⌐4

Research 4: Macedon Range Demand & Supply Assessment 2021
The review of the Macedon Ranges adopted underlying demand metrics and supply of zoned residential land.

Paper 1 : Summary
Paper 2 : Supporting market evidence
Paper 3 : Audit of Macedon Ranges Supply & Demand

Research 4 Pty Ltd

Colin Keane

Paper 1

Summary of the Macedon Ranges forecast demand and supply setting.

The supporting market evidence and additional research material have been published in Paper 2 and Paper 3

Glossary of main terms

Primary Supply Response [PSR]: A Primary Supply Response [PSR] is the preferred residential "property type" referenced by Planning Authorities to strategically address local housing demand in a timely and affordable way.

Wholesale supply: Zoned land supply for housing.

Active Supply: The volume of zoned supply that can be purchased by end users or is under the direct management of a Developer.

Demand Shock: Is when actual activity spikes in response to a market event. The spike in activity is measured against expected levels of demand for housing.

Capacity of Active Supply: The number of dwellings that can be sustainably produced on a regular basis. Production levels are based on a residential projects scale. Capacity rates have been developed using historic production rates for over 2,000 land estates from 2008 through to 2021.

Underlying demand: The level of demand for new housing based on population change. The drivers of population change are net interstate migration, natural population net change and movement of people in and out of Australia. Underlying demand is deemed to be what is required at a point in time.

Established House Prices: The median house price for existing detached housing stock. The values have been sourced from the ABS.

Relative housing affordability: Price growth of one market compared to a benchmark rate of house price movement, usually represented by the supporting capital city.

PEAK Demand: When a market records a record high or near high expression of demand. This can be triggered by several events, such as the release of additional supply enabling a fuller view of underlying demand, or periods within the market cycle that have been stimulated via third party actions.

The Effective Sale Rate is the aggregate selling capacity of all active estates based on standard rates of selling for land estates of different scale.

Research4 Pty Ltd

Research4 undertake detailed research with a focus on better understanding the Australian residential Greenfield market.

Research4's data is used by industry, government and financial institutions to assist with in-house modelling, performance tracking and forecasting of the nation's major Greenfield markets.

National Land Survey [R4]

Research4 undertake the National Land Survey Program [NLSP]. The survey monitors the performance of the nation's major Greenfield markets. The survey has been operating since June 2007 and is the nation's longest and most detailed survey of this property sector. All data is collected and processed by Research4 on a full-time basis, reported quarterly.

To-date, the survey has tracked over 650,000 individual land allotments sold across 2,500 land estates which have been managed by over 900 land developers. Each quarter the survey adds on average 21,000 new land allotments to its survey.

The survey incorporates selected regional markets outside the nation's major metro Greenfield markets.

Introduction

The primary role of any community is to provide housing opportunities for people wanting or needing to live in that town or city that is both useful and affordable.

The key challenge facing any strategic planning department is to understand how many people need and or want to live in the community. This challenge is made even more difficult when the level of demand is changing.

The main consequence of not understanding or responding to changes in the level of demand for housing is that the supporting land supply will be insufficient.

More importantly, the families and households wanting or needing to live in that community will be forced to either pay more for existing housing and or move outside the market.

With demand for regional and Peri Urban property significantly increasing it is important to understand how these changes are impacting markets such as the Macedon Ranges.

The objective of this paper is to investigate the effectiveness of zoned land across the Macedon Ranges in addressing 15 years of housing demand.

This Summary should be read in conjunction with Paper 2 which contains reference details to passages in this paper, and Paper 3 which assesses demand and supply in each of the six submarkets in Macedon Ranges [Gisborne/New Gisborne, Kyneton, Woodend, Riddell's Creek, Romsey, and Lancefield].

Summary

The Macedon Ranges adhere to a supply benchmark of having zoned land that can address 15 years of demand. Land supply that is equal to 15 years of demand is "best practice" in that it provides the market the best opportunity to address forward housing demand. *Reference 1 – Macedon Ranges aims and objectives for future zoned land supply*

Average Household Demand

The effectiveness of any future zoned land supply is directly informed by the modelled level of forward household demand.

The determination of the volume of zoned land that can respond to 15 years of demand is largely based on forward growth scenarios or demand forecasts.

Applying a demand metric that is below actual levels of demand will result in insufficient land being zoned. Most strategic plans will employ an average forward demand number based on projected population changes. These projected population changes are sourced from third parties or government projections.

The Macedon Ranges Shire Council (MRSC) has used the Victoria in Future 2019 (VIF), Forecast ID and what is called a "Third Option" forecasts. The MRSC has relied predominantly upon VIF and Forecast ID demand projections. These demand metrics are based on population projections from 2016 through to 2031. Though the Macedon Ranges Residential Land Demand and Supply report was published in 2020, the forward demand metrics used to assess sufficiency of underlying land supply are based on data as early as 2016. *Reference 3 - Average Demand metrics - Options*

> "VIF2016 estimates the Gisborne District VIFSA population to increase by approximately 6,500 residents from 2016 to 2031 at an average rate of 1.7% per annum. The projections indicate that the Gisborne VIFSA will accommodate approximately 57% of population growth in the municipality during this projection period. Forecast ID projects an average annual growth rate of 2.2% per annum, resulting in an additional 7,100 residents in the Gisborne District. This projection is somewhat lower than the recent population growth rate for the area (SA2) of 3% per annum between 2008 and 2018" MACEDON RANGES RESIDENTIAL LAND DEMAND AND SUPPLY page 20

It is important to note that the basis for the two applied demand forecast rates is data starting from 2016 and moving forward. The 2016 start point aligns with the ABS census.

What is common is that both forecast demand metrics are an averaged annual figure and therefore a fixed forecast demand rate. They are based on population and development data that is dated and does not reflect the major structural changes that have been occurring across the nation..

Under Clause 11.02-1S of the Macedon Ranges Planning Scheme, which sets out the State policy for the supply of urban land, provision is given for other strategies such as to "Monitor development trends and land supply and demand for housing and industry". This strategy is dynamic, it suggests that the market can change and that there is a value in being able to understand when it changes and the degree of any change.

Most markets employ an average demand metric that is reviewed infrequently over a period of years. This general approach to monitoring the demand metric fails to pick up on changes that may have a material impact on the effectiveness of a markets zoned supply.

Examples of events which are impacting on housing demand are:

- A change in lifestyle preference i.e., tree change and sea change trends
- Impacts arising from infrastructure investment i.e., fast rail, highway upgrades
- Housing stimulus grants such as regional homeowner grants which encourage people to look at other markets *Reference 7: First Home Buyer grants and expressed demand*
- Changes to the drivers of population growth i.e., a lift in Permanent Visa numbers, Net Interstate and or Regional Migration *Reference 8: Changes to the volume of Permanent Visa applications and expressed demand*
- Changes in the boarders of property markets. With Melbourne Greenfield expanding, Peri Urban markets such as Gisborne not considered to be better connected to Melbourne *Reference 9: Melbourne Greenfield boundary*

The most recent event which has significantly impacted local housing demand has been COVID 19. COVID triggered a massive surge in housing demand, driven by returning Australian citizens and a broad push for larger and more "lockdown friendly" housing product. The impact on demand has been nationwide with all major Greenfield markets experiencing record levels of demand. *Reference 10: COVID induced demand spike*

COVID has seen demand for regional markets such as Geelong and Ballart increase by up to 130 percent. *Reference 11: COVID induced regional demand push*

The COVID demand stimulus has impacted the Macedon Ranges, bringing about higher than benchmark price growth for existing housing stock, and running down the already limited supply of new building blocks. *Reference 13: Supply of zoned land MRS reconciled*

The sale of yet to be development zoned land in Gisborne for $170 million is further evidence of the underlying strength of demand for future local property. *Reference 12: Sale of Development land - Gisborne*

In all this, a major barrier to understanding the true level of housing demand is a lack of market ready supply. The full expression of demand can only be truly tested when there is unlimited supply. It is an accepted fact that the Macedon Ranges has had limited market ready land supply, therefore using actual land sales as a measure of true average demand cannot be relied upon. However, there is value in assessing the actual volume of expressed demand across the Greenfield markets of the Macedon Ranges to help validate the adopted forward demand metrics. *Reference 3: Macedon Ranges expressed demand metrics*

Greenfields demand in Macedon Ranges

Based on an audit of Greenfield development sites since 2010 across the six markets, the level of expressed demand has ranged from 7.2 lots per month up to 39.5 lots per month. Since 2018, the average monthly take-up for broad hectare and major supply sites has been 32 lots per month. Over the past 2

years, the average has increased to 36 lots per month. *Reference 3: Macedon Ranges expressed demand metrics*

The average of 32 lots per month does not include the additional sale of single vacant lots or minor land supply opportunities. It does not include urban infill activity. It only represents the major Greenfield activity for the market. The 32 lots per month is therefore a conservative estimate of expressed demand. Additionally, the average take-up rate will be lower than market reality because most land estates sell out within months, not years. The average take-up rate of 32 is based on annual consumption therefore it will be lower than how the market operates.

That said, the expressed demand rate for Greenfield land across the Macedon Ranges of 32 land lots per month can be used to help validate the adopted forecast demand metrics employed by the MRSC for the purpose of assessing the volume of land needed to address 15 years of demand.

The MRSC had adopted a forward average demand metric 26.3 lots per month [the average of the three methods]. This is lower than the 2010-2020 average of 27 lots per month and below the 3-year average of 32 lots per month discussed above. *Reference 2 - Average Demand metrics*

It is reasonable to suggest therefore that the forecast demand metric the MRSC has adopted of 26.3 lots per month will not represent the likely level of demand over the next 15 years. This is primarily because it has not factored in the rise in demand for Peri Urban markets such as Macedon nor does it represent more recent levels of estimated expressed demand. The forward demand metric is lower than the past 10-year level of expressed demand.

Greenfield land price and supply

Where the expression of housing demand is limited due to a lack of market ready land supply, the consequences can be measured by the rate of price growth across the established housing market.

Where demand goes unmet, pressure will build on the existing dwelling stock. This test of supply effectiveness should guide planners in the management of current and future land supply.

To evaluate if local house price growth has been impacted by unmet demand there needs to be a benchmark house price growth. One reference point is house price movement in metro Melbourne which sits at 25 percent over the five-year periods [2015-2020]. *Reference 14: Sufficiency of expressed demand assessment*

The median house price for the Macedon Ranges has lifted by 47 percent over a 5-year period compared to a benchmark house price rate of 25 percent. The fact that local house price movement has been 92 percent greater than metro Melbourne, provides strong evidence that the local markets strategic supply of zoned land has been insufficient. *Reference 14: Sufficiency of expressed demand assessment*

This highlights the real risk facing the local market in terms of being able to fulfill its strategic objective, which is to accommodate forward demand while protecting housing affordability.

The rise of Peri Urban demand

As mentioned, the Macedon Ranges like other regional and Peri Urban markets has become more popular and desirable. It is suggested that the average level of demand for new detached housing needs to be lifted to reflect this new market reality.

To demonstrate how these structural changes are impacting average demand forecasts the following markets have been selected:

- The Peri Urban market of Wallan with a smaller population than that of the Macedon Ranges, has seen expressed demand for the past 12 months lift by 164% compared to the past 5 years. *Reference 6: Other Peri Urban [Wallan] markets expressed demand metrics*
- The adopted average demand metric for Greenfield for the City of Ballarat is 72 net lot sales per month. The average actual expressed demand metric for the past 12 months has been 100 percent higher. *Reference 15: Expressed Greenfield demand for City of Ballarat*
- The Peri Urban market of Warragul / Drouin has an official Forecast ID forecast of 37 dwellings per month, all dwelling types with Greenfield demand forecast from 2021 -2026 of 31 lots per month [85% of total]. Actual land sales since the close of 2019 has been 63.5 lots per month representing a 103% increase on average demand. *Reference 5: Other Peri Urban [Drouin Warragul] markets expressed demand metrics*
- The major regional city of Greater Geelong. Forecast ID modelled housing demand for Greater Geelong to average 233 dwellings per month [all types], 198 dwellings per month for Greenfield. Actual average land sales for Greater Geelong for the past 12 months have been 467 per month or 135% above the forecast average demand. The past 5-year average actual sale rate has been 43 percent above forecast average demand. *Reference 16: Expressed Greenfield demand for City of Geelong*
- The Sunbury market has an official forecast demand metric of 46 dwellings per month including all types, Greenfield is 39 dwellings per month [forecast set by Forecast ID representing 2021-2026 demand]. The actual volume of land sold over the past 12 months has been 233 % above the forecast average demand metric. *Reference 17: Expressed Greenfield demand for Sunbury*
- Forecast ID forecast for the City of Hume at 195 new dwellings per month from 2021-2026, the actual sale rate of just Greenfield land was 486 dwellings per month, 149% higher than the average demand metric. *Reference 18: Expressed Greenfield demand for Hume*
- Forecast ID forecast 317 dwellings per month [all types] for the City of Casey. Actual sales of Greenfield only dwellings were 454 per month for the past 12 months, 43% above the forecast demand metric. *Reference 19: Expressed Greenfield demand for Casey*

Based on the examples provided, Forecast ID forecasts have been 164%, 100%, 103%, 135%, 233%, 150% and 43% below actual average levels of demand.

That the above examples of forecast average demand are already outdated and well below actual demand further highlights the new market reality. The challenge facing most property markets across Peri Urban and Regional Victoria is that demand has changed. Using demand metrics which have been formulated on pre COVID and on 2016 ABS data sets are not responding to the new level of demand. For a market's

zoned supply to be effective over the next 15 years will require a re-setting of the underpinning demand metric.

Additionally, the Forecast ID forecasts are from 2021-2026, therefore suggesting that if the first year of this forecast is already seriously below actual, the balance of the forecast period is likely to be further out.

Macedon Ranges has adopted Forecast ID's forecast of 26 lots per month. The above examples should provide strong evidence that the adopted forecast rate of 26 lots per month is outdated and well below actual average demand levels.

We conclude that the Macedon Ranges forecast of 26 lots per month needs to be lifted by 130% to reflect the reality of the new Peri Urban market settings. The 130% uplift is the average of the seven market examples above. The recommended new market demand metric for the Macedon Ranges that should be used to assess the volume of zone land over the coming 15 years is 60 lots per month. *Reference 23: Research4 demand metrics - Applied*

Sufficiency of zoned residential land supply

The volume of zoned land across the Macedon Ranges as of 2019 was estimated to be equal to 6,050 housing lots. Since 2019 the volume of zoned supply has reduced by a further 1,121 lots to 4,929 lots [as of June 2021]. *Reference 13: Reconciliation of Zoned Supply for MRSC*

Thirteen percent of the estimated 4,929 lots of zoned supply is classified as single lot or minor supply parcels.

Applying the Macedon Ranges own pre COVID average demand metrics, the supply balance of 4,929 lots is equal to 15.6 years of future demand.

It is suggested that the average demand metrics employed by the Macedon Ranges in determining the volume of zoned land required will be out of date as per the evidence provided in the previous section of this paper.

Employing a revised average demand metric of 60 dwellings per month for the Macedon Ranges indicates that the current supply balance of zoned land is equal to 6.8 years of demand. *Reference 23: Research4 demand metrics – Applied*

The Macedon Ranges Shire has suggested that any un-met demand could be addressed through land supply located across Sunbury. The supply setting for Sunbury Greenfield land is however not able to respond to demand from the Macedon Ranges. *Reference 26: Relying on external supply solutions – City of Hume*

The Sunbury Greenfield market is already under demand pressure and is struggling to effectively respond to its own level of demand. *Reference 17: Expressed Greenfield demand for Sunbury*

PEAK Demand

This paper has outlined that the average forecast demand metric adopted by the MRSC is not reflective of true underlying demand. It has been suggested that the average demand metric employed should be 60 lots per month for detached housing demand.

Average demand is never market reality. Generally the market cycle will both exceed average demand levels and fall below. PEAK demand refers to the times when actual activity spikes or exceeds average demand by 60 percent. *Reference 20: PEAK demand*

PEAK demand needs to be considered separately to average demand. Average demand will assist with assessing the volume of zoned land needed to address 15 years of demand. Peak demand will be used to assess the effectiveness of Active Supply. *Reference 21: Active Supply explained*

Housing affordability is lost during periods of PEAK demand not average demand. *Reference 24: Demand Shock or Peak Demand*

Periods of PEAK demand typically last from 12-24 months on average and can occur as frequently as every 4-5 years. Price growth for land during PEAK demand can be 300 times greater than average price growth rate.

Based on an average demand of 60 lots per month the MRSC would need to consider that over the course of the next 15-year forecast period that PEAK demand will occur at least two times. In the case of Macedon Ranges, PEAK demand is estimated to be 96 lots per month.

To address PEAK demand, there needs to be a level of Active Supply that can address any spike in a timely manner. *Reference 22: Active Supply implications*

The effectiveness of a market's Primary Supply Role [PSR] in addressing affordability will largely depend on the capacity of Active Supply to address moments of PEAK demand. Therefore, the number and mix of trading projects at any point in time will determine local housing affordability.

Conclusion

The objective of this paper is to investigate the effectiveness of zoned land across the Macedon Ranges in addressing 15 years of housing demand.

The Macedon Ranges location with respect to metro Melbourne has seen demand for housing increase over time. To-date a large percentage of this demand has gone unmet with the result being increased pressure on established housing stock. This demand pressure is eroding local housing affordability and will be making it difficult for local first home buyers to enter the market and for those people who need to live in the region from accessing a property.

The volume of zoned land in the Macedon Ranges Council Shire is considered to have reduced from 6,050 dwellings published in 2019 to 4,924 land lots as of June 2021. This supply balance has further reduced since the June 2021 audit.

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	Other	TOTAL DWELLINGS
GRZ	981	210	137	235	1,921	244	3,728
LDRZ	111	84	37	25	182	0	439
RLZ	84	25	39	57	63	0	268
NRZ	135	71	42	96	117	0	461
UGZ	0	0	0	0	0	1,154	1,154
TOTAL	1,311	390	255	413	2,283	1,398	6,050
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	Other	TOTAL
TOTAL #2	473	88	8	6	426	120	1,121
Supply Total 2021	838	302	247	407	1,857	1,278	4,929

This report recommends that the currently adopted demand metric of 26 land lots per month for the Macedon Ranges needs to be increased to 60 lots per month. The 60 lots per month represents the demand metric for Greenfield or detached housing only.

The current volume of zoned land can address 6.8 years of demand based on a demand metric of 60 lots per month.

Macedon Range								
Demand Option			Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19 forecast		290	24	4929	17.0	4,350	579
MRSC_Urban Enterprises	Forecast id forecast		314	26	4929	15.7	4,710	219
MRSC_Urban Enterprises	Third Option forecast		343	29	4929	14.4	5,138	-209
Applied	Average of three		316	26	4929	15.6	4,733	197
Historical 2010-2020	Broadhectare & Major		327	27	4929	15.1	4,900	29
R4 Forecasts								
R4 Revised Average	130% uplift on ID		722	60	4929	6.8	10,833	-5,904

Additionally, the report recommends that the local Greenfield market be managed in a way that ensures that Active Supply can address PEAK demand of 96 lots per month. Maintaining a development capacity across the markets equal to 96 lots per month will mitigate any upward pressure on land prices during periods of PEAK demand.

Overall, the Macedon Ranges market is estimated to have a shortfall of zoned supply ready for market use of 5,904 dwellings.

Forward demand will not abate but is expected to strengthen. Any strategic plan for the Macedon Ranges will need to consider the trade off between supply and affordability. Under-supplying the market will result in a continuation of rapid house price growth.

[Note blank pages follow]

Paper 2

Supporting market research evidence

Research4 Pty Ltd

Research4 undertake detailed research with a focus on better understanding the Australian residential Greenfield market.

Research4's data is used by industry, government and financial institutions to assist with in-house modelling, performance tracking and forecasting of the nation's major Greenfield markets.

National Land Survey [R4]

Research4 undertake the National Land Survey Program [NLSP]. The survey monitors the performance of the nation's major Greenfield markets. The survey has been operating since June 2007 and is the nation's longest and most detailed survey of this property sector. All data is collected and processed by Research4 on a full-time basis, reported quarterly.

To-date, the survey has tracked over 650,000 individual land allotments sold across 2,500 land estates which have been managed by over 900 land developers. Each quarter the survey adds on average 21,000 new land allotments to its survey.

The survey incorporates selected regional markets outside the nation's major metro Greenfield markets.

Contents

Introduction

This paper provides supporting market evidence for the conclusions published in Paper 1.

The objective of this paper is to outline sufficient market evidence to assist with understanding the reasons why the forecast demand metric for the Macedon Ranges needs to be revised upward.

Evidence has been sourced primarily from the National Land Survey with data from other third party sources.

The following reference notes refer to section in Paper 1.

Reference 1 – Macedon Ranges aims and objectives for future zoned land supply

Most Strategic Plans for housing supply aim to have a minimum volume of zoned land; normally the minimum period is 15 years.

A core objective for having a minimum volume of zoned supply is to ensure that the role of the Primary Supply Response [PSR] remains effective. The primary role of any PSR is to ensure that there are sufficient housing opportunities to address underlying demand or a set dwelling target. Ideally, the supply should be able to mitigate upward pressure on property prices.

It is thought that a 15-year supply horizon will provide opportunity for the industry to take up zoned supply and convert that supply into market ready product.

MACEDON RANGES RESIDENTIAL LAND DEMAND AND SUPPLY 2019 publication.

Clause 11.02-1S of the Planning Scheme sets out the state policy for the supply of urban land. The strategies included in the policy are as follows: • Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development. • Ensure that sufficient land is available to meet forecast demand. • Plan to accommodate projected population growth over at least a 15-year period and provide clear direction on locations where growth should occur. Residential land supply will be considered on a municipal basis, rather than a town-by-town basis.

Other strategies of the policy include: • Monitor development trends and land supply and demand for housing and industry.

Reference 2: A Markets Primary Supply Response [PSR]

A markets response to create new housing supply will be employ one or more of the following three main property types:

- Greenfield land upon which to build a new home,

- Urban infill [Town homes], or

- Higher Density [Apartments] housing product.

It is understood that some markets will use more than one type and, in some cases, all three. However, in nearly all markets there will be a Primary Supply Response [PSR].

A Primary Supply Response [PSR] is the preferred residential "property type" referenced by Planning Authorities to strategically address core local housing demand in a timely and affordable way.

A core objective of any PSR is to respond to changing levels of housing demand in a way that preserves general housing affordability.

A loss of housing affordability is generally linked to a failure of a markets PSR to respond to an increase in demand.

In simple terms, when a markets PSR is unable to appropriately respond to an increase in demand, this will trigger price escalation across the broader residential housing market. In other words, when consumer demand exceeds available supply, prices rise.

Given the long lead times involved with property development, housing affordability is generally lost even during short periods of strong demand, as opposed to normal operating levels, as additional supply cannot be instantaneously "turned on".

Price escalation is experienced when the PSR is unable to keep pace with a spike in demand. Therefore, the effectiveness of a market to maintain affordability is directly linked to its capacity to respond to "peak" periods of demand as opposed to "normalised" periods of demand.

Reference 3 - Average Demand metrics

To address 15 years of housing demand, there needs to be an understanding as to what the level of forward demand will be. Demand forecasts are generally developed from

a) historic population growth patterns

b) known developed opportunities

c) from the assessment of the drivers of population change.

Often all three methods are employed or considered. Additionally, some markets choose not to address underlying demand but simply set a dwelling target.

The effectiveness of any PSR will be influenced by the underlying demand metric employed by planning authorities to determine the required level of zoned land.

Average forecast demand for metropolitan markets is largely based on the major drivers of population change. Population change driven by net overseas demand, net interstate demand and local demand.

Average forecast demand is generally defined as "underlying" demand as opposed to "expressed demand".

The challenge facing most strategic plans when setting a forward demand metric is the consideration of any structural changes that may impact on demand.

Factors such as,

- lifestyle changes, associated with more people wanting or needing to live in a location that previously was not considered. "Sea change" or "Tree change" terms are often associated with this type of structural change.
- Government incentives to promote development and growth in certain areas.
- Infrastructure investment which opens new markets.
- Changes to the planning boarders or development boundaries.
- General urban expansion that results in Peri Urban markets having closer links to a major market.
- Affordability of housing product attracting demand.
- Significant events such as COVID. COVID has brought about not only a spike in demand but also a change in where people are wanting to live. COVID is re-structuring demand pathways.

Figure 1 summarises the different forward demand metrics used for the Macedon Ranges.

The demand metrics were published in the Urban Enterprise MRS Demand and Supply 2019 report.

Figure 1 MRSC adopted forecast demand metrics for Macedon Ranges [all six markets]

Macedon Range							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19 forecast	290	24	4929	17.0	4,350	579
MRSC_Urban Enterprises	Forecast id forecast	314	26	4929	15.7	4,710	219
MRSC_Urban Enterprises	Third Option forecast	343	29	4929	14.4	5,138	-209
Historical 2010-2020	Broadhectare & Major	327	27	4929	15.1	4,900	29

The MRSC has adopted a forecast demand metric that averages 26 lots per month for Greenfield or detached housing product across the market. The adopted forecast rate is marginally less than the actual recorded take up rate from the past 10 years.

Reference 4: Macedon Ranges expressed demand metrics

Expressed demand can be constrained by the volume of Active Supply. Where a market has insufficient Active Supply, true levels of demand may not have the opportunity to be fully expressed.

Figure 2 Macedon Ranges expressed demand per month by year [Research4]
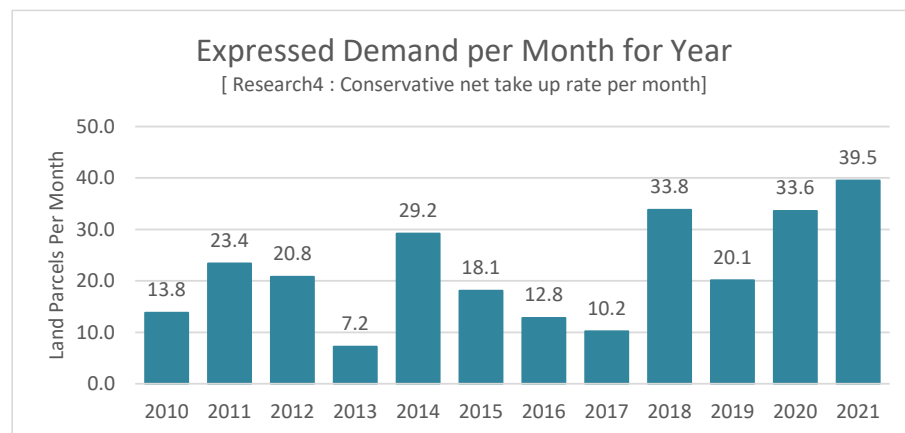
Figure 2 is a chart showing the estimated level of monthly expressed demand for the Macedon Ranges [six markets combined]. The data has been sourced through an audit of the known development sites across each market. The method for auditing included:

- Actual land sale rate for known land estates
- Reconciliation of land releases through Developer web sites and third-party web sites
- Arial mapping showing signs of construction for set stage releases.

The survey is of known development sites [the identification of development sites was based on the UE 2019 report in addition to a general survey of zoned land within each market].

It should be noted that the sale rate per month has been based on a minimum time of 12-months e.g. If an estate offered 36 lots in the 2020 year, then the sale rate would be recorded as 36/ 12 months = 3 lot sales per month. Most of these smaller estates have sold well under 12 months. Therefore the "expressed demand" metrics shown should be viewed as a conservative demand metric i.e., the actual take up rate will be higher.

This market has demonstrated that it can conservatively sell up to 39 lots per month. This demand metric does not include any minor or single lot supply options and is therefore lower than actual sales per month.

The Macedon Ranges has experienced a significant lift in average expressed demand since 2017. From 2018 through to 2021, the average take-up rate has been 32 lots per month compared to an average take-up rate of 17 per month from 2010 through to 2017. Between these two periods the average expressed demand has lifted by 88 percent.

These take up rates represent the minimum level of expressed demand. Due to low levels of supply, real or true demand is unknown. The challenge is to assess the likely gap between what is known in terms of a take up rate and what is the true level of demand for detached housing product.

Reference 5: Other Peri Urban [Drouin Warragul] markets expressed demand metrics

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input].

Figure 3 Expressed demand: Net sales per month for Greenfield land estates [NLSP]
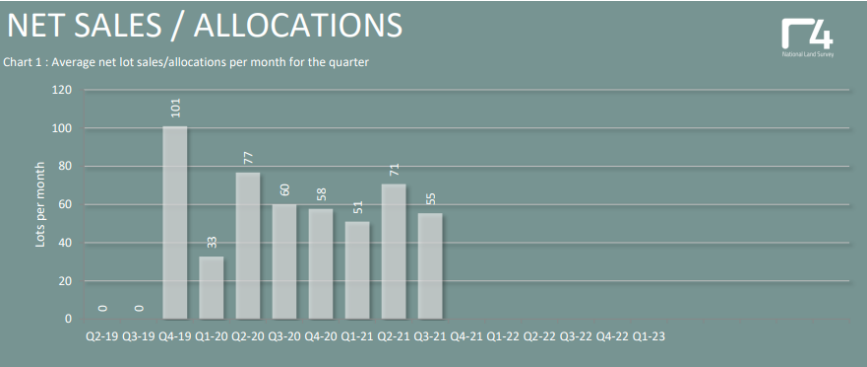
Figure 4 Median lot price per block of land [NLSP]
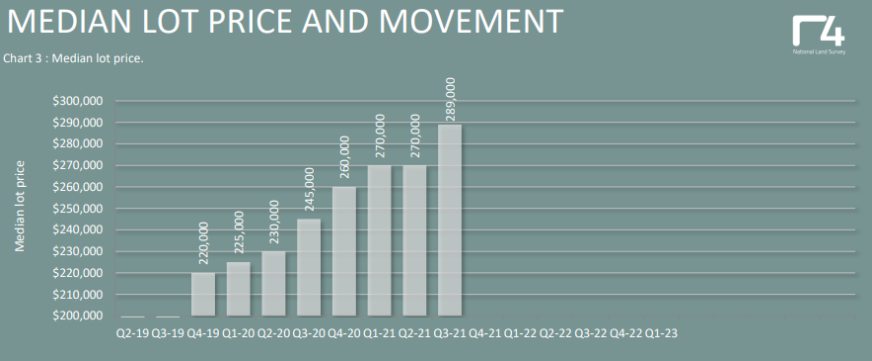
Figure 5 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	14,115	16,350	37
National Land Survey past 12-month average			59
Variance			+58%

Reference 6: Other Peri Urban [Wallan] markets expressed demand metrics

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

Figure 6 Expressed demand: Net sales per month for Greenfield land estates [NLSP]
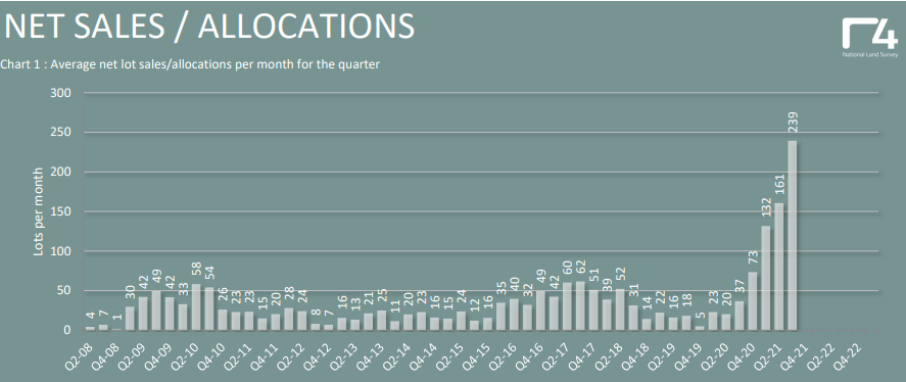
Figure 7 Median lot price per block of land [NLSP]
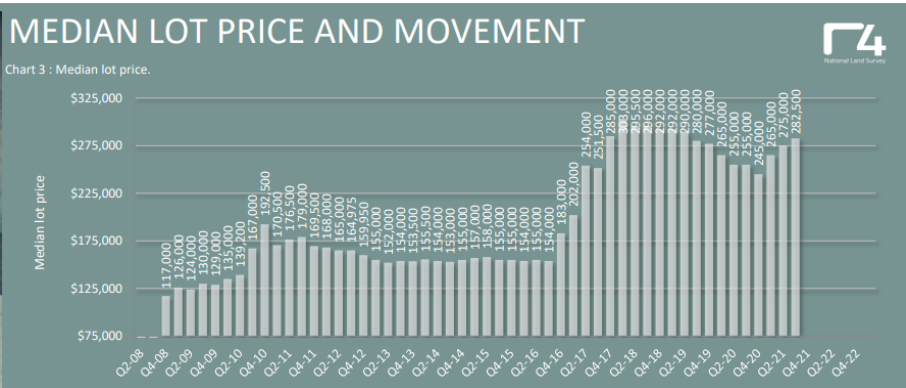
Figure 8 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	6,459	11,546	84
National Land Survey past 12-month average			151
Variance			+80%

Reference 7: First Home Buyer grants and expressed demand

Housing demand will spike when set customer groups are incentivised. The chart shows the relationship between first home buyer loans and net land sales across Melbourne Greenfield.

Two notable periods where demand spiked are the Global Financial Crisis and COVID 19.

Figure 9 First Home Buyer loans [Melbourne Metro ABS] and new land sales for Greenfield Melbourne [NLSP]
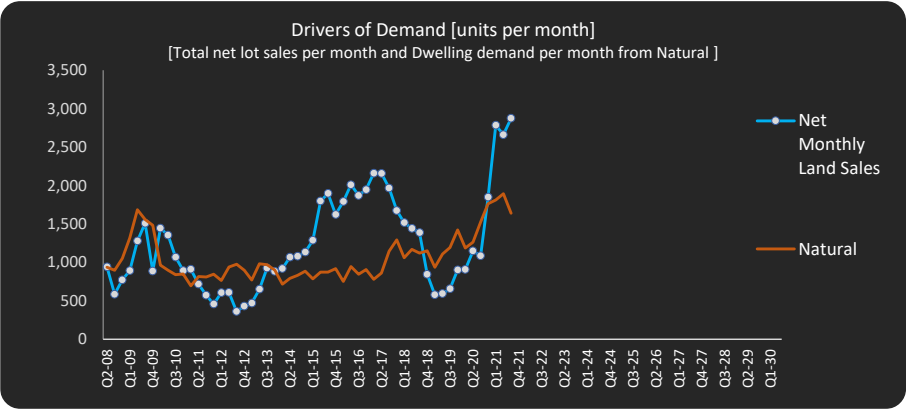
Reference 8: Changes to the volume of Permanent Visa applications and expressed demand

Figure 10 shows the relationship between new land sales per month across metro Melbourne Greenfield sites and the number of Permanent Visa's (PV's) issued by the Federal government impacting Melbourne.

The volume of PV's is expected to increase over the forecast period in line with the opening of international borders and a policy direction by the Federal government to increase the inflow of people.

The NSW government is leading the push for increased PV numbers.

The net impact of a modest increase of PV numbers from 160,000 for the 20220/2021 financial year to 180,000 for the 2021/22 year produces this chart. The impact on the State property market will be noticeable. It is expected that this impact will flow directly into Peri Urban markets such as the Macedon Ranges over the forecast period.

Figure 10 Permanent Visa [Department of Immigration and Border Protection] and land sales per month [NLSP]
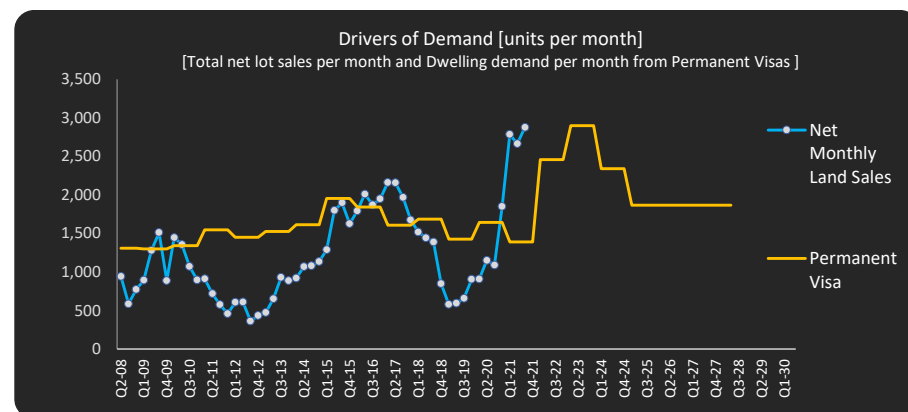
Reference 9: Melbourne Greenfield boundary

The current boundary of the Metro Melbourne Greenfield market.

Figure 11 Metro Melbourne Greenfield
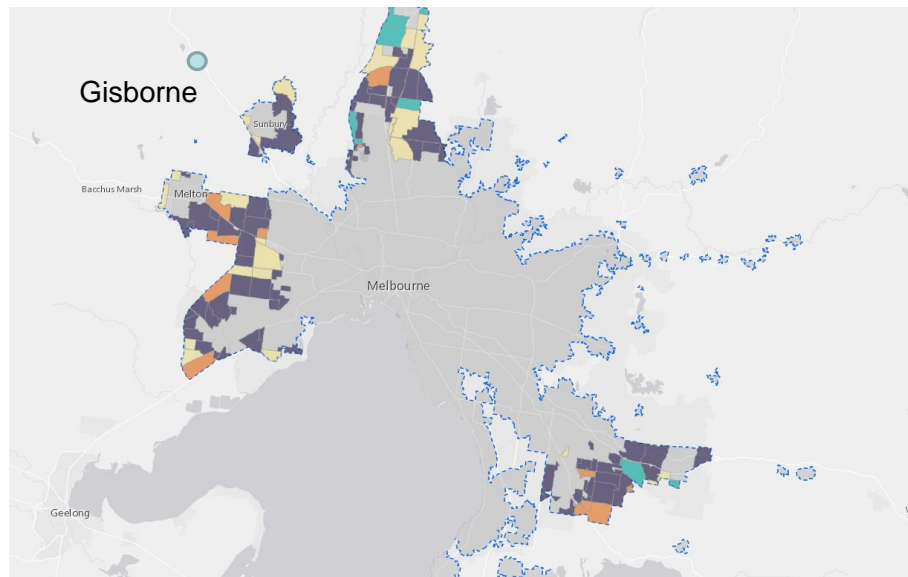
Markets such as Melton, Sunbury, Wallan, and Warragul in the Southeast are located further away from the CBD than parts of the Macedon Ranges.

These markets have higher levels of underlying demand and have all exceeded their official forward annual demand forecasts.

These markets provide a clear insight as to the true level of expressed demand for housing in locations which are further away from the epicentre of demand [metro Melbourne].

The proximity of the Macedon Ranges shire to Melbourne is a further prompt to housing demand.

Reference 10: COVID induced demand push

COVID has triggered a spike in the number of citizens returning from overseas. Close to 300,000 citizens or permanent residents returned from March to June 2020. The subsequent six months saw an additional 340,000 people return.

Normally Australia loses 10,000 people per year but COVID stopped people from leaving and accelerated the return of people who were living overseas. Close to 40% of the total people who returned suggested that they will remain.

COVID has therefore re-set the demand pathway for housing. Though the number of people returning is expected to return to normal levels post the borders opening, they will be replaced with an increase in the number of people granted Permanent Visa status.

Figure 12 Returning Australian's [Department of Immigration and Border Protection] and land sales per month [NLSP]
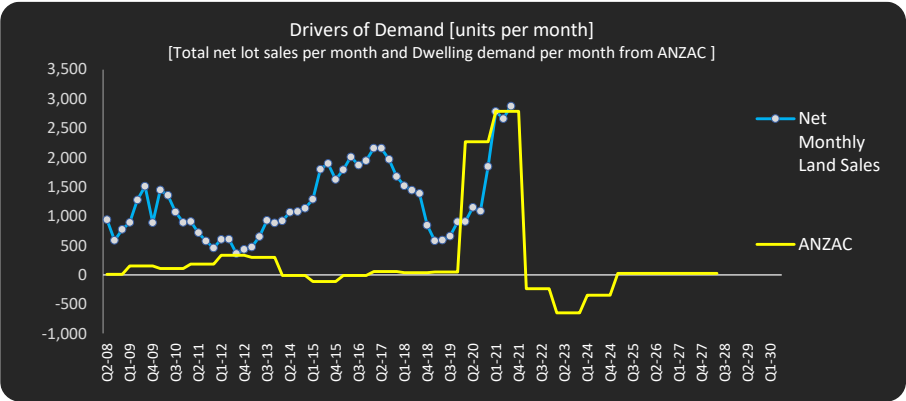
COVID is a prime example of how the demand for a market can be significantly changed and highlights the importance of being able to respond to any structural changes in demand quickly.

Reference 11: COVID induced regional demand push

COVID has delivered a major Demand Shock to all property markets. Average forecast demand for regional, coastal, and Peri Urban property markets across the nation are now considered out of date. COVID has brought about a structural change regarding demand for Peri Urban markets. This structural change is unlikely to revert to pre COVID levels and will strengthen over the forecast period.

Figure 13 Expansion of Melbourne Greenfield [Research4 NLSP]
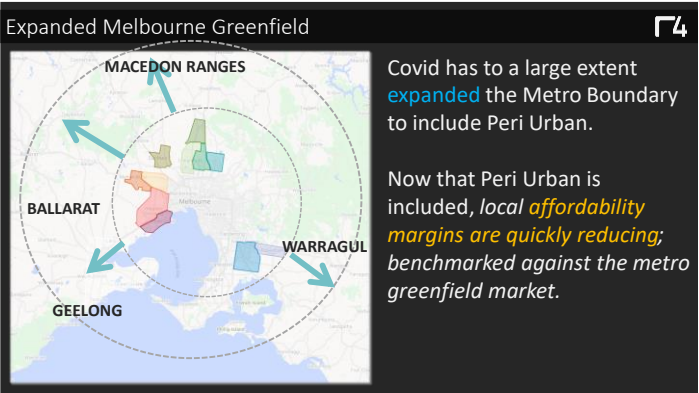
Peri Urban markets have not factored within their strategic planning framework any contingency for such a structural change. In fact most Peri Urban markets were failing to keep pace with growing demand prior to COVID.

Figure 14 Affordability loss pre and post structural change to demand [R4 NLSP]

Peri Urban & Melbourne Greenfield Pricing after acceptance					
	Acceptance date	Land Price	Price Gap	Price Gap [Now]	Affordability Change
GEELONG	Q2-18	$210,000	$127,000	$19,000	-85%
BALLARAT	Q2-19	$165,000	$170,000	$76,000	-55%
WARRAGUL	Q1-20	$220,000	$110,000	$60,000	-45%

After Acceptance, local affordability has quickly evaporated.

The impact of COVID on local housing affordability has been significant and the quick loss of local affordability is directly linked to a lack of housing supply.

Geelong has seen its affordability gap [land price compared to Melbourne land price] reduce by 85 percent. Ballarat has seen its affordability gap reduce by 55 percent. The Warragul market has seen a 45 percent reduction in its affordability gap.

Figure 15 House price movement – Annual, Greater Geelong & Melbourne Valuer General Victoria, R4]
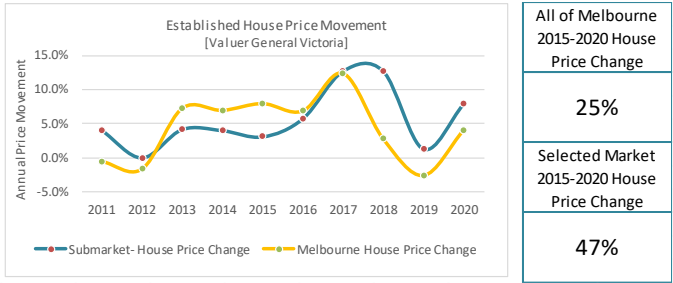
Figure 15 demonstrates that house price growth for Greater Geelong was 47 percent compared to the benchmark rate of 25 percent [all of Melbourne house price change]. The higher than benchmark price growth rate re-enforces the fact that land supply has been unable to respond to changes in demand.

Figure 16 House price movement – Annual, Warragul & Melbourne [Valuer General Victoria, R4]
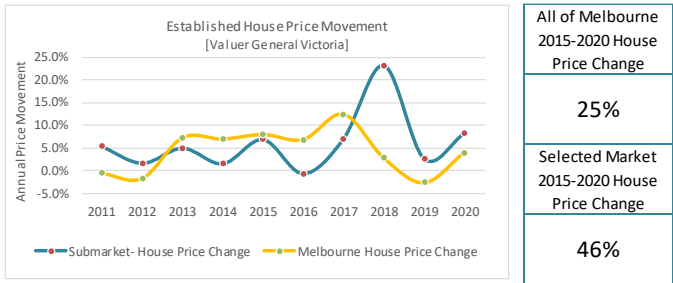
Figure 16 demonstrates that house price growth for Warragul was 47 percent compared to the [Melbourne] benchmark rate of 25 percent.

The fact that house price growth for Geelong and Warragul were close to double that of the Melbourne benchmark rate is evidence that the local supply of zoned land has been unable to respond to the level of demand for new housing. This failure has triggered a "demand

shift" from land supply into existing housing, in turn pushing prices higher and eroding local housing affordability.

Figure 17 summarises the supply setting for Greater Bendigo as of January 2021. Like other major regional markets, Greater Bendigo has a serious shortfall of both zoned and active supply. This setting was prior to any structural changes brought about by COVID.

Figure 17 Summary of Greater Bendigo Supply readiness [Research 4]

When looking at the movement in house prices for Greater Bendigo, from 2015 through to 2020, house prices lifted by 24 percent compared to the benchmark rate of 25 percent.

In summary the supply response for Greater Bendigo since 2015 can be described as being "effective" and keeping house price growth in check. In fact, house price growth from 2012 through to 2019 was well below the Melbourne metro benchmark, suggesting that the demand and supply setting for this period was working.

However as of 2021, the level of Active Supply had reduced to 1.2 years of demand and zoned supply was equal to 3.12 years.

This drop in supply also coincided with a dramatic lift in house prices from 2019 through to 2020. It could be stated that the Greater Bendigo market is currently facing the prospect of local affordability being eroded through a lack of Active Supply.

Figure 18 House price movement – Annual, Greater Bendigo & Melbourne [Valuer General Victoria, R4]

Established House Price Movement
[Valuer General Victoria]

All of Melbourne 2015-2020 House Price Change
25%

Selected Market 2015-2020 House Price Change
24%
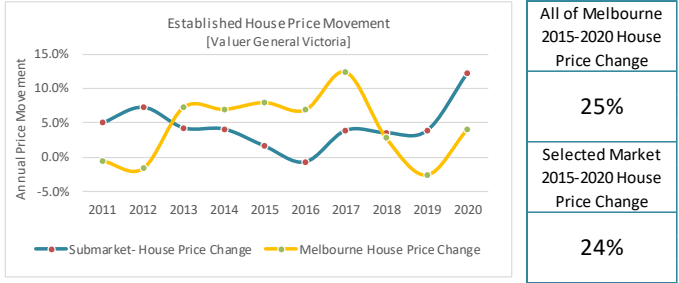
Case Study - Ballarat Property Market

The City of Ballarat employs Greenfield land supply as its Primary Supply Response. Over 75 percent of all new dwellings are delivered via Greenfield land supply. Research4's National Land Survey has been tracking the performance of the Ballarat Greenfield market.

The City of Ballarat leading into COVID had an estimated 7.5 years of zoned supply which was based a demand metric of 75 dwellings per month. From a local planning perspective, the only thing that mattered was identifying additional Greenfield supply that would address the 7.5-year shortfall in zoned land.

The fact that zoned supply had fallen well below the 15-year benchmark and had not triggered a re-assessment of the demand metric essentially means the demand metric being used is out of date.

When COVID impacted in Q1 2020, land sales volumes increased from 60 per month to 185 per month [Q3-20]. The "Demand Shock" resulted in a rundown of Active Supply which in turn placed greater pressure on new land pricing.

Active Supply, reduced from 31 trading estates to 21 active estates by the start of Q2-2021.

The net result of this COVID induced "Demand Shock" was an increase in the average price of a block of land, from $169,000 to $275,000 over an 18-month period.

This extra $106,000 was not driven by a sudden uplift in the cost base but was a result of not building into the strategic plan capacity to respond to a PEAK demand. If the local strategic plan had been able to understand the relationship between affordability and Active supply, then there would have been less opportunity for land prices to escalate at such a fast rate.

Ballarat's property market was failing before COVID. This is evident when considering the rate of price growth across the established housing market compared to metro Melbourne house price movement.

From 2015 through to 2020 house prices across Ballarat lifted by 44 percent compared to 25 percent for Melbourne. This elevated rate of price growth for existing housing stock is evidence of a failure in planning and the management of its Primary Supply Response.

Figure 19 House price movement – Annual, Ballarat Melbourne [Valuer General Victoria, R4]

All of Melbourne 2015-2020 House Price Change
25%
Selected Market 2015-2020 House Price Change
44%
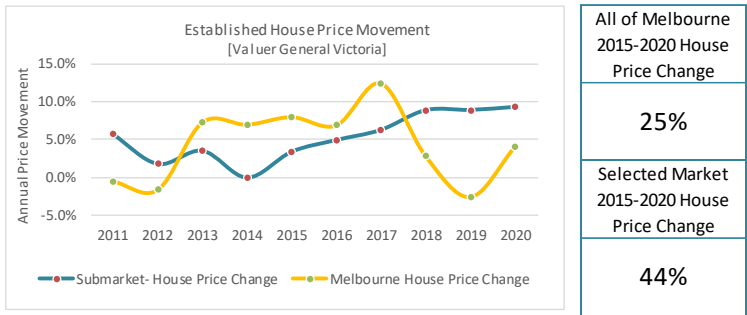
Re-setting Peri Urban Demand Metrics

The new reality is that demand for Peri Urban and regional markets has changed. Market evidence supports this fact. Despite the change in the level of demand going forward, Local Government planning bodies have not revised their underlying Average demand forecast metrics nor considered PEAK demand implications.

Further, most regional markets within commuting distance of Melbourne were struggling with growing levels of demand prior to the "Demand Shock", caused by COVID.

The strengthening of demand for regional properties has resulted in significant rates of price growth for the established housing product.

It is critical that Regional and Peri Urban markets adopt a forward demand metric that can both respond to this new market setting while also being capable of responding to any further Demand shock.

Updating the underlying demand metrics on a regular basis will mitigate loss of local housing affordability and ensure local zoned land for Active supply remains effective.

Reference 12: Sale of Development land - Gisborne

Demand for developable land across the Macedon Ranges remains strong due to the knowledge that underlying demand for housing is going un-met.

The recent sale of Ross Watt Road for $86 million dollars represents a higher per block rate than selected wholesale supply opportunities across Melbourne Greenfield markets.

Figure 20 Examples of wholesale land prices Biggins and Scott Land 2021
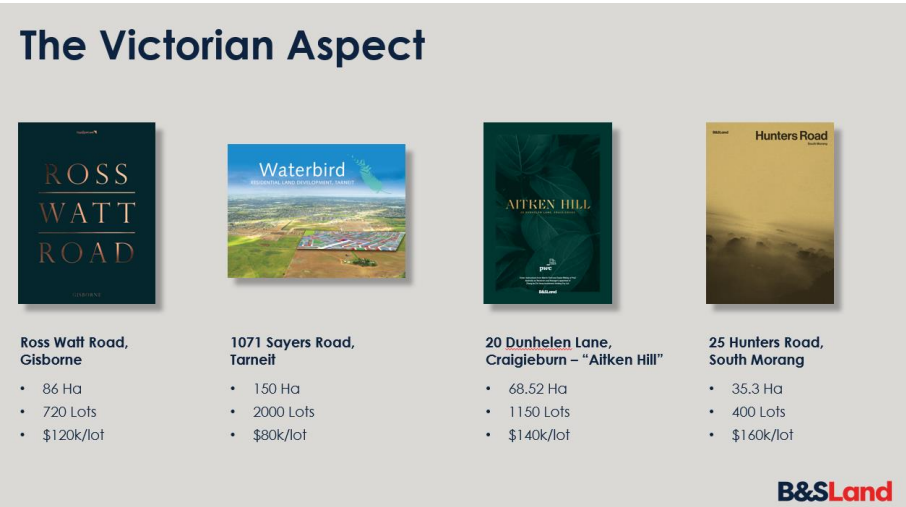
Reference 13: Supply of zoned land MRS reconciled

Figure 21 summarises the major changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council as at 2019 and an audit undertaken by Research 4 Pty Ltd as of June 2021. The reconciliation has focused on broad hectare, major and any nominated growth zone land supply.

No or minimal changes have been made to "Minor" and or "Single" lot supply metrics i.e., this report has assumed that the supply setting as at 2019 as stated within the Urban Enterprise report has remained largely unchanged. The inclusion of Minor and or Single lot land supply to derive a 15-year supply benchmark is a structural weakness for a strategic plan. The nature of this supply type is that it cannot be relied upon from a strategic supply response due to fragmented ownership issues, unknown intentions of final land use and that the sale of a block or single lot is generally seen as addressing housing demand at point of sale, not when a dwelling is constructed.

This section presents aggregate data for the six markets across the Macedon Ranges: Kyneton, Woodend, Gisborne/New Gisborne, Riddell's Creek, Romsey, and Lancefield.

Urban Enterprise (UE) published zoned land supply 2019

This report states that supply was equal to 6,050 dwellings or land lots as at the close of 2019. The 6,050 lots were considered to represent the Primary Supply Response [PSR] of the Macedon Ranges with respect to underlying demand for housing.

Figure 21 Summary of land supply as per Urban Enterprise MRSC Residential Land Demand and Supply Assessment 2019

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	Other	TOTAL DWELLINGS
GRZ	981	210	137	235	1,921	244	3,728
LDRZ	111	84	37	25	182	0	439
RLZ	84	25	39	57	63	0	268
NRZ	135	71	42	96	117	0	461
UGZ	0	0	0	0	0	1,154	1,154
TOTAL	1,311	390	255	413	2,283	1,398	6,050

Reduction in zoned land supply since report publication

Since the publication of the UE report on land supply, the local supply level has reduced by an estimated 1,121 lots. The reduction in zoned supply has been driven by the selling down of housing lots over 2020 and 2021. The assessment of supply sold since 2019 was undertaken using direct communication with active land estates and satellite images to determine status of zoned land.

Figure 22 Summary of land supply as per Urban Enterprise MRSC Residential Land Demand and Supply Assessment and changes to zoned land supply since 2019 and adjustments since 2019.

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	Other	TOTAL DWELLINGS
GRZ	981	210	137	235	1,921	244	3,728
LDRZ	111	84	37	25	182	0	439
RLZ	84	25	39	57	63	0	268
NRZ	135	71	42	96	117	0	461
UGZ	0	0	0	0	0	1,154	1,154
TOTAL	1,311	390	255	413	2,283	1,398	6,050
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	Other	TOTAL
TOTAL #2	473	88	8	6	426	120	1,121
Supply Total 2021	838	302	247	407	1,857	1,278	4,929

The estimated current volume of zoned land across the six nominated townships is 4,929 lots. Thirteen percent of this zoned supply is either Minor or Single lot format.

Reference 14: Sufficiency of expressed demand assessment

As mentioned, "expressed demand" is often a function of available supply. Unless a market has unlimited supply, it is difficult to assess if "expressed demand" is equal to "underlying demand".

The Macedon Ranges market has been capable of selling up to 39 lots per month over a 12-month period. To assist with better understanding if the level of expressed demand has been effective in addressing local demand, price growth for Melbourne metro is compared to the price movement for established houses across this Macedon Ranges.

Benchmark house price growth rate

The reason why the 'all of Melbourne' house price has been employed is because it represents a volume of supply that reduces the bias associated with under-supplied markets. This is not to say that the 'all of Melbourne' supply setting has been sufficient, but that it is closer to this objective that other nearby markets.

Benchmark house price movement compared to Macedon Ranges

Figure 23 compares the movement in house prices for both Melbourne and the selected market from 2015 through to 2020. Selected market being the six nominated markets for the Macedon Ranges.

The Macedon Ranges established detached housing market from 2015 through to 2020 saw house price lift by 48 percent compared to 25 percent for 'all of Melbourne' [Valuer General 2021].

Figure 23 All Melbourne & Selected markets Established house price change 2025-2020
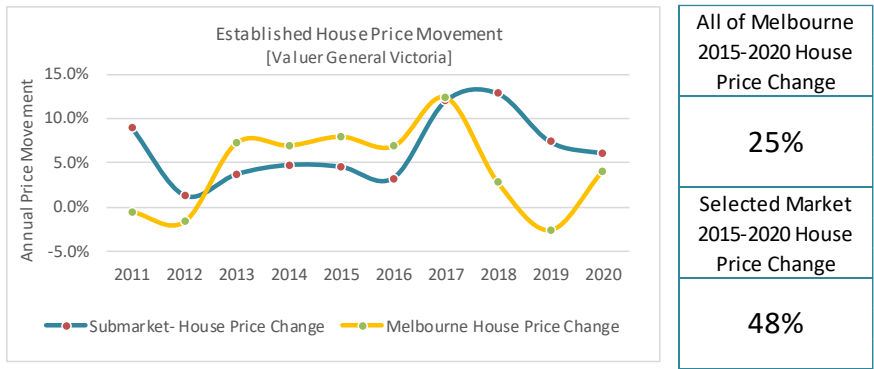
The key insight from Figure 23 is the difference between the benchmark price movement and the price movement for the Macedon Ranges. House price growth across the Macedon Ranges since 2015 has been 98% greater than the benchmark.

Figure 23 shows that local house prices have been increasing at a much faster rate than the benchmark since 2017. Prior to 2017, the rate of house price growth was below the benchmark indicating that from 2012 through to 2016, Active Supply levels were effectively responding to expressed demand. This aligns with the change in the average expressed take-up rate lifting by 88 percent.

The effectiveness of Active Supply across the Macedon Ranges has been significantly reduced since 2017.

The overall effectiveness has been reduced due to an increase in demand. The fact that local housing affordability was dramatically weakened since 2017 re-enforces the need to employ a demand metric that both ensures that there is 15 years of zoned supply to which the market can respond in a timely fashion.

Reference 15: Expressed Greenfield demand for City of Ballarat

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

Figure 24 Expressed demand: Net sales per month for Greenfield land estates [NLSP]

Figure 25 Median lot price per block of land [NLSP]

Figure 26 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	49,982	54,360	73
National Land Survey past 12-month average			162
Variance			+122%

Reference 16: Expressed Greenfield demand for City of Geelong

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

Figure 27 Expressed demand: Net sales per month for Greenfield land estates [NLSP]

Figure 28 Median lot price per block of land [NLSP

Figure 29 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	119,659	133,643	233
National Land Survey past 12-month average			467
Variance			+100%

Reference 17: Expressed Greenfield demand for Sunbury

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

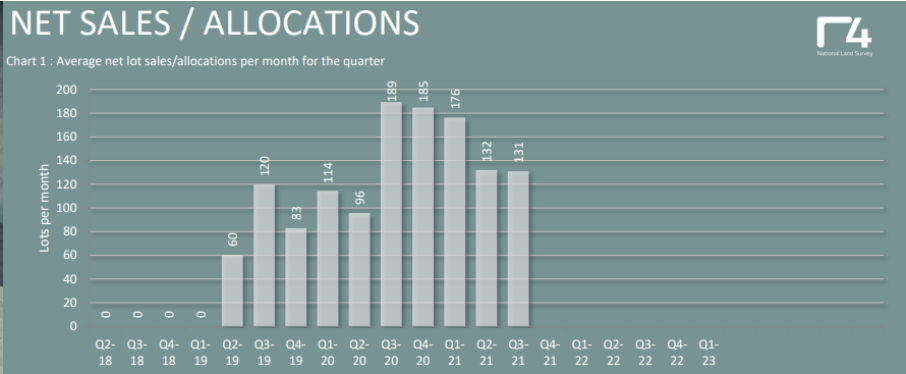Figure 30 Expressed demand: Net sales per month for Greenfield land estates [NLSP]
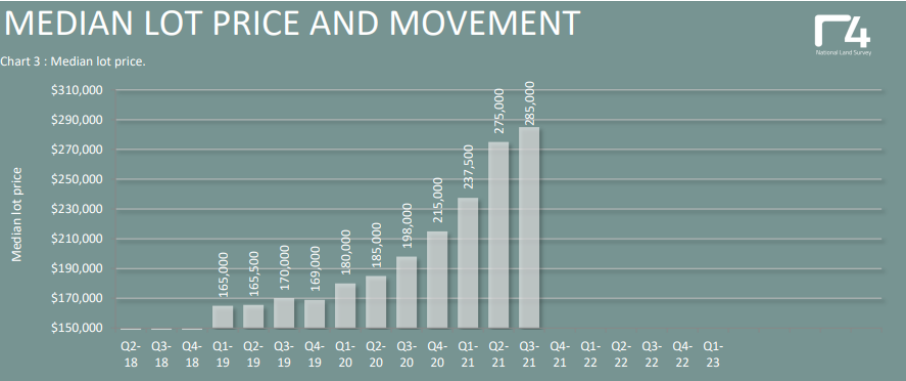

Figure 31 Median lot price per block of land [NLSP

Figure 32 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	15,411	18,220	46
National Land Survey past 12-month average			126
Variance			+173%

Reference 18: Expressed Greenfield demand for City of Hume

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

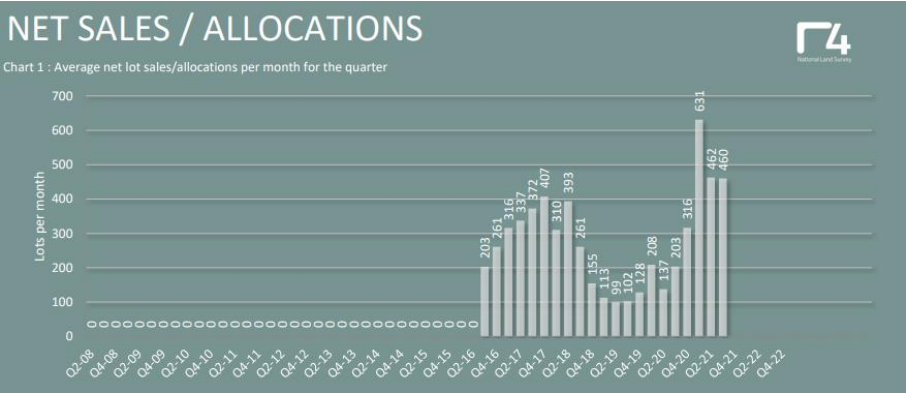Figure 33 Expressed demand: Net sales per month for Greenfield land estates [NLSP]
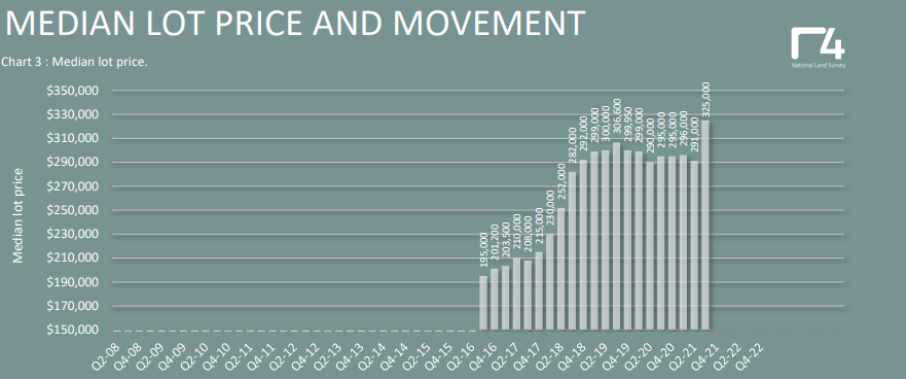

Figure 34 Median lot price per block of land [NLSP

Figure 35 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	82,684	94,427	195
National Land Survey past 12-month average			486
Variance			+149%

Reference 19: Expressed Greenfield demand for City of Casey

The following data is sourced from the National Land Survey [NLSP] undertaken by Research 4 Pty Ltd and Forecast ID [used by the Macedon Ranges as a demand input]

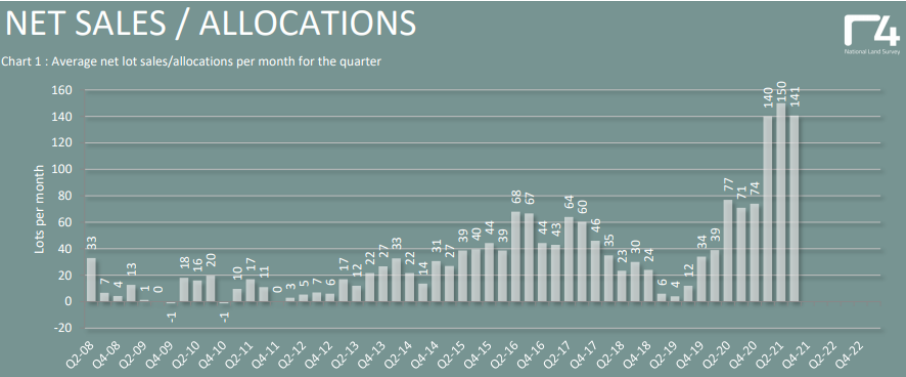Figure 36 Expressed demand: Net sales per month for Greenfield land estates [NLSP]
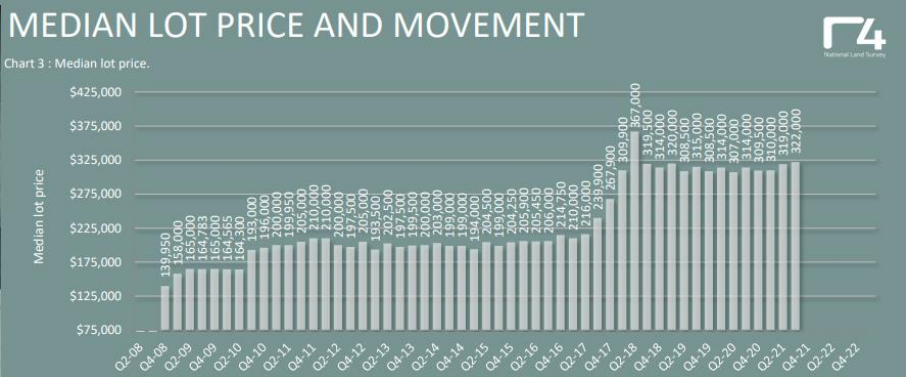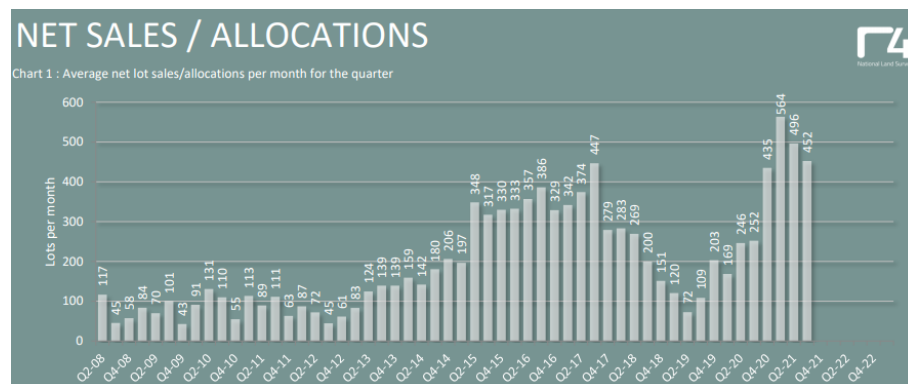

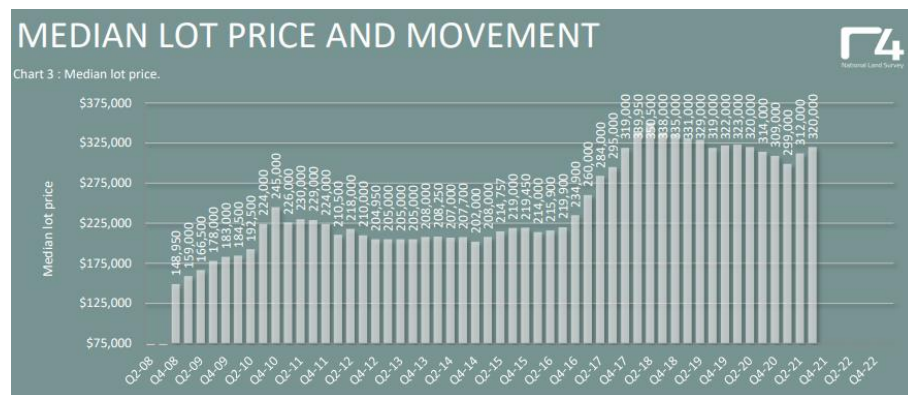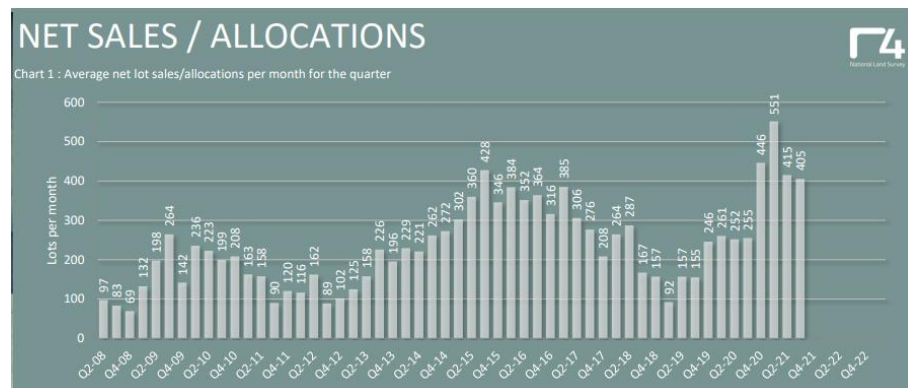Figure 37 Median lot price per block of land [NLSP
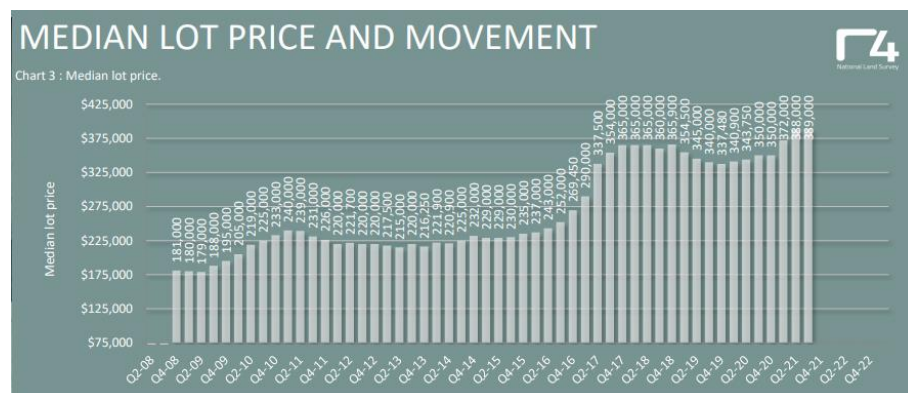
Figure 38 Forecast ID forecast average dwelling demand per month measure against actual

Forecast Period [dwellings]	2021 Dwl	2025 Dwl	Dwl per month
Forecast ID	126,372	145,429	317
National Land Survey past 12-month average			454
Variance			+43%

Reference 20: PEAK demand

PEAK demand refers to a period during a market cycle when demand spikes above average demand. PEAK demand periods are associated with higher rates of property price growth due to a lack of selling capacity from Active Supply [number of active projects combined selling capacity]. The impact on local housing affordability arising from periods of PEAK demand can be mitigated when there are sufficient active trading projects.

Figure 39 PEAK Demand Melbourne Greenfield [NLSP]
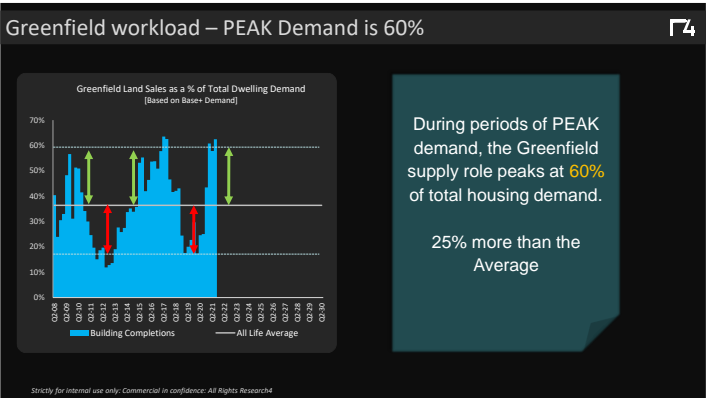
Figure 40 PEAK Demand and price growth Melbourne Greenfield [NLSP]
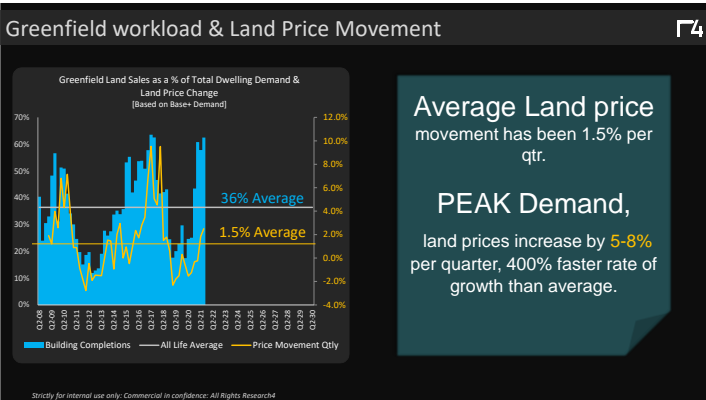
The average level of demand for Melbourne Greenfield sites is 36 percent of total metro housing demand. During periods of PEAK demand, the percentage of total housing demand addressed through land supply lifted from 36% to 60%.

With this example, Melbourne PEAK demand triggered an associated higher rate of new land price growth with land prices growing at an average 5-8 percent per quarter compared to a normal rate of growth of 1.5 percent per quarter.

The Macedon Ranges level of PEAK demand has been estimated to be 96 lots per month.

Reference 21: Active Supply explained

Active Supply is that part of zoned supply that is being managed by an entity with a clear intention to develop and then offer to the market as a housing product.

Active Supply is defined by the number of land holders that are actively developing and selling product. In terms of Greenfield sites, Active supply is measured in terms of the number of residential land estates in the marketplace that can sell and deliver a completed lot within a 6-month period enabling the purchaser to build a home.

Effective Active Supply is not only measured by volume of land under management, but by the number of different Developers operating at the same time. If a market has three active projects selling housing product, but all three are managed by the same Developer, then the level of competition is lower which in turn places greater upward pressure on land prices.

The important insight is that housing affordability is lost during periods when expressed demand exceeds the Active Supply capacity to meet that demand.

Active Supply – Number of trading projects Melbourne Greenfield sites

Figure 41 Active Supply for Melbourne – Historic and run down of current count [no replacements] R4, NLSP
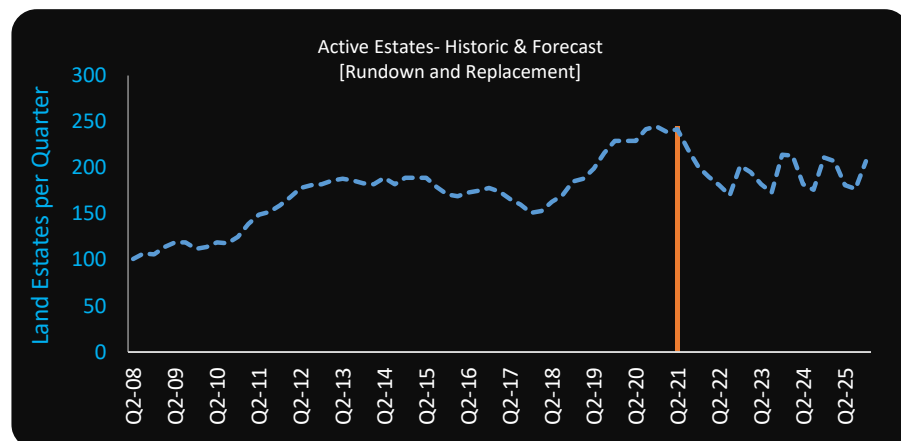
Figure 42 shows the number of trading estates over time for the Melbourne Greenfield market. As of June 2021, there were 242 trading estates across Melbourne nominated as Greenfield sites.

The number and type of projects trading will impact the level of competition between estates and the total selling capacity of all the estates.

Active Supply – Different types of projects

Active Supply is also defined by the mix of development projects operating at any point in time.

Figure 42 Number and type of trading estates for Melbourne Greenfield [NLSP]
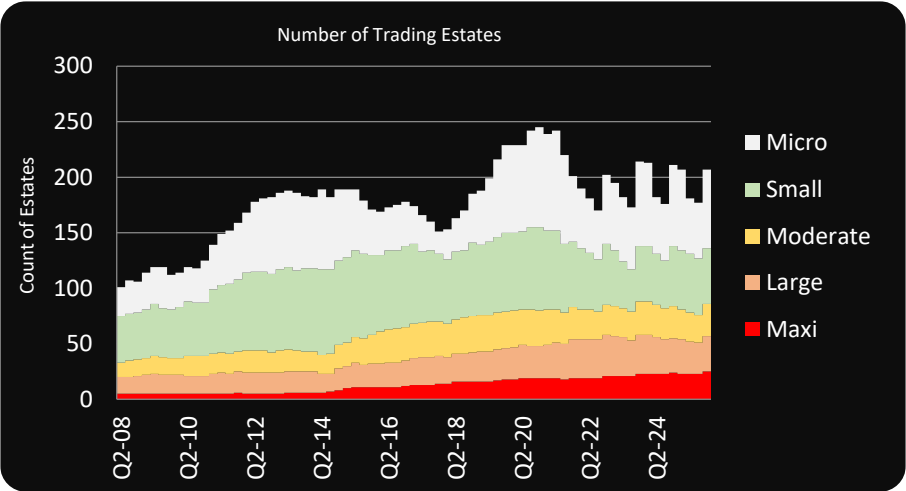
Figure 43 shows the number of trading estates for Melbourne Greenfield sites and the mix of estates.

Figure 43 Average monthly sale rate by project scale for Melbourne Greenfield sites [NLSP]

Average monthly sale rates used to run down active trading estates over forecast period				
	Group1	Group2	Group3	Group4	Group5
	3000+ lots	1500-3000	750-1500	250-750 lots	less than 250 lots
PCM	29.5	18.8	9.2	8.0	3.7

Figure 44 shows the average sale rate for development projects of different scale. Effective Greenfield supply is characterised by the count and the mix of land estates.

The mix and count of development projects [Active Supply] can be used to measure the ability of the market to respond to expected levels of "Average" demand but also "PEAK" demand.

Active Supply - Effective Selling Rate [ESR]

The effectiveness of Active Supply is defined by the level of demand which can be addressed by active land estates. The Effective Sale Rate is the aggregate selling capacity of all active estates.

Figure 44 Effective Sale Rate, Melbourne Greenfield sites [NLSP]
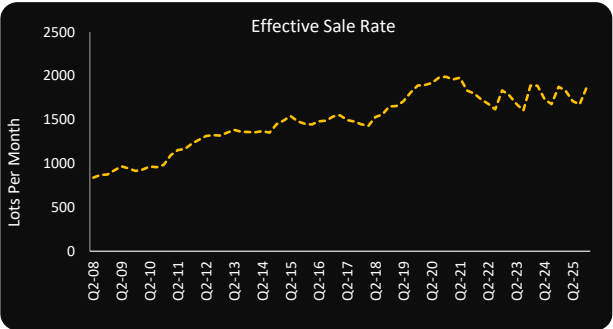
Figure 45 is the Effective Sale Rate [lots per month] for Melbourne's 242 land estates which are charged with responding to underlying housing demand in a timely manner. As of June 2021, the ESR of Melbourne Greenfield sites was 1450 lots per month.

The final ESR of the market needs to exceed the forecast average demand for property to be able to respond to periods when demand spikes.

Active Supply Effective Selling Rate [ESR] & Housing Demand

As mentioned, the final test as to the effectiveness of any Primary Supply Response is its ability to respond to average demand and reasonable spikes in demand.

Figure 45 Effective Sale Rate – Actual Land Sales & Forecast Demand [per month] [NLSP]
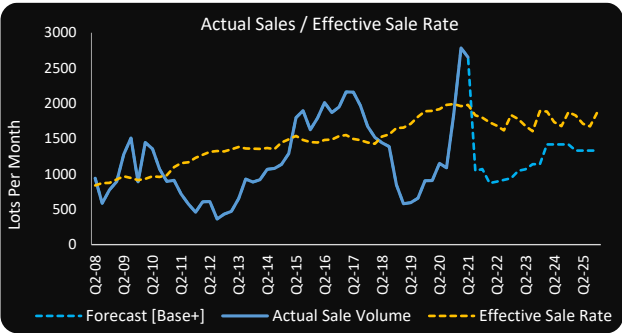
Figure 46 shows the relationship between the ESR of Melbourne Greenfield sites and expressed demand. Forecast demand is also shown. Melbourne Active Supply has been unable to sustainably address PEAK demand or "Demand Shock" for three distinct periods.

Reference 22: Active Supply implications

It is recommended that the MRSC incorporate a demand metric of 60 dwellings per month for detached housing to best manage Average forecast demand. The level of Active Supply [number of trading estates] needed to respond to a forecast average demand of 60 lots per month will be determined by the volume and type of development projects in the market.

To assist with better understanding the capacity of each land project, the average sale rates for 'all of Melbourne' Greenfield land estates are shown in Figure 47.

Figure 46 Average sale rates of land estates [Melbourne Greenfield]- Research 4

| Average monthly sale rates used to run down active trading estates over forecast period					
	Group1	Group2	Group3	Group4	Group5
	3000+ lots	1500-3000	750-1500	250-750 lots	less than 250 lots
PCM	29.5	18.8	9.2	8.0	3.7

These metrics are based on actual land sale rates from over 200 land estates operating across Melbourne Greenfield sites for the prior 12 months. The estates have been grouped by scale [measured in lots].

There are two key objectives with Active Supply

1. The more active estates the better, as opposed to having a single large estate. This is because having more active land estates provides greater competition which in turn places downward pressure on land prices.

2. The combined selling capacity needs to be able to respond to Average demand but also periods of PEAK demand or Demand Shock. Affordability is lost during periods of PEAK Demand not Average demand.

One scenario for Active Supply to address 60 net lot sales per month is shown below.

Figure 47 Scenario example for Active Supply MRSC

Land Estate Type	Av Sale Rate	Estates Active	Total Capacity
Group5	4 lots per month	4	16 lots per month
Group4	8 lots per month	3	24 lots per month
Group2	19 lots per month	1	19 lots per month

This is just one scenario; the objective is to be aware of the total selling capacity of all active estates with respect to average or PEAK demand metrics. Currently Macedon Ranges does not have sufficient trading estates to ensure demand is addressed in a competitive setting.

Reference 23: Research4 demand metrics - Applied

Based on our analysis the following demand metrics are recommended for forecasts in the Macedon Ranges.

1. It is recommended that the R4 Average demand metric of 60 lots per month be used to determine the required volume of zoned land supply.

2. The 60 lots per month is based on increasing the MRSC accepted averaged demand metric of 26 by 130 percent.

Under the Research4 Average Demand option, the current volume of zoned supply of 4,929 lots is equal to 6.8 years of activity.

With an Research4 demand of 60 lots per month there is a current shortfall of 5,904 lots of zoned supply.

Figure 48 Macedon Ranges Demand Forecast – Research4 summary

Macedon Range							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19 forecast	290	24	4929	17.0	4,350	579
MRSC_Urban Enterprises	Forecast id forecast	314	26	4929	15.7	4,710	219
MRSC_Urban Enterprises	Third Option forecast	343	29	4929	14.4	5,138	-209
Applied	**Average of three**	**316**	**26**	**4929**	**15.6**	**4,733**	**197**
Historical 2010-2020	Broadhectare & Major	327	27	4929	15.1	4,900	29
R4 Forecasts							
R4 Revised Average	**130% uplift on ID**	**722**	**60**	**4929**	**6.8**	**10,833**	**-5,904**

Reference 24: Demand Shock or Peak Demand

Average forecast demand is used to assess the volume of zoned land needed for a market over a set time. The demand metric employed should be responding to underlying population-based demand while also recognising any structural changes to the demand profile.

As previously mentioned, for a market's supply response to be effective in mitigating issues around a loss of affordability, consideration of PEAK demand needs to be undertaken.

PEAK demand is often driven by external events such government housing policy [first home buyer grants], the economic setting [interest rates], general consumer confidence, speculation amongst other factors. These events impact the timing of underlying population-based demand and not the long-term average. During these periods of PEAK demand, housing affordability is at risk.

The effectiveness of a markets PSR in addressing affordability will largely depend on the capacity of Active Supply to address moments of PEAK demand. Therefore the number and mix of trading projects at any point in time will influence local housing affordability.

Example of Demand Shock - Melbourne Greenfield sites

Greater Melbourne has relied upon Greenfield supply to address core underlying housing demand. It has 10 major supporting Greenfield submarkets with a total estimated 416,000 future lots available as wholesale or zoned supply.

The Melbourne Greenfield market has traditionally responded to 35 percent of Melbourne's total housing demand, more recently the supply role has lifted to 47 percent of total housing demand.

The following chart shows the relationship between:

  a) total actual new land sales

  b) Active Supply Capacity, and

  c) the median land price for Melbourne Greenfield sites.

Figure 50 brings together the Effective Sale Rate, Expressed demand for land, and the annual price movement for land. The three arrows indicate periods of "Demand Shock".

Figure 49 Effective Sale Rate, Expressed demand [land] & Land price change [R4]
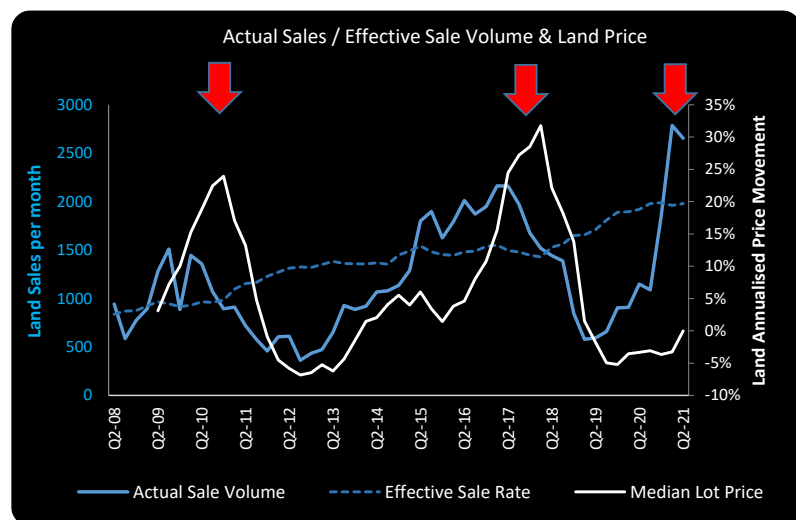
Excluding the current COVID "Demand Shock" there have been two major periods where activity has exceeded the capacity of Active supply.

The first period was the GFC and the second was a general upswing in the cycle caused by an extended period of undersupply. These two periods of "Demand Shock" triggered a rapid escalation in land prices over a short period of time.

The GFC demand shock was caused by government stimulus entering the market and the bringing forward of demand. A surge in activity placed the Greenfield industry under pressure [due to the limited availability of Active supply] which resulted in price escalation and a loss of affordability. New land prices rose from $160,000 to $220,000 over 24 months. Land prices then moderated once activity levels fell below the capacity of Active Supply.

The second "Demand Shock" was from 2015 through to 2017, triggered by a long period of undersupply which was a direct result of government stimulus post GFC. After five years of demand going un-met, the market experienced another "Demand Shock". The impact of higher levels of activity which exceeded the capacity of Active Supply resulted in upward pressure on land prices. Land price lifted from $212,000 to $345,000 over 30 months; a 20 percent price growth per annum for three years. When activity dropped below Active Supply capacity, price growth moderated.

Figure 51 brings together the Effective Sale Rate, Expressed demand for land and annual price movement for housing.

This chart highlights the impact on the broader property market [established housing sector] when a markets PSR [in this case Greenfield] fails to respond to a Demand Shock.

The Melbourne Greenfield example provides real market evidence of what happens when Active Supply is unable to respond to strong periods of demand in a timely fashion. It demonstrates that affordability is significantly impacted during these short periods of strong demand.

It also highlights that simply having 15 years of wholesale zoned land supply is not going to provide protection against a loss of housing affordability.

Reference 25: A Markets Primary Supply Response [PSR]

A markets response to create new housing supply will be through one of three main property types:

- Greenfield land upon which to build a new home,

- Urban infill [Town homes], or

- Higher Density [Apartments] housing product.

It is understood that some markets will use more than one type and, in some cases, all three. However in nearly all markets there will be a Primary Supply Response [PSR].

A Primary Supply Response [PSR] is the preferred residential "property type" referenced by Planning Authorities to strategically address core local housing demand in a timely and affordable way.

A core objective of any PSR is to respond to changing levels of housing demand in a way that preserves general housing affordability.

A loss of housing affordability is generally linked to a failure of a markets PSR to respond to an increase in demand.

In simple terms, when a market's PSR is unable to appropriately respond to an increase in demand it will trigger price escalation across the broader residential housing market. In other words, when consumer demand exceeds available supply, prices will rise.

Given the long lead times involved with property development, housing affordability is generally lost even during short periods of strong demand, as opposed to normal operating levels, as additional supply cannot be instantaneously "turned on".

Price escalation is experienced when the PSR is unable to keep pace with a spike in demand. Therefore, the effectiveness of a market to maintain affordability is directly linked to its capacity to respond to "PEAK" periods of demand as opposed to "normalised" periods of demand.

Reference 26: Relying on external supply solutions – City of Hume

The MRSC has indicated that any unmet demand from across the Macedon Ranges can be addressed through Greenfield supply located across Sunbury.

Land supply located across Sunbury in the City of Hume has been established to respond to metropolitan Melbourne housing demand. The strategic framework which was used to establish both the volume and timing of Greenfield supply in Sunbury did not include the Macedon Ranges.

Key considerations are:

- The Sunbury market falls within the metropolitan planning framework and is managed by the VPA in conjunction with the City of Hume.

- There has been no strategic planning that has considered shifting demand from the Peri Urban market into Sunbury.

- The Sunbury Greenfield market is currently responding to demand that is 233% above forecast demand for new land [173% above forecast average demand for all housing types].

- One of the primary roles of any market is to provide housing solutions for those people who need to live in the community.

Figure 50 Performance of the Zoned land supply for Sunbury June 2021 [Research4]

VIC-Sunbury		Q2-21	Q2-22	Q2-23	Q2-24	Q2-25	Q2-26	Q2-27
Land Supply	**Balance of Supply as per State Planning**	**20,307**	**18,699**	**17,494**	**17,068**	**15,636**	**14,641**	**13,065**
Land Supply	*Yet to be Developed to Active Supply*	-						
Land Supply	Yet to Be Developed Supply	13,074	13,010	12,868	12,636	12,478	12,222	12,048
Land Supply	Active Supply Balance	7,233	5,689	4,626	4,432	3,158	2,419	1,017
Industry Capacity	**Current/Forecast Active Estates**	**18**	**13**	**11**	**13**	**12**	**10**	**10**
Acive Supply -Years	Sale Rate [high level consumption pcm]	4	3	3	3	2	1	1
Total Supply -Years	Sale Rate [high level consumption pcm]	12	11	10	10	9	8	8

Figure 52 shows the current supply and demand setting for the Sunbury Greenfield market. The supply setting includes "Completed" Precinct Structure Plans (PSP).

- Supply balance in completed PSP's is equal to 20,307 lots. This includes the supply balance within the current 18 active estates.

- The market has been selling on average 145 lots per month [based on past 6 months].

- The expected life of the current supply balance is 12 years [20,307 lots].

- The current life of the supply balance of active estates is 4 years.

- Active Supply is currently equal to

    o 4 years of land supply

    o 18 land estates

    o Combined selling capacity of the 18 estates is 119 lots per month, 82 percent of the current level of activity

In summary, the current supply setting for Sunbury is one of insufficient zoned land to address the 15-year benchmark. The level of Active Supply is only capable of responding to 82% of current expressed demand. In short the Sunbury Greenfield land supply is currently failing to address its own demand quota.

DISCALIMER

Forecasts are based on a number of assumptions and estimates and are subject to contingencies and uncertainties. Forecasts should not be regarded as a representation or warranty by or on behalf of RESEARCH 4 PTY LTD or any other person that such forecasts will be met. Forecasts constitute judgment and are subject to change without notice, as are statements about market trends, which are based on current market conditions.

Paper 3

Macedon Ranges demand and supply metrics

Research4 Pty Ltd

Research4 undertake detailed research with a focus on better understanding the Australian residential Greenfield market.

Research4's data is used by industry, government and financial institutions to assist with in-house modelling, performance tracking and forecasting of the nation's major Greenfield markets.

National Land Survey [R4]

Research4 undertake the National Land Survey Program [NLSP]. The survey monitors the performance of the nation's major Greenfield markets. The survey has been operating since June 2007 and is the nation's longest and most detailed survey of this property sector. All data is collected and processed by Research4 on a full-time basis, reported quarterly.

To-date, the survey has tracked over 650,000 individual land allotments sold across 2,500 land estates which have been managed by over 900 land developers. Each quarter the survey adds on average 21,000 new land allotments to its survey.

The survey incorporates selected regional markets outside the nation's major metro Greenfield markets.

Contents

Introduction

This paper provides a summary of the supporting data metrics for each of the six markets which represent the Macedon Ranges.

These markets are:

1. Gisborne/New Gisborne
2. Kyneton
3. Woodend
4. Riddell's Creek
5. Romsey, and
6. Lancefield.

The focus of the report is to review any changes that have occurred between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council as at 2019 and an audit undertaken by Research 4 Pty Ltd as of June 2021. The reconciliation has focused on broad hectare, major and any nominated growth zone land supply.

The market summaries below also include the adopted forward demand metrics used for assessing the sufficiency of land supply.

The aim of the analysis is to understand the current likely level of zoned land across the six markets and the sufficiency of that land supply to address 15 years of forward demand.

The demand metrics employed include those adopted by the Macedon Ranges Shire Council in 2020 and a revised forward demand metric based on market research published in Paper 1 and Paper 2.

The critical component of this research is the forecast demand metric. The volume of zoned land is generally well understood. The applied forecast demand metric, however, is the variable that will directly impact the effectiveness of the stated volume of zoned supply.

Macedon Ranges Submarkets – Market Assessments

Gisborne & New Gisborne Market Assessment

Reconciliation of Zoned Supply

This table summarises the major changes between the assessment of zoned supply land undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council as at 2019 and an audit undertaken by Research 4 Pty Ltd as of June 2021. The reconciliation has focused on broad hectare, major and any nominated growth zone land supply.

Figure 2: Gisborne & New Gisborne Zoned supply assessment 2021

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	Fersfield Road	TOTAL DWELLINGS
GRZ	341	118	55	129	1,711	244	2,598
LDRZ		17	4	7			28
RLZ				3			3
TOTAL	341	135	59	139	1,711	244	2,629
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	Fersfield Road	TOTAL
Willows Estate					300		300
Wallaby Run		22					22
Black Avenue		15					15
Baringo Estate		10					10
Ferrier Road Estates [2]	200						200
Fersfield Estate						120	120
							0
TOTAL	200	47	0	0	300	120	667
Supply Total 2021	141	88	59	139	1,411	124	1,962

As of 2019 the MRSC planning report stated that there was an estimated 2,639 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by at least 667 dwellings. The estimated zoned supply as of June 2021 is 1,962 lots for the market.

Major considerations:

1. The Willows has sold over three hundred lots across the 2020 and 2021 years.

2. The land estates in Ferrier Road have since sold down product. It should be noted that one of these estates is unable to bring forward any further land supply until

Figure 1: Gisborne / New Gisborne Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.

F5. GISBORNE RESDIENTIAL LAND SUPPLY MAP

Legend
- Township Boundary
- Broadhectare Occupied
- Broadhectare Vacant
- Major Vacant
- Minor Vacant
- Single Vacant
- Fersfield Rd DP Area
- Designated Medium Density

Source: Urban Enterprise, 2019
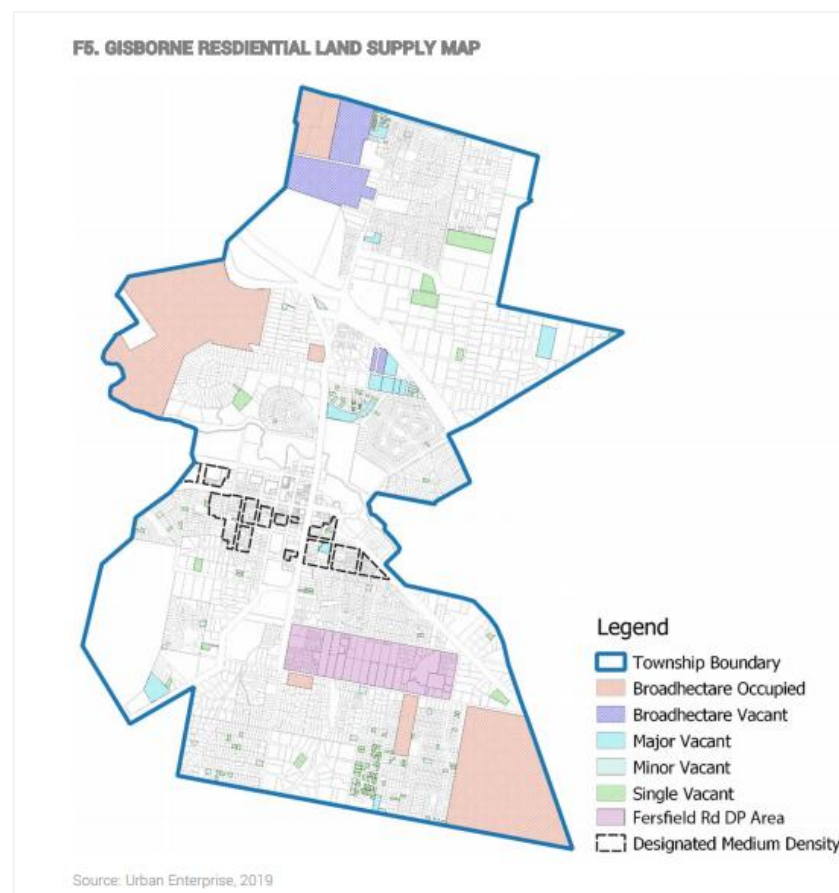
water infrastructure issues have been resolved. These estates have sold out before product has been titled.

3. Selected "major" infill sites have also sold down land supply. Baringo Estate has sold well since 2019 with most of the land supply now consumed. Wallaby Run has sold well since 2019 and parts of Black Avenue have since been sold.

4. Reductions in "minor" and "single lot" supply has not been considered however the supply totals would have reduced.

5. The Fersfield Road DP is made up of multiple small land parcels. Since 2019 segments of this precinct have been sold.

Gisborne / New Gisborne Active Supply

The market has limited Active supply, with only one major land estate operating. The Willows has experienced strong demand with the estate selling over 200 lots within 12 months.

There are two other estates located in New Gisborne, one of these estates has been sold out for over two years with its supply balance held up due to issues around onsite drainage. Despite the hold up, the supply balance is less than 50 lots. The second estate has sold out all releases made to date. The supply balance is now sub 100 lots.

An 860-parcel property has just been sold [Barro land]; however, the sale has been made to the same Developer who is currently developing The Willows. This fact will mean that this parcel of land will not contribute to a competitive environment or assist with mitigating upward pressure on local house prices.

Gisborne / New Gisborne Demand metrics

Figure 3: Gisborne /New Gisborne Expressed & Modelled levels of demand for Greenfield sites
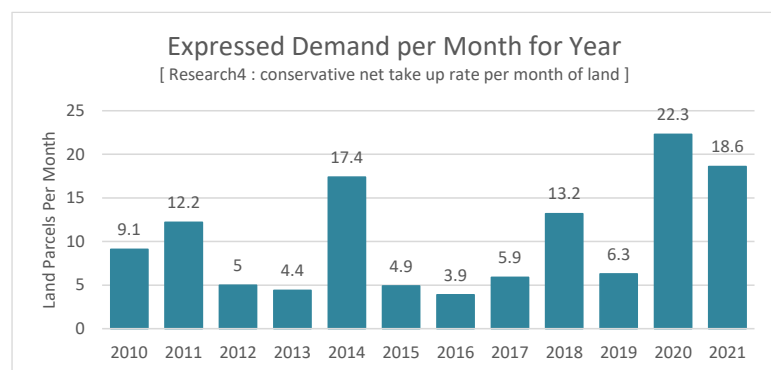
Expressed demand

The market has demonstrated that it can sell up to 22 lots per month. This demand metric does not include any minor or single lot supply options. Expressed demand has notably lifted since 2019.

Sufficiency of expressed demand assessment

Figure 4 compares the movement in house prices for both Melbourne and the selected market. The Gisborne housing market from 2015 through to 2020 saw house price lift by 47 percent compared to 25 percent for 'all of Melbourne'.

It is suggested that the Gisborne / New Gisborne Primary Supply Response [PSR] to has been unable to fully respond to underlying demand.

House price growth has been 88 percent higher than that of Melbourne. The market evidence of higher house price growth highlights that the supply opportunities over the past five years were ineffective in managing property prices.

Figure 4: All Melbourne & Selected markets Established house price change 2015-2020
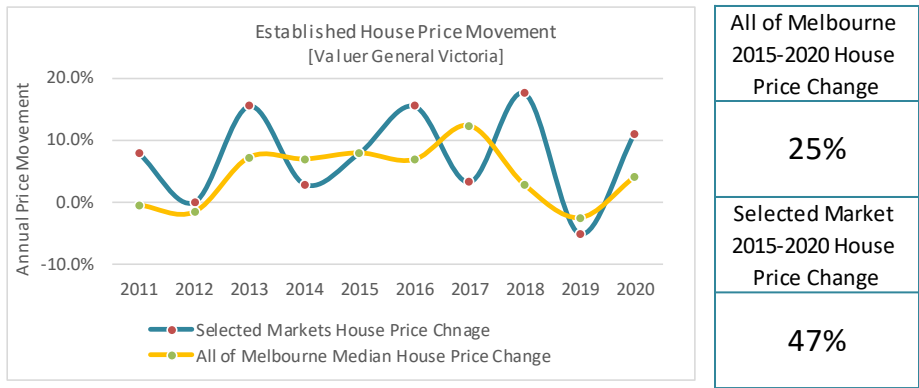
Demand metrics – Options

Figure 5 summarises the different demand metrics for the submarket. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing Active Supply.

The MRSC has employed a Growth Scenario demand metric of 11 lots per month. It has already been stated that the past 10-year average take up rate has resulted in house price growth exceeding the benchmark house price growth rate by 88 percent.

Based on the MRSC Growth scenario, the current volume of zoned supply is equal to 15 years of activity.

Figure 5: Demand options for Gisborne / New Gisborne Greenfield sites

GISBORNE							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	108	9	1962	18.2	1,620	342
MRSC_Urban Enterprises	Forecast id	117	10	1962	16.8	1,755	207
MRSC_Urban Enterprises	Growth Scenario	130	11	1962	15.1	1,950	12
Historical 2010-2020	Broadhectare & Major	124	10	1962	15.9	1,854	108
R4 Forecasts							
R4 Revised Average	130% uplift on ID	269	22	1962	7.3	4,037	-2,075

Demand metrics - Applied

- It is recommended that the Research4 Average demand metric of 22 lots per month be used to determine the required level of Zoned land supply.

Under the Research4 Average demand option, the current volume of zoned supply of 1,962 lots is equal to 7.3 years of activity, with a shortfall of 2,075 lots of zoned supply.

Market summary- Gisborne / New Gisborne

The Gisborne / New Gisborne submarket is the Macedon Ranges major supply response. The MRSC is relying upon this market to address underlying housing demand for the area.

The Gisborne / New Gisborne market is located within an hour of Melbourne and is seen by the market as a preferred destination from which to commute, work and live.

The fact that house prices have been growing at a rate which is 88 percent faster than the broader Melbourne metropolitan housing market underscores the appeal of this market. Additionally, the very high rate of price growth highlights the fact that the historic supply of broad hectare and major infill has been ineffective in managing local housing affordability.

The volume of zoned land supply is well below the expected 15-year benchmark, while the level of Active Supply [projects in the market] is insufficient in terms of ensuring a competitive marketplace.

A minimum of ten percent of the tabled zoned supply [single lot and minor supply] cannot be relied upon to enter the market within a timely fashion due to fragmented ownership and unknown intentions regarding future development.

The MRSC has not compensated for this uncertainty around its zoned supply via increasing the volume of supply which has a clear development intention.

Additionally, the current two major sources of broad hectare supply, Willow Estate and the recently sold Barro land, will be controlled by the same Developer. This fact reduces the prospect of local competition and level of Active Supply.

Kyneton Market Assessment

Reconciliation of Zoned Supply

This table summarises the main changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council and an audit undertaken by Research 4 Pty Ltd as of June 2021.

The reconciliation has focused on broad hectare, major and any nominated growth zone.

Figure 7: Kyneton Zoned supply assessment 2021

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare		TOTAL DWELLINGS
GRZ	341	0	4	0	0		345
LDRZ	66	0	3	2	0		71
RLZ	84	25	39	54	63		265
TOTAL	491	25	46	56	63	0	681
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare		TOTAL
River Heights	84						84
LDRZ sell down	38						38
RLZ sell down	10	7	8	6			31
TOTAL	132	7	8	6	0	0	153
Supply Total 2021	359	18	38	50	63	0	528

As of 2019 the MRSC planning report stated that there was an estimated 681 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by at least 153 dwellings. The estimated zoned supply as of June 2021 is 528 lots for the market.

Major considerations:

1. The Kyneton market has one notable active land estate, Riverside. This estate has been selling well since 2019, with limited competition.

2. The market is relying upon RLZ land supply which is typically very low density and high valued lifestyle allotments.

3. This supply response lacks capacity to address core new housing demand for the market. Close to half of the future supply is made up of RLZ land.

Kyneton Active Supply

Figure 6: Kyneton Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.
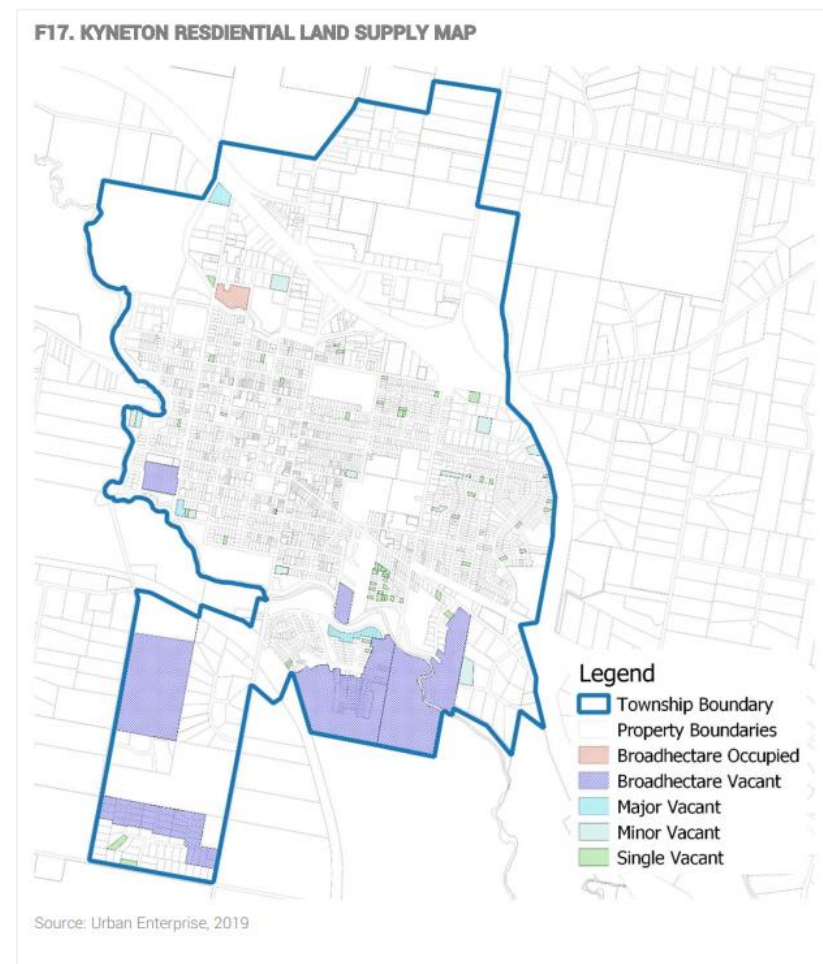
The market has limited active supply, with only one major land estate operating.

Kyneton Demand Metrics

Figure 8: Kyneton Expressed & Modelled levels of demand for Greenfield
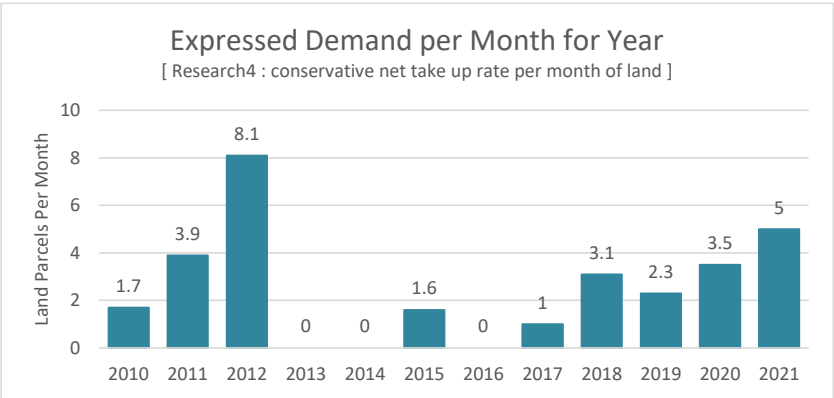
Expressed Demand

This market has demonstrated that it can sell up to 8 lots per month. This demand metric does not include any minor or single lot supply options. The market has clearly experienced a lack of Active Supply from 2013 through to 2017, with very limited take up rates.

Sufficiency of expressed demand assessment

Figure 9 compares the movement in house prices for both Melbourne and the selected market. The Kyneton housing market from 2015 through to 2020 saw house prices lift by 44 percent compared to 25 percent for 'll of Melbourne'.

Figure 9: All Melbourne & Selected markets Established house price change 2015-2020
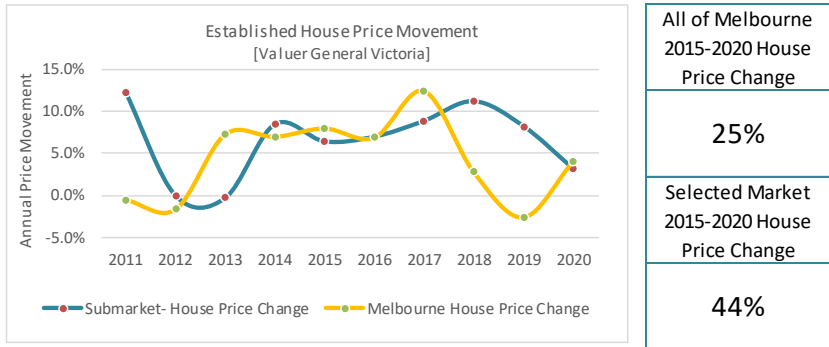
Overall Kyneton's Primary Supply Response [PSR] has been unable to fully respond to underlying demand. This is reflected in house price growth being 77 percent higher than that of Melbourne over the same period.

Demand Metrics-Options

Figure 10 summarises the different demand metrics for the Kyneton submarket. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing active supply.

Figure 10: Demand options for Kyneton Greenfield sites

KYNETON							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	41	3	528	12.9	615	-87
MRSC_Urban Enterprises	Forecast id	46	4	528	11.5	690	-162
MRSC_Urban Enterprises	Third Option	44	4	528	12.1	653	-125
Historical 2010-2020	Broadhectare & Major	40	3	528	13.1	604	-76
R4 Forecasts							
R4 Revised Average	130% uplift on ID	**106**	**9**	**528**	**5.0**	**1,587**	**-1,059**

The MRSC has employed a Growth Scenario demand metric of 4 lots per month. Although the demand metric is low, it is still well below the expressed market demand peak of 8 lots per month.

Excluding the low supply periods of 2013 to 2016, the average take-up rate has been 3.65 lots per month.

Based on the MRSC Growth scenario, the current volume of zoned supply is equal to 11 years of activity.

Demand Metrics-Applied

- It is recommended that the Research4 average demand metric of 9 lots per month be used to determine the required level of zoned land supply.

Under the Research4 average demand option, the current volume of zoned supply of 528 lots is equal to 5 years of activity. Under this likely option there is a shortfall of 1,059 lots of zoned land supply.

Market Summary- Kyneton

The Kyneton market has been unable to fully test the depth of underlying demand. A large percentage of its nominated future zoned supply is Rural Living, which suggests larger lifestyle homes at a higher price point. The level of competition between Active estates is non-existent.

The local market's level of zoned supply is failing the MRSC own test on maintaining 15 years of supply.

The MRSC is relying upon a rural living product as opposed to a traditional housing product. Overall the MRSC is relying on a demand metric that has been ineffective in protecting local housing affordability.

Woodend Market Assessment

Reconciliation of Zoned Supply

This table summarises the main changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council and an audit undertaken by Research 4 Pty Ltd as of June 2021.

The reconciliation has focused on broad hectare, major and any nominated growth zone.

Figure 12: Woodend Zoned supply assessment 2021

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare		TOTAL DWELLINGS
LDRZ	0	0	0	10	0		10
NRZ	109	66	37	58	117		387
RLZ	0	0	0	0	0		0
TOTAL	109	66	37	68	117	0	397
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare		TOTAL
NRZ	50				84		134
							0
TOTAL	50	0	0	0	84	0	134
Supply Total 2021	59	66	37	68	33	0	263

As of 2019 the MRSC planning report stated that there was an estimated 397 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by at least 134 dwellings. The estimated zoned supply as of June 2021 is 263 lots for the market.

Major considerations:

1. The Woodend market lacks any major source of Greenfield supply. It has relied upon a type of urban infill with limited capacity.

2. Most of the vacant broad hectare nominated as future supply has been since sold down.

3. The focus of the market is currently retirement living and or medium density infill.

Woodend Active Supply

The market has very limited opportunities as of June 2021.

Woodend Demand Metrics

Figure 11: Woodend Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.
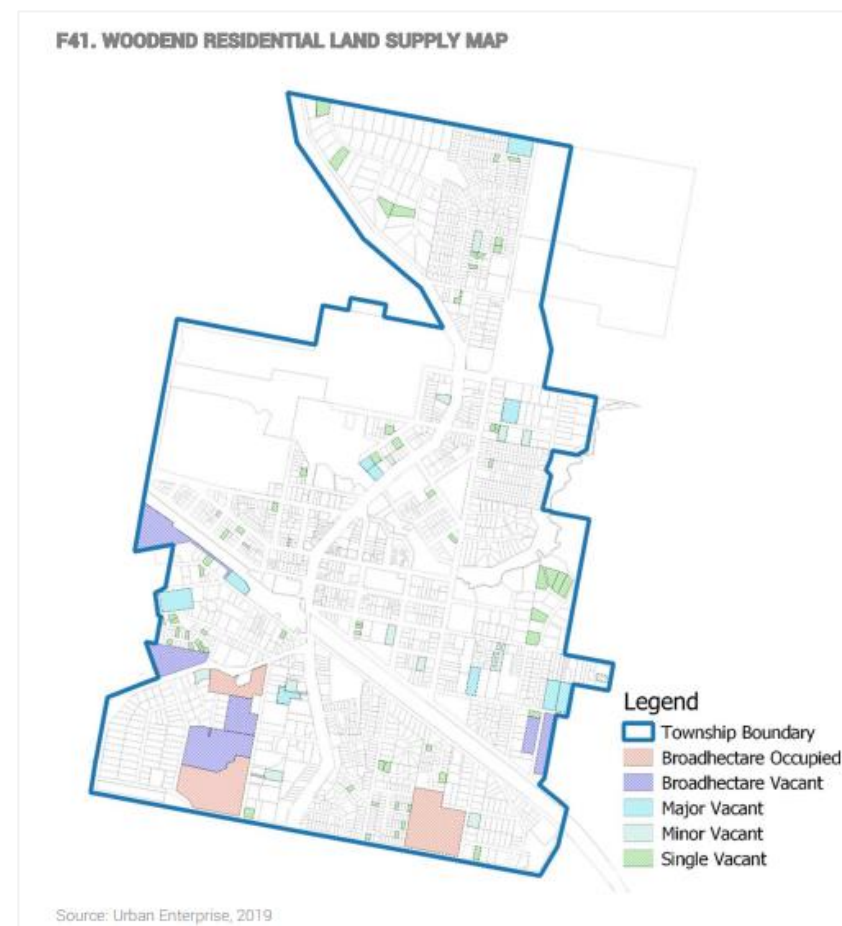
Figure 13: Woodend Expressed & Modelled levels of demand for Greenfield sites
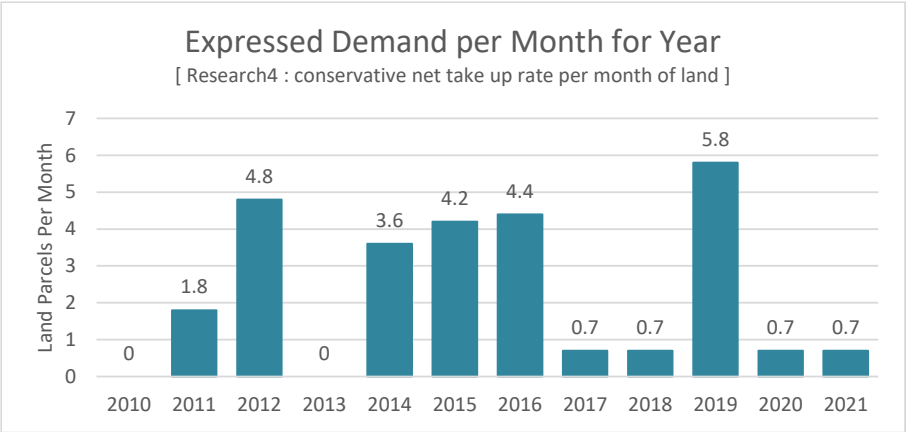
Expressed Demand

- This market has demonstrated that it can sell up to 6 lots per month.
- The market has averaged 2.74 lots per month across broad hectare and major supply sources
- This demand metric does not include any minor or single lot supply options.

Sufficiency of expressed demand

Figure 14 compares the movement in house prices for both Melbourne and the selected market. The Woodend housing market from 2015 through to 2020 saw house prices lift by 56 percent compared to 25 percent for 'all of Melbourne'.

The Woodend established housing market has experienced the highest rate of price growth of all towns within the MRSC.

Woodend house prices increased 124 percent faster than metro Melbourne. The market has seen house price growth accelerate since 2017, indicating a structural change to the underlying demand profile.

This market evidence supports the position that the supply response to date for Woodend has failed. The reliance upon small urban type infill parcels has only caused demand to build up and/or shift into the established housing sector causing above average price escalation.

The market has experienced strong price growth relative to Melbourne since 2017, which has coincided with near zero levels of expressed demand [refer to figure 13].

Figure 14: All Melbourne & Selected markets Established house price change 2015-2020

	All of Melbourne 2015-2020 House Price Change
	25%
	Selected Market 2015-2020 House Price Change
	56%
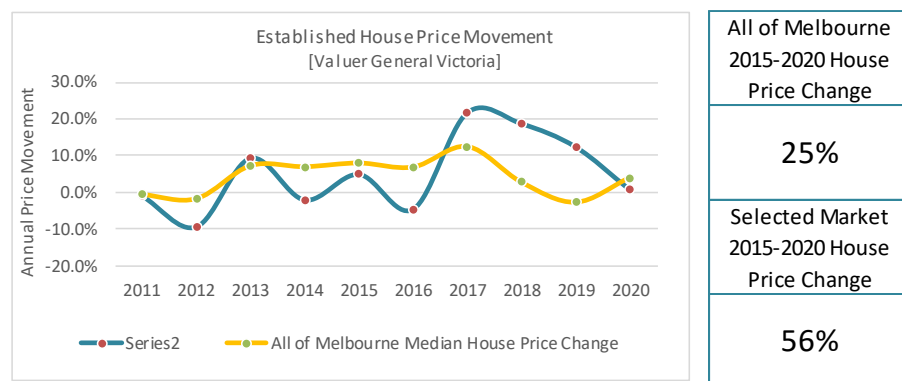
In summary, the supply response and strategy for the Woodend market has been unable to address issues of affordability. The lack of any clear supply lines has only frustrated demand.

Demand Metrics-Options

Figure 28 summarises the different demand metrics for the Woodend. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing active supply.

Figure 15: Demand options for Woodend Greenfield sites

WOODEND							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	49	4	263	5.4	735	-472
MRSC_Urban Enterprises	Forecast id	36	3	263	7.3	540	-277
MRSC_Urban Enterprises	Midpoint	42	4	263	6.3	630	-367
Historical 2010-2020	Broadhectare & Major	33	3	263	8.0	493	-230
R4 Forecasts							
R4 Revised Average	**130% uplift on ID**	**83**	**7**	**263**	**3.2**	**1,242**	**-979**

The MRSC has employed a Growth Scenario demand metric of 4 lots per month which mirrors the historical average of 3.65 lots per month.

This market has had insufficient land supply for some years, meaning that the market evidence for both average and peak take-up rates will be limited.

Based on the MRSC Mid-Point scenario, the current volume of zoned supply is equal to 6.3 years of activity, 58 percent below the MRSC benchmark of 15 years of zoned supply.

Demand Metrics-Applied

- It is recommended that the Research4 average demand metric of 7 lots per month be used to determine the required level of zoned land supply.

Under the Research4 average demand option, the current volume of zoned supply of 263 lots is equal to 3.2 years of activity. Under this likely option, there is a shortfall of 979 lots of zoned supply.

Market Summary- Woodend

The MRSC has relied upon small, fragmented supply opportunities to respond to underlying demand in this submarket.

This strategic approach has failed to prevent house prices growing at or below the benchmark rate. Local affordability has been severely diminished.

This market lacks competition, certainty of supply and a realistic future demand metric.

Riddell's Creek Market Assessment

Reconciliation of Zoned Supply

This table summarises the main changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council and an audit undertaken by Research 4 Pty Ltd as of June 2021. The reconciliation has focused on Broad hectare, Major and any nominated growth zone.

Figure 17: Riddell's' Creek Zoned supply assessment 2021

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied - Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL DWELLINGS
LDRZ	45	45	20	5	182	0	297
NRZ	26	5	5	38	0	0	74
UGZ	0	0	0	0	0	1,154	1,154
TOTAL	71	50	25	43	182	1,154	1,525
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL
LDRZ	12						12
NRZ					22		22
							0
TOTAL	12	0	0	0	22	0	34
Supply Total 2021	59	50	25	43	160	1,154	1,491

As of 2019 the MRSC planning report stated that there was an estimated 1,525 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by at least 34 dwellings. The estimated zoned supply as of June 2021 is 1,491 lots for the market. It should be noted that the reduction in the supply balance since 2019 has not factored in any reduction in single lot or in the level of minor supply housing. These last two sources of supply will have reduced since 2019 [this paper assumes no reduction over the past 18-24 months, which is a conservative assumption].

Major considerations:

1. The Riddell's' Creek volume of zoned supply of 1,491 is largely dependent upon one land zone being brought to market.

2. The market's only reliable source of traditional housing product is now coming to an end.

Figure 16: Riddell's Creek Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.

F29. RIDDELLS CREEK RESDIENTIAL LAND SUPPLY MAP

Legend
- Township Boundary
- Broadhectare Occupied
- Broadhectare Vacant
- Major Vacant
- Minor Vacant
- Single Vacant
- Urban Growth Zone

Source: Urban Enterprise, 2019
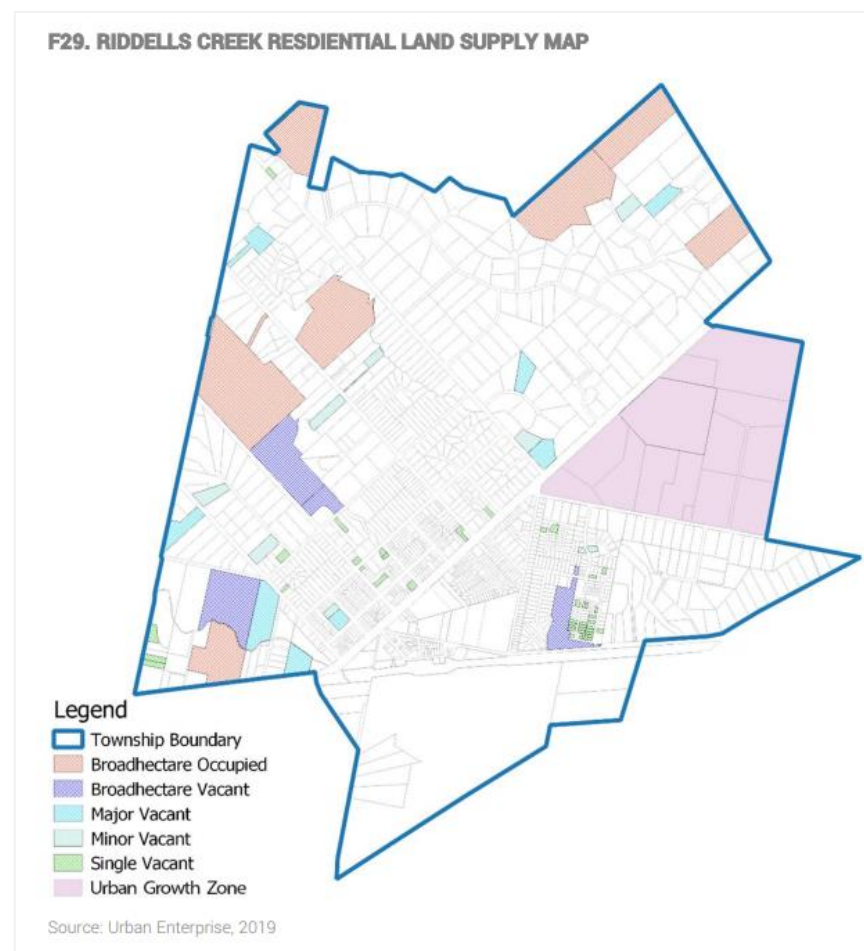
3. A significant proportion of supply is low density residential. Once again, LDRZ supply lacks affordability capacity due to the nature of the land type.

4. The nominated 1,154 lots covered by the Urban Growth Zone is still not market ready.

5. There is a lack of active estates.

Riddell's Creek Active Supply

The only trading estate is nearing its end.

Riddell's Creek Demand Metrics

Figure 18: Riddell's' Creek Expressed & Modelled levels of demand for Greenfield sites
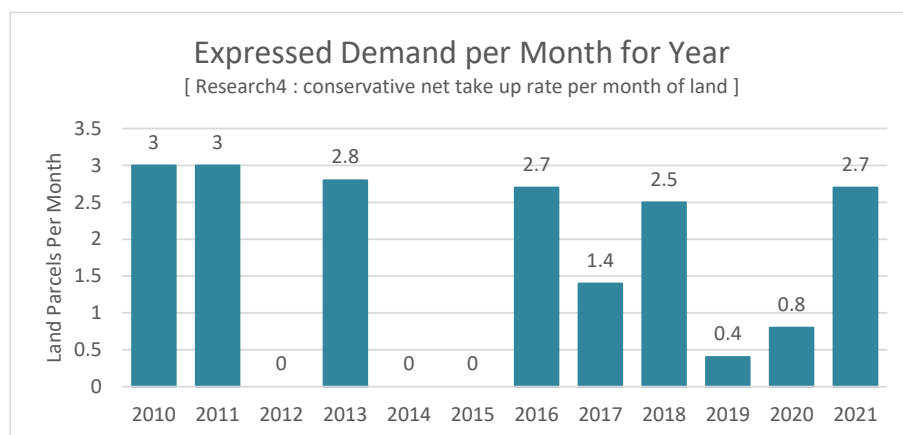
Expressed Demand

- This market has demonstrated that it can sell up to 3 lots per month.

- The market has averaged 2.2 lots per month across broad hectare and major supply sources.

- This demand metric does not include any minor or single lot supply options.

Sufficiency of expressed demand

Figure 19 compares the movement in house prices for both Melbourne and the selected market. The Riddell's' Creek housing market from 2015 through to 2020 saw house prices lift by 49 percent compared to 25 percent for 'all of Melbourne'.

The rate of house price growth for Riddell's Creek compared to metro has been 96 percent greater.

Like most other markets across the Macedon Ranges, the role of nominated supply has failed to prevent rapid price escalation and loss of relative housing affordability.

In summary, the supply response for the Riddell's' Creek market has been unable to address issues of affordability.

Figure 19: All Melbourne & Selected markets Established house price change 2015-2020

	All of Melbourne 2015-2020 House Price Change
	25%
	Selected Market 2015-2020 House Price Change
	49%

Demand Metrics-Options

Figure 20 summarises the different demand metrics for the submarket. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing active supply.
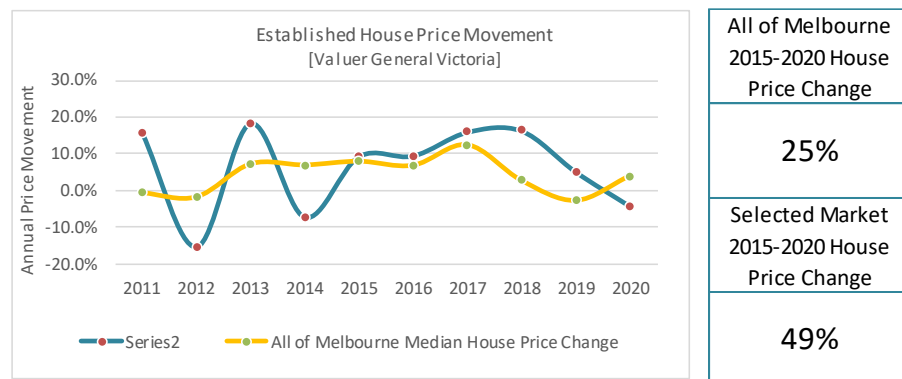
Figure 20: Demand options for Riddell's' Creek Greenfield sites

RIDDELLS CREEK							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	29	2	1491	51.4	435	1,056
MRSC_Urban Enterprises	Forecast id	47	4	1491	31.7	705	786
MRSC_Urban Enterprises	Midpoint	38	3	1491	39.2	570	921
Historical 2010-2020	Broadhectare & Major	26	2	1491	57.9	386	1,105
R4 Forecasts							
R4 Revised Average	130% uplift on ID	**108**	**9**	**1491**	**13.8**	**1,622**	**-131**

The MRSC has employed a Growth Scenario demand metric of 3 lots per month.

Based on the MRSC Mid-Point scenario the current volume of zoned supply is equal to 39.2 years of activity.

Demand Metrics-Applied

- It is recommended that the Research4 Average demand metric of 9 lots per month be used to determine the required level of Zoned land supply.

Under the Research4 average demand option, the current volume of zoned supply of 1,491 lots is equal to 13.8 years of activity. Under this likely option, there is a shortfall of 131 lots of zoned supply.

Market Summary- Riddell's' Creek

The historic supply profile of Riddell's Creek has resulted in record high price growth compared to Melbourne suggesting that the historic supply / demand relationship has been misunderstood. To ensure that the UGZ zoned supply is effective in responding to local housing affordability, it will need to be delivered by more than one Developer.

Romsey Market Assessment

Reconciliation of Zoned Supply

This table summarises the main changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council and an audit undertaken by Research 4 Pty Ltd as of June 2021.

The reconciliation has focused on broad hectare, major and any nominated growth zone.

Figure 22: Romsey Zoned supply assessment 2021

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL DWELLINGS
GRZ	228	66	58	81	47	0	480
LDRZ	0	0	4	0	0	0	4
							0
TOTAL	228	66	62	81	47	0	484
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL
GRZ	47	34			20		101
LDRZ							0
							0
TOTAL	47	34	0	0	20	0	101
Supply Total 2021	181	32	62	81	27	0	383

As of 2019 the MRSC planning report stated that there was an estimated 484 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by a minimum 101 dwellings. The estimated Zoned supply as of June 2021 is 383 lots for the market.

It should be noted that the reduction in the supply balance since 2019 has not factored in any reduction in single lot or in the level of minor supply housing. These last two sources of supply will have reduced since 2019 [this paper assumes no reduction over the past 18-24 months, which is a conservative assumption].

Major considerations:

1. The market has enjoyed a good level of broad hectare supply until recently. The two land estates that have been active have now sold down.

2. The market has one remaining Broad-hectare parcel which is market ready.

Romsey Active Supply

Figure 21: Romsey Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.

F53. ROMSEY RESDIENTIAL LAND SUPPLY MAP

Legend
- Township Boundary
- Broadhectare Occupied
- Broadhectare Vacant
- Major Vacant
- Minor Vacant
- Single Vacant
- Designated Medium Density

Source: Urban Enterprise. 2019
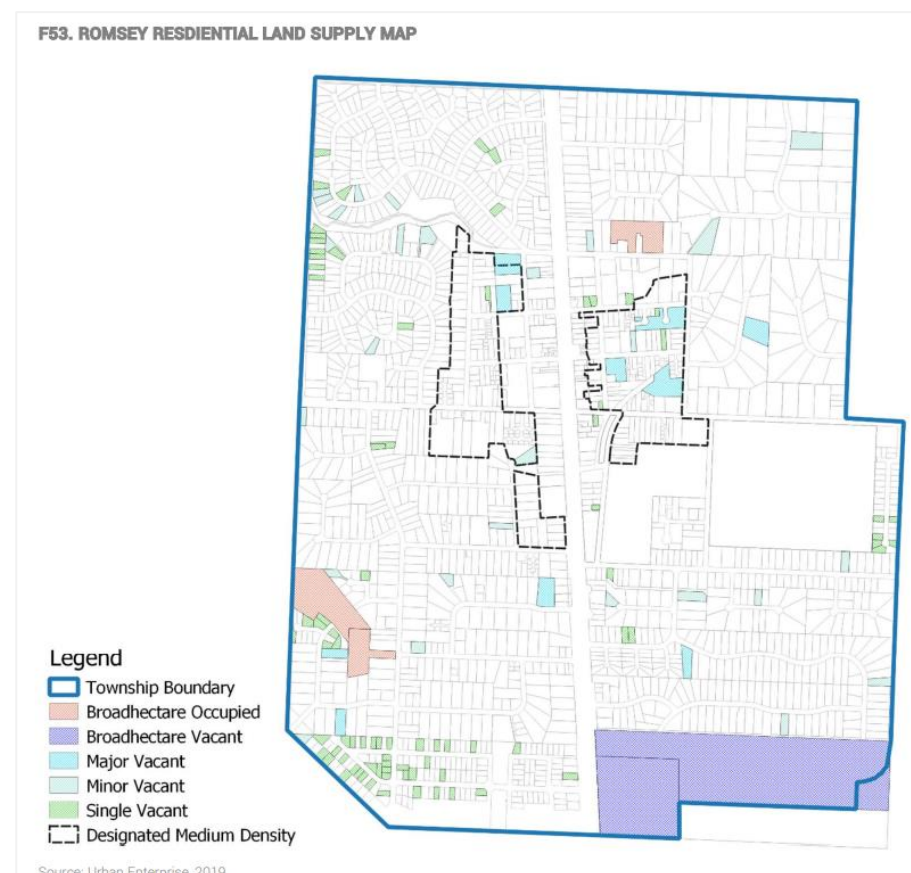
The major estate has now come to an end.

Romsey Demand Metrics

Figure 23: Romsey Expressed & Modelled levels of demand for Greenfield
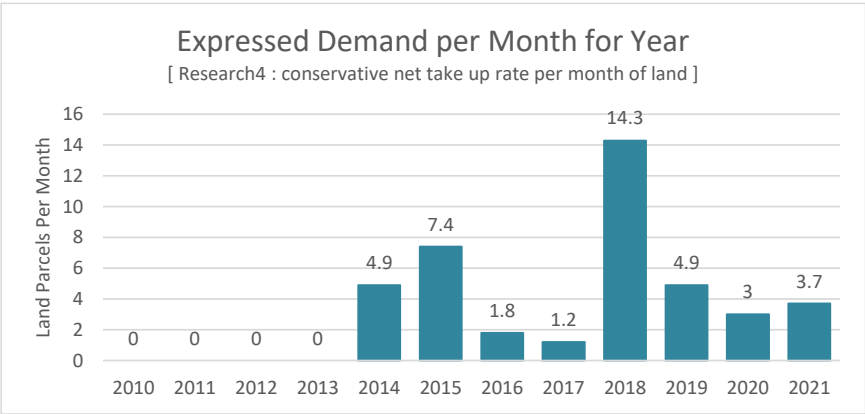
Expressed Demand

- This market has demonstrated that it can sell up to 14 lots per month.

- The market has averaged 5.2 lots per month across Broad hectare and Major supply sources [excluding zero take up rates]

- This demand metric does not include any minor or single lot supply options.

Sufficiency of Demand

Figure 24: All Melbourne & Selected markets Established house price change 2015-2020

Figure 24 compares the movement in house prices for both Melbourne and the selected market. The Romsey housing market from 2015 through to 2020 saw house price lift by 51 percent compared to 25 percent for All of Melbourne.

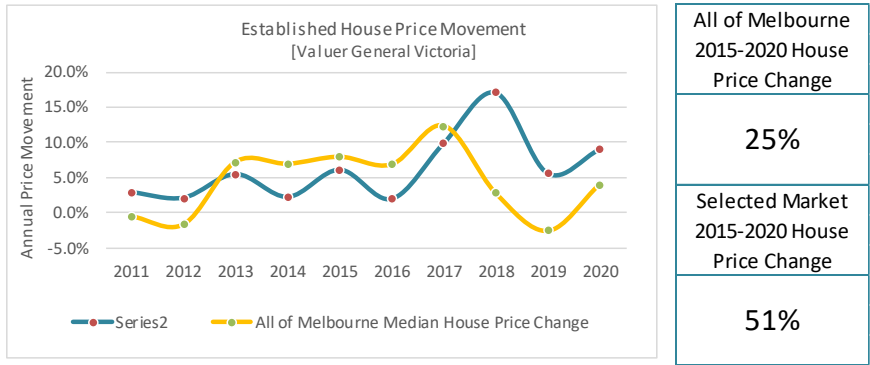The rate of house price growth for Romsey compared to metro has been 102 percent greater.

The Romsey market has performed extremely well when there has been Active supply. The market has been nominated by the MRSC as a major growth zone for the Shire. The market has recorded very strong peak sale rates underscoring the strength of demand for this market.

However, it can be firmly argued that the supply response to date has not prevented the market from experiencing elevated rates of property price growth.

Demand Metrics-Options

Figure 25 summarises the different demand metrics for the submarket. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing active supply.

Figure 25: Demand options for Romsey Greenfield

ROMSEY							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	44	4	383	8.7	660	-277
MRSC_Urban Enterprises	Forecast id	53	4	383	7.2	795	-412
MRSC_Urban Enterprises	Activity Based	72	6	383	5.3	1,080	-697
Historical 2010-2020	Broadhectare & Major	62	5	383	6.2	927	-544
R4 Forecasts							
R4 Revised Average	130% uplift on ID	122	10	383	3.1	1,829	-1,446

The MRSC has employed a demand metric of 6 dwellings per month as the basis for forward supply planning.

Demand Metrics-Applied

- It is recommended that the R4 Average demand metric of 10 lots per month be used to determine the required level of Zoned land supply.

Under the R4 Average Demand option, the current volume of zoned supply of 383 lots is equal to 3.1 years of activity. Under this likely option, there will be a shortfall of 1,446 lots of zoned supply.

Based on the MRSC Mid-Point scenario; the current volume of zoned supply is equal to 6.2 years of activity.

Market Summary- Romsey

This market has been nominated by the MRSC as being second to the Gisborne New Gisborne housing market.

Demand for housing product has been strong, with all active estates now sold out or nearing their end.

The MRSC has employed a long-term average growth rate to inform their strategic planning. Forward demand metrics have simply leveraged past performance, which in turn has been defined by limited supply.

With Active Supply now coming to an end, this will only generate a greater level of un-met demand which will place greater upward pressure on land and housing price points.

Lancefield Market Assessment

Reconciliation of Zoned Supply

This table summarises the main changes between the assessment of zoned supply undertaken by Urban Enterprise Pty Ltd for the Macedon Ranges Shire Council and an audit undertaken by Research 4 Pty Ltd as of June 2021.

The reconciliation has focused on broad hectare, major and any nominated growth zone.

Figure 27: Lancefield Zoned supply assessment 2021

Figure 26: Lancefield Map of Zoned land supply as per Urban Enterprise Pty Ltd 2019. This map represents the Zone land status as of 2019. The map shows the supply opportunities identified by the MRSC.

ZONED LAND SUPPLY	Vacant - Dwellings				Occupied- Dwellings		
Urban Enterprise 2019 Assessment	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL DWELLINGS
GRZ	71	26	20	25	163		305
LDRZ	0	22	6	1	0		29
							0
TOTAL	71	48	26	26	163	0	334
less Major Supply Adjustments since 2019	Broad hectare	Major	Minor	Single Lot	Broad hectare	UGZ	TOTAL
GRZ	32						32
LDRZ							0
TOTAL	32	0	0	0	0	0	32
Supply Total 2021	39	48	26	26	163	0	302

F65. LANCEFIELD RESDIENTIAL LAND SUPPLY MAP

Legend
- Township Boundary
- Broadhectare Occupied
- Broadhectare Vacant
- Major Vacant
- Minor Vacant
- Single Vacant

As of 2019 the MRSC planning report stated that there was an estimated 334 lots of zoned land supply distributed across multiple land type categories.

As of June 2021, the volume of zoned land supply would have reduced by a minimum 32 dwellings. The estimated Zoned supply as of June 2021 is 302 lots for the market.

It should be noted that the reduction in the supply balance since 2019 has not factored in any reduction in single lot or in the level of minor supply housing. These last two sources of supply will have reduced since 2019 [this paper assumes no reduction over the past 18-24 months, which is a conservative assumption].

Major considerations:

1. The market retains 163 potential future lots across occupied broad-hectare land parcels.

2. These land parcels provide opportunity to deliver more than one land estate, opening opportunity for greater local competition.

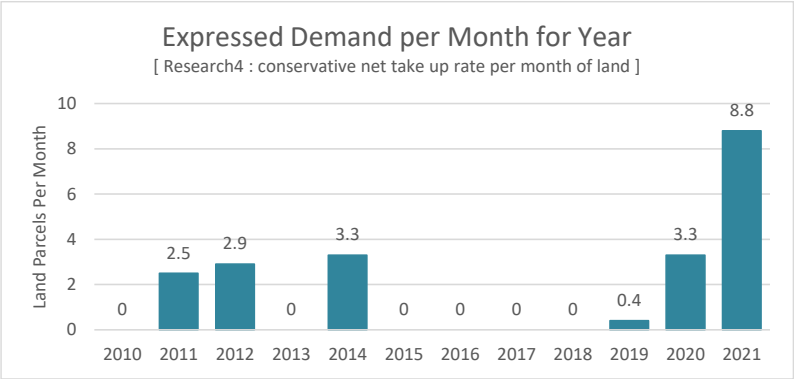3. The market currently has one active land estate.

Lancefield Active Supply

Once major estate operating.

Lancefield Demand Metrics

Figure 28: Lancefield Expressed & Modelled levels of demand for Greenfield sites

Expressed Demand

- This market has demonstrated that it can sell up to 9 lots per month.
- The market has averaged 3.5 lots per month across broad hectare and major supply sources [excluding zero take up rates].
- This demand metric does not include any minor or single lot supply options.

Sufficiency of Demand

Figure 29: All Melbourne & Selected markets Established house price change 2015-2020
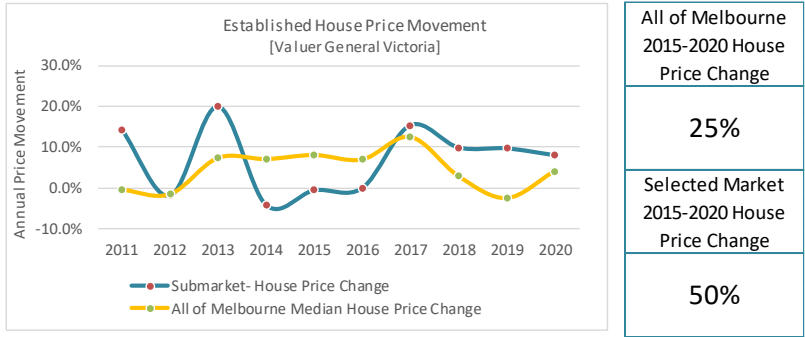
Figure 29 compares the movement in house prices for both Melbourne and the selected market. The Lancefield housing market from 2015 through to 2020 saw house price lift by 50 percent compared to 25 percent for 'all of Melbourne'.

The rate of house price growth for Lancefield compared to Melbourne has been 100 percent greater.

The established housing market for Lancefield has experienced strong price growth since the markets Primary Supply Response has been unable to fully respond to underlying demand for local housing. The performance of the market is like that for all other markets across the Macedon Ranges. The level of demand for Peri Urban markets such as the Macedon Ranges has been very strong and will remain very strong over the forecast period.

Demand Metrics-Options

Figure 30 summarises the different demand metrics for the submarket. The selection of a demand metric will directly impact the planning of future zoned supply and the management of existing active supply.

Figure 30: Demand options for Lancefield Greenfield sites

LANCEFIELD							
Demand Option		Annual	Monthly	Zoned Supply as at 2021	Years of Zoned Supply	Benchmark Supply for 15 Years	Surplus/ Shortfall of Supply
MRSC_Urban Enterprises	VIF 19	19	1.6	302	15.9	285	17
MRSC_Urban Enterprises	Forecast id	15	1.3	302	20.1	225	77
MRSC_Urban Enterprises	Third Option	17	1	302	17.8	255	47
Historical 2010-2020	Broadhectare & Major	42	3.5	302	7.1	636	-334
R4 Forecasts							
R4 Revised Average	130% uplift on ID	35	3	302	8.8	518	-216

The market has averaged 3.5 lots per month as a take-up rate.

The MRSC has decided to use 2 lots per month as the demand metric for assessing the adequacy of zoned land supply.

Demand Metrics-Applied

- It is recommended that the Research4 average demand metric of 3 lots per month be used to determine the required level of zoned land supply in Lancefield.

Under the Research4 average demand option, the current volume of zoned supply of 302 lots is equal to 8.8 years of activity. Under this likely option, there will be a shortfall of 216 lots of zoned supply.

The MRSC VIF 19 demand option is equal to 17.8 years of activity.

Market Summary- Lancefield

The Lancefield market is a small residential market. However it is still important to ensure that the level of zoned supply can address core underlying demand.

Lancefield house prices have increased by 50 percent over a five-year period providing evidence that despite being a small market demand remains strong.