RESIDENTIAL LAND SUPPLY & DEMAND ASSESSMENT

Wallace & Bungaree

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Spatial Economics

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EXECUTIVE SUMMARY

Spatial Economics Pty Ltd have been commission as a sub-consultant by Mesh Livable Urban Communities Pty Ltd to assess the residential land supply and demand outlook for the settlements of Wallace and Bungaree. This is in the context of providing input to a Structure Plan for the two townships.

The following provides a summary of key residential land supply and demand findings.

Population – A Regional Perspective

The 2021 census results have recently been released. On 26th July, 2022, the Australian Bureau of Statistics (ABS) updated its estimated resident populations (ERPs) for regions and local government areas in Australia.

The Australian Bureau of Statistics had significantly under-estimated the resident population of Moorabool from 2017 to 2021. The revised and final population estimates illustrate the under-count of the resident population was 3,400 persons. The population estimate under count for Ballarat was less significant at nearly 870.

Population growth has been strong and sustained in Moorabool. From 2016 to 2021, the resident population increased on an average annual basis by 3.0%. The resident population increased by nearly 5,300 persons over this period.

In 2021, the resident population of Moorabool was nearly 38,000.

Whilst population growth in the municipal area of Ballarat increased on an average annual basis by 1.9% - increasing its population by nearly 10,000 from 2016 to 2021.

In 2021, the resident population of Ballarat was nearly 114,000.

Over the next 15 years it is population projected to increase by:

- 1,326 persons per annum across Moorabool; and
- 1,943 persons per annum across Ballarat.

Population – A Local Perspective

The total population for the settlements/localities of Wallace and Bungaree is small. In 2021 the population is estimated at 227 and 302 respectively.

Over the five years from 2016, Wallace increased its total population by 40 (4.0 % average annual growth rate). Whilst Bungaree increased its population by 33 – a 2.3% average annual growth rate.

It is observed that the majority of this population growth was located in the rural hinterland of these settlements as opposed to being located in the urban area of the localities.

Small Area Residential Demand Forecast – Wallace and Bungaree

Spatial Economics from a demographic forecasting technique perspective, view that a robust and methodologically sound housing demand projection **cannot** be undertaken for settlements the size of Wallace and Bungaree

At best, informed demand scenarios could be formulated.

From a current and future demand perspective for small settlements such as Wallace and Bungaree, Spatial Economics approach is to examine the 'regional' demand outlook. In this instance, the appropriate 'regional' demand outlook would be Moorabool and the adjoining municipality of Ballarat.

The future demand outlook for Wallace and Bungaree is more about capturing a component of the regional demand via a combination of location and residential land product mix (in the context of appropriate pricing points).

Residential Building Approval Activity - A Regional Perspective

The Building Approval statistics collected by the ABS for Victoria reveal several interesting trends brought on by the Covid19 pandemic.

As measured over the last 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, as measured from 2019/20 to 2020/21.

As measured from 2011/12 to 2021/22, residential building approvals across Moorabool averaged 387 per annum - of which, 90% were for separate dwellings. Building approvals peaked in 2020/21 at 526 and declined to 256 approvals in 2021/22.

As measured from 2011/12 to 2021/22, residential building approvals across Ballarat averaged nearly 1,200 per annum - of which, 91% were for separate dwellings. Building approvals peaked in 2020/21 at 2,114 and remained at relatively historical highs at neatly 1,800 approvals in 2021/22.

Wallace and Bungaree– Development Activity Overview

Residential lot construction within the Wallace and Bungaree has been limited. This is largely due to limited land supply opportunities as opposed to the lack of underlying regional demand.

From the 2008 to 2017 financial years, there was in total nine lots constructed, five located in Wallace and four in Bungaree. There were no residential lots constructed post the 2017 financial year.

All lots constructed were zoned Township (TZ).

At a locality level (which includes the rural hinterland of the townships) there was a total of 20 dwellings constructed from 2016 to 2021. Of which, 13 were located in Bungaree and seven in Wallace.

Over a similar period for the township areas (defined by RLZ and TZ zoning) just one dwelling was constructed, this was located in Bungaree. However, from 2014 to 2017 five dwellings were constructed, four in Wallace and one in Bungaree.

Wallace and Bungaree– Housing and Vacant Lot Stock

As at February 2021, there as a total residential dwelling stock of 108 across the two townships. Dwelling stock is only measured on land zoned TZ and RLZ, it excludes dwelling stock that is located on Farm zoned land.

Of this total dwelling stock: 39 dwellings were located in Bungaree and 59 in Wallace.

As at February 2021, there were minimal vacant residential lots across the Study Area, with only three vacant lots located in Bungaree and seven lots in Wallace.

Recent Trends and Opportunities – Rural Residential

The settlements of both Wallace and Bungaree are intrinsically linked to Ballarat and to a lesser degree Bacchus Marsh via access to employment, and services such as education, health and retail.

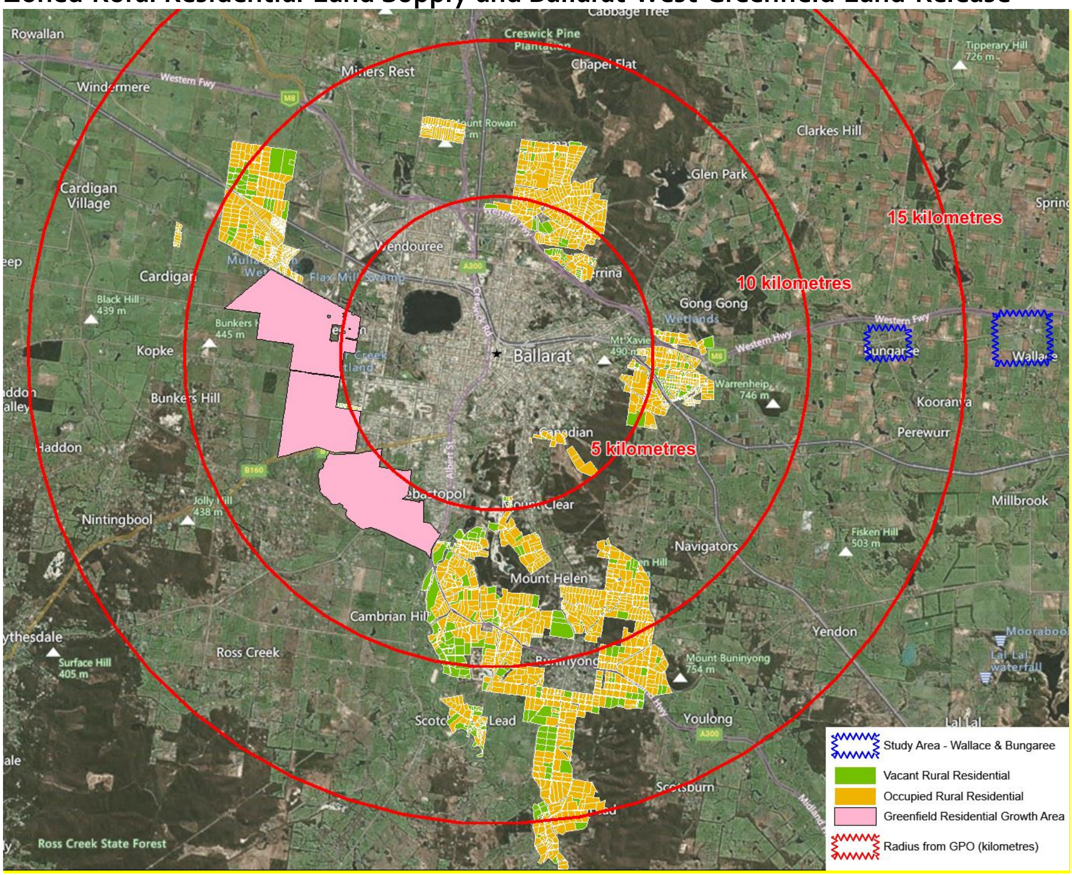
Wallace and Bungaree are effectively a sub-housing market for the wider Ballarat regional housing market.

Ballarat has a significantly constrained stock of rural residential lands. Compounding this lack of rural residential land supply, is the similar supply situation within the neighbouring municipality of Golden Plains (north). Golden Plains (north) traditionally supplied significant rural residential supply opportunities for the wider Ballarat housing market.

Rural residential housing development across regional Victorian municipalities represent between 5 to 15% of the total housing market. This is a significant market given the projected medium to long term growth of Ballarat.

This provides a significant opportunity for Wallace and Bungaree in potentially providing rural residential lands for the Ballarat housing market.

Zoned Rural Residential Land Supply and Ballarat West Greenfield Land Release



However, an emerging and significant trend across regional Victoria in terms of the rural residential housing market segment is:

- the decline in the demand for larger rural residential lots, particularly lots zoned Rural Living (RLZ) which are typically four to eight hectares in size';
- the increase in the demand for smaller rural residential lots, typically zoned Low Density Residential (LDRZ); and

- the increase in the prevalence of the demand and the supply of serviced LDRZ lots sized around 2,000 sqm within master planned estates.

Again, this represents a significant opportunity for potential land supply provision within Bungaree and Wallace given:

- the current supply constraints in Ballarat; and
- the emergence of smaller rural residential lot demand.

Recent Trends and Opportunities – Conventional Density Greenfield
The dominant market preference for residential lots in Ballarat, Ballan and Bacchus Marsh is for conventional density greenfield subdivisions. This has been a long-term and constant trend.

Across the majority of major urban centres in Victoria, the median lot size of constructed greenfield lots are rapidly declining. The declining densities of constructed greenfield lots in major regional urban centres is largely driven by affordability pricing points and to a lesser degree changing demographic characteristics and consumer preferences.

However, Spatial Economics have observed via undertaking residential land supply assessment across practically all regional municipal areas in Victoria, there is a strong underlying demand for 'larger' normal density lots.

In **Ballarat** from 2017 to 2021 the median size of a constructed greenfield lot was 513 sqm. For the 2022 calendar year, this declined to 448 sqm.

Bacchus Marsh in comparison, achieved a median lot size of 462 sqm over the period of 2017 to 2021. For the calendar year of 2022, the median lot size increased significantly to 510 sqm.

Whereas in **Ballan**, greenfield lot construction has resulted in 'larger' outcomes, historically around 620 sqm increasing to 670 sqm in the 2022 calendar year.

There is an opportunity for the provision of 'larger' conventional density residential lots in both Bungaree and Wallace. A larger conventional greenfield lot would be described in the range of 700 to 800 sqm.

Effectively there is no supply of larger residential conventional density greenfield lots in Ballarat or Bacchus Marsh, primarily due to affordable pricing points. There is strong demand for greenfield conventional density residential lots, as illustrated by recent construction levels. Specifically, since 2017, the average annual residential greenfield lot construction activity has averaged:

- nearly 1,400 in Ballarat; and
- 300 in Bacchus Marsh.

The presented opportunities and trends would provide a residential land supply outcome, that would maintain and enhance the existing rural character of the townships. In addition, it provides a niche residential land product that would be supported by regional demand and regional supply deficiencies.

It is recognised that such land supply configuration is dependent on the financially feasible provision of reticulated water/waste-water infrastructure.

1.0 Introduction

Spatial Economics Pty Ltd have been commission as a sub-consultant by Mesh Livable Urban Communities Pty Ltd to assess the residential land supply and demand outlook for the settlements of Wallace and Bungaree. This is in the context of providing input to a Structure Plan for the two townships.

Our approach to this task was to examine:

1. recent population change for Moorabool and Ballarat, this was particularly critical given the recent updates to population estimates by the Australian Bureau of Statistics release of the 2021 Population and Housing Census;
2. examination of recent residential lot construction trends in terms of both the quantum, size composition and market segmentation;
3. detailed assessment of the residential land, housing and development activity within the settlements of Wallace and Bungaree;
4. investigation of regional housing supply and demand opportunities; and
5. provision of an evidence based residential demand outlook for the settlements of Wallace and Bungaree– this is in the context of assumed potential additional residential land provision.

Spatial Economics have not undertaken residential dwelling forecasts for Wallace and Bungaree. In Spatial Economics opinion, forecasts at this geographical scale are highly erroneous and any methodological approach would be fundamentally flawed.

Our approach to assessing the future demand outlook and potential land supply provision opportunities was to:

- examine regional housing demand (Ballarat and Moorabool municipal areas);
- the recent demand for residential land products by market segment;
- assessing existing supply levels for rural residential lands in the Ballarat housing market;
- examining the lot size characteristics of conventional density greenfield lot construction in Ballarat, Bacchus Marsh and Ballan; and
- outlining recent land development trends across regional Victoria.

2.0 Population Growth

The following section of this assessment details recent population change and published projections for the municipal areas of Moorabool and Ballarat and for the settlements of Wallace and Bungaree.

2.1 Population Growth – A Regional Perspective

The 2021 census results have recently been released. On 26th July, 2022, the Australian Bureau of Statistics (ABS) updated its estimated resident populations (ERPs) for regions and local government areas in Australia.

The updates use the results of the 2021 census and cover each year from 2017 to 2021, thereby superseding previously published population estimates that were based on the 2016 census.

The new data show that the Moorabool and Ballarat municipalities 2021 population and its growth since 2016 has been revised upwards, despite Victoria as a whole being revised down.

The following table and graph illustrate the changes that have been made to the Estimated Resident Population for the Moorabool Shire and Ballarat City.

The Australian Bureau of Statistics had significantly under-estimated the resident population of Moorabool from 2017 to 2021. The revised and final population estimates illustrate the under-count of the resident population was 3,400 persons, equating to 680 persons per annum.

This is a significant under-count. This would equate to an under-estimation of assumed dwelling requirements of around 1,300 dwellings, if a population-based method of estimating dwelling requirements were utilised.

The population estimate under count for Ballarat was less significant at nearly 870.

Table 1: Change in Estimated Resident Populations (2016-2021), Moorabool.

Year	2016 census based	2021 census revised	Difference
2016	32,672	32,672	0
2017	33,442	33,671	229
2018	34,156	34,630	474
2019	35,051	35,749	698
2020	36,002	36,882	880
2021	36,773	37,895	1,122

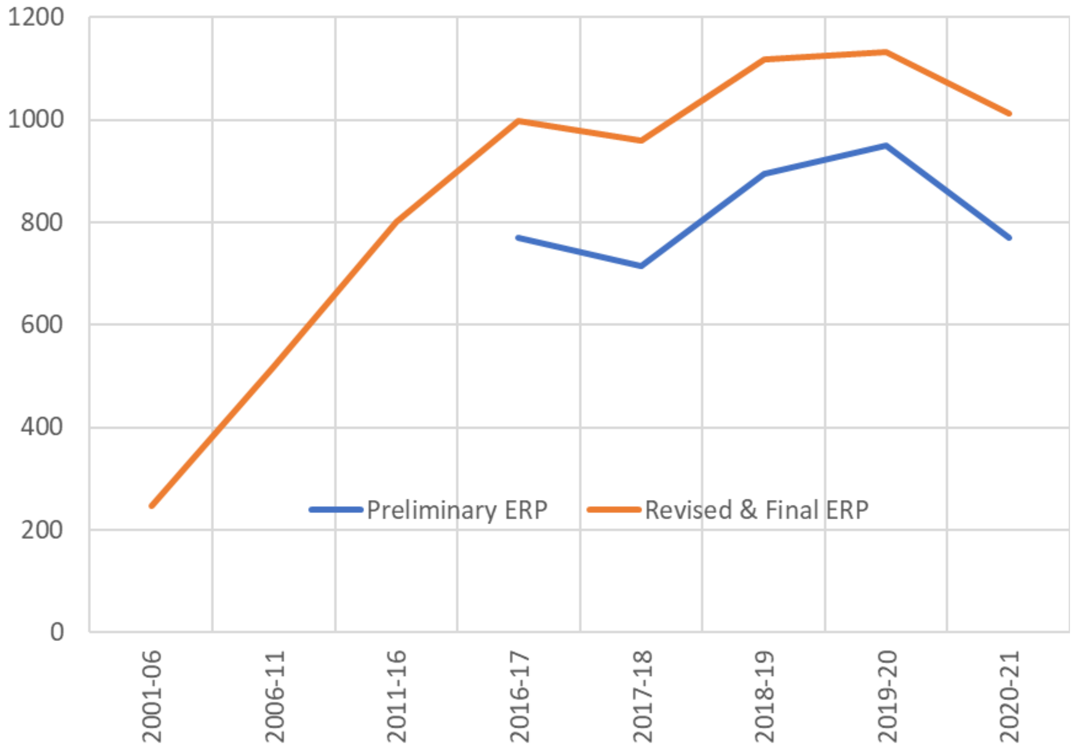
Source: Australian Bureau of Statistics

Table 2: Change in Estimated Resident Populations (2016-2021), Ballarat.

Year	2016 census based	2021 census revised	Difference
2016	103,500	103,500	0
2017	105,422	105,498	76
2018	107,324	107,518	194
2019	109,504	109,650	146
2020	111,325	111,476	151
2021	113,183	113,482	299

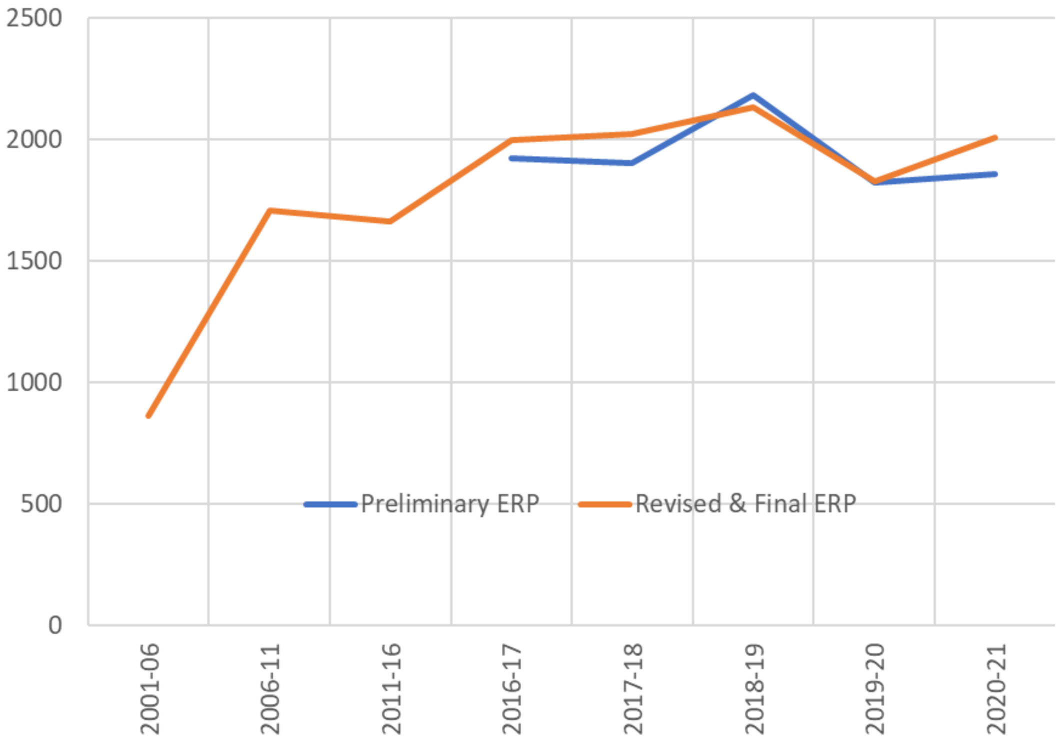
Source: Australian Bureau of Statistics

Graph 1: Revised/Final and Preliminary Annual Change in the Estimated Resident Population - Moorabool



Source: Australian Bureau of Statistics

Graph 2: Revised/Final and Preliminary Annual Change in the Estimated Resident Population - Ballarat



Source: Australian Bureau of Statistics

Population growth has been strong and sustained in Moorabool. From 2016 to 2021, the resident population increased on an average annual basis by 3.0%. The resident population increased by nearly 5,300 persons over this period.

In 2021, the resident population of Moorabool was nearly 38,000.

Whilst population growth in the municipal area of Ballarat increased on an average annual basis by 1.9% - increasing its population by nearly 10,000 from 2016 to 2021.

In 2021, the resident population of Ballarat was nearly 114,000.

2.1.1 Population Growth – Wallace & Bungaree

Estimated Resident Population data is not produced by the ABS for smaller urban settlements/localities such as Wallace and Bungaree.

However, population counts from the Census night is reported.

The total population for the settlements/localities of Wallace and Bungaree is small. In 2021 the population is estimated at 227 and 302 respectively.

As measured from 2016 to 2021 population growth has been strong (albeit from a low population base). Over the five years from 2016, Wallace increased its total population by 40 (4.0 % average annual growth rate). Whilst Bungaree increased its population by 33 – a 2.3% average annual growth rate.

It is observed that the majority of this population growth was located in the rural hinterland of these settlements as opposed to being located in the urban area of the localities.

2..1.2 Population Growth Outlook

Firstly, Spatial Economics from a demographic forecasting technique perspective, view that a robust and methodologically sound housing demand projection **cannot** be undertaken for urban settlements the size of Wallace and Bungaree.

At best, informed demand scenarios could be formulated.

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 3: 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

As at 2021, the Australian Bureau of Statistics Population and Housing Census have estimated the population of Wallace at 227 and Bungaree at 302.

A compounding issue for Wallace and Bungaree is that residential land supply opportunities has been historically and currently constrained. A constrained land supply environment limits the expression of underlying demand. Therefore, historical demand trends are not a useful indicator of future demand.

For the current purpose, the key point is that longer term and small area (areas with under 2,000 people) projections are inherently problematic and this needs to be taken into account in sound strategic planning.

From a current and future demand perspective for small settlements such as Wallace and Bungaree, Spatial Economics approach is to examine the 'regional' demand outlook. In this instance, the appropriate 'regional' demand outlook would be Moorabool and the adjoining municipality of Ballarat.

The future demand outlook for Wallace and Bungaree is more about capturing a component of the regional demand via a combination of location and residential land product mix (in the context of appropriate pricing points).

Published Population & Dwelling Projections

There are currently two published sets of demographic based projections for the Moorabool Shire and Ballarat City, namely:

1. Victoria in Future (2019) – undertaken by the Victorian State Government; and
2. id Forecast – commissioned by the Moorabool Shire and the City of Ballarat and undertaken by id.

Spatial Economics consider the State Government projections are dated as they were undertaken prior to:

- the release of the 2021 ABS Population and Housing Census;
- the release of updated and revised Estimated Resident Population data from the ABS; and
- start of the Covid19 pandemic.

Most critically, the State Government demographic projections utilised preliminary ABS Estimated Resident Population (ERP) data. Post-census, the final revised ERP was significantly revised upward, an undercount of 3,400 persons in Moorabool and nearly 900 persons in Ballarat.

Therefore, caution is highlighted for the State Government (VIF2019) demographic projections in terms of the stated forecast outcomes due to the significant demographic changes that have occurred since its release.

Moorabool

In summary from 2021 to 2036 the **population** forecasts state:

- VIF2019 – an annualised average growth of 859 persons (2.0% growth rate); and
- idForecast – an annualised average growth of 1,326 persons (2.9% growth rate). .

In summary from 2021 to 2036 the **dwelling** forecasts state:

- VIF2019 – an annualised average growth of 392 dwellings (2.2% growth rate); and
- idForecast – an annualised average growth of 512 dwellings (2.7% growth rate).

From 2016 to 2021, the average annual dwelling growth rate was 3.4%, as measured by the ABS Census. The population growth rate excluding 2021 (due to impacts of the pandemic) from 2016 to 2020 was tracking at 3.1% per annum.

Ballarat

In summary from 2021 to 2036 the **population** forecasts state:

- VIF2019 – an annualised average growth of 2,147 persons (1.7% growth rate); and
- idForecast – an annualised average growth of 1,943 persons (1.5% growth rate). .

In summary from 2021 to 2036 the **dwelling** forecasts state:

- VIF2019 – an annualised average growth of 1,076 dwellings (1.9% growth rate); and
- idForecast – an annualised average growth of 873 dwellings (1.6% growth rate).

From 2016 to 2021, the average annual dwelling growth rate was 2.2%, as measured by the ABS Census. The population growth rate excluding 2021 (due to impacts of the pandemic) from 2016 to 2020 was tracking at 1.9% per annum.

Future population growth for Moorabool and Ballarat is likely to remain strong. A key factor in both attracting and retaining the local population is the provision of diverse residential land products.

It is evident that there is strong demand for housing in Moorabool and Ballarat. The key land use policy question from a demand perspective in this context, is there regional demand for the potential residential product mix in Wallace and Bungaree?

This question will be explored in more detail in Section 3 and 5 of this report

3.0 Residential Development Activity

The following section of this assessment details recent residential development activity in the form of building approvals, lot and dwelling construction for the municipal areas of Moorabool and Ballarat and for the settlements of Wallace and Bungaree.

This section also provides an overview of the rural residential land stocks in the municipal area of Ballarat, exploring potential land supply opportunities for the townships of Wallace and Bungaree.

Case studies are included to highlight emerging and growing trends in terms of lot supply construction.

3.1 Residential Building Approval Activity

Building Approval Activity in Context – Regional Victoria & metropolitan Melbourne

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 last 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%.

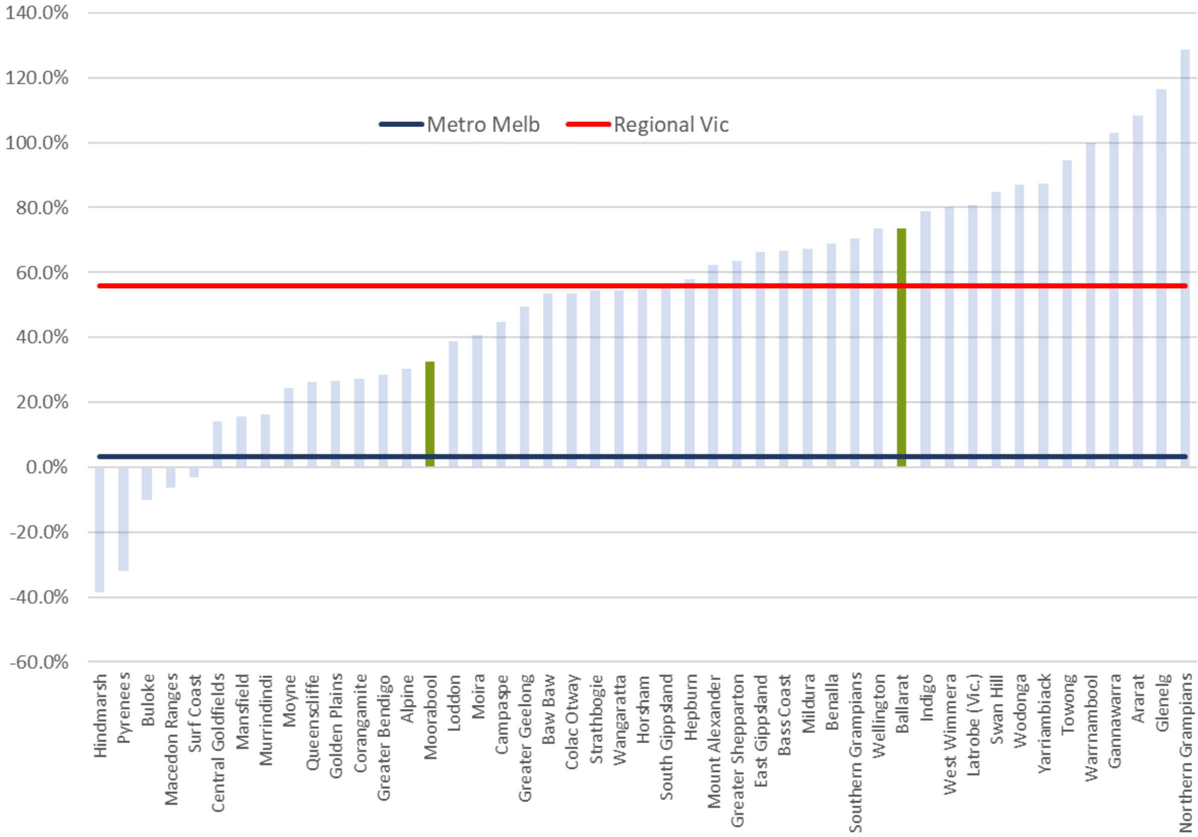
As a share of total activity, regional Victoria has jumped from 20% of all new dwellings to 28% in one year. The share going to regional Victoria peaked around 2006 and declined until around 2017. The share for regional Victoria had been rising in the last few years.

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

Moorabool has illustrated significant growth in building approval activity, increasing by 32%, from 397 approvals to 526 in 2020/21.

Whereas, Ballarat illustrated even more significant growth in building approval activity, increasing by 73%, from 1,224 approvals to 2,114 in 2020/21.

Graph 3: Percentage Change in Residential Building Approval Activity by Regional Municipal Areas, 2019/20 to 2020/21



Source: Australian Bureau of Statistics

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.

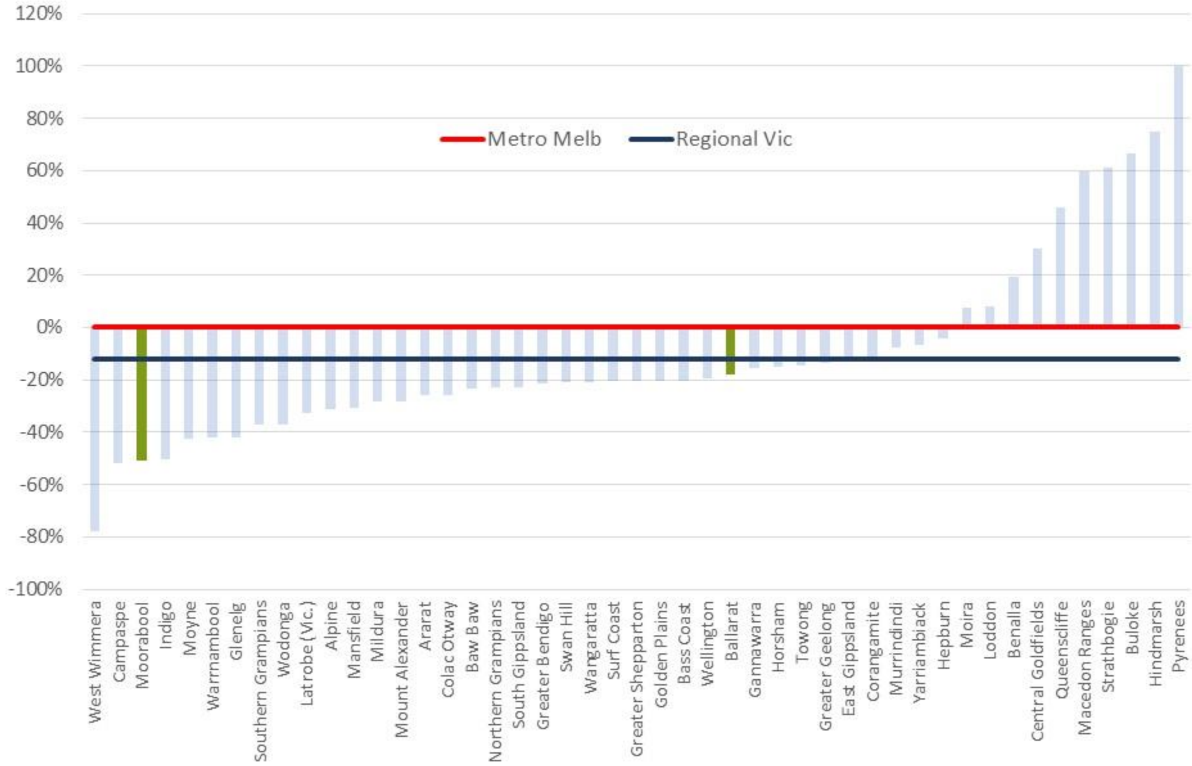
In 2021/22 the quantum of residential building approval was more subdued compared to the previous financial year. For Victoria, building approval activity declined by 3.4%, metropolitan Melbourne increased by 2.5% and regional Victoria declined by nearly 18%.

The vast majority of regional municipalities experienced declines in the quantum of residential building approval activity compared to the historic peaks in 2020/21.

However, residential building approval activity across regional Victoria in 2021/22 was still strong at nearly 17,000 approvals, compared to just 12,300 approvals in 2019/20.

Over the last two financial years, residential housing demand across regional Victoria has been strong and at historic highs.

Graph 4: Percentage Change in Residential Building Approval Activity by Regional Municipal Areas, 2020/21 to 2021/22



Source: Australian Bureau of Statistics

Building Approval Activity - Moorabool

As measured from 2011/12 to 2021/22, residential building approvals across Moorabool averaged 387 per annum - of which, 90% were for separate dwellings.

Over the previous financial year, residential building approval (demand for housing) has rapidly declined as illustrated in the graph below. Building approvals peaked in 2020/21 at 526 and declined to 256 approvals in 2021/22.

Building approval activity (ytd Dec) remains relatively strong at 181.

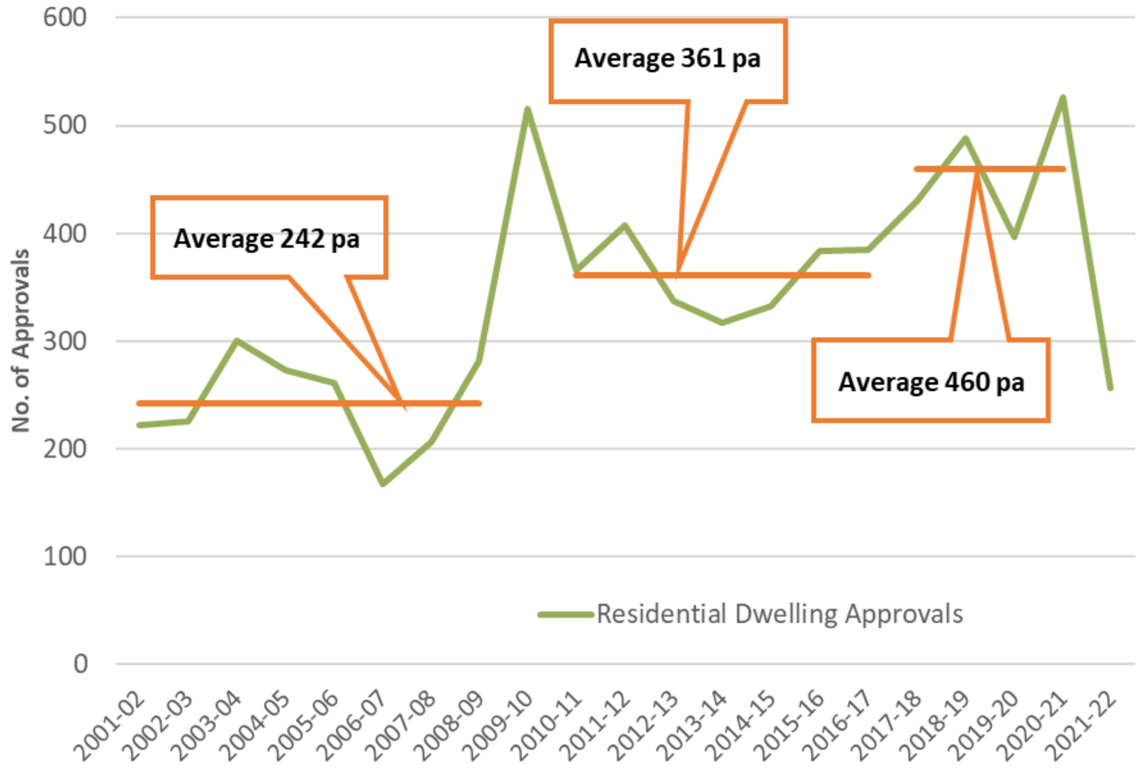
Building Approval Activity - Ballarat

As measured from 2011/12 to 2021/22, residential building approvals across Ballarat averaged nearly 1,200 per annum - of which, 91% were for separate dwellings.

Over the last two financial years, residential building approval (demand for housing) has rapidly accelerated as illustrated in the graph below. Building approvals peaked in 2020/21 at 2,114 and remained at relatively historical highs at neatly 1,800 approvals in 2021/22.

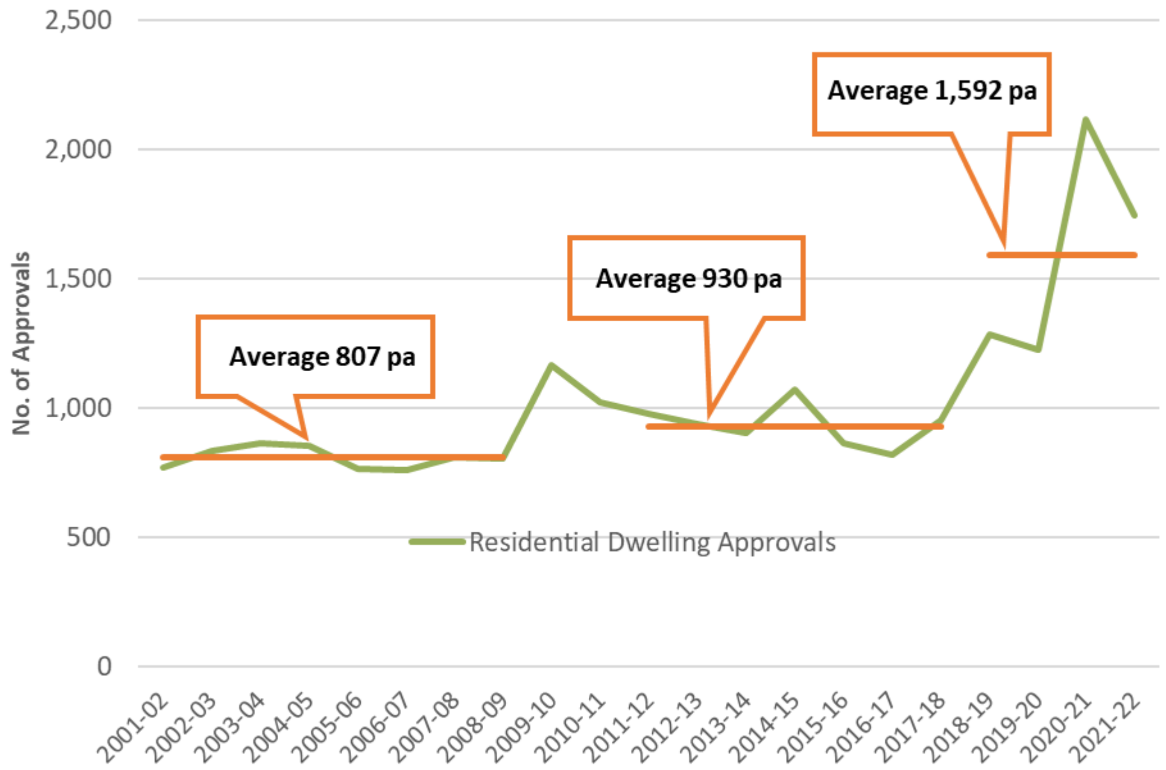
Building approval activity (ytd Dec) remains strong at 867.

Graph 5: Residential Building Approvals by Type – Moorabool, 2002 to 2022



Source: Australian Bureau of Statistics

Graph 6: Residential Building Approvals by Type – Ballarat, 2002 to 2022



Source: Australian Bureau of Statistics

3.2 Lot Construction Activity -A Regional Perspective

Residential greenfield and rural residential lot construction activity was assessed for the municipal area of Ballarat and the localities of Ballan and Bacchus Marsh.

Residential lot construction has been determined via the assessment of the 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. Lot construction was captured from June 2017 to December 2022.

Residential greenfield lot construction is defined as residential development on greenfield sites (sites that have not been used previously for urban development purposes or previously subdivided for normal/urban density development) and typically located on/or near the urban fringe. Whilst, Rural Residential is all subdivision activity on land zoned Rural Living and Low Density Residential.

Greenfield Lot Construction Activity

The dominant market preference for residential lots in Ballarat, Ballan and Bacchus Marsh is for conventional density greenfield subdivisions. This has been a long-term and constant trend.

Since 2017, the average annual residential greenfield lot construction activity has averaged:

- nearly 1,400 in Ballarat;
- 300 in Bacchus Marsh; and
- 13 in Ballan.

Across the majority of major urban centres in Victoria, the median lot size of constructed greenfield lots are rapidly declining in size. The declining densities of constructed greenfield lots in major regional urban centres is largely driven by affordable pricing points and to a lesser degree changing demographic characteristics and consumer preferences.

However, Spatial Economics have observed via undertaking residential land supply assessment across practically all regional municipal areas in Victoria, there is a strong underlying demand for 'larger' normal density lots.

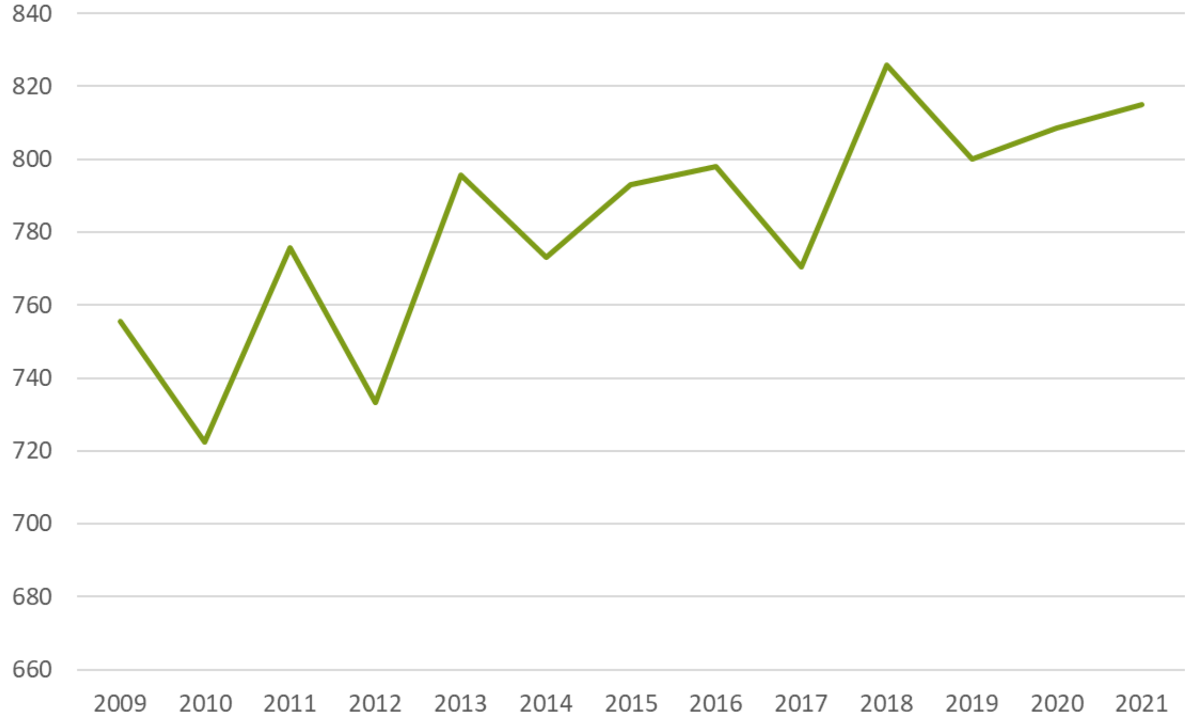
As will be outlined later, there is an emerging trend in demand for 'smaller' rural residential lots, typically around 2,000 sqm that are service with hydraulic infrastructure (water and waste-water).

Graph 7 below illustrates the median lot size over time for constructed greenfield lots in Greater Shepparton. The dominant market preference for residential lots in Greater Shepparton is for conventional density greenfield subdivisions. This has been a long-term and constant trend.

Consumer preference for residential lots in Greater Shepparton has overwhelmingly been for larger sized lots.

In recent years, newly constructed greenfield lots are getting bigger. This again reinforces the overall consumer preference for larger lots in Greater Shepparton, if affordable pricing points are achieved and maintained.

Graph 7: Median Lot Size (sqm) – Greenfield Lot Construction – Greater Shepparton



Source: Spatial Economics

In comparison to Greater Shepparton, residential greenfield lot construction outcomes in both Ballarat and Bacchus Marsh are considerable smaller.

In **Ballarat** from 2017 to 2021 the median size of a constructed greenfield lot was 513 sqm. For the 2022 calendar year, this declined to 448 sqm.

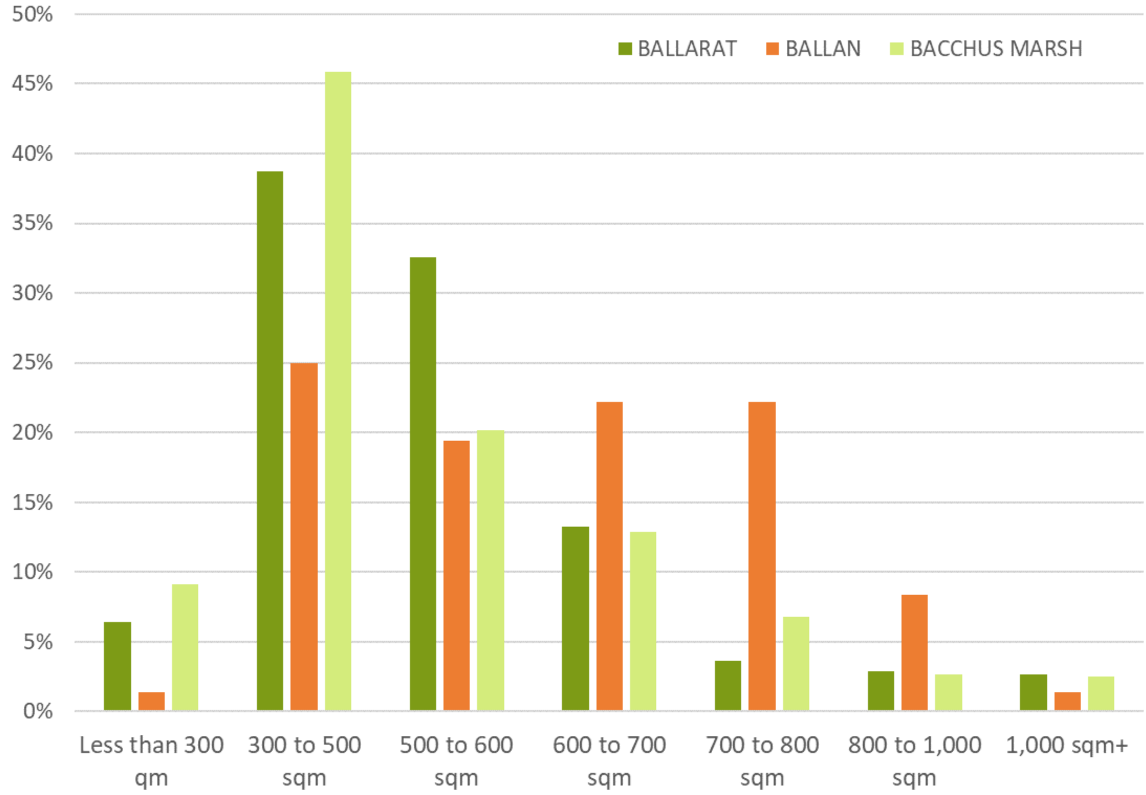
Bacchus Marsh in comparison, achieved a median lot size of 462 sqm over the period of 2017 to 2021. For the calendar year of 2022, the median lot size increased significantly to 510 sqm.

Whereas in **Ballan**, greenfield lot construction has resulted in 'larger' outcomes, historically around 620 sqm increasing to 670 sqm in the 2022 calendar year.

Graph 8 below illustrates the residential greenfield lot size distribution outcomes as measured from 2017 to 2022 for Ballarat, Bacchus Marsh and Ballan.

As illustrated, there is minimal greenfield lots constructed that were sized over 700 sqm in both Ballarat and Bacchus Marsh. Conversely, greenfield lot construction outcomes in Ballan were typically larger in comparison.

Graph 8: Residential Greenfield Lot Size Distribution Outcomes



Source: Spatial Economics

Rural Residential Lot Construction Activity - Ballarat

Historically and currently, rural residential lot construction activity in Ballarat is relatively subdued when compared to other regional municipal areas. This is primarily due to:

1. Limited greenfield rural residential site opportunities (RLZ and LDRZ); and
2. Limited existing vacant lot stock.

Typically, across regional Victoria, rural residential lot construction activity equates to around 10% of total residential lot construction activity. This can vary significantly depending on the population base, rural residential land stock levels and most importantly – land use planning policies regarding the provision of rural residential lands.

The contribution of rural residential lot construction typically ranges from 5% to 15% of total lot construction activity - within municipal areas with ample zoned supply opportunities.

Since 2017 to December 2022, rural residential lot construction activity in Ballarat represented just over 1% of total residential lot construction activity or just 19 lots on average per annum.

As an outcome indicator, this potentially highlights a constrained land supply market for rural residential lands. This is explored further in the following section of the report.

However, the underlying demand for rural residential lands in Ballarat is strong. Dwelling construction from 2016 to 2021 on zoned rural residential lands was 33 dwellings per annum, representing an average annualised growth rate of 1.9%. Population growth (due to higher average house sizes) was 2.1% compared to 1.9% for the total municipal area.

Dwelling construction across Ballarat on zoned rural residential lands was largely sourced from existing vacant lot stock.

Of the rural residential subdivision activity in Ballarat, it was largely sourced from the re-subdivision of existing allotments as opposed to larger scale greenfield style subdivision. Therefore, supply is largely secured from 'mum and dad' land developers – resulting in typically one net lot.

If a typical share of rural residential subdivision activity were applied to the Ballarat municipal area, from 2016 to 2021, 100 dwellings per annum would have been constructed on rural residential lands. This is a significant unmet demand potential for competing areas within the wider Ballarat housing market.

3.2.1 A Constrained Land Supply Market, Rural Residential - Ballarat

The municipal area of Ballarat has significant stocks of zoned rural residential lands. Currently there is a total of nearly 5,400 hectares of rural residential lands, of which 5,040 hectares is zoned Rural Living (RLZ) and 285 hectares zoned Low Density Residential (LDRZ).

It is observed that over the last decade or more across regional Victoria, the market preference for rural residential lands is for LDRZ lots as opposed to RLZ lots. There is relatively minimal LDRZ stocks across Ballarat.

The images below illustrate the stock (occupied and vacant) of rural residential lands across the municipal area of Ballarat.

Image 1: Zoned Rural Residential Lot Stock - Ballarat

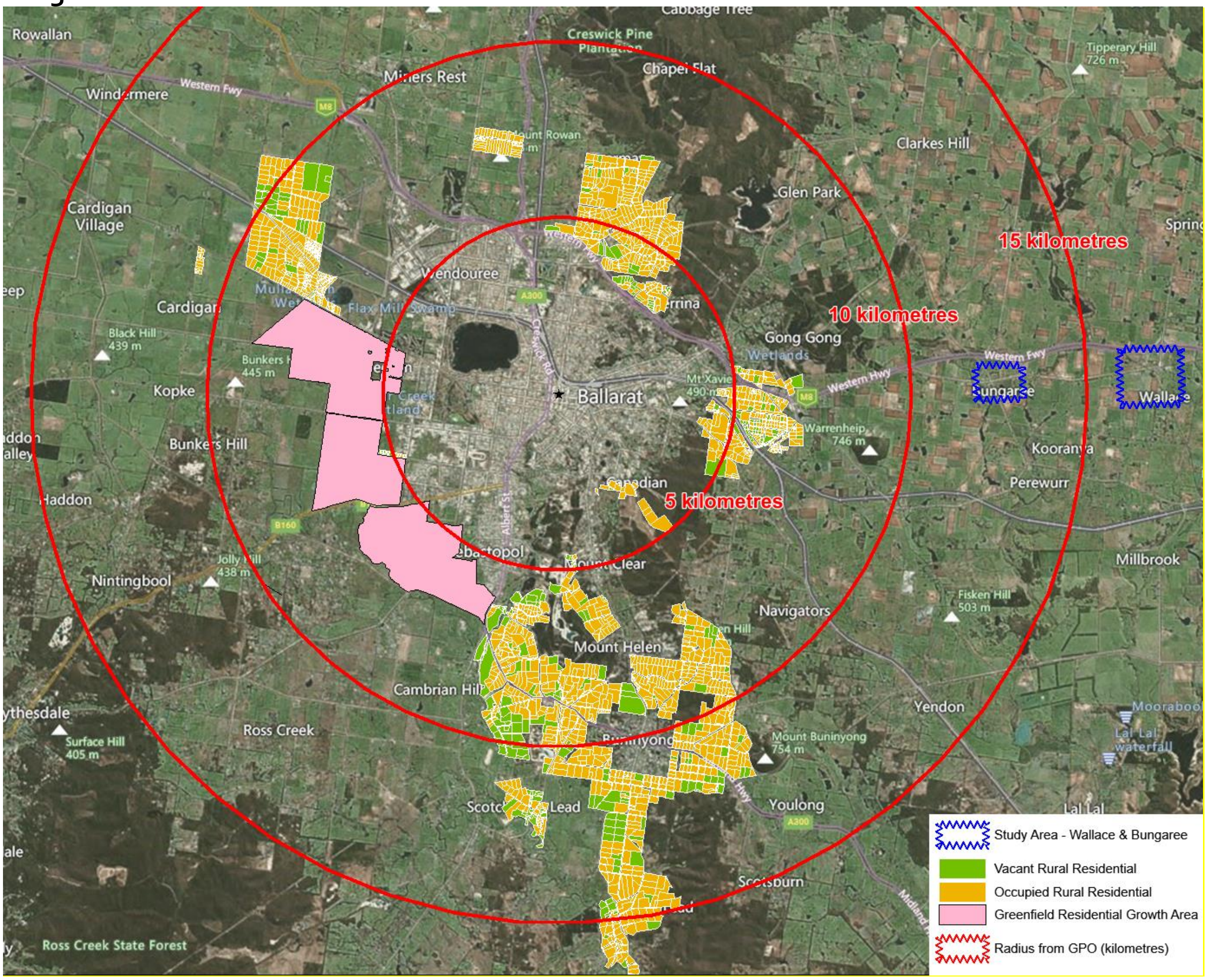


Image 2: Zoned Rural Residential Lot Stock – Ballarat East

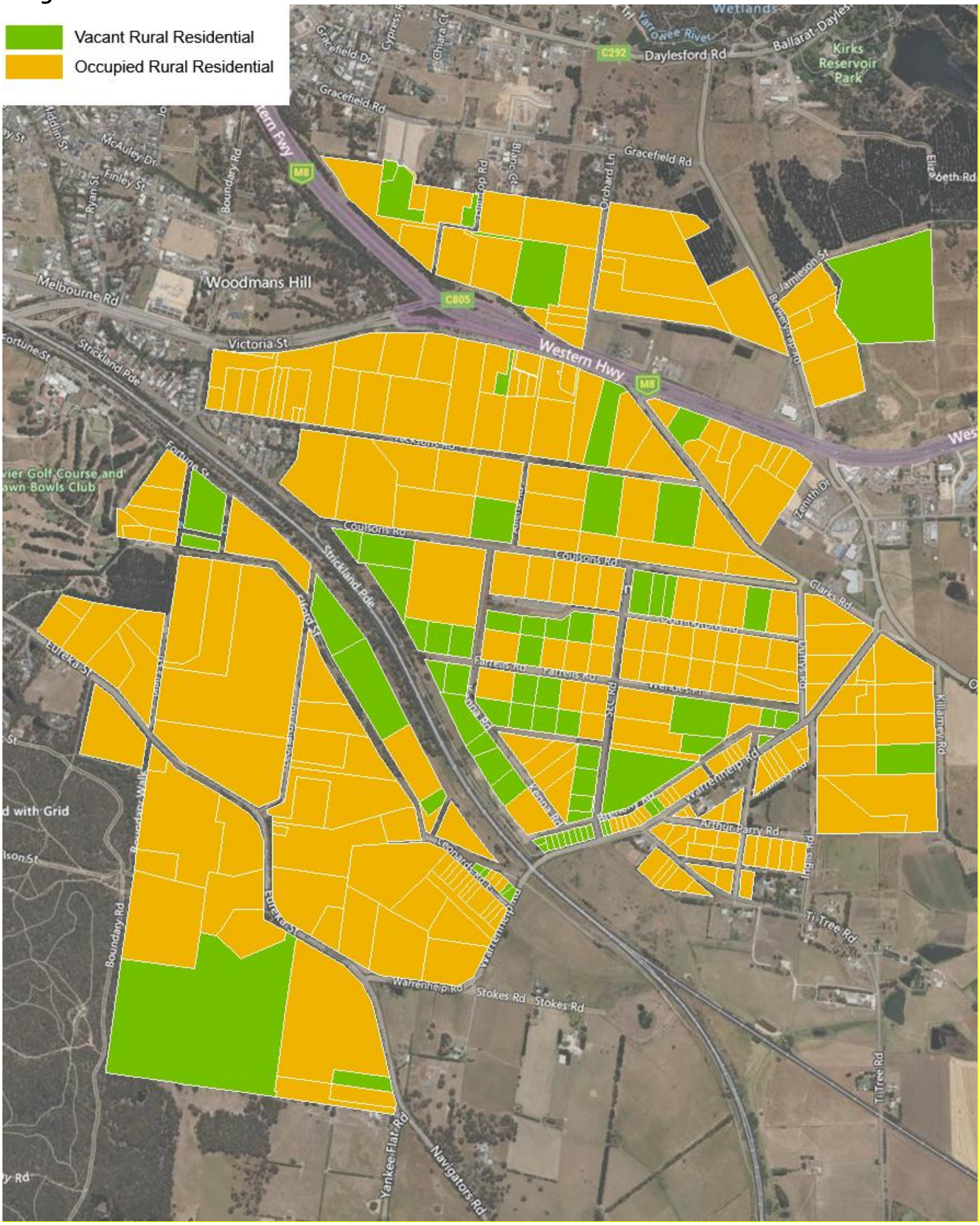


Image 3: Zoned Rural Residential Lot Stock – Ballarat North East

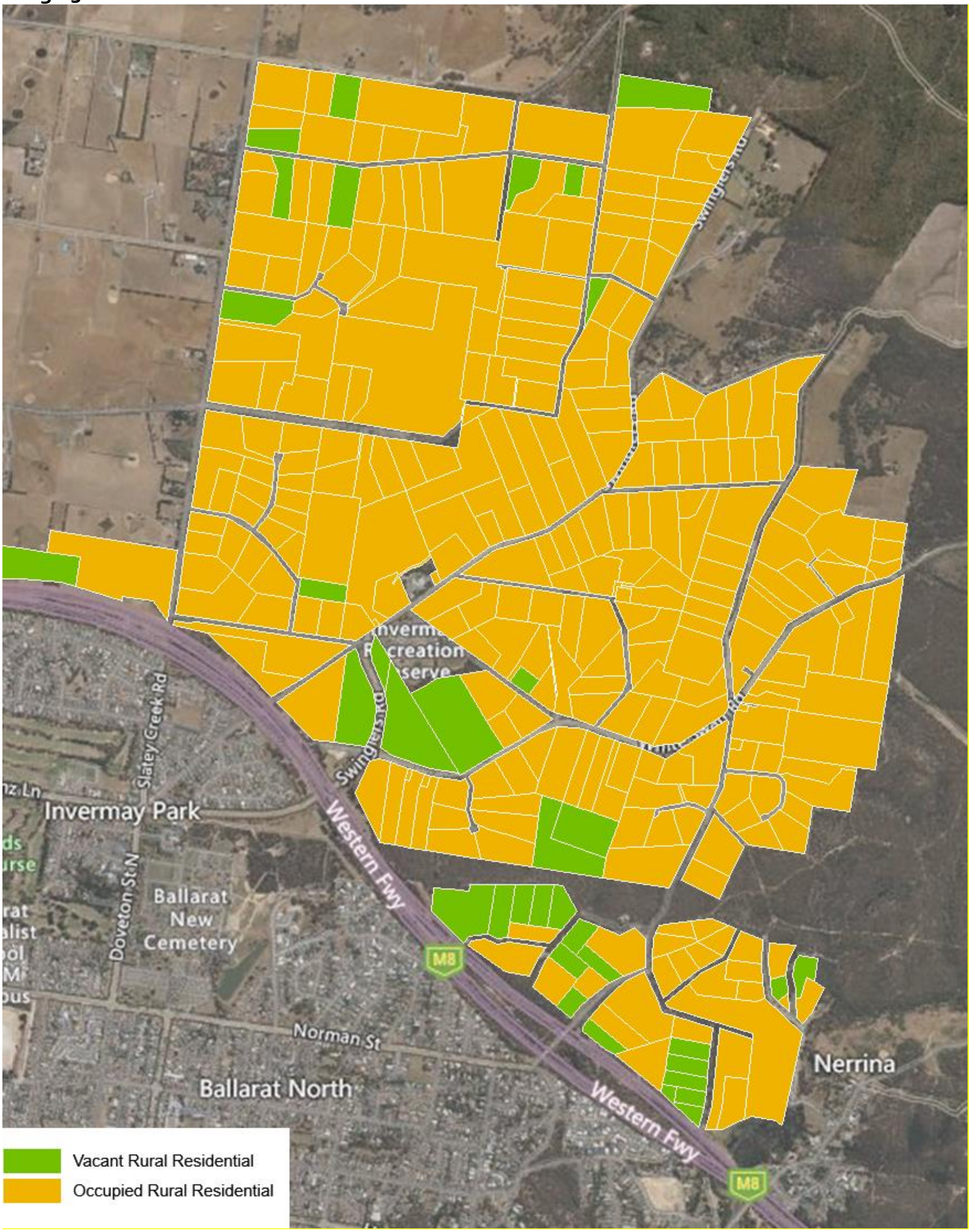


Image 4: Zoned Rural Residential Lot Stock – Ballarat West

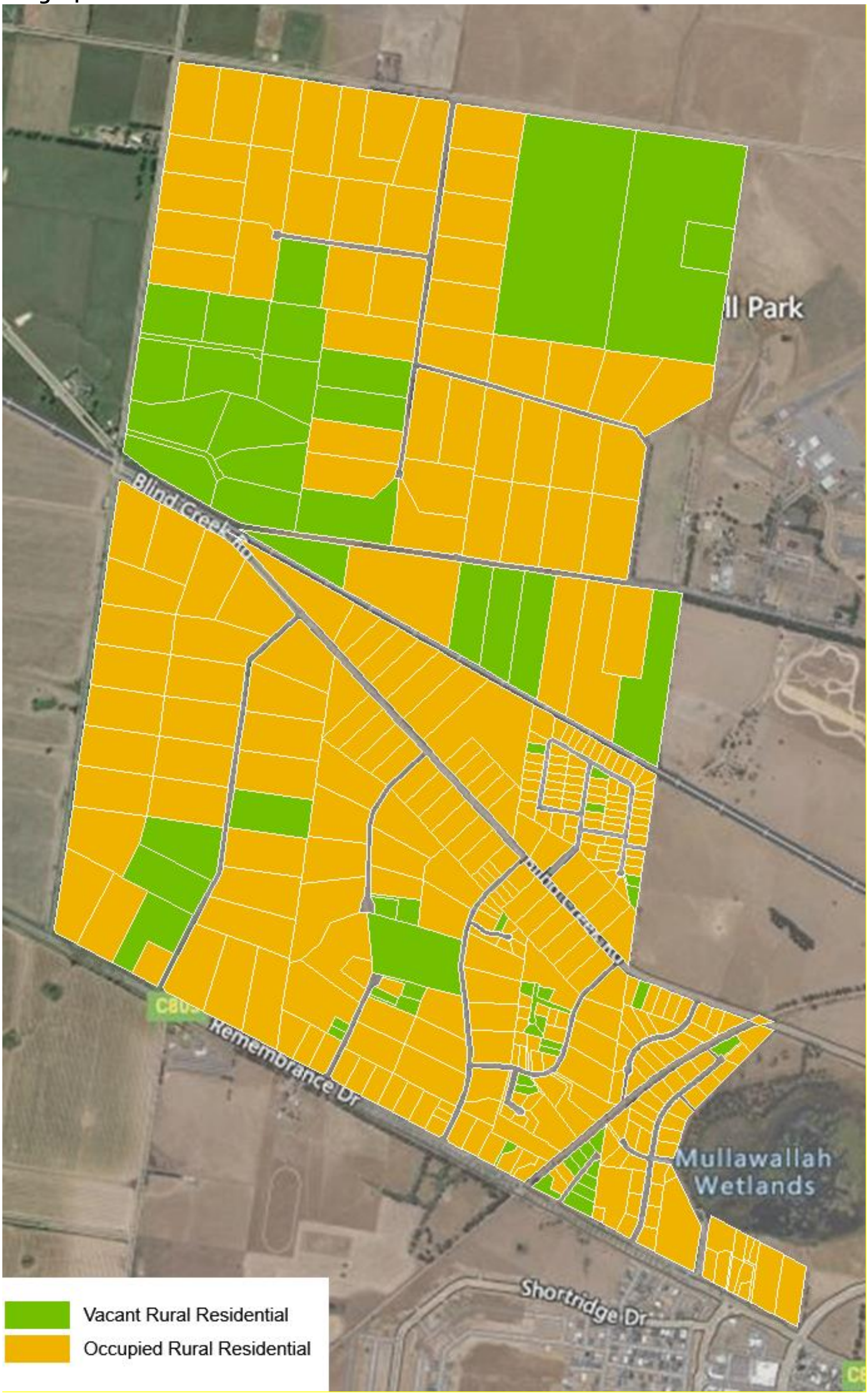


Image 5: Zoned Rural Residential Lot Stock – Ballarat South/Buninyong

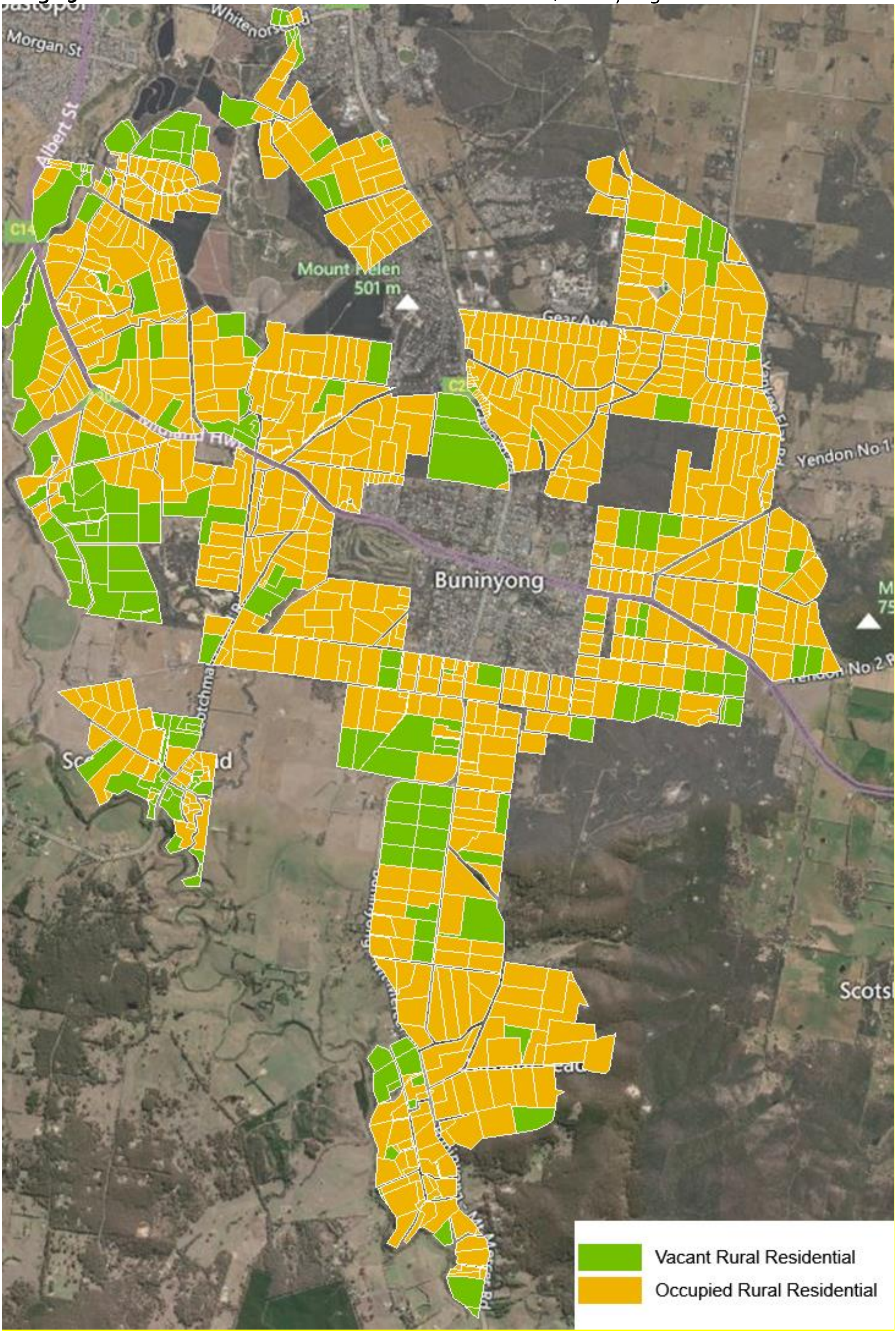
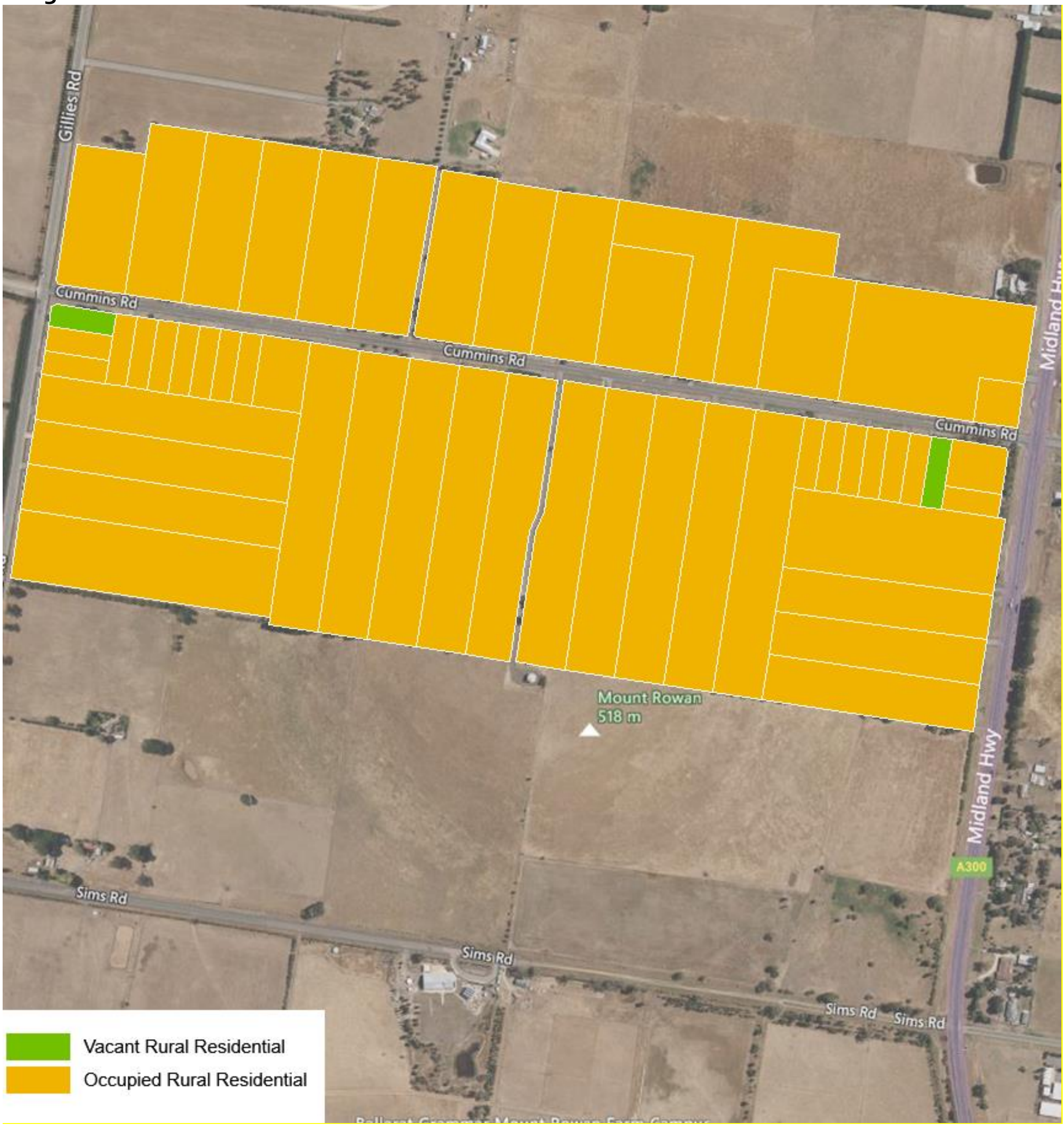


Image 6: Zoned Rural Residential Lot Stock – Mount Rowan



There are approximately 2,090 rural residential lots across the municipal area of Ballarat. Of this stock, 1,719 are zoned RLZ and 370 zoned LDRZ. Graph 9 below illustrates the lot stock size distribution.

As illustrated, there are very few larger zoned allotments suitable for greenfield style subdivision. There are currently only nine lots sized over 16 hectares in size, of this stock only six are vacant.

Spatial Economics have undertaken a capacity assessment of Ballarat's' rural residential land stocks in terms of a conservative (likely) dwelling yield. The capacity assessment examined both the stock of occupied and vacant allotments.

The assessment revealed that there is minimal existing dwelling capacity within the existing stock of zoned rural residential lands across Ballarat. In total it is estimated that there is a dwelling capacity of just 292. Of this capacity it is estimated that:

- 112 dwellings on land zoned LDRZ; and

- 180 dwellings on land zoned RLZ.

Rural residential lot construction activity in Ballarat is comparatively minimal, particularly for the population size and historical/current growth rates. This is entirely due to a constrained rural residential supply market.

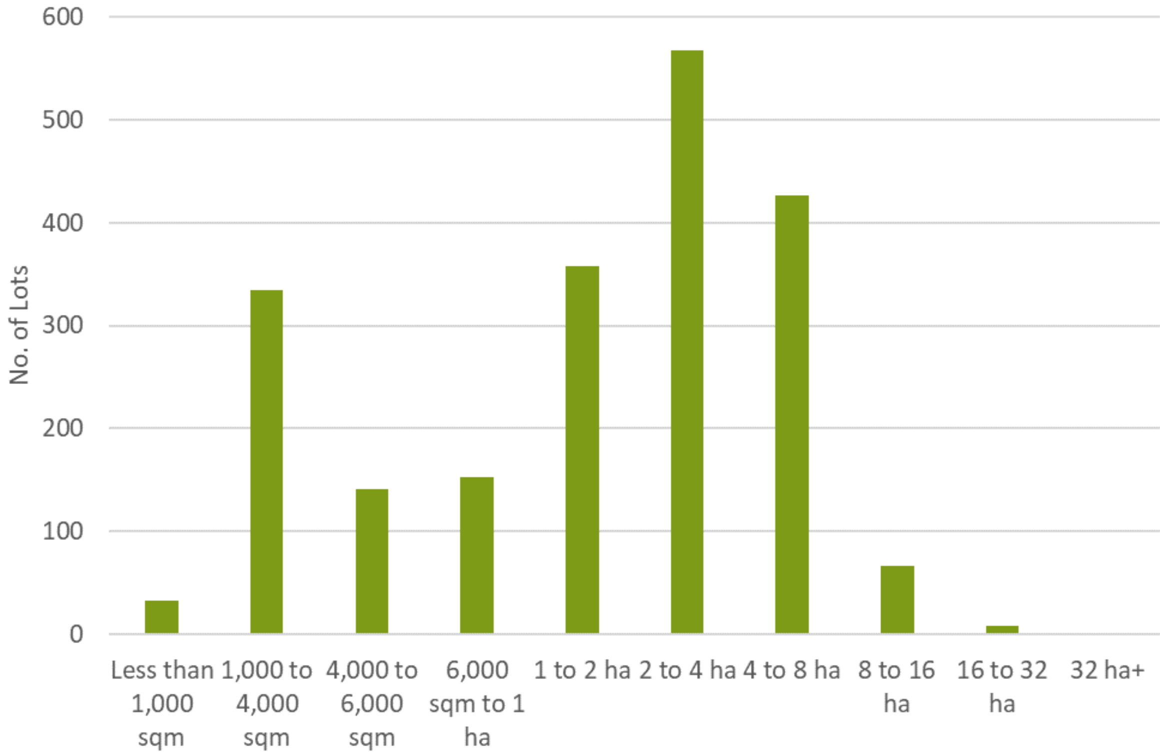
Historically, Ballarat's rural residential land supply market has been largely filled by the significant stocks of rural residential land in the neighbouring municipality of Golden Plains (north).

However, stocks of rural residential land in Golden Plains (north) are a) depleting and b) has significant constraints in terms of vegetation cover and associated bushfire risk. There are minimal greenfield type rural residential land stocks in Golden Plains (north). The vast majority of supply opportunities which is similar to Ballarat is through existing vacant lot stock and the re-subdivision of existing lots.

This as a supply source does not result in a) a reliable and consistent source of new lots and b) provide the quantum of a greenfield subdivision site.

The composition, characteristics and supply of rural residential lands in the wider Ballarat housing market presents opportunities for neighbouring municipalities to fulfill this market gap.

Graph 9: Rural Residential Lot Stock Size Profile - Ballarat



Source: Spatial Economics

3.2.2 Recent Trends & Case Studies– Rural Residential Lot Construction

Spatial Economics have undertaken residential land supply assessments across virtually all regional Victorian municipal areas. Over recent years Spatial Economics have observed an increasing and prevalent trend across regional Victoria for both the demand and supply of 'smaller' rural residential land products.

This 'smaller' rural residential land product is characterised by:

- Low Density Residential zoning (LDRZ);
- is serviced by reticulated hydraulic infrastructure (water and waste-water);

- is typically sized around 2,100 sqm; and
- master planned site outcomes.

Spatial Economics undertook a detailed residential land supply assessment for the City of Greater Shepparton in 2021 as an input for the review of their planned land supply provision contained in the Shepparton and Mooroopna 2050: Regional City Growth Plan. The land supply assessment highlighted a significant change in the composition/characteristics of rural residential lot construction activity, namely:

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

In recent years, rural residential lot construction activity in the form of Low Density Residential (LDRZ) zoning, which are a) smaller in lot size than historical outcomes and b) serviced by water/waste-water mains infrastructure is experiencing significant growth.

Two case studies are used to illustrate the significant increase in the demand for this type of land product in Greater Shepparton. The case studies include:

1. Tatura Waters Estate (Tatura); and
2. Providence Field Estate (North Shepparton).

Tatura Waters Estate

The Tatura Waters Estate is zoned Low Density Residential (LDRZ) and is located on the eastern edge of the township of Tatura. Over the last three financial years, within the estate, 85 lots have been constructed. These lots are typically sized around 2,100 sqm and are all serviced by mains water and waste-water infrastructure.

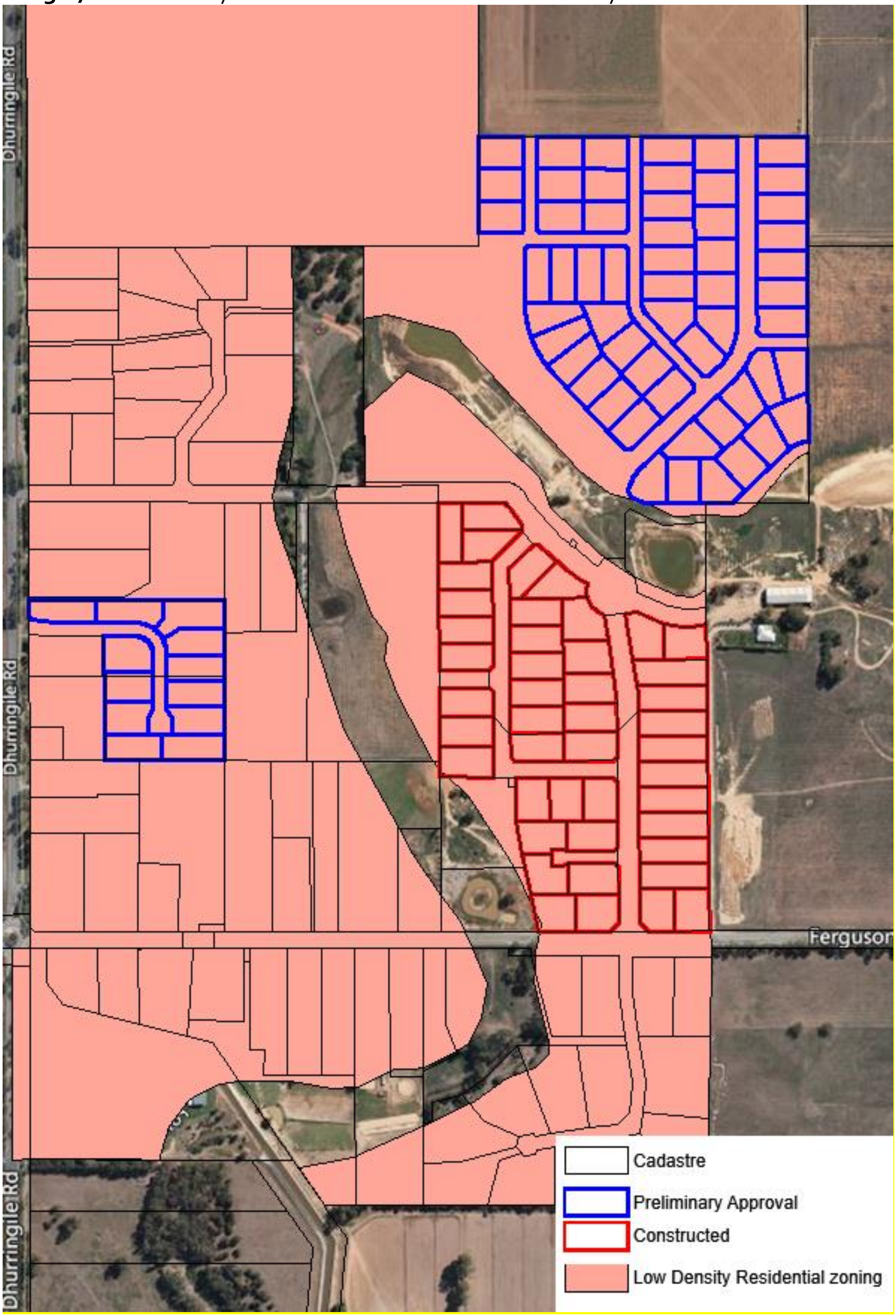
In the six months to date of the current financial year, an additional 23 lots have been constructed.

Of these 108 lots, all bar two have been sold, and the vast majority have had a residential dwelling constructed.

There is currently preliminary subdivision approval for the construction of an additional 67 lots within the estate. Preliminary subdivision approval data indicates that these lots will typically be around 2,010 sqm in size.

Image 7 illustrates the location of the constructed lots in and around the Tatura Estate, including lots with preliminary subdivision approval.

Image 7: Low Density Residential Lot Construction Activity – Tatura East



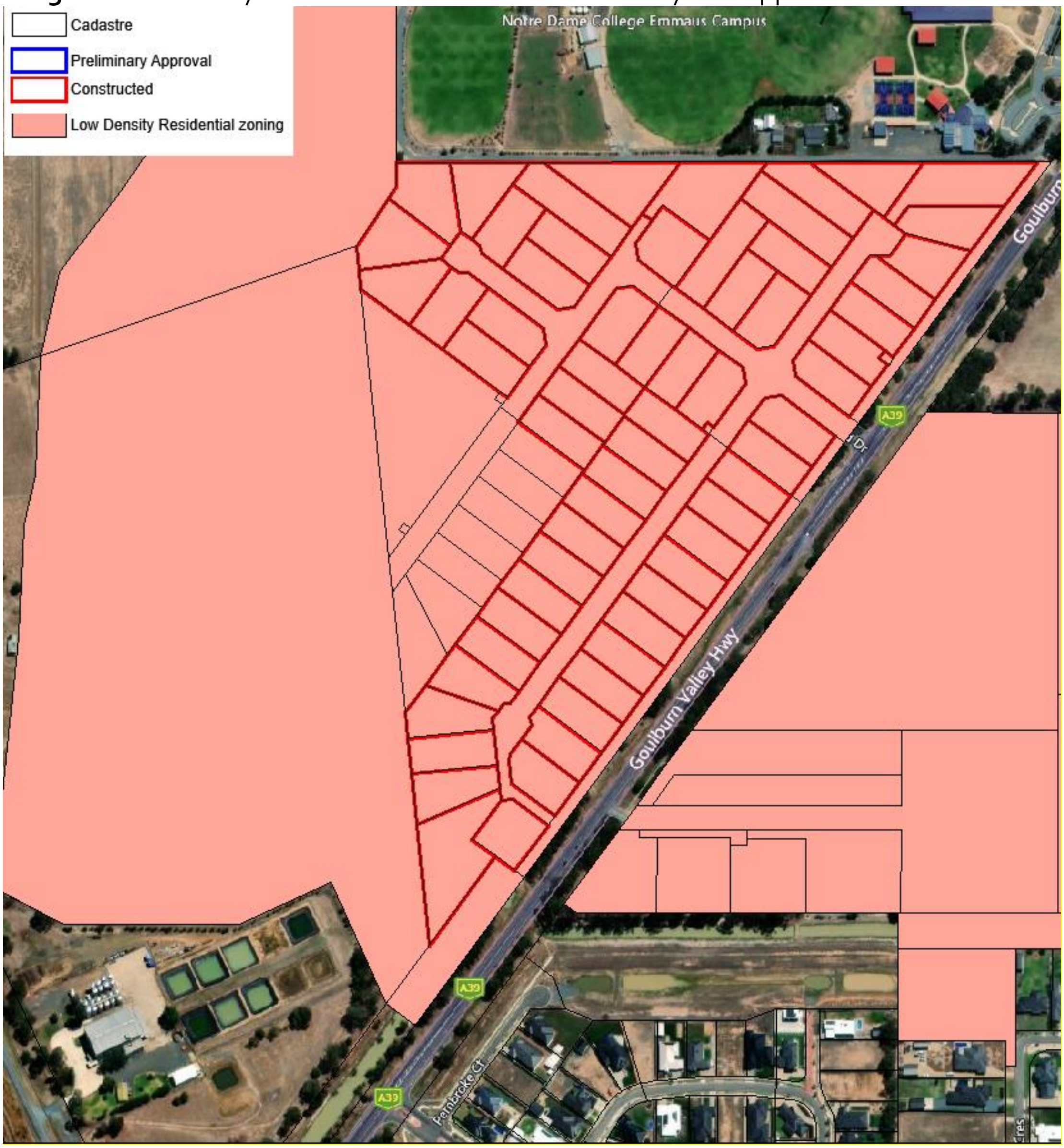
Source: Spatial Economics

Providence Field Estate
The Providence Field Estate is zoned Low Density Residential (LDRZ) and is located in the suburb of North Shepparton. Over the two financial years of 2019 and 2020 63 lots were constructed. These lots are typically sized around 2,042 sqm and all are serviced by mains water and waste-water infrastructure.

All lots were reportedly rapidly sold, and the vast majority have now a residential dwelling constructed.

Image 8 illustrates the location of the constructed lots in the estate.

Image 8: Low Density Residential Lot Construction Activity – Shepparton North



Source: Spatial Economics

It is clear, there is a strong underlying demand for 'smaller' serviced rural residential lots across Greater Shepparton.

Historically, demand was low for rural residential land products in Greater Shepparton. However, the provision of rural residential lots that are typically smaller than traditional offerings has resulted in strong demand. The provision of cost-effective water/waste-water hydraulic infrastructure for low-density residential greenfield development has directly facilitated the provision of smaller rural residential lots i.e. around the 2,100 sqm mark.

As evidenced by the rapid take-up of these smaller serviced rural residential allotments, there is a strong underlying demand for this specific and unique land product.

This is also strongly evidenced across other municipal areas such as Golden Plains, Wodonga and Ballarat (Cardigan Village).

3.3 Lot Construction Activity - Wallace & Bungaree

Residential lot construction within the Wallace and Bungaree has been limited. This is largely due to limited land supply opportunities as opposed to the lack of underlying regional demand.

From the 2008 to 2017 financial years, there was in total nine lots constructed, five located in Wallace and four in Bungaree. There were no residential lots constructed post the 2017 financial year.

All lots constructed were zoned Township (TZ).

In terms of achieved lot size, there was a wide variety, ranging from 1,300 sqm, to typically one hectare.

Of all of the lots constructed, five out of the nine lots have had a subsequent dwelling constructed post residential subdivision.

Residential lot construction in Wallace and Bungaree has entirely been sourced from the re-subdivision of existing lots as opposed to greenfield style subdivision.

3.4 Housing Construction Activity - Wallace & Bungaree

Two approaches were undertaken to determine the quantum and rate of residential housing construction for both Wallace and Bungaree.

The first approach was to examine the 2016 and 2021 ABS Population and Housing Census. This approach examined housing stock change for a wider study area, specifically the Wallace and Bungaree localities, which includes land zoned Farm (FZ).

The second approach utilised current and historical aerial imagery and only examined land within the townships of Wallace and Bungaree – specifically land zoned Township (TZ) and Rural Living (RLZ).

At a locality level (which includes the rural hinterland of the townships) there was a total of 20 dwellings constructed from 2016 to 2021. Of which, 13 were located in Bungaree and seven in Wallace.

Over a similar period for the township areas (defined by RLZ and TZ zoning) just one dwelling was constructed, this was located in Bungaree. However, from 2014 to 2017 five dwellings were constructed, four in Wallace and one in Bungaree.

Housing construction has been minimal in both Wallace and Bungaree. Dwelling construction was greater within the rural hinterland (within Farm Zone land) than within the townships.

Table 4: Number of Residential Dwellings Constructed, Wallace and Bungaree

	2012 to 2014	2014 to 2017	2017 to 2018	2018 to 2019	2019 to 2021
Wallace	3	1		1	
Bungaree		1			
Total	**3**	**2**	**0**	**1**	**0**

Source: Spatial Economics

4.0 Residential Dwelling & Lot Stock – Wallace & Bungaree

As at February 2021, there as a total residential dwelling stock of 108 across the two townships. Dwelling stock is only measured on land zoned TZ and RLZ, it excludes dwelling stock that is located on Farm zoned land.

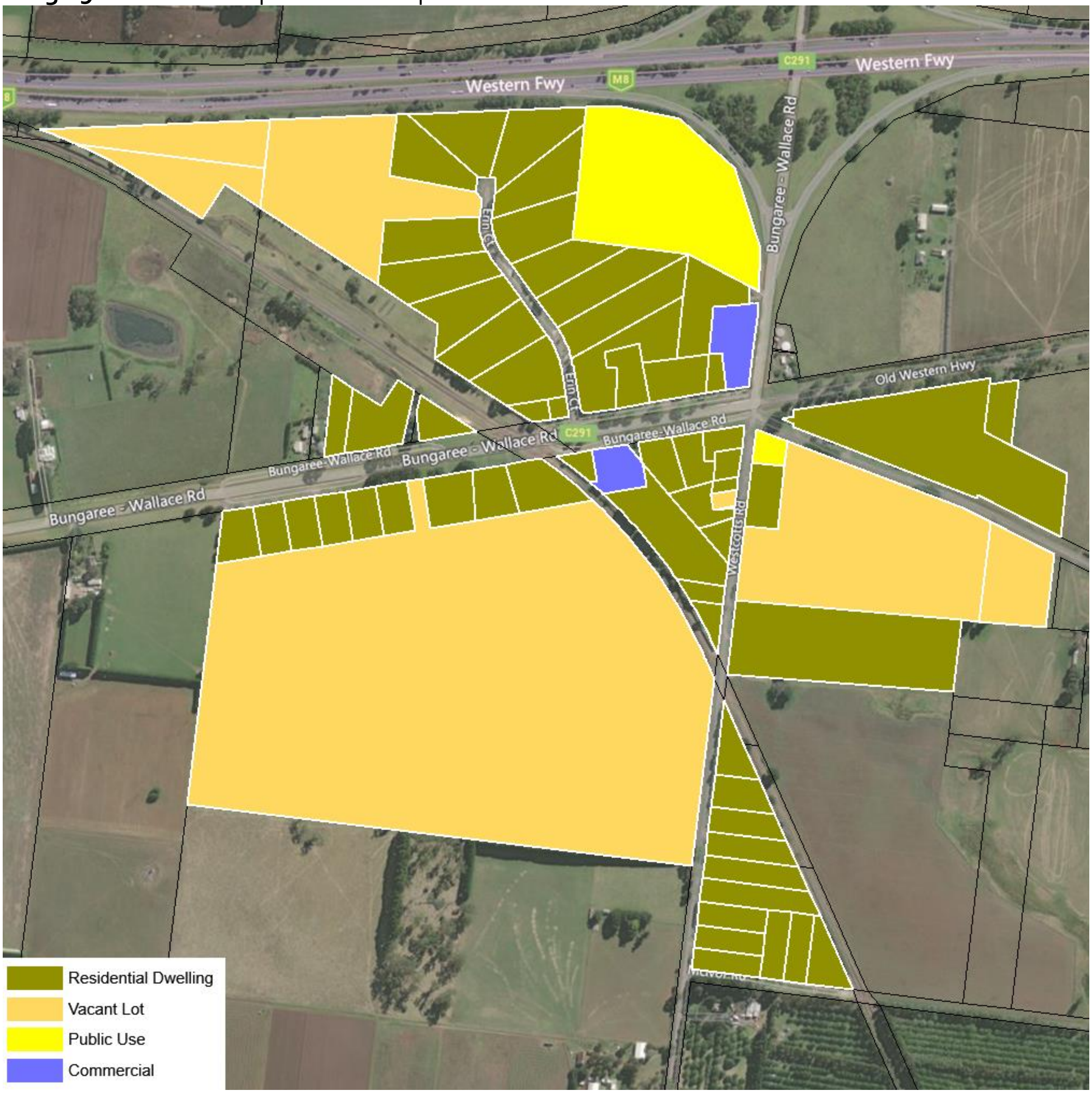
Of this total dwelling stock: 39 dwellings were located in Bungaree and 59 in Wallace.

As at February 2021, there were minimal vacant residential lots across the Study Area, with only three vacant lots located in Bungaree and seven lots in Wallace – a residential lot vacancy rate of only 9%.

The residential lot vacancy rate has significantly declined over time. In 2012 the residential lot vacancy rate was 15% declining to 9% in 2019 and remaining constant since this period.

Images 9 and 10 illustrate the stock of occupied and unoccupied residential lots for the two townships.

Image 9: Stock of Occupied & Unoccupied Residential Lots – Wallace



Source: Spatial Economics

Image 10: Stock of Occupied & Unoccupied Residential Lots – Bungaree

Source: Spatial Economics

In terms of land use zoning, residential lots within the settlements are predominantly zoned Township (TZ) with 83 lots and Rural Living (RLZ) with 25 lots. All the RLZ lots are located in Wallace and the TZ lots are evenly distributed between the two settlements.

The lot stock across the two settlements is typically 'larger' in size. This is primarily due to the lack of reticulated waste-water infrastructure and the reliance on septic waste-water systems.

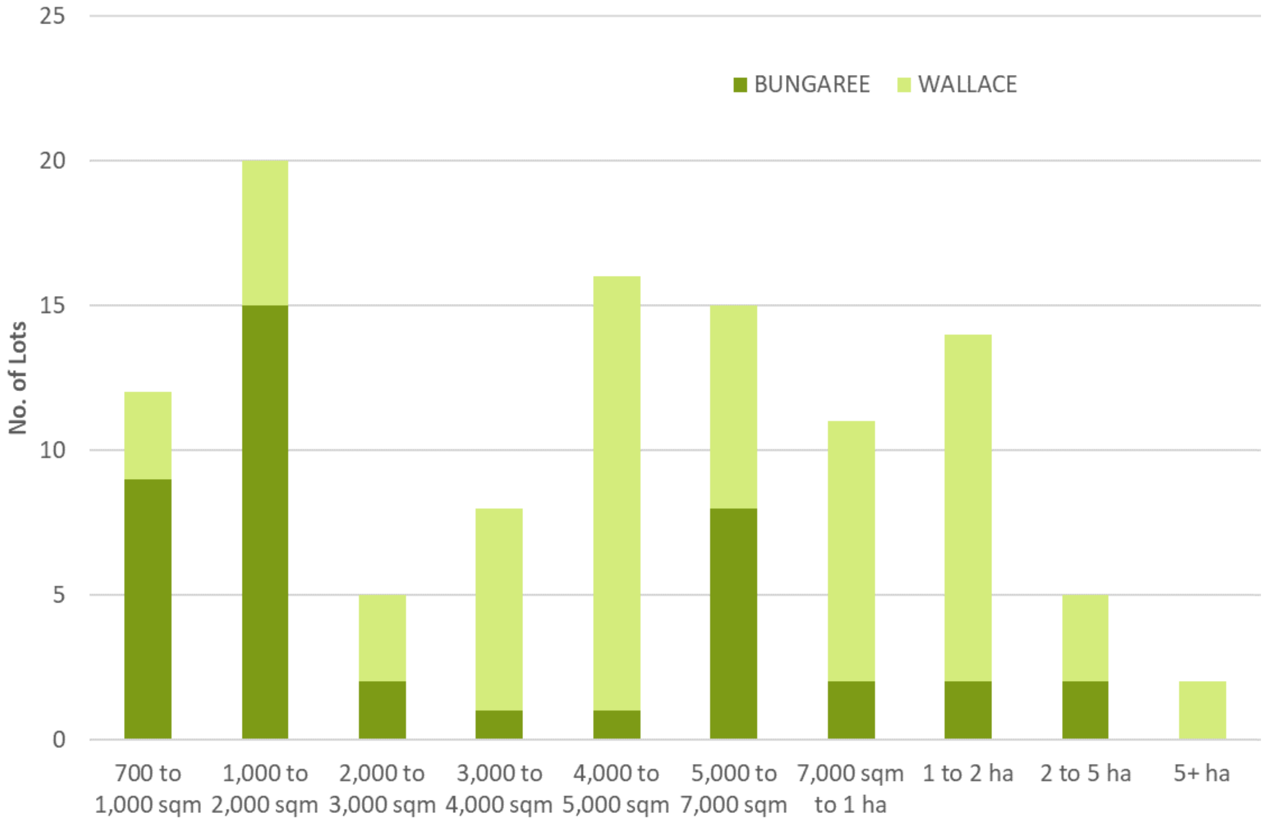
In Wallace, lots zoned RLZ are typically around 4,300 sqm, whilst lots zoned TZ are typically one hectare in size. In Bungaree, TZ lots are typically around 1,400 sqm in size. [1]

Of the total residential lot stock, nearly 60% of lots are sized above 4,000 sqm, the residual lot stock sized less than 4,000 sqm.

There are three significantly sized vacant lots in Wallace, two are zoned TZ and totalling nearly 13 hectares in area and one is zoned RLZ and is 38 hectares in size.

[1] Excludes lots that have an existing non-residential use. Includes vacant lots.

Graph 10: Residential Lot size Distribution – Wallace/Bungaree



Source: Spatial Economics

5.0 Demand Outlook

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

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

This is the current land supply situation in Wallace and Bungaree. Compounding this issue, is the methodologically difficulty in undertaking sound demographic projections for the two township settlements with just 108 dwellings.

So then what is the best course of action? In planning terms, we really need to be prepared for a range of possible futures of population and dwelling growth – this means considering a range of realistic growth forecasts and supply options. It also means, the exploration of regional demand for certain land supply products , such as 'large' residential lots.

Demand for Larger Lots

Based on published demographic projections undertaken by iDForecast, a total dwelling demand over the next fifteen years for the municipal areas of Moorabool and Ballarat combined is approximately 21,000. This is a significant regional demand outlook for housing.

Spatial Economics have not attempted to forecast potential housing demand in Wallace and Bungaree due to innate methodological difficulties for such small settlements and the unknown future residential land composition and quantum.

What we do know however, is:

1. Bungaree and Wallace townships are intrinsically linked to Ballarat via access to employment, and services such as education, health and retail;
2. There is an emerging and strong trend across regional Victoria for the demand for 'smaller' rural residential land products that are serviced (water/waste-water) and that are within master-planned estates;
3. Ballarat's stock of rural residential lands is significant, but has limited residual dwelling capacity;
4. Alternative historical rural residential supply to Ballarat from Golden Plains (north) is constrained;
5. Rural Residential demand typically ranges from 5 to 15% of the total dwelling market across regional Victoria;
6. Demand (and associated construction) of conventional density greenfield residential lots in Ballarat and Bacchus Marsh is strong and likely to continue;
7. Greenfield conventional residential density lots are declining in size over-time and relatively small compared to historical preferences/supply; and
8. Declining greenfield residential lot sizes are primarily driven by pricing/affordability points rather than changing demographics and consumer preferences.

To what degree any proposed land addition and associated density outcomes within the township areas of Wallace and Bungaree will 'capture' a component of regional demand will be primarily dependent on consumer perception and preference of a mixture of competing price, product, product gap, and amenity.

Potential additional residential land stocks in both Wallace and Bungaree have the scale to facilitate master-planned 'larger' lot estates. This characteristic is likely to attract/capture a sizable proportion of the identified regional demand for larger lots, particularly given its proximity to Ballarat and to a lesser degree Bacchus Marsh.

From a residential land supply and demand perspective, there is significant regional demand to support additional land supply stocks in Wallace and Bungaree – however, this would be based on land products meeting consumer preferences/demand.

There is a significant opportunity for both Wallace and/or Bungaree to fulfill a regional housing market gap in terms of:

- 'smaller' rural residential lots (around 2,000 sqm) that are serviced and within a master planned style estate; and
- 'larger' conventional density greenfield lots (around 700 to 800 sqm).

This land supply configuration would allow the maintenance of the rural character of these townships. However, this would be totally dependent on the economic feasibility of the provision of reticulated waste-water infrastructure.

Ultimately, it is a strategic land use policy/planning question of whether a component of this regional demand be located within these townships.