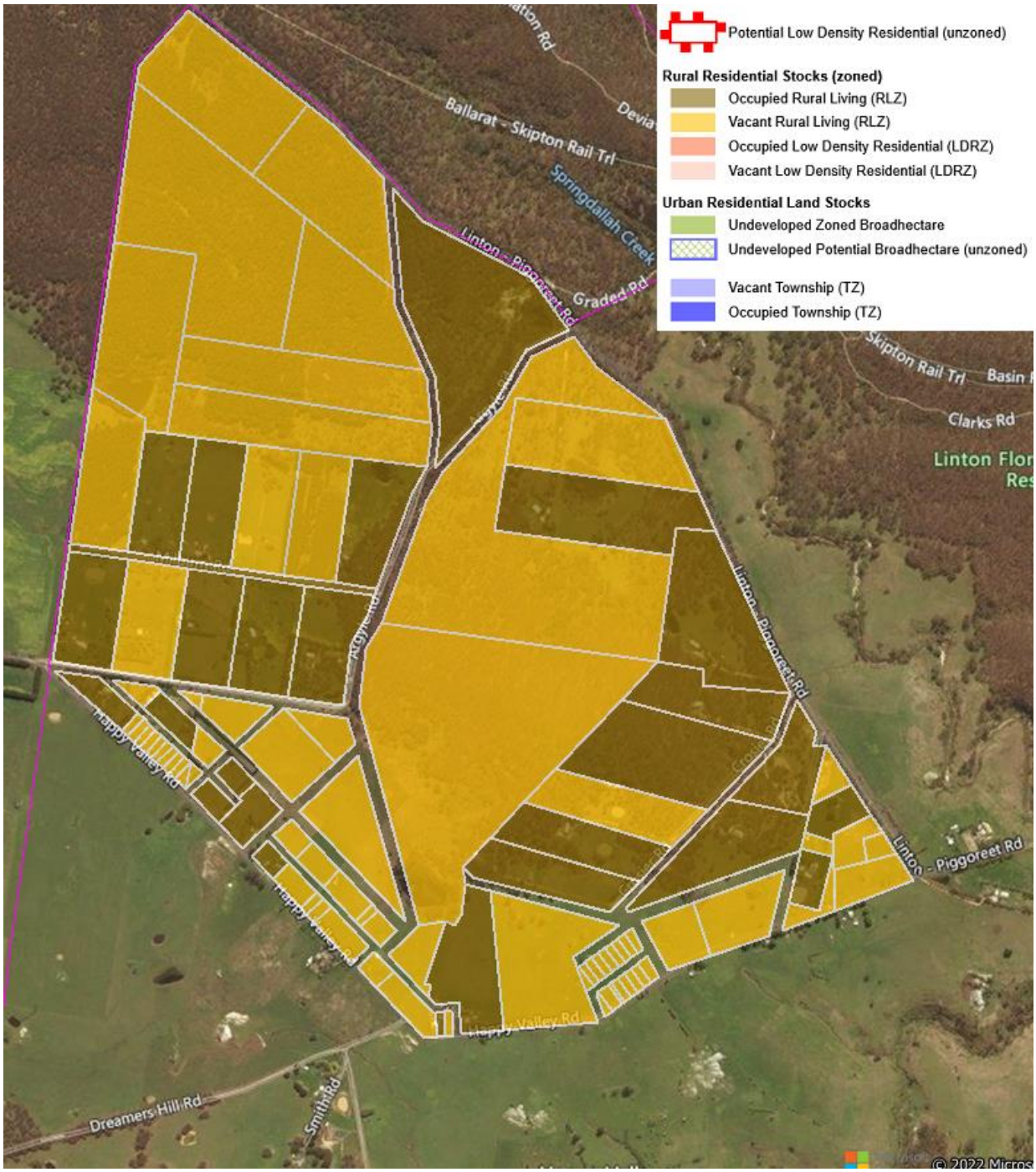


Table 34: Residential Land Supply Summary – Happy Valley

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		71		**71**
Occupied (lots) [1]		27		**27**
Lot Stock Area (ha)				
Vacant (ha) [1]		188		**188**
Occupied (ha) [1]		103		**103**
Average Annual Lot Production (2013 to 19)		0.2		**0**
Average Annual Lot Production (2019 to 21)		0.4		**0**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	36	0	**36**
Dwelling Capacity - Scenario 2	0	41	0	**41**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Illabarook

Map 19: Land Supply Profile – Illabarook

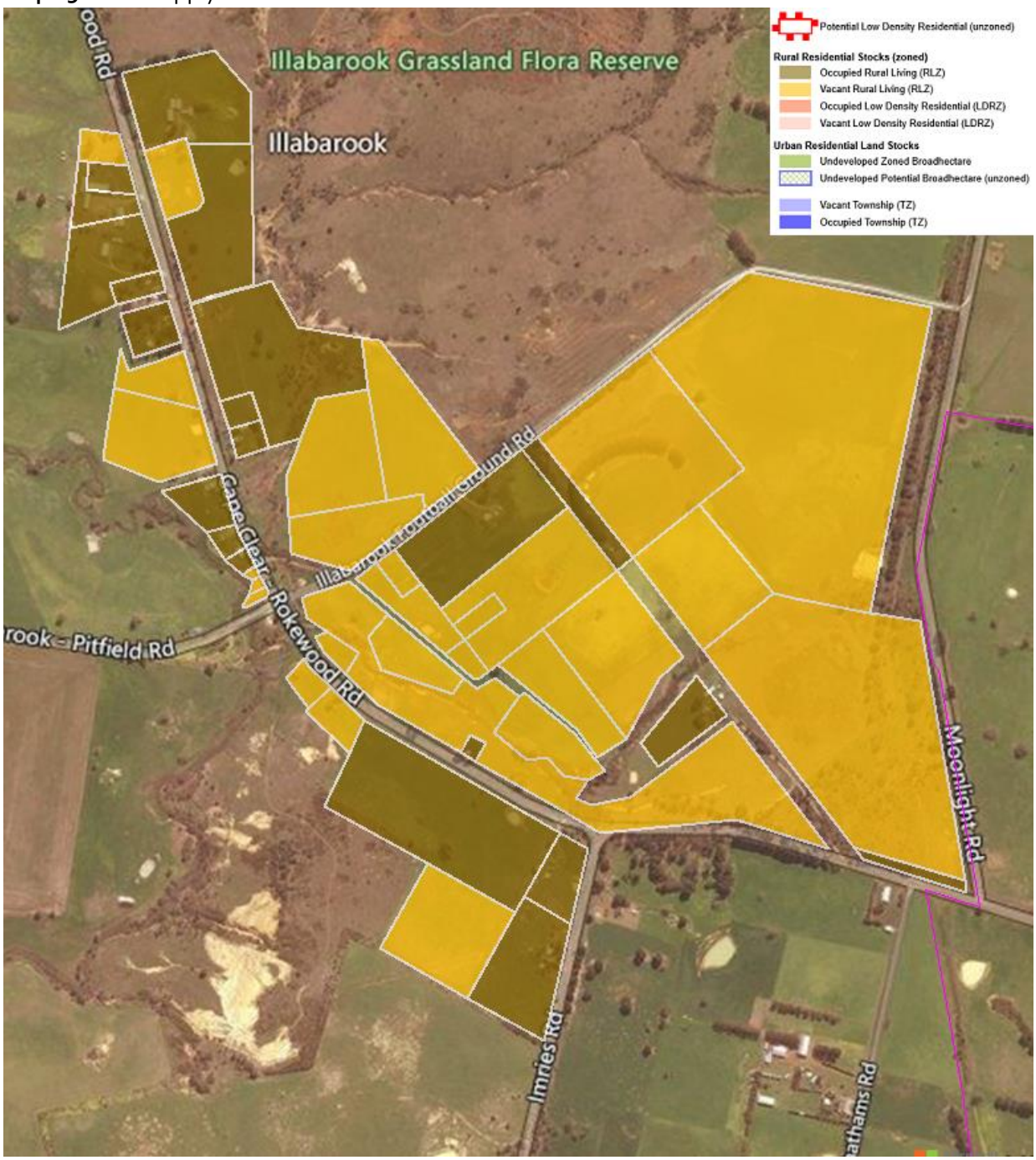


Table 35: Residential Land Supply Summary – Illabarook

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		28		**28**
Occupied (lots) [1]		21		**21**
Lot Stock Area (ha)				
Vacant (ha) [1]		99		**99**
Occupied (ha) [1]		41		**41**
Average Annual Lot Production (2013 to 19)		0.2		**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		0.2		**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	21	0	**21**
Dwelling Capacity - Scenario 2	0	23	0	**23**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Inverleigh

Map 20: Land Supply Profile – Inverleigh

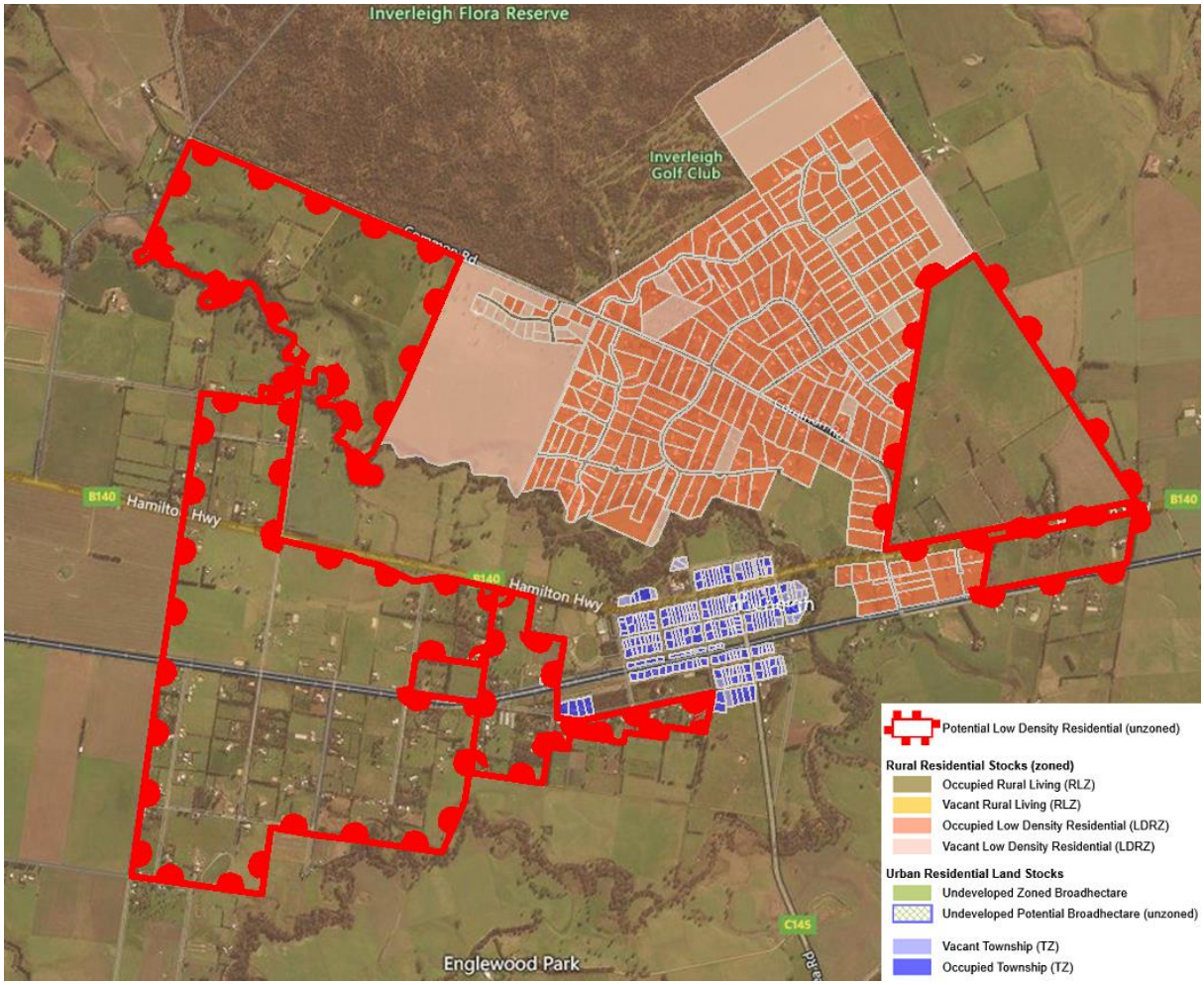


Table 36: Residential Land Supply Summary – Inverleigh

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	25		20	**45**
Occupied (lots) [1]	255		199	**454**
Lot Stock Area (ha)				
Vacant (ha) [1]	143		4.3	**147**
Occupied (ha) [1]	314		33.3	**347**
Average Annual Lot Production (2013 to 19)	8.5		2.3	**11**
Average Annual Lot Production (2019 to 21)	8.4		0.4	**9**
Average Annual Dwelling Production (2013 to 19)	12.7		1.8	**15**
Average Annual Dwelling Production (2019 to 21)	4		0.4	**4**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	267			**267**
Dwelling Capacity - Potential Residential (unzoned)	970			**970**
Dwelling Capacity - Scenario 1	1258	0	1	**1259**
Dwelling Capacity - Scenario 2	1277	0	1	**1278**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Lethbridge

Map 21: Land Supply Profile – Lethbridge

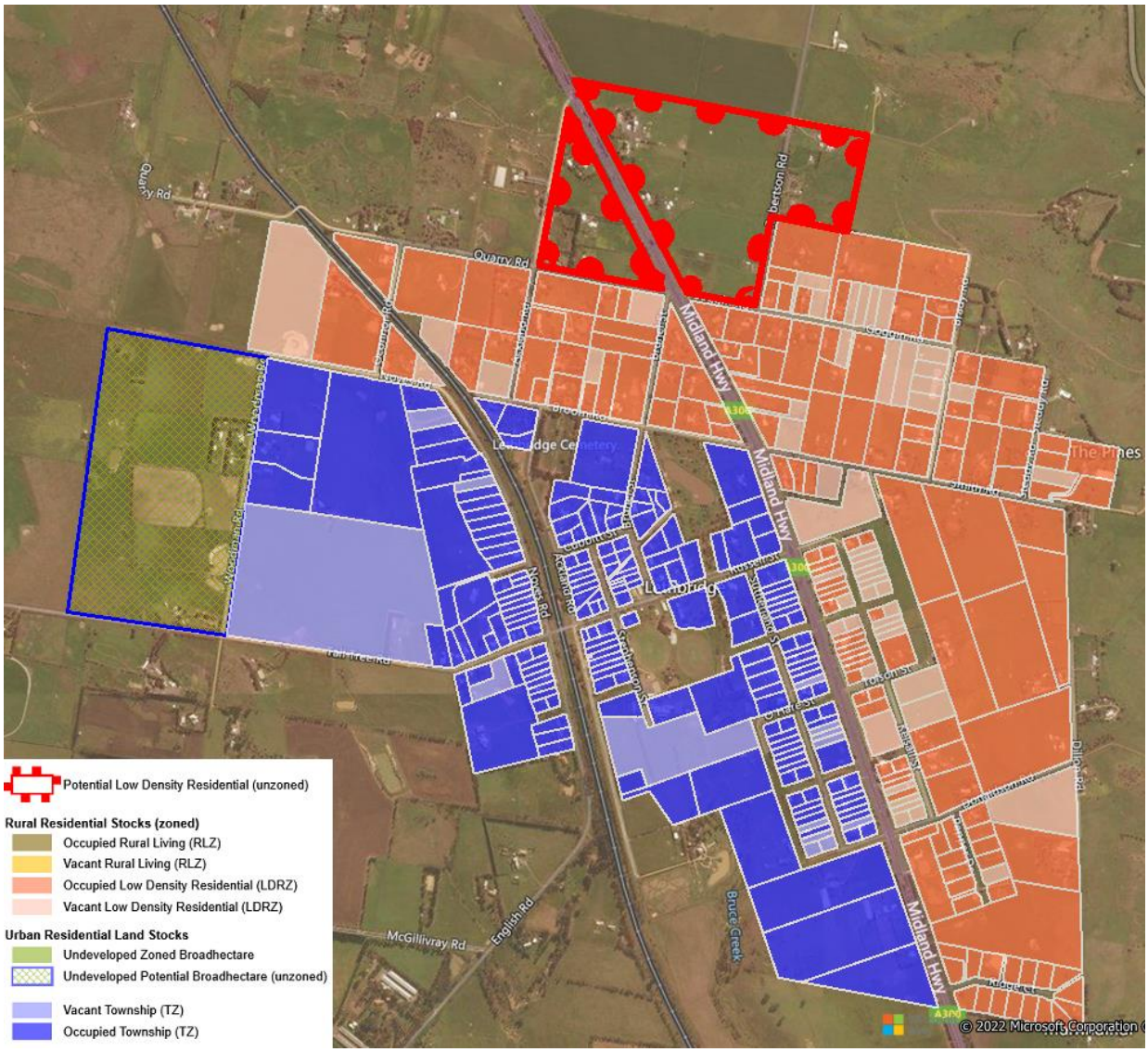


Table 37: Residential Land Supply Summary – Lethbridge

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	52		14	**66**
Occupied (lots) [1]	146		190	**336**
Lot Stock Area (ha)				
Vacant (ha) [1]	143		36.2	**179**
Occupied (ha) [1]	314		128.3	**442**
Average Annual Lot Production (2013 to 19)	7.5		2.5	**10**
Average Annual Lot Production (2019 to 21)	10.8		6	**17**
Average Annual Dwelling Production (2013 to 19)			1.3	**1**
Average Annual Dwelling Production (2019 to 21)			2	**2**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	106		750	**856**
Dwelling Capacity - Potential Residential (unzoned)	62		356	**418**
Dwelling Capacity - Scenario 1	196	0	1111	**1307**
Dwelling Capacity - Scenario 2	224	0	1133	**1357**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Linton

Map 22: Land Supply Profile – Linton

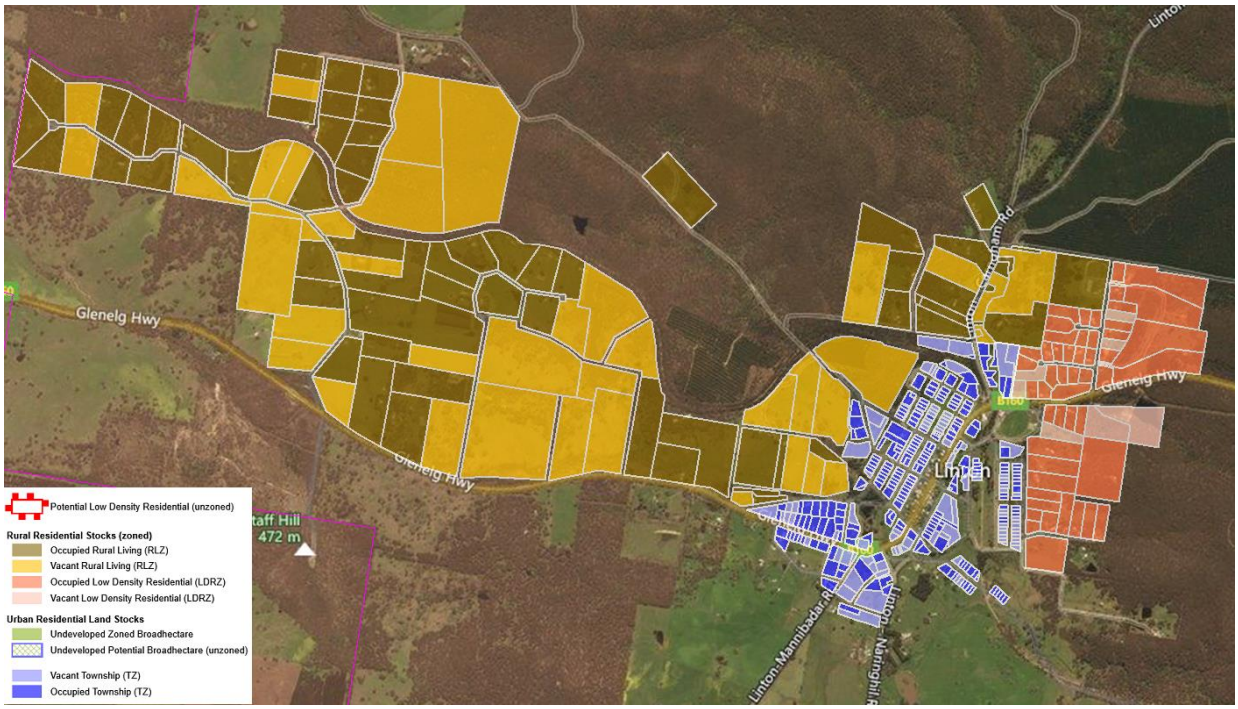


Table 38: Residential Land Supply Summary – Linton

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	7	41	91	**139**
Occupied (lots) [1]	50	64	190	**304**
Lot Stock Area (ha)				
Vacant (ha) [1]	13	281	24.6	**319**
Occupied (ha) [1]	80.3	268	38.7	**387**
Average Annual Lot Production (2013 to 19)		0.2		**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)	0.3	0.3	1.3	**2**
Average Annual Dwelling Production (2019 to 21)	1.6		1.6	**3**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	67			**67**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	74	40	18	**132**
Dwelling Capacity - Scenario 2	95	44	30	**169**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Maude

Map 23: Land Supply Profile – Maude

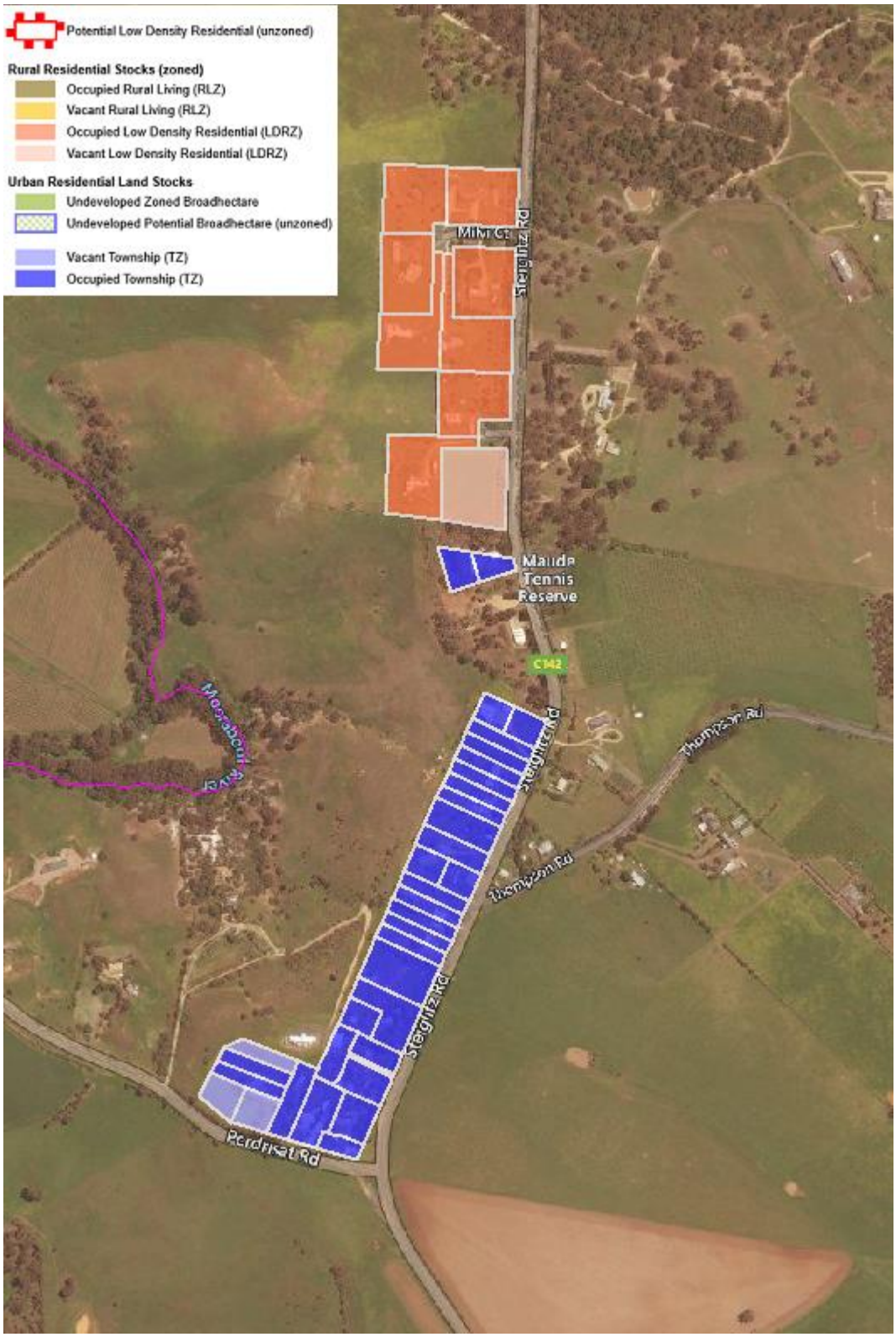


Table 39: Residential Land Supply Summary – Maude

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	1		3	**4**
Occupied (lots) [1]	8		31	**39**
Lot Stock Area (ha)				
Vacant (ha) [1]	1		0.7	**2**
Occupied (ha) [1]	6.6		7.8	**14**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)			0.2	**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	1	0	0	**1**
Dwelling Capacity - Scenario 2	2	0	0	**2**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Meredith

Map 24: Land Supply Profile – Meredith

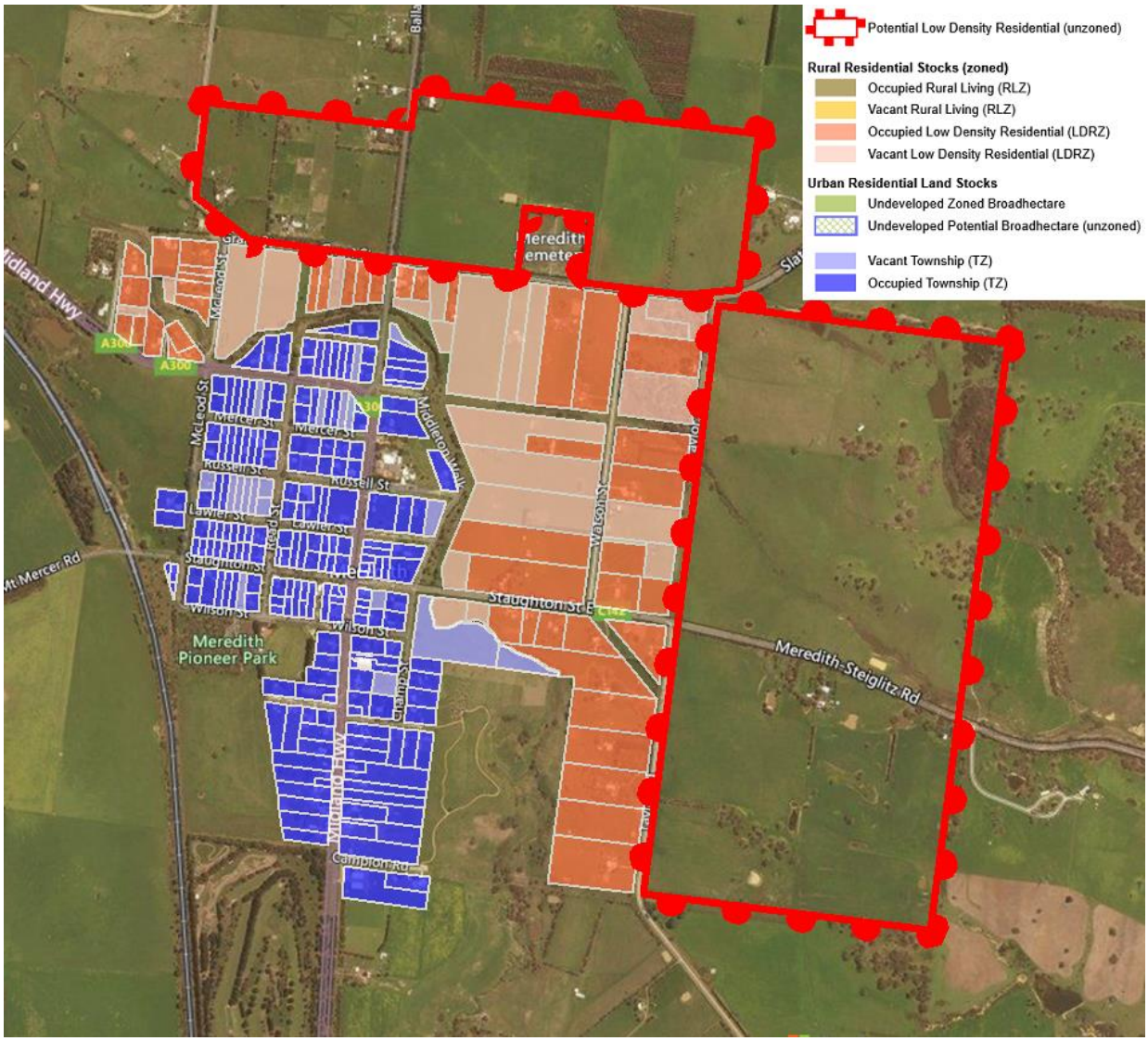


Table 40: Residential Land Supply Summary – Meredith

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	22		19	**41**
Occupied (lots) [1]	43		211	**254**
Lot Stock Area (ha)				
Vacant (ha) [1]	34.6		7	**42**
Occupied (ha) [1]	52.1		51.5	**104**
Average Annual Lot Production (2013 to 19)	0.7		1.2	**2**
Average Annual Lot Production (2019 to 21)	1.2			**1**
Average Annual Dwelling Production (2013 to 19)	0.3		1.3	**2**
Average Annual Dwelling Production (2019 to 21)	0.8		4	**5**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)			15	**15**
Dwelling Capacity - Potential Residential (unzoned)	270			**270**
Dwelling Capacity - Scenario 1	288	0	18	**306**
Dwelling Capacity - Scenario 2	346	0	29	**375**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Napoleons

Map 25: Land Supply Profile – Napoleons

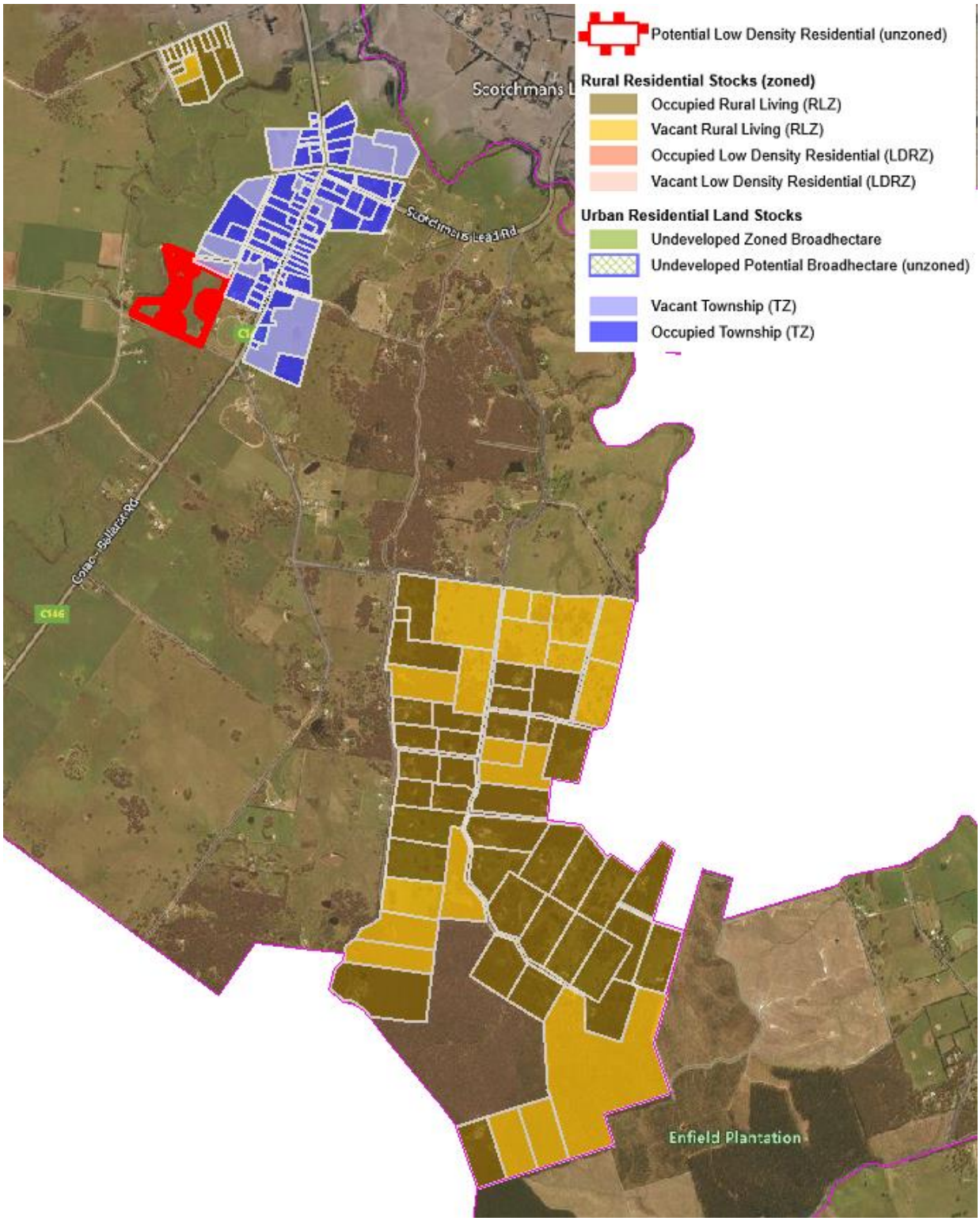


Table 41: Residential Land Supply Summary – Napoleons

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		20	13	**33**
Occupied (lots) [1]		50	65	**115**
Lot Stock Area (ha)				
Vacant (ha) [1]		185	34.9	**220**
Occupied (ha) [1]		261	60.3	**321**
Average Annual Lot Production (2013 to 19)		0.8	0.2	**1**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		0.3	0.5	**1**
Average Annual Dwelling Production (2019 to 21)		0.4		**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)	28			**28**
Dwelling Capacity - Scenario 1	28	20	10	**58**
Dwelling Capacity - Scenario 2	28	25	153	**206**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Newtown

Map 26: Land Supply Profile – Newtown

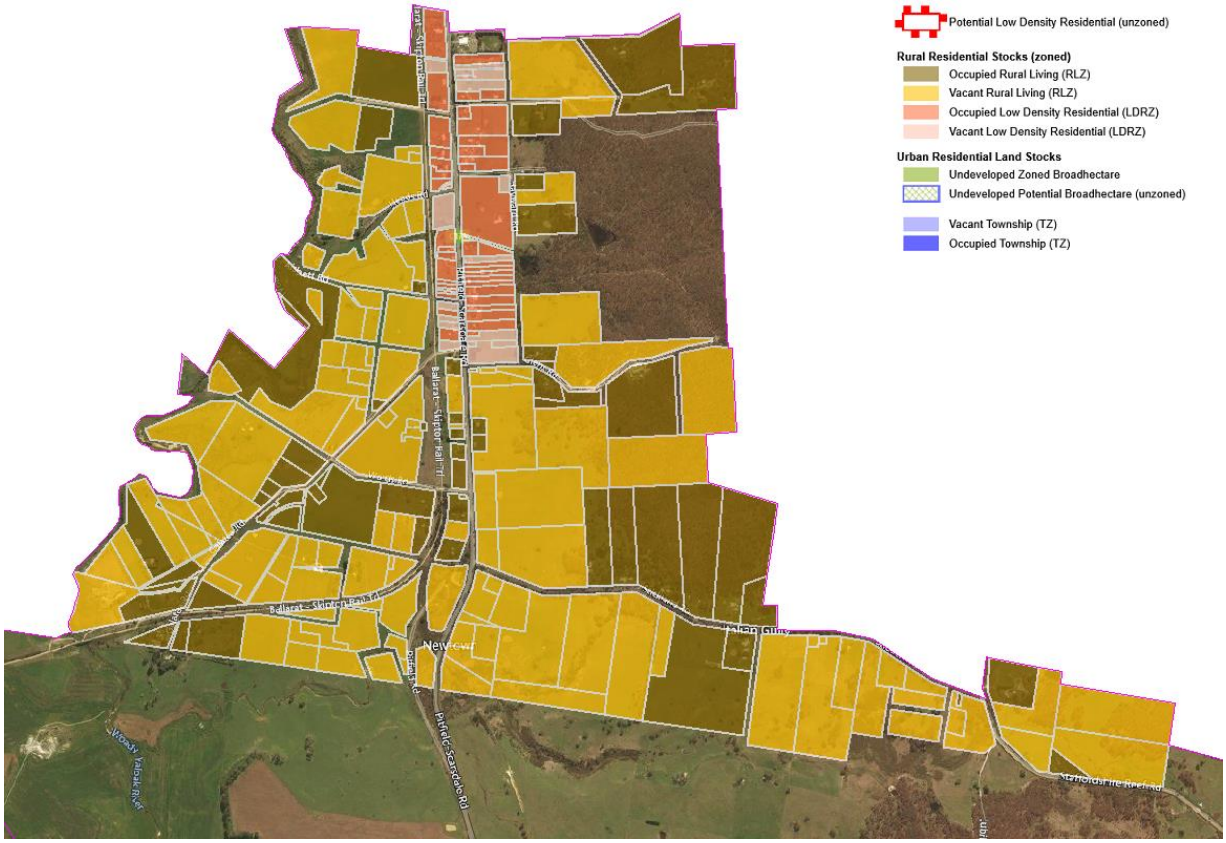


Table 42: Residential Land Supply Summary – Newtown

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	16	117		**133**
Occupied (lots) [1]	44	58		**102**
Lot Stock Area (ha)				
Vacant (ha) [1]	7.9	300		**308**
Occupied (ha) [1]	27.2	145		**172**
Average Annual Lot Production (2013 to 19)		1.5		**2**
Average Annual Lot Production (2019 to 21)	0.4			**0**
Average Annual Dwelling Production (2013 to 19)	0.3	0.7		**1**
Average Annual Dwelling Production (2019 to 21)	0.4	0.8		**1**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	10			**10**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	18	103	0	**121**
Dwelling Capacity - Scenario 2	22	103	0	**125**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Nintingbool

Map 27: Land Supply Profile – Nintingbool

Table 43: Residential Land Supply Summary – Nintingbool

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		0		**0**
Occupied (lots) [1]		66		**66**
Lot Stock Area (ha)				
Vacant (ha) [1]		0		**0**
Occupied (ha) [1]		166		**166**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	0	0	**0**
Dwelling Capacity - Scenario 2	0	0	0	**0**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Rokewood

Map 28: Land Supply Profile – Rokewood

Table 44: Residential Land Supply Summary – Rokewood

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	2		34	**36**
Occupied (lots) [1]	1		78	**79**
Lot Stock Area (ha)				
Vacant (ha) [1]	1.3		14.3	**16**
Occupied (ha) [1]	1.2		16.4	**18**
Average Annual Lot Production (2013 to 19)			1	**1**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)			1.6	**2**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)			2	**2**
Dwelling Capacity - Potential Residential (unzoned)	24			**24**
Dwelling Capacity - Scenario 1	26	0	12	**38**
Dwelling Capacity - Scenario 2	26	0	25	**51**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Ross Creek

Map 29: Land Supply Profile – Ross Creek

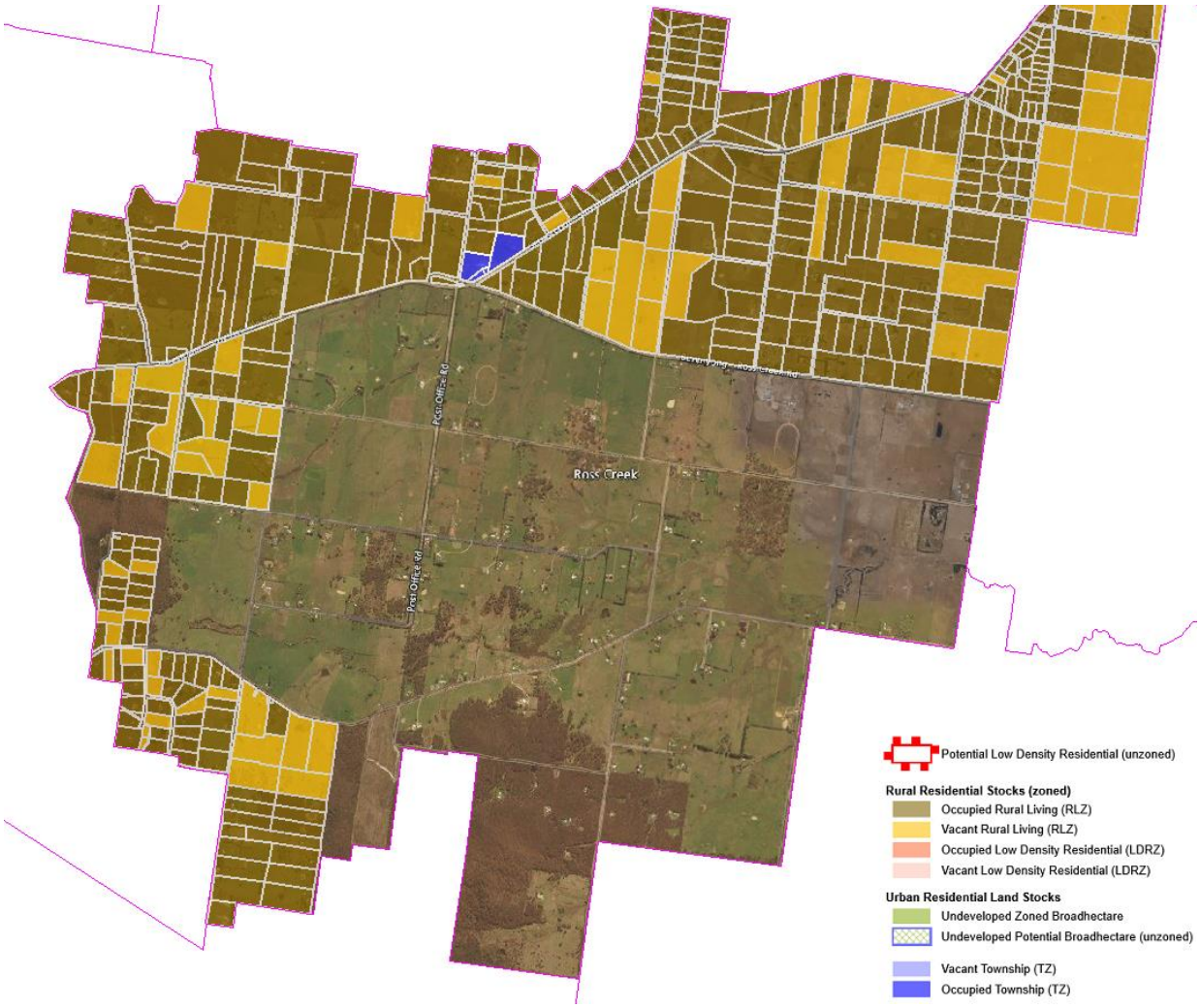


Table 45: Residential Land Supply Summary – Ross Creek

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		75	0	**75**
Occupied (lots) [1]		316	5	**321**
Lot Stock Area (ha)				
Vacant (ha) [1]		438	0	**438**
Occupied (ha) [1]		1339	9.5	**1349**
Average Annual Lot Production (2013 to 19)		7.2		**7**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		4.5		**5**
Average Annual Dwelling Production (2019 to 21)		3.6		**4**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	73	0	**73**
Dwelling Capacity - Scenario 2	0	94	0	**94**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Scarsdale

Map 30: Land Supply Profile – Scarsdale

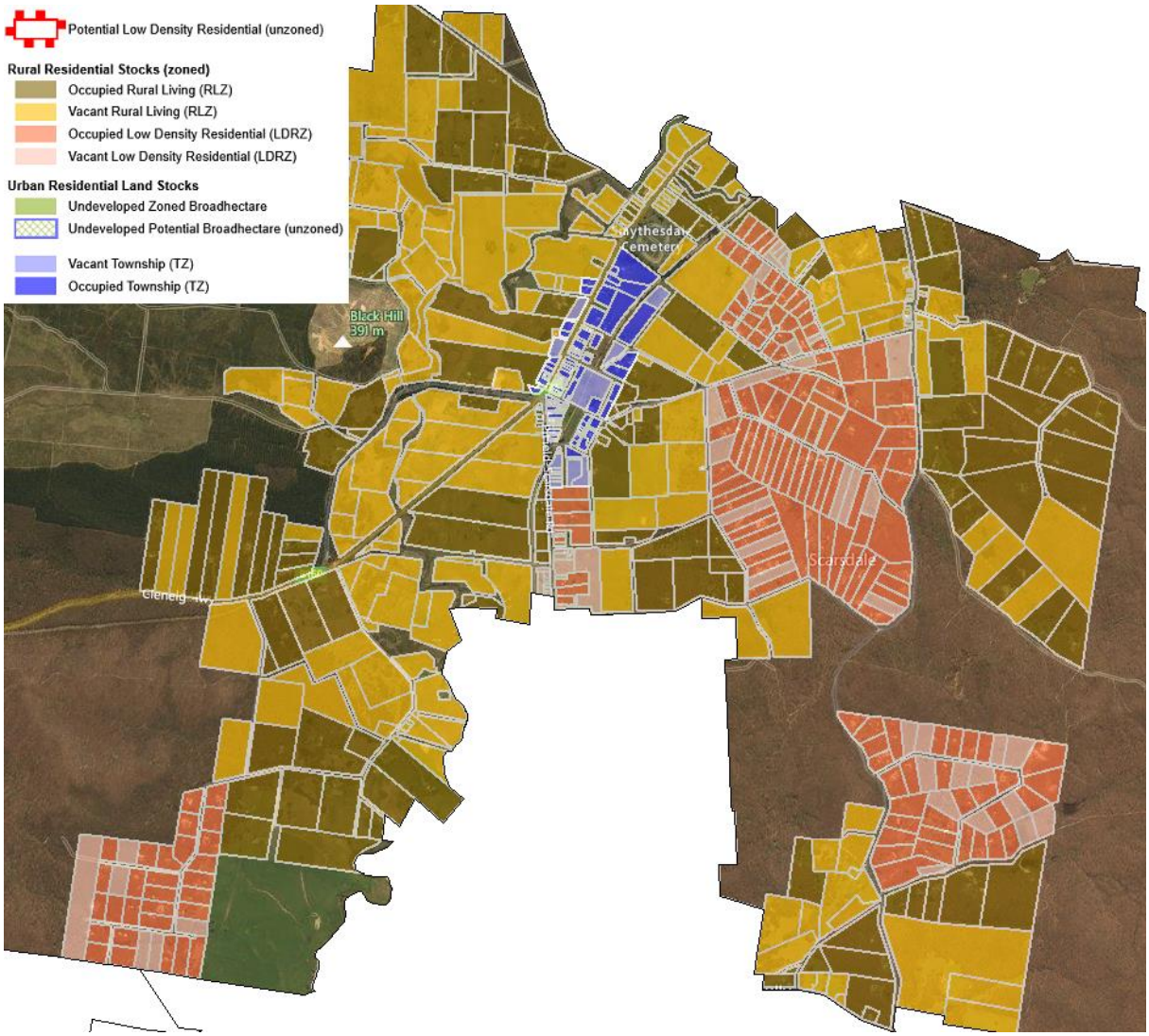


Table 46: Residential Land Supply Summary – Scarsdale

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	55		15	**70**
Occupied (lots) [1]	164		98	**262**
Lot Stock Area (ha)				
Vacant (ha) [1]	86.4	739	12.4	**838**
Occupied (ha) [1]	330.3	640	32.6	**1003**
Average Annual Lot Production (2013 to 19)	0.8	3		**4**
Average Annual Lot Production (2019 to 21)	0.8			**1**
Average Annual Dwelling Production (2013 to 19)	1.2	1.5	0.2	**3**
Average Annual Dwelling Production (2019 to 21)	2	1.6		**4**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	79			**79**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	113	127	7	**247**
Dwelling Capacity - Scenario 2	240	356	56	**652**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Shelford

Map 31: Land Supply Profile – Shelford

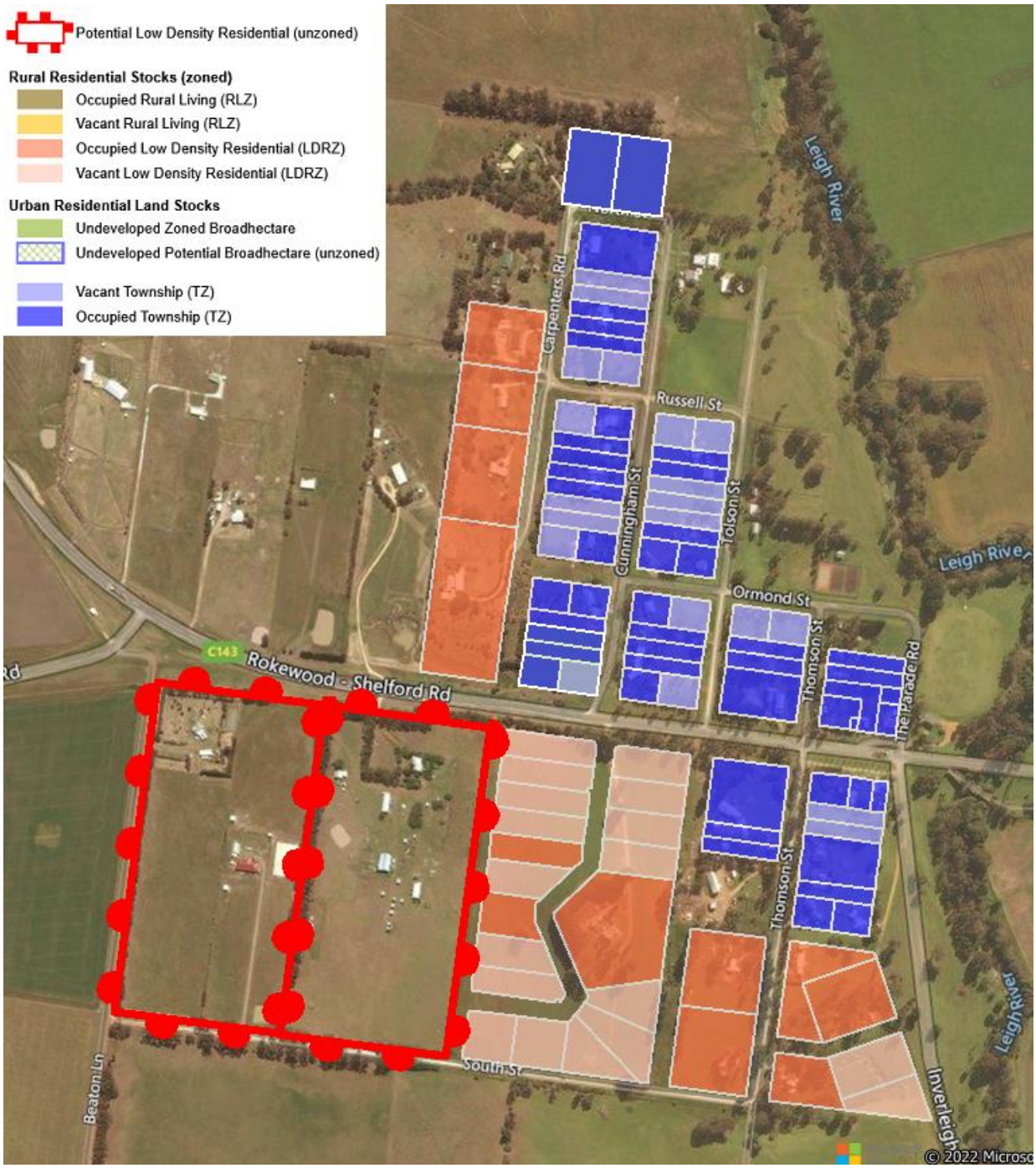


Table 47: Residential Land Supply Summary – Shelford

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	18		20	**38**
Occupied (lots) [1]	12		48	**60**
Lot Stock Area (ha)				
Vacant (ha) [1]	7.5		4.1	**12**
Occupied (ha) [1]	11.6		11.8	**23**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)	7.2			**7**
Average Annual Dwelling Production (2013 to 19)			0.3	**0**
Average Annual Dwelling Production (2019 to 21)	0.8		0.4	**1**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)			4	**4**
Dwelling Capacity - Potential Residential (unzoned)	40			**40**
Dwelling Capacity - Scenario 1	55	0	4	**59**
Dwelling Capacity - Scenario 2	55	0	5	**60**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Smythes Creek

Map 32: Land Supply Profile – Smythes Creek

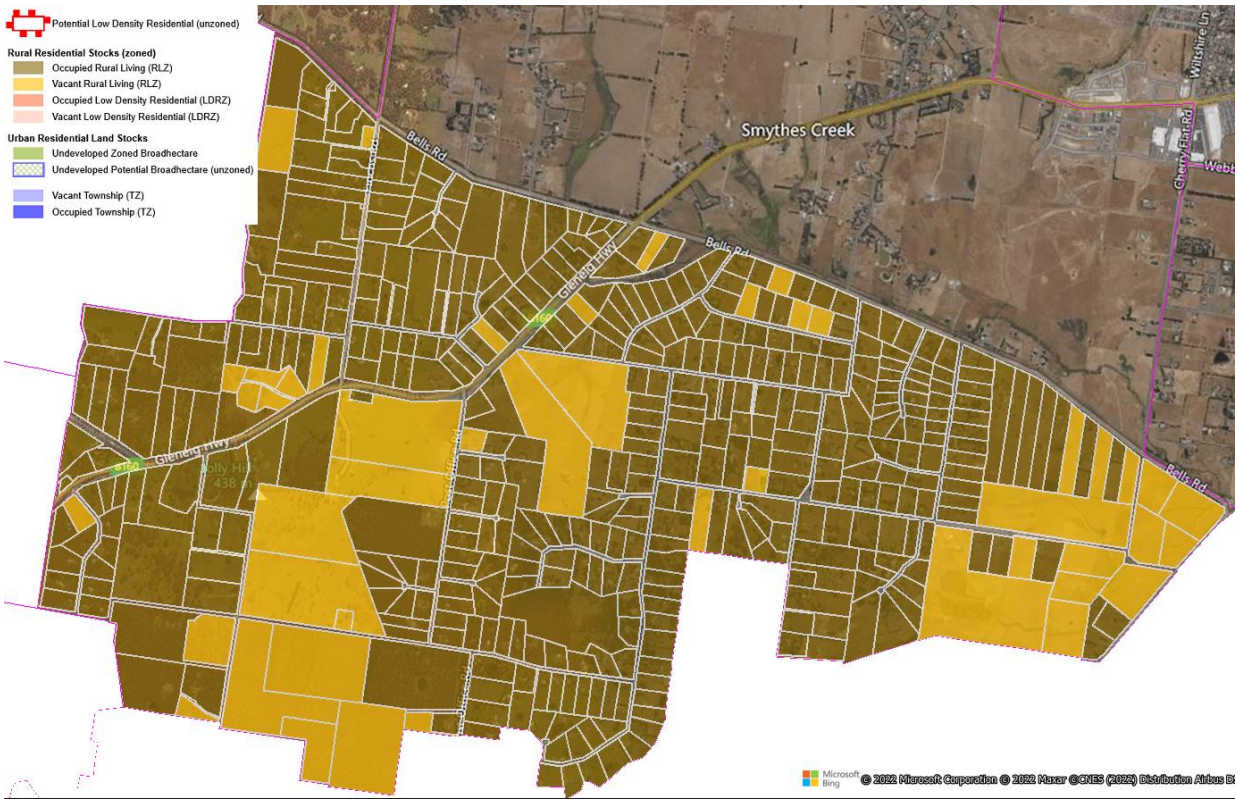


Table 48: Residential Land Supply Summary – Smythes Creek

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		46		**46**
Occupied (lots) [1]		429		**429**
Lot Stock Area (ha)				
Vacant (ha) [1]		413		**413**
Occupied (ha) [1]		1222		**1222**
Average Annual Lot Production (2013 to 19)		5		**5**
Average Annual Lot Production (2019 to 21)		8.4		**8**
Average Annual Dwelling Production (2013 to 19)		4.8		**5**
Average Annual Dwelling Production (2019 to 21)		5.6		**6**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)		43		**43**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	87	0	**87**
Dwelling Capacity - Scenario 2	0	125	0	**125**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Smythesdale

Map 33: Land Supply Profile – Smythesdale

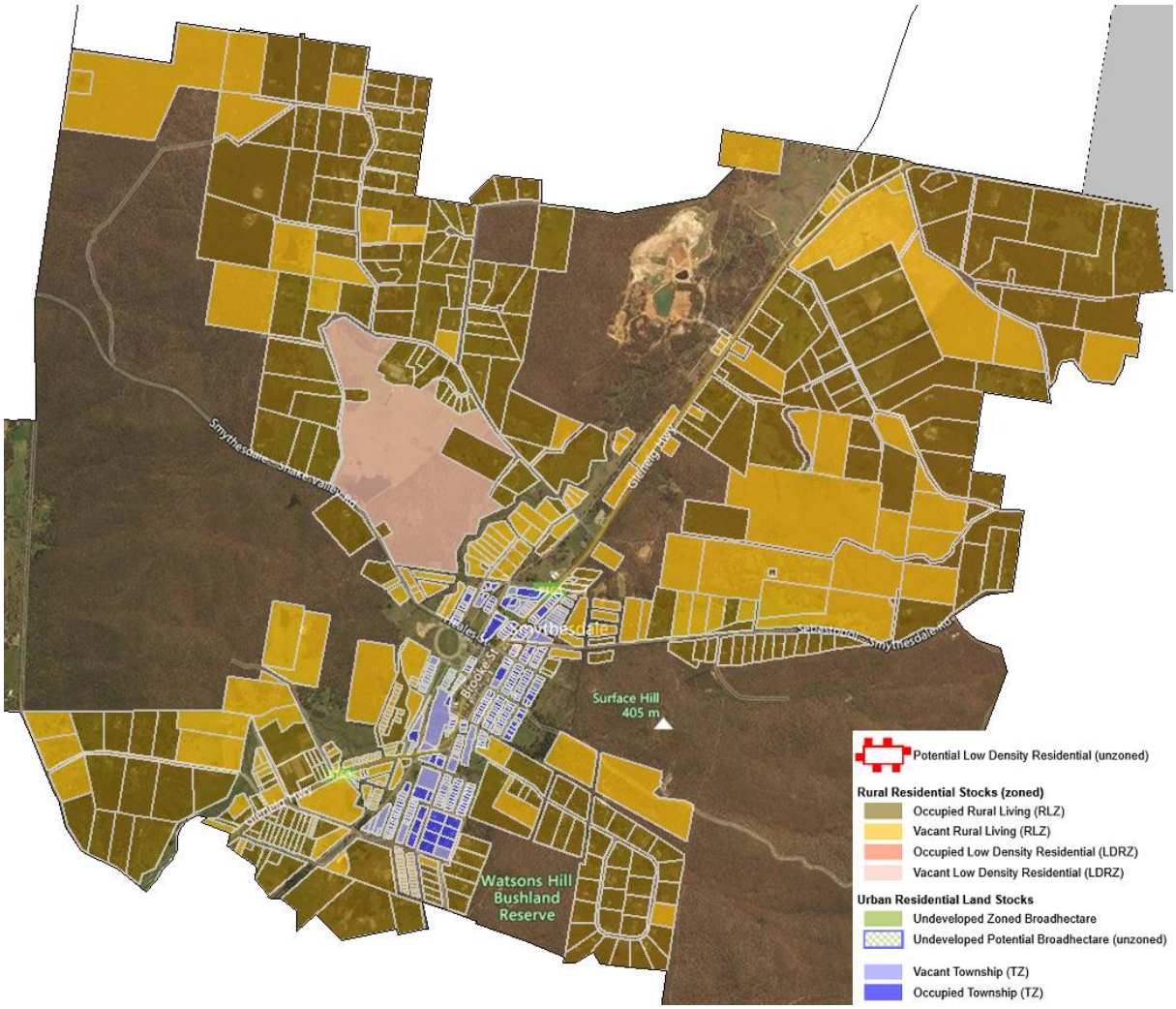


Table 49: Residential Land Supply Summary – Smythesdale

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	0	193	126	**319**
Occupied (lots) [1]	1	294	189	**484**
Lot Stock Area (ha)				
Vacant (ha) [1]	0	514	22	**536**
Occupied (ha) [1]	91.5	924	28.1	**1044**
Average Annual Lot Production (2013 to 19)		0.7		**1**
Average Annual Lot Production (2019 to 21)		0.4		**0**
Average Annual Dwelling Production (2013 to 19)		1.8	5.5	**7**
Average Annual Dwelling Production (2019 to 21)		1.6	6	**8**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	140	27		**167**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	140	130	114	**384**
Dwelling Capacity - Scenario 2	140	148	473	**761**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Staffordshire Reef

Map 34: Land Supply Profile – Staffordshire Reef

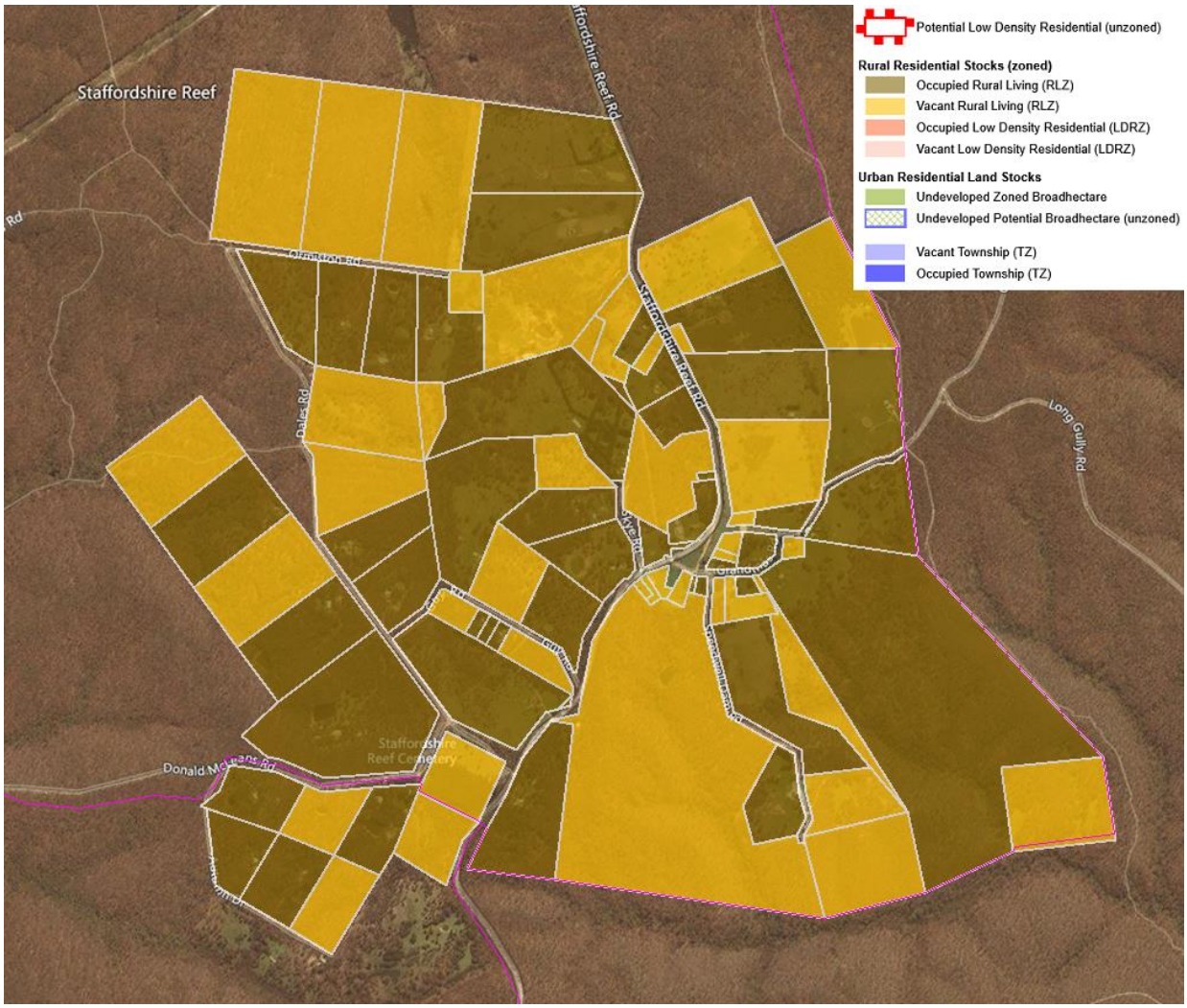


Table 50: Residential Land Supply Summary – Staffordshire Reef

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]		38		**38**
Occupied (lots) [1]		42		**42**
Lot Stock Area (ha)				
Vacant (ha) [1]		207		**207**
Occupied (ha) [1]		238		**238**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)		0.2		**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	30	0	**30**
Dwelling Capacity - Scenario 2	0	34	0	**34**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Steiglitz

Map 35: Land Supply Profile – Steiglitz

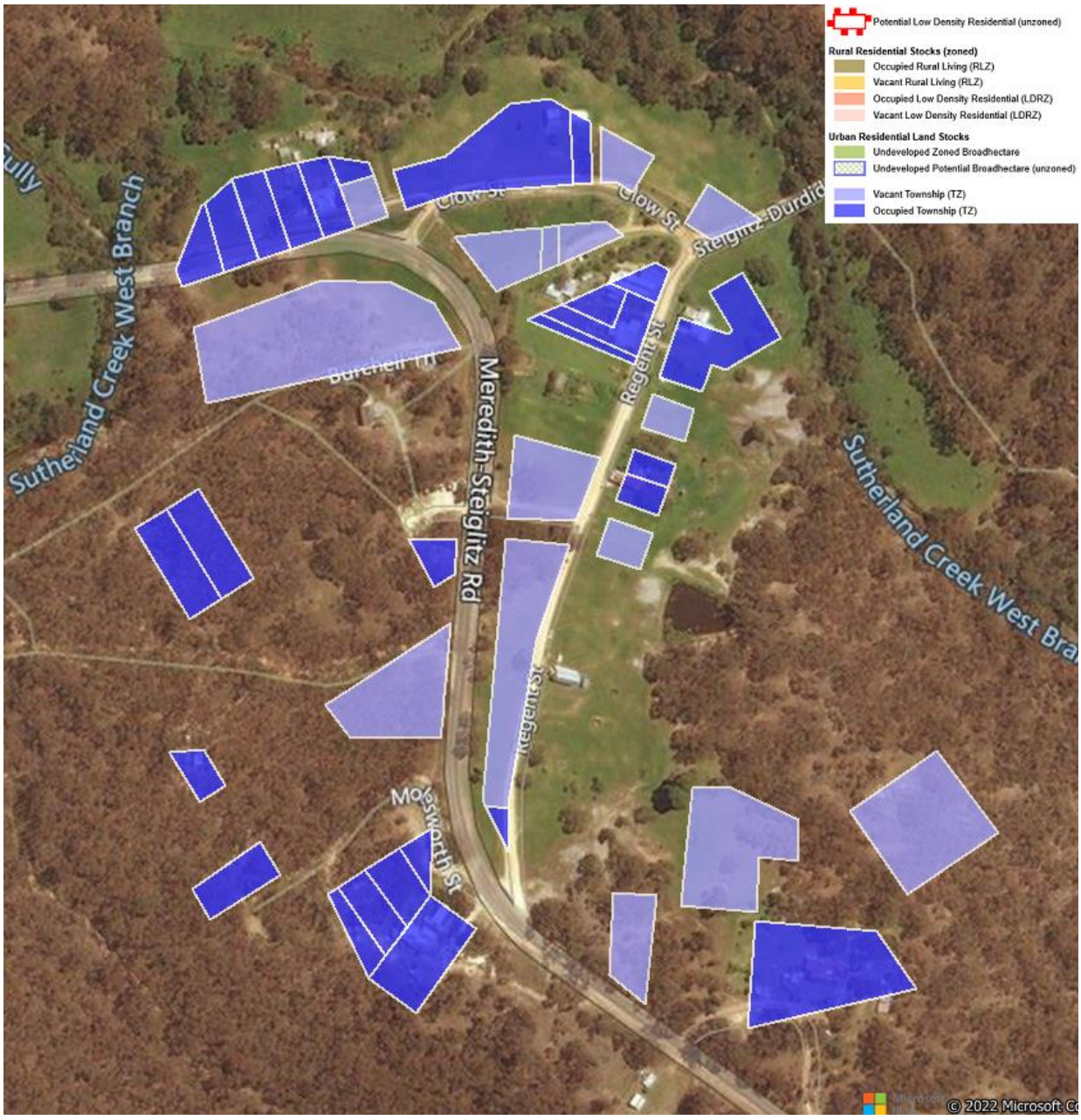


Table 51: Residential Land Supply Summary – Steiglitz

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]			15	**15**
Occupied (lots) [1]			27	**27**
Lot Stock Area (ha)				
Vacant (ha) [1]			2.4	**2**
Occupied (ha) [1]			2.3	**2**
Average Annual Lot Production (2013 to 19)				**0**
Average Annual Lot Production (2019 to 21)				**0**
Average Annual Dwelling Production (2013 to 19)				**0**
Average Annual Dwelling Production (2019 to 21)				**0**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)				**0**
Dwelling Capacity - Potential Residential (unzoned)				**0**
Dwelling Capacity - Scenario 1	0	0	1	**1**
Dwelling Capacity - Scenario 2	0	0	1	**1**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)

Teesdale

Map 36: Land Supply Profile – Teesdale

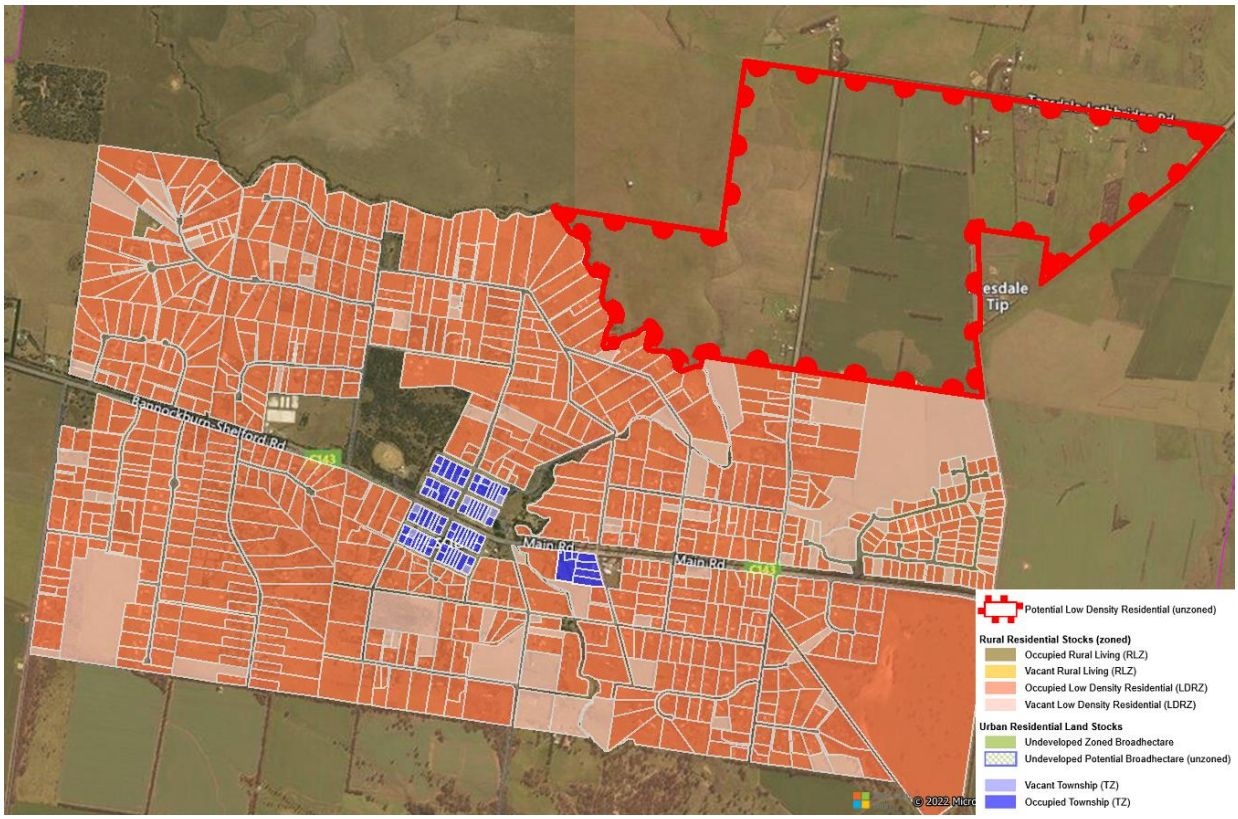


Table 52: Residential Land Supply Summary – Teesdale

	LDRZ	RLZ	TZ/GRZ	**Total**
Lot Stock				
Vacant (lots) [1]	70		7	**77**
Occupied (lots) [1]	715		75	**790**
Lot Stock Area (ha)				
Vacant (ha) [1]	157.7		1.4	**159**
Occupied (ha) [1]	949		19.1	**968**
Average Annual Lot Production (2013 to 19)	27.2		1.3	**29**
Average Annual Lot Production (2019 to 21)	37.6			**38**
Average Annual Dwelling Production (2013 to 19)	13.7		0.5	**14**
Average Annual Dwelling Production (2019 to 21)	49.2			**49**
Undeveloped Greenfield				
Dwelling Capacity - Potential Residential (zoned)	332			**332**
Dwelling Capacity - Potential Residential (unzoned)	700			**700**
Dwelling Capacity - Scenario 1	1090	0	0	**1090**
Dwelling Capacity - Scenario 2	1190	0	2	**1192**

Source: Spatial Economics
1: Note – excludes lots zoned General Residential (GRZ)