Urban Development Institute of Australia VICTORIA

Urban Development Instituue of Australia (Victoria)

Residential Development Index

Annual Update

December 2020

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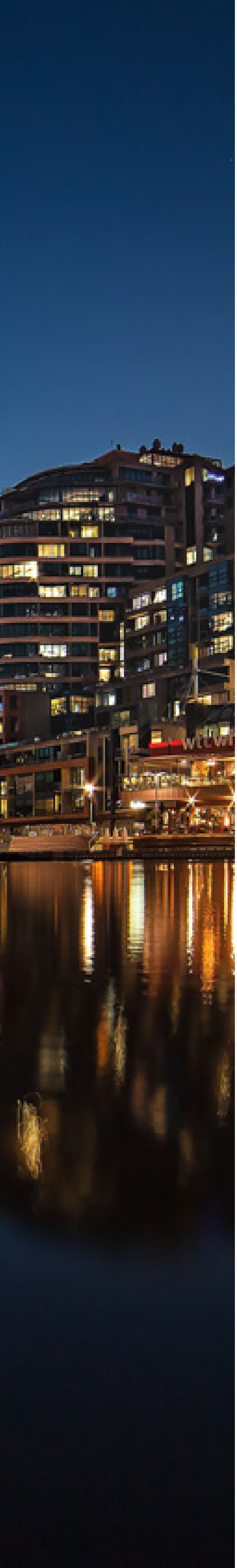

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Executive summary

About the Residential Development Index

The Urban Development Institute of Australia, Victoria Division (UDIA Victoria) uses a unique model to assess the health of Victoria's residential development industry and measure its activity on an ongoing basis. The research examines the dynamics impacting the industry, including economic conditions, population growth, development activity, building approvals, regulatory changes and policy implications. These industry activity fundamentals inform the Residential Development Index (RDI), which determines whether the industry is operating in a strong, moderate or weak market, relative to recent and long history.

Scope of works

This report provides the annual update of the UDIA Victoria RDI for June 2020, and a forecast for June 2021. Additionally, this research report includes:

- A review and update of activity in individual sub-markets including inner, middle and outer ring and growth areas of Melbourne;
- Market commentary and assessment of key drivers and health of the overall market;
- An economic impact assessment of the Victorian residential development sector including multiplier impacts on the economy and employment.
- Consideration of how a drop-off in residential construction could impact the Victorian economy; and
- A review of the impacts of the COVID-19 pandemic and border closures on Victorian population growth, and possible scenarios for the state's recovery.

Executive summary

Scenarios for the market in the short- and medium-term post COVID

While dwelling commencements and building approvals remain at reasonable levels, this reflects historically strong immigration to Victoria – from overseas and interstate – that was still running up until March 2020.

The end to population movements post March 2020 have been sudden and without precedent. Between March 2020 and September 2020 short term visitor arrivals to Victoria declined to just 3,250 down by nearly 98% compared to the same period in 2019. Returns of residents from overseas were also down by a similar margin.

There is a significant lag between the cessation of population growth and dwelling demand. The residents buying dwellings in 2020 are a mix of current residents upsizing and downsizing, and first homebuyers including immigrants who arrived in 2017, 2018 and 2019.

The impacts of a shut-off in immigration in 2020 will therefore begin to be felt in 2021 and more deeply in 2022 and 2023.

This report paints two scenarios for a return of normalised immigration and population growth in the market. The impacts of these scenarios and the potential hollowing out of the residential construction sector are unprecedented.

Executive summary

Scenario 1

Immigration kick to start in late 2021

- The first scenario assumes that international migration movement commences in late 2021 with a gradual return of international students in early 2022, and that population growth will begin to normalise in 2022/23 and reach current pre-COVID-19 levels in 2023/24.
- This scenario is considered a 'best case' outcome and will lead to the loss of up to 150,000 new residents over the next three financial years. Dwelling demand could be reduced by 60,000 to 70,000 dwellings over a 3-year period.
- Under this scenario, international migration would increase to 75% of pre COVID-levels in FY22/23, and 100% in FY23/24.
- This scenario would lead to a large reduction of economic output over a three-year period in the order of $30 billion or an average of $10 billion per year. This would reduce direct employment in the residential development sector by around 20,000 jobs per annum.

Scenario 2

Immigration delayed until late 2022

- The second scenario assumes that international migration movement is delayed until late 2022 due to a delay in managing the impacts of the COVID-19 pandemic.
- Key assumptions include that delayed vaccine distribution or acceptance by populations internationally to be vaccinated is an issue; and that international borders do not open until mid to late-2022 with international students delayed until early 2023.
- Impacts of this scenario on population and dwelling demand include that Victoria's population growth remains at an annualised rate of 30,000 persons per annum until late 2022.
- Under this scenario, interstate migration remains subdued over the next two years due to weak economic growth in Victoria and nationally, with population growth beginning to recover in 2022/23, and dwelling demand increasing in 2023/24 and normalising in 2024/25.
- This scenario, with its prolonged weak population growth, could lead to a halving of residential dwelling demand for a period of up to four years. This would lead to the loss of demand equivalent to nearly 100,000 dwellings.
- This scenario would have wider and prolonged impacts over four years with higher impacts to direct and indirect employment.

Executive summary

Will the Victorian State Budget offset impacts?

The recently announced Victorian State Budget provides strong support mechanisms for the overall Victorian economy in 20/21 and 21/22. The budget injects new capital spending of $19.8 billion over the next four years.

The Budget's own forecasts expect dwelling investment to weigh significantly on the overall economy. Independent of other influences, the reduction in dwelling investment in 20/21 will lead to a 1.5% reduction in Gross State Product in 20/21.

The State Government's commitment to Social and Affordable Housing will see delivery of $3.2 billion in dwelling investment over four years from 20/21. This will support around 12,000 new dwellings or approximately 3,000 per year, offsetting around 15 to 20% of the expected decline in private sector stock volumes.

Overall recent market performance and analysis of regions

Recent building approval and dwelling commencement trends confirm that the residential development sector has been somewhat buffered from the full impact of COVID-19. JobKeeper has provided a level of employment support that has helped maintain homebuyer purchasing power, and the HomeBuilder Scheme has provided support for demand, encouraging buyers of lots to commence construction of new dwellings.

Additionally, the people whose employment has been hit particularly hard by the pandemic include those under 35, single persons and those in casual work. These market segments are not typically active participants in the new housing market. In contrast, to date, typical buyers of new dwellings including couples with permanent jobs and downsizing empty nesters seem to have been less impacted by the economic shock of COVID-19.

However, with both JobKeeper and HomeBuilder due to expire in early 2020, there is likely to be a significant deterioration in buyer demand over the coming term.

Executive summary

Key market trends by region:

- In the **inner ring**, building approvals grew significantly in FY19/20 but remain below longer-term trends, particularly in the City of Melbourne. Recent building approvals for high density projects may be at some risk of not commencing given current market uncertainty or could be delayed.
- In the **middle ring**, activity is down after several strong years of growth. Supply in the middle ring significantly eclipsed the inner ring in 16/17 and 17/18 however while the market is still larger, it is facing dramatic reductions in apartment activity and to a lesser extent townhouse supply.
- Activity in the Melbourne **growth areas** remains remarkably stable averaging around 20,000 dwellings per annum over the last four years. It is expected that this strong activity will continue throughout 20/21 at the expense of other parts of Melbourne.
- Activity in **regional Victoria** remains robust. Dwelling approvals for FY19/20 has followed strong lot sales in FY17/18 and FY18/19, particularly in Greater Geelong, and recent results in the September Quarter 2020 have equated to 25% over the year.
- **Growth area and regional areas** are both projected to deliver circa 20,000 building approvals for new houses, with the regional market trending to comprise 70% to 80% of the size of the total housing market, led by major regional centres including Bendigo, Ballarat and Geelong.

Key market drivers that are expected to continue include:

- Greater interest in **regional** locations from buyers in general.
- Individuals aged 50 plus who have either lost employment or had investments impacted **cashing out of Melbourne** – including inner Melbourne – for lower cost housing in peri-urban areas and regional hubs.
- **Townhouses and houses** in high amenity outer ring, peri-urban and regional centres will grow as a share of the housing market.
- We will see an ongoing decline in **high density** development in the City of Melbourne.
- The **apartment** market will recover but in boutique, lower density projects initially.
- **Higher density projects in the inner ring** will require the return of a large volume of international students and immigrant populations who seek access to education and entertainment.
- **Young buyers and renters** will become more accepting of outer suburbs, growth areas and regions. They will seek more affordable housing as income certainty and income growth may take 5 to 7 years to normalise.

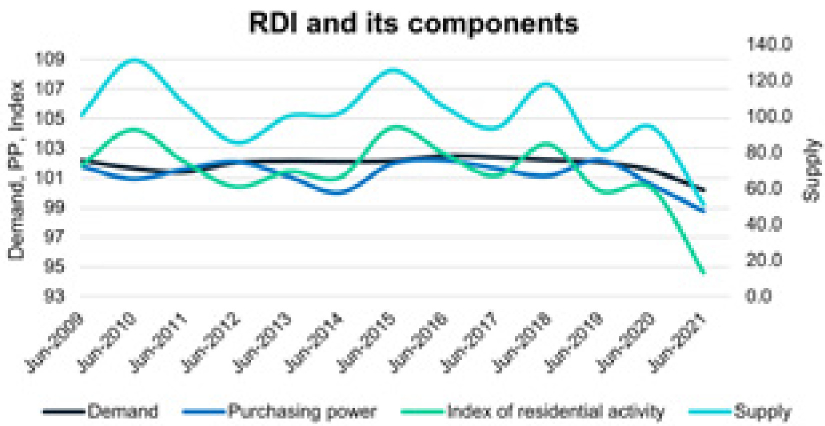
Executive summary

Residential Development Index (RDI)

The RDI has experienced a marginal increase in June 2020 to 100.3 up from 100.1 in June 2019 which remains below the 10-year average of 101.9. However, the RDI is forecasted to significantly decrease to 94.6 throughout the 12 months to June 2021.

Based on historical data, an RDI of 100 or higher indicates a relatively well performing sector with results above 103 indicating strong drivers in the sector. Results below 100 indicate relative weakness or emerging weakness in key drivers.

Negative drivers of the June 2020 index include a significant decrease in supply along with a strong decline in residential activity. Demand and purchasing power also experienced a decline over the same period.



Executive summary

Conclusions

The impacts of a COVID induced recession are yet to be heavily felt across the broader residential market due to several factors including:

- **Job losses** haven't hit the typical home buying cohort who purchase new dwellings and have mainly fallen on young people who aren't yet forming families and are primarily still renting;
- Demand has been supported for first home buyers and those upsizing to a second dwelling with a combination of **government grants and more recently tax cuts** for property acquisition in the form of stamp duty savings;
- **Moderate income growth** has been offset by continued record low interest rates and record re-financing activity; and
- Market **demand** is still being driven by population growth flowing from 2017 to 2019.

However, there are significant risks on the horizon that need to be managed. These include:

- The potential for a **prolonged economic impact** from low population growth with impacts on economic output and full-time employment in the sector of up to 20,000 direct jobs per annum;
- A significant shift in the **volume of housing** provided in established areas including the inner ring and parts of the middle ring which will compromise strategic planning objectives of 70% housing in established areas;
- A reduction in **housing diversity** with a medium-term shift in supply to townhouse and detached dwellings;
- A hollowing out in demand for housing in the **inner ring** if students and international migration flows are delayed; and
- Potential **impacts on buyer confidence** in 2021 if unemployment rates remain elevated and economic recovery is delayed.

These trends are highlighted in the latest estimate of the Residential Development Index, which whilst stable in June 2020, is forecast to decrease to a historically low position in June 2021.

The prospect of avoiding major impacts from a COVID recession in the residential sector will depend on decisions made by both Commonwealth and State governments in 2021, including extensions of demand support and the broader impacts of the removal of the JobKeeper scheme.

The demand support currently provided by the Commonwealth and State Government is likely to be required to be maintained in the medium term as population growth impacts play out over a number of years.

IMPACT OF COVID-19

In this section

Impact of COVID-19

Economic Trends of Impacts of Employment in the Residential Development Sector

Historical economic impacts of residential construction sector

A review of the economic impacts and importance of the residential construction sector in FY19/20 based on recent data to June 2020 is outlined in the analysis below.

Based on the economic value add measure, residential construction expenditure generated $25.5 billion in the Victorian economy. This impact has held up in FY19/20 but as discussed below is likely to decline in coming years.

Table 1: Expenditure ($m, Jan 2020, real), total residential construction

	FY16/17	FY17/18	FY18/19	FY19/20
Expenditure ($m)	$20,370	$24,658	$20,860	$21,602

Table 2: Economic value add ($m, Jan 2019, real), total residential construction

	FY16/17	FY17/18	FY18/19	FY19/20
Direct value add ($m)	$5,887	$7,126	$6,028	$6,265
Indirect value add ($m)	$18,149	$21,970	$18,586	$19,226
Total value add ($m)	$24,036	$29,096	$24,615	$25,490

Note:

- Expenditure has been updated to reflect prices as of 1 January 2020
- Total values may not be the sum of direct and indirect values due to rounding
- The input/output multipliers used to calculate economic activity are from the 2018-19 financial year

Table 3: Jobs (full time, part time and casual), total residential construction

	FY16/17	FY17/18	FY18/19	FY19/20
Direct jobs creation	40,739	49,315	41,720	43,203
Indirect jobs creation	142,587	172,603	146,018	151,209
Total jobs	183,326	221,918	187,738	194,411

Impact of COVID-19

The residential development sector was estimated to sustain 194,400 direct and indirect jobs in Victoria in FY 19/20. This figure is an average across the full year and will not reflect job losses that are likely to have been accruing in the last few months of the financial year. The impact includes jobs sustained directly in the sector as well as in support industries such as property and business services, financial services, transport and distribution, manufacturing and other sectors.

Direct employment in the residential construction sector was estimated at around 43,000 jobs prior to any slowdown in activity in 2020.

It is important to note that these estimates of impact and revenue do not include the contribution that the residential development sector makes to the Victorian Government's own source tax collections. State taxes including stamp duty and land tax are supported by the sector. While off-the-plan stamp duty concessions will apply to first home buyers and those residing in new properties, it is important to note that developers fund large stamp duty and land tax collections as part of the land acquisition and development process.

Other charges including open space contributions and developer levies also provide State and Local Government with a diversity of revenue streams to fund capital projects and services.

Impacts of a future population slowdown under alternative scenarios

The impacts of COVID-19 on the Victorian economy combined with slowdowns in population growth are expected to be felt for several years. As discussed in part 5 of the Report it is likely that population growth and dwelling demand will not normalise for between 2 and up to 4 years.

The impact of a slowdown in dwelling construction on jobs in the residential development sector has been considered in this context. The analysis in Part 6 of this Report confirmed that dwelling demand could fall to around 20,000 to 30,000 per year from 60,000 to 65,000 in previous years.

This scale of impact on employment in the sector would be significant under this scenario.

Total expenditure in the new residential construction sector has recently averaged around $22 billion per year. This is equivalent to almost 6% of the Victorian economy and implies that roughly one in every $20 of activity is driven by the sector.

According to analysis of ABS Building Approvals data, the average dwelling directly contributes $370,000 in demand through various sectors of the economy.

Depending on the scenario outlined on pages 16-18 of this Report, the loss of 20,000 to 30,000 dwellings per year over three to four years would extract a significant volume of economic activity and employment out of the economy.

An example of the potential impact across Scenario 1 is provided in the table on the following page.

Impact of COVID-19

Table 1: Impacts of Scenario 1 on total residential construction demand and employment (approximate estimates)

	FY20/21	FY21/22	FY22/23
Dwelling Demand based on population growth	20,000	29,000	43,000
Expenditure ($m)	$8,000	$11,600	$17,200
Total value add of sector ($m)	$9,600	$13,920	$20,640
Employment (Direct Jobs in sector)	16,000	24,000	35,000
Employment volume relative to average employment	- 30,000	- 20,000	-10,000

As depicted in the table, Scenario 1 could lead to direct employment losses averaging 20,000 jobs per year over a 3-year period and wider job losses in other sectors. **1**

It will therefore be important for the State and Commonwealth Government to consider how a demand and employment slump of this scale can be managed within the wider economy. The success of a vaccine and decisions around international population movement will play out independently but a slowdown of this scale would lead to permanent shifts in skills and the workforce composition of this important sector.

1 - The analysis assumes that the population slowdown directly impacts demand and does not account for lags in demand and ongoing support programs from Government.

Impact of population losses on residential development sector and Government support

Considering scenarios of population growth slowdowns

The COVID-19 pandemic put a hold on international population movements in Australia and in Victoria from March 2020. Up until this time Victoria's population was growing by around 115,000 persons per annum which was generating a need for around 55,000 to 60,000 new dwellings per year.

The impacts of a slowdown in population growth will take time to feed through to demand for new residential construction. What we have seen in 2020 is even though population growth started declining in March residential buyer demand has held up due to several trends including:

- The Commonwealth's JobKeeper and HomeBuilder programs;
- Tenure shifts whereby renters in Melbourne's Inner Ring are now seeking to become owner occupiers in the outer ring and growth areas; and
- The reality that immigrants who arrived in Melbourne in 2019 as renters are still fuelling demand in 2020 as they settle into the economy, gain employment and start families.

It is therefore expected that the population slowdown occurring now and through the next 2 years will be felt for up to 3 years and with at least a 1-year lag. This process of delayed impact is depicted in the figure below.

To consider the impact that border closures may have on population growth and dwelling demand the Report has considered two scenarios.

The first scenario assumes that international migration movement commences in late 2021 with a gradual return of international students in early 2022.

The alternative scenario considers the impacts of a prolonged delay in international population movements until late 2022 due to a delay in vaccine roll-out or acceptance of further outbreaks.

Scenario 1 – Immigration kick start in late 2021

This scenario assumes that international migration movement commences in late 2021 with a gradual return of international students in early 2022. Population growth will begin to normalise in 2022/23 and reaches current pre-COVID-19 levels in 2023/24.

Key Assumptions

1. In 20/21 population growth driven by natural increase circa 35,000
2. A return of immigrants in 1st quarter in late 2021.
3. Immigration to Victoria starts to normalise accompanied by international students in early to mid-2022.

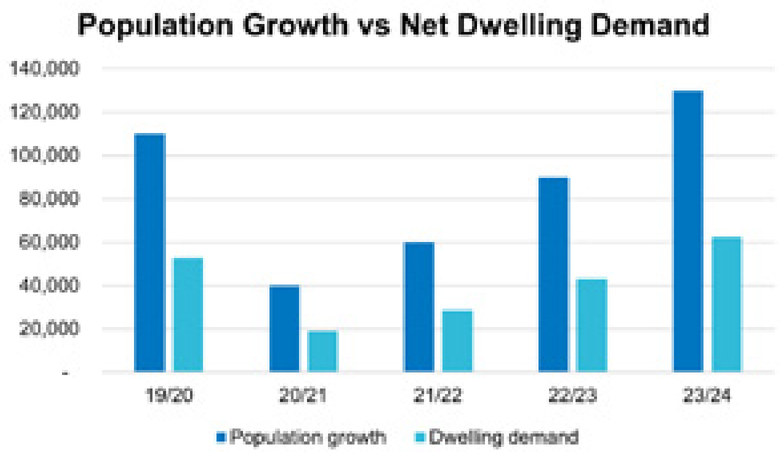
Immediate Impacts

- Dwelling demand will lag population growth changes as new residents take time to 'soak' into the rental and owner occupier market
- A net contribution of 30,000 new arrivals in Victoria in FY21/22 with interstate migration remaining subdued in FY21/22
- Total population growth in FY21/22 to be circa 60,000 persons. This is relative to generally stable pre-COVID levels of population increase at around 115,000 persons per annum.
- Rental vacancies in Inner Melbourne will begin falling in FY22/23 having increased in FY19/20
- Dwelling demand increases in the later part of FY22/23.

Medium term Impacts

- Victoria and Australia are perceived as a 'safe haven', particularly with regard to our financial and property markets, and more recently our response to and recovery from the effects of COVID-19.
- International migration increases to 75% pre COVID levels in FY22/23 and 100% FY23/24.
- The Commonwealth Government may limit 'net overseas migration' if unemployment remains elevated over the medium term.
- Skilled migration to Australia will be constrained if economic recovery is delayed.

The impacts on population growth and net dwelling demand of this scenario are outlined in the figure below:



Source: Estimated forecasts

Scenario 2 – Immigration delayed until 2022/23

This scenario assumes that international migration movement is delayed until the FY 2022/23 year due to a delay in managing the impacts of the COVID-19 pandemic.

Key Assumptions

1. Delayed vaccine distribution internationally and or delays in approval.
2. Immigration does not commence until late 2022 with international students delayed until early 2023.

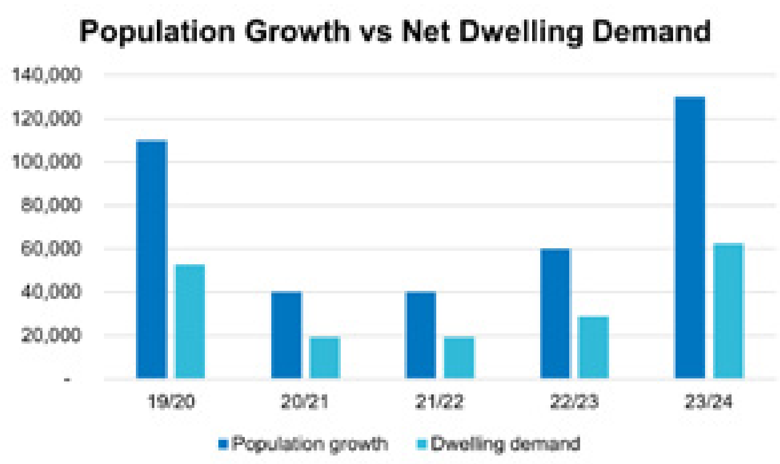
Immediate Impacts and constraints

- Victoria's population growth remains at an annual rate of 30,000 to 40,000 persons per annum until late 2022.
- Interstate migration remains subdued over next two years due to weak economic growth in Victoria relative to other States.
- Total population growth of circa 60,000 persons achieved in FY22/23. This is relative to generally stable pre-COVID levels of population increase at around 115,000 persons per annum.
- Inner city and CBD rental vacancies begin falling in mid-2023.
- Dwelling demand increases in FY 2023/24

Medium term Impacts

- This scenario would have longer term impacts on the Victorian residential development sector and the overall economy.
- The prolonged weak population growth could lead to a halving of residential dwelling demand for a period of up to 4 years with secondary impacts on residential vacancies and dwelling prices.

The impacts on population growth and net dwelling demand of this scenario are outlined in the figure below:



Source: ABS, 2020

Impacts of each scenario on future dwelling typologies

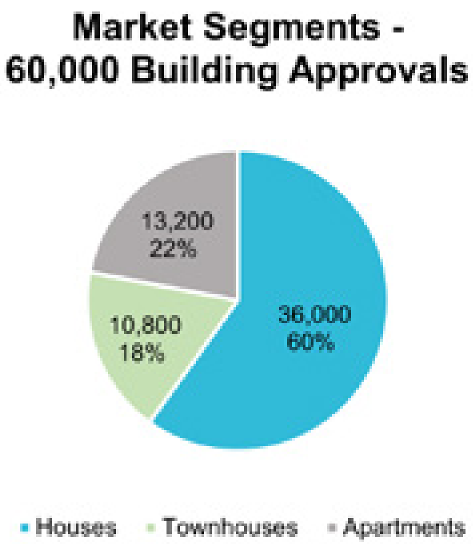
The slowdown in dwelling demand would not only lead to a reduction in overall dwellings but will have impacts on the size of sub-markets in the Victorian residential development sector.

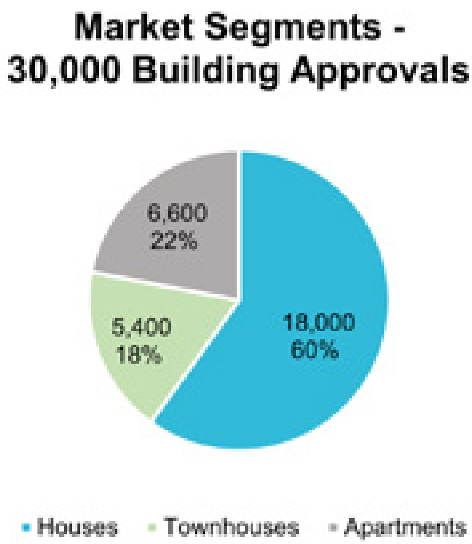
In 2019-20 of the 60,000 building approvals in Victoria the following market segments existed:

- 36,000 or 60% were houses
- 10,800 or 18% were townhouses
- 13,200 or 22% were apartments

If the overall market shrunk to an average of 30,000 dwellings per year over two years with similar ratios of dwelling typology the impact on market segments would be significant. A comparison is provided in the pie charts below.

This comparison indicates that the apartment sector across Victoria could decline to a low of 6,600 dwellings on a per annum basis. There is potential that this outcome could be even lower if preferences for houses and townhouses increase.





Impacts and estimates within the State Budget

The recently announced Victorian State Budget provides a strong support mechanism for the overall Victorian economy in FY/22. The budget injects new capital spending of $19.8 billion over the next 4 years. Further new spending is expected in the May 2021 Budget.

The budgets own forecasts expect dwelling investment to weigh significantly on the overall economy. Independent of other influences, the reduction in dwelling investment in FY20/21 will lead to a 1.5% reduction in Gross State Product in FY20/21.

The State Government's commitment to Social and Affordable Housing will deliver $3.2 billion in dwelling investment over 4 years from 20/21. State Government funding for the 'Big Housing Build 'program provides support for over 12,000 new homes throughout Victoria. This includes 9,300 social housing properties replacing 1,100 old social housing dwellings, with funding apportioned to also develop 2,900 mainly affordable housing dwellings.

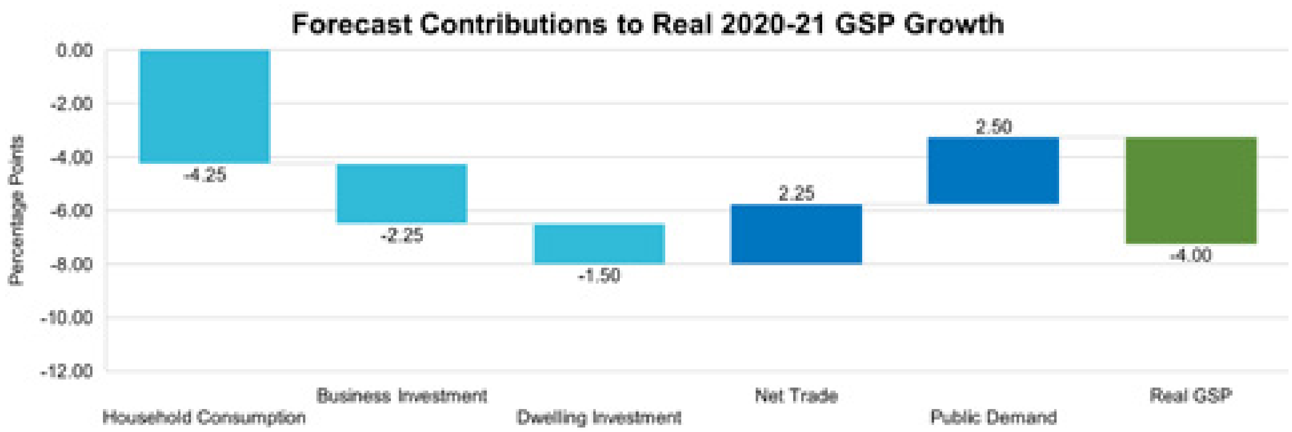
This commitment will go some way to offsetting the expected losses in dwelling investment over the next 3 years. A volume of 3,000 dwellings per year on average could offset around 15 to 20% of the expected decline in private sector stock volumes.

The State budget large capital investment program will be challenging to achieve and may lead to competition for labour between residential projects and major State funded civil works projects.

It will be important for Government to more broadly consider whether ongoing demand stimulus particularly in the residential development sector could lead to more accelerated economic impacts. The recent announcement of stamp duty concessions for those purchasing new and established properties should simulate greater demand across the sector.

The State Budget forecasts Victorian GSP to decline by 4.0 per cent in 2020-21, following a small fall in 2019-20. There are several factors that are expected to contribute to this outcome including declines in dwelling construction activity and household spending.

Reduced dwelling construction activity is expected to reduce economic output by 1.5% in 2020-21 according to budget paper estimates. This 1.5% impact on the economy will be equivalent to around $6 billion.



Federal Government HomeBuilder Scheme

The Federal Government has pursued support for the residential construction industry by establishing the HomeBuilder scheme. The structure of the HomeBuilder program is as follows:

- Eligible owner-occupiers (including first home buyers) will be provided with a financial grant to build a new home or substantially renovate an existing home with applications due by 14 April 2021.
- This grant will be $25,000 for building contracts (new builds and substantial renovations) signed between 4 June 2020 and 31 December 2020.
- Construction must commence within six months of the contract being signed.
- The grant covers new builds up to a price of $750,000 and renovations up to a property value of $1,500,000.
- The grant will be reduced to $15,000 for building contracts (new builds and substantial renovations) signed between 1 January 2021 and 31 March 2021.

On the 29 November 2020 a number of updates were made to the HomeBuilder scheme. These included the abovementioned continuation of the scheme from 1 January 2021 until 31 March 2021, along with increases to the contract price cap, extensions to construction commencement timeframe requirements and changes to licensing and registration requirements of builders.

The HomeBuilder Scheme is expected to support jobs in the industry with 23,877 applications for the scheme having been received by 20 November 2020.

The take up of the scheme in Victoria has been significant. Grant records from the scheme confirm that Victorians applied for $127.3m in grants between mid-August and late October with much of this timeframe still being in Stage 4 lockdown. In comparison applications in Queensland which has had the second highest volume equated to $88m from the $685m program.

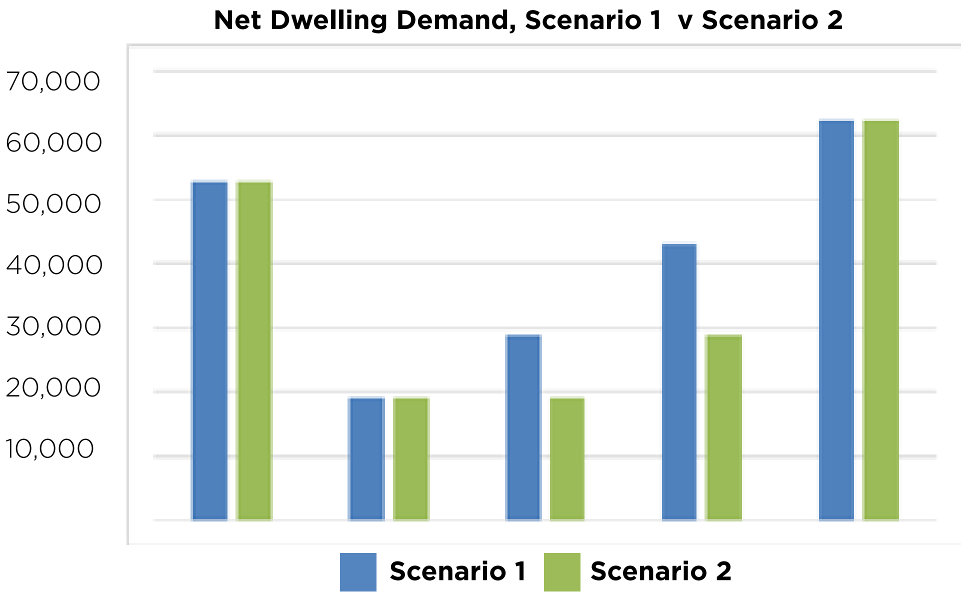
The scheme has undoubtedly supported a significant volume of lot sales in Victoria which will flow through to building commencements in coming months including sales in growth areas and in regional hubs including Geelong and Bendigo. In September alone sales values for new lots in Victoria equated to $266 million which is in line with data from September 2018 and 2019.

Depending on the trajectory of economic recovery and which scenario of population growth Victoria follows, it will be important to consider how this scheme can be extended.

Conclusion

Both scenarios confirm that while there are several issues beyond the control of the Victorian Government, it is critical for the overall economy that support for the residential development sector is extended over the next two years to support and bolster the State's recovery.

Measures including stamp duty relief combined with other demand stimulation will be important in maintaining the industry and its economic contribution.



RESIDENTIAL DEVELOPMENT INDEX

In this section

About the Residential Development Index

Latest estimates and results (RDI)

As defined in the methodology the Residential Development Index "RDI" has three components:

A. Demand for residential development re presented by relative population growth;

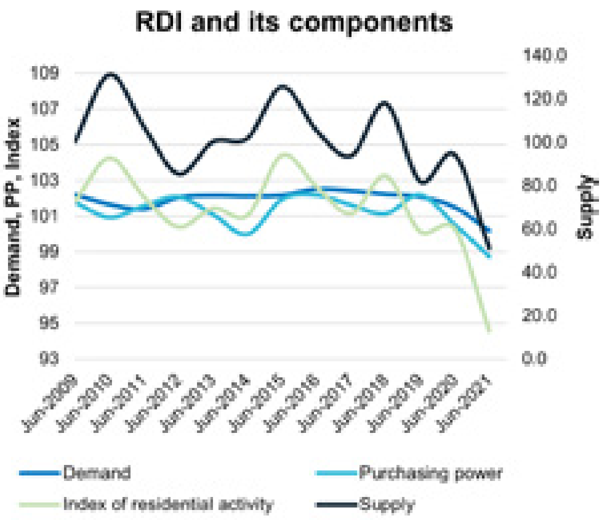
B. The ability to purchase property reflected by the employment growth in the economy and income growth relative to inflation and;

C. Overall supply levels calculated by relative growth in dwelling commencements over the year

Each input is calculated on an annual basis at a point in time subject to the availability of data. It should be noted that employment and dwelling approvals data is available with limited lags whereas estimates of population and employment have approximately a six-month lag.

The results for the RDI and its components are depicted in the below figure. In summary based on the last eleven years of analysis between June 2009 and June 2020, along with June 2021 forecasts:

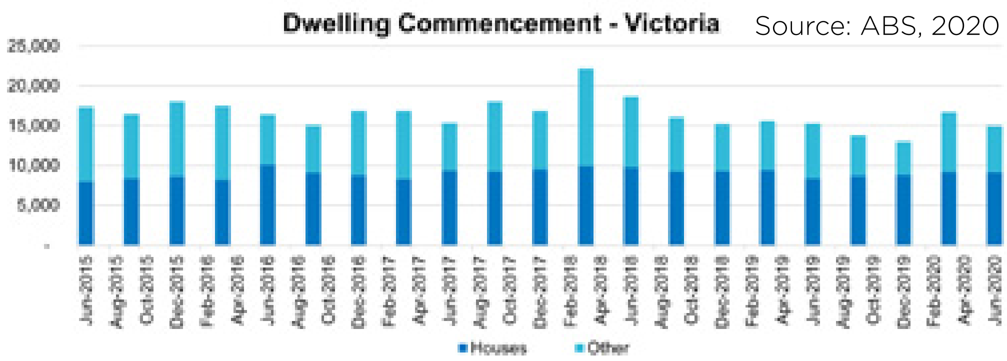
1. The index has experienced a marginal increase in June 2020 to 100.3 up from 100.1 in June 2019 which remains below the 10-year average of 101.9 However, the RDI is forecasted to significantly decrease to 94.6 throughout the 12 months to June 2021.
2. Based on historical data an index of 100 or higher indicates a relatively well performing sector with results above 103 indicating strong drivers in the sector. Results below 100 indicate relative weakness or emerging weakness in key drivers.
3. The index was at its lowest point in June 2012 (100.4) when employment growth (purchasing power) and population (demand) were all relatively consistent but supply (dwelling approvals) was notably low.
4. Negative drivers of the June 2020 index include a significant decrease in supply along with a strong decline in residential activity. Demand and purchasing power also experienced a decline over the same period. As a result of the weakened demand and forward activity profile, it is forecast that the index will continue to decline through FY21 to record the weakest RDI performance since 2009, with an Index score likely to be under 95.



Other residential market indicators

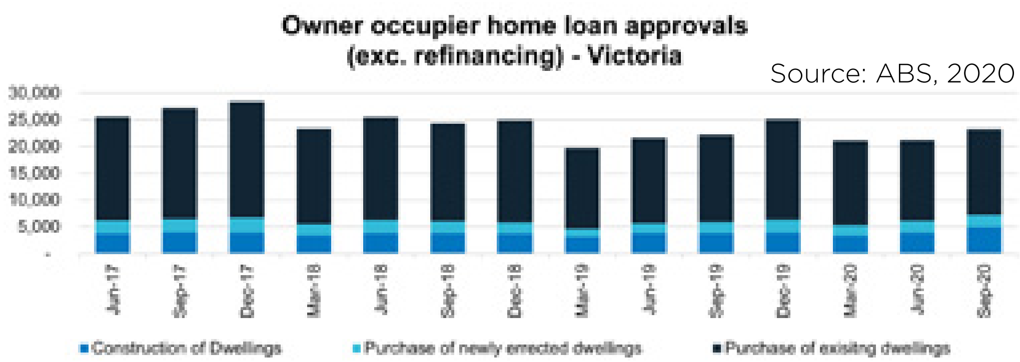
Dwelling Commencements

- Covid-19 may exacerbate the lag between building approval and project commencement, leaving lower number of apartment projects to be delivered in the short-medium term, resulting in heightened pent-up demand as the population grows and the economy recovers.
- There has been a downward trend in dwelling unit commencements for townhouses and apartments in 2019-20. Over the year to June Quarter 2020 commencements averaged 5,600 per quarter in this category compared to 6,400 a quarter in 2018-19. This equates to an average decline of 12% compared to 2018-19 which was already a relatively weak year in regard to historical volumes.
- Dwelling unit commencements of houses in Victoria has been relatively stable over the past 24 months from June quarter 2018 to June quarter 2020, with commencements trending just above 9,000 per quarter.



Home Loan Approvals

- Home loan activity, excluding refinancing, has been generally falling each quarter from a peak in 2017, although approvals have been relatively stable from FY18/19 through FY19/20.
- In the September quarter 2020 there was growth in home loan approvals for the construction of new dwellings which is likely to have been a result of government stimulus measures supporting new residential construction and renovations. The outcome for September quarter 2020 is the strongest quarterly result in the last 3 years.



RESIDENTIAL DEVELOPMENT BY REGION

In this section

Trends by region

This section provides dwelling approval trends by region, highlighting current hot spots and weakening LGAs.

A snapshot of dwelling approval trends in the Melbourne Statistical Division area are provided below, with further trends by region detailed in the following pages.

Snapshot of trends across Victoria and Melbourne

- ABS dwelling approvals data show that total dwelling approvals in the Melbourne Statistical Division (SD) increased by 4% in FY19/20 to 45,547.
- Across the Melbourne SD, apartment approvals grew by 13% and houses by 2% in FY19/20. Townhouse approvals decreased by 4%.
- Overall, detached housing supply remains relatively strong particularly in growth and regional areas, leading dwelling approvals over apartments and townhouses in the Melbourne SD.
- So far, overall building permit activity remains relatively stable in FY19/20 and in the September quarter of 2020.
- Overall activity however remains well below longer term averages and has not been heavily impacted by COVID-19 and the State economy at this stage, with FY21/22 and beyond heavily dependent on immigration.
- The prospect of avoiding major impacts from a COVID recession in the residential sector will depend on decisions made by government over the coming months, including extensions of demand support and managing the broader impacts of the removal of the JobKeeper scheme.

Trends by region

Victoria and Melbourne				
Victoria – All Regions	FY16/17	FY17/18	FY18/19	FY19/20
Flats units or apartments - In a four or more storey block	15,821	20,631	11,087	12,442
Flats units or apartments - Total	17,828	22,204	12,061	13,451
Houses	35,867	39,568	36,747	36,166
Semi-detached, row or terrace houses, townhouses - Total	11,393	13,841	10,916	10,445
Total Residential	**65,088**	**75,613**	**59,724**	**60,062**

Inner Melbourne				
Inner Ring – Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Flats units or apartments - In a four or more storey block	9,183	11,855	4,895	8,286
Flats units or apartments - Total	9,556	12,074	5,078	8,464
Houses	474	493	313	383
Semi-detached, row or terrace houses, townhouses - Total	526	900	524	652
Total Residential	**10,556**	**13,467**	**5,915**	**9,499**

Middle Ring Melbourne				
Middle Ring – Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Flats units or apartments - In a four or more storey block	5,555	7,020	4,732	3,607
Flats units or apartments - Total	6,727	8,062	5,286	4,155
Houses	4,581	4,053	3,454	2,847
Semi-detached, row or terrace houses, townhouses - Total	5,734	6,591	4,863	5,198
Total Residential	**17,042**	**18,706**	**13,603**	**12,200**

Trends by region

Outer Ring Melbourne				
Outer Ring – Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Flats units or apartments - Total	1,575	1,211	1,183	657
Houses	2,130	2,038	1,693	1,255
Semi-detached, row or terrace houses, townhouses - Total	1,819	1,971	1,846	1,552
Total Residential	**4,866**	**5,220**	**4,722**	**3,464**

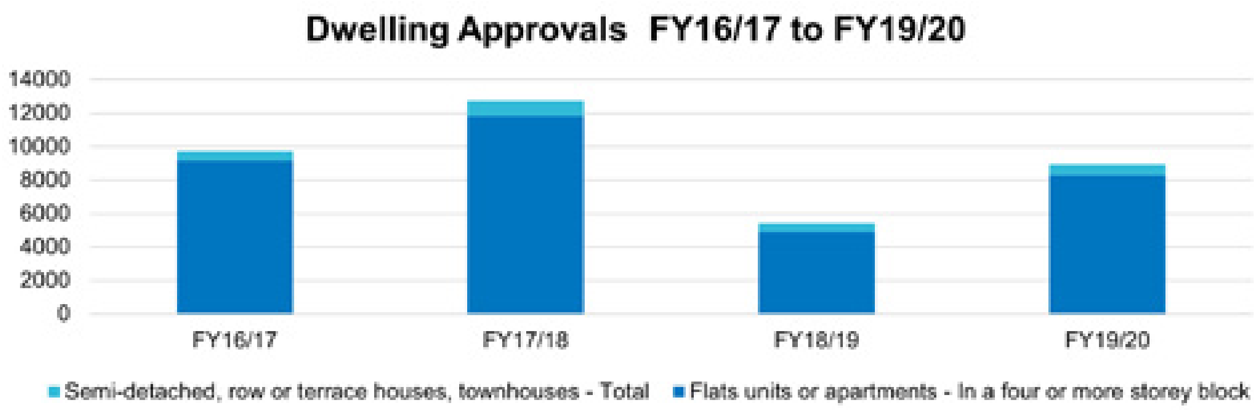
Melbourne Growth Area LGA's				
Melbourne Growth Areas – Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Houses	17,005	19,585	17,297	18,695
Semi-detached, row or terrace houses, townhouses - Total	2,190	2,511	2,140	1,610
Flat units or apartments - Total	760	476	427	79
Total Residential	**19,612**	**22,345**	**19,675**	**20,384**

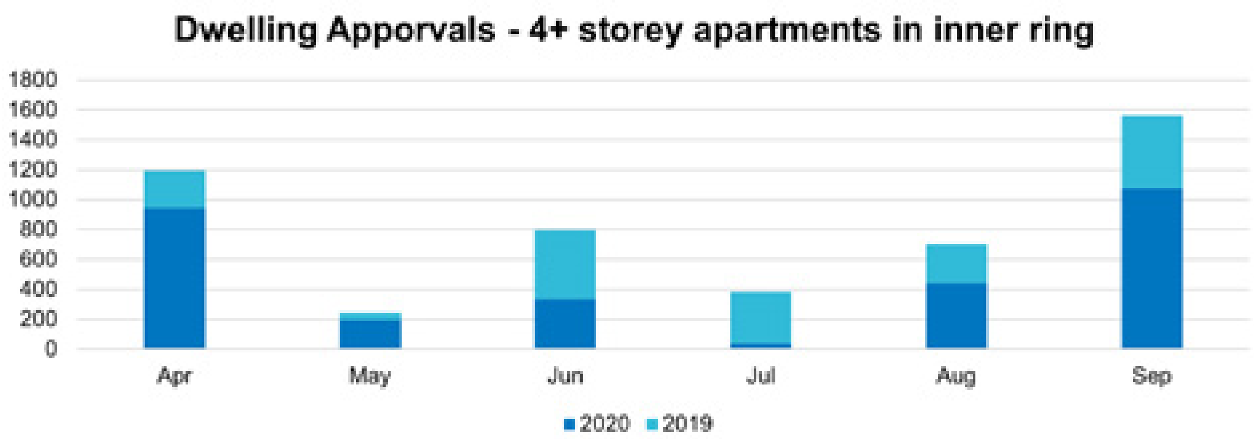
Regional Areas				
Regional Areas – Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Houses	11,677	13,399	13,988	12,984
Semi-detached, row or terrace houses, townhouses - Total	1,124	1,868	1,540	1,433
Flat units or apartments - Total	293	1,027	456	102
Total Residential	**13,012**	**15,875**	**15,804**	**14,513**

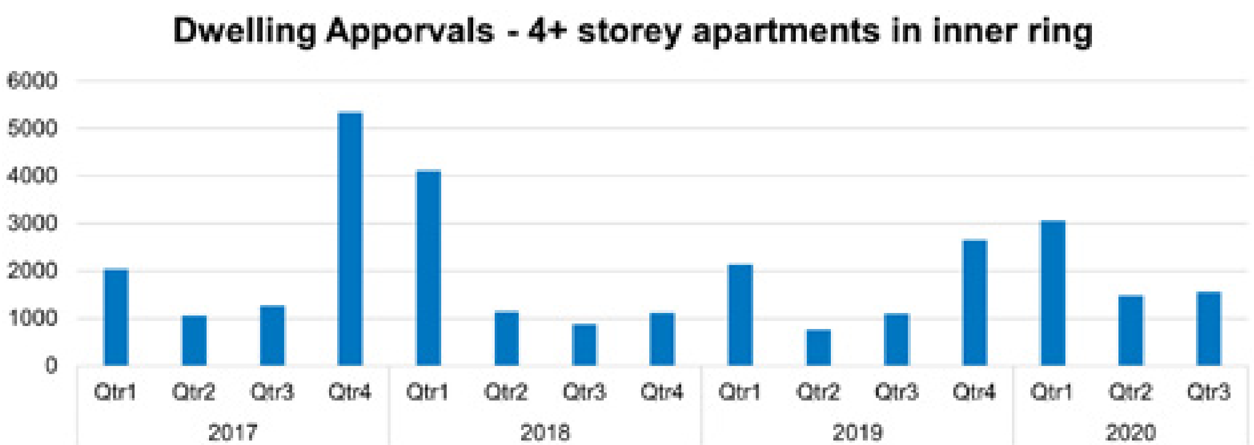
Victoria Total Dwelling Approvals	FY16/17	FY17/18	FY18/19	FY19/20
Flats units or apartments - In a four or more storey block	15,821	20,631	11,087	12,442
Flats units or apartments - Total	17,828	22,204	12,061	13,451
Houses	35,867	39,568	36,747	36,166
Semi-detached, row or terrace houses, townhouses - Total	11,393	13,841	10,916	10,445
Total Residential	**65,088**	**75,613**	**59,724**	**60,062**

Source: ABS, 2020

Inner ring of Melbourne







Source: ABS, 2020

Snapshot of trends across the inner ring of Melbourne

Dwelling approval trends in relation to housing typologies and highlights of specific regions within the Inner Ring are provided below.

- ABS dwelling approvals data show that total dwelling approvals in inner Melbourne for FY19/20 have increased significantly to 9,499 from 5,915 in FY18/19 representing annual growth of 61%. This is, however, still below the total dwelling approvals seen in FY17/18 which saw 13,467 approvals.
- The growth in dwelling approvals in the inner ring is driven by a rise in four storey plus projects, which have grown from 4,895 to 8,286 in FY19/20. This increase is in line with longer term averages but reflects pre COVID activity.
- Growth for houses and townhouses has remained stable between FY18/19 and FY19/20.
- There was generally stable movement or growth across LGA's in the inner ring over FY19/20 for apartment dwelling approvals of 4 or more storeys, led by strong growth in the City of Melbourne and City of Yarra. Stonnington is the only LGA within inner Melbourne to show a significant decline in approvals in FY19/20, exhibiting a 75% decrease in dwelling approvals for apartments in buildings of 4 or more storeys.
- The City of Melbourne LGA remained the strongest LGA in the inner ring for approvals, representing 51% of the inner ring, increasing from a 33% share of building approvals for FY18/19.
- The trends in the City of Melbourne LGA for high density projects continue to be weak. In the September quarter of 2020 there were a total of 207 apartments approved high density projects.
- If this trend plays out over the full year the total supply could equate to less than 1,000 apartments which would be a historically low figure.
- However outside the Melbourne LGA, apartment approvals remain healthy with significant increases in Port Phillip including Fishermans Bend and Hobsons Bay.

Market drivers in the inner ring

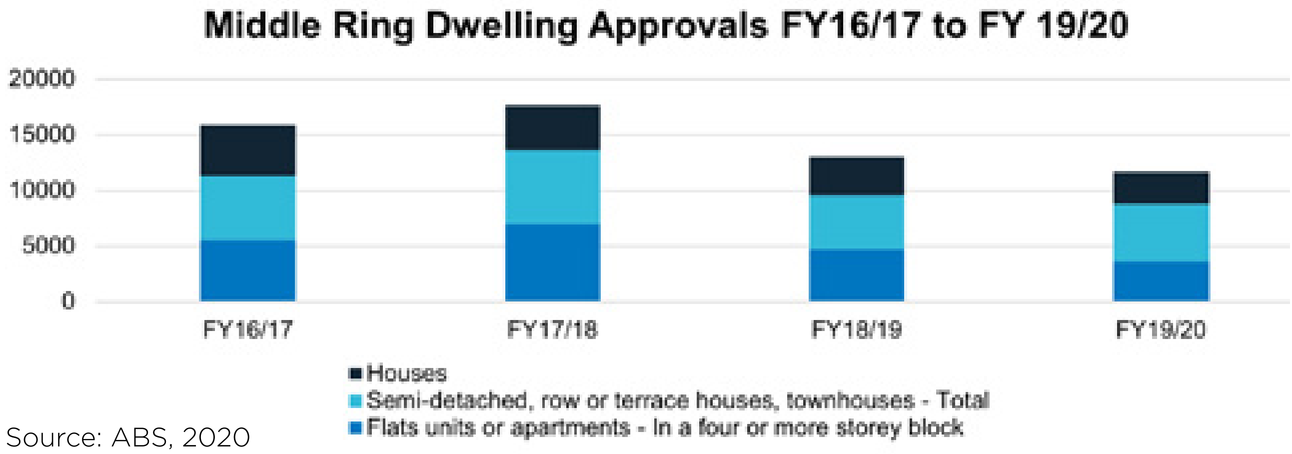
There are a number of issues influencing demand in the the inner ring of Melbourne. The inner ring of Melbourne has experienced the most noticeable impacts in population movements resulting from COVID-19 restrictions. This has been led by substantial declines in the number of international students as well as the switch to people working from home. These impacts are characterised by the following:

- The loss of international students combined with a reduced need to live near work has dramatically reduced demand.
- Melbourne City vacancy rates have increased from 1.90% in March 2020 to 4.40% in October 2020.
- Data available from the Real Estate Institute of Victoria shows median unit rents declined by 6.8% from March 2020 to June 2020.
- A reduced need to live near the city, combined with the higher cost of housing in the inner ring, will continue to impact demand in the short to medium term.

Will the market conditions persist?

- Current Supply - Large volume of apartment stock has reached completion in FY19/20, which hasn't helped when combined with declining demand.
- International Students - Elevated vacancies should decline by FY21/22 if international students return and commercial office occupation reaches 70% capacity.
- Investors - Buyers will accept limited capital gains on apartments in first 5 years if rental yields are strong - however if yields collapse, the investor market will significantly deteriorate.

Middle ring of Melbourne



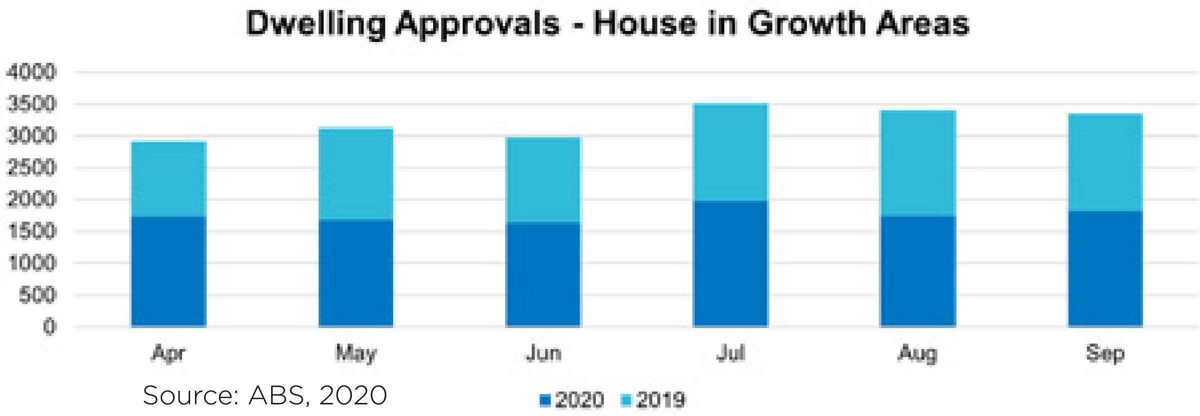
Source: ABS, 2020

Snapshot of trends across the middle ring of Melbourne

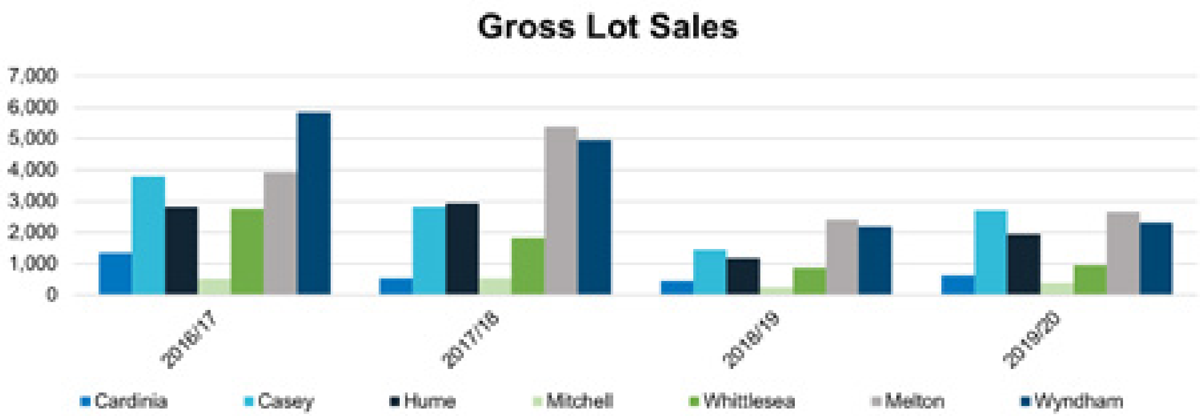
Dwelling approval trends in relation to housing typologies and highlights of specific regions within the Middle Ring are provided below.

- ABS dwelling approvals data show that total dwelling approvals in middle Melbourne for FY19/20 declined by 10%, with all building types experiencing a decline in approvals compared to the previous financial year with the exception of apartments in a one or two storey block and townhouses, both of which recorded modest growth.
- Townhouse approvals grew by 6% in FY19/20, whilst apartments fell 21%, with the most significant decline in the middle ring apartment market experienced for apartment dwelling approvals of 4 or more storeys which experienced a 24% fall.
- Activity for apartments in FY19/20 declined relative to FY8/19 and is significantly below the result of 7,020 approvals in FY17/18.
- Glen Eira and Monash LGA's both experienced the greatest falls in total dwelling approvals, with a 38% and 48% fall respectively over FY19/20.
- Banyule experienced moderately strong growth over FY19/20. There was a 27% increase in dwelling approvals in FY19/20 as compared to FY18/19, led predominantly by a modest increase in townhouse and apartment dwelling approvals.
- Historically activity remains low compared to FY16/17 and FY17/18. This may indicate a decline in available sites in some key activity centres.

Melbourne growth areas



Source: ABS, 2020



Source: RPM Real Estate Group, 2020

Snapshot of trends across the growth areas of Melbourne

Dwelling approval trends in relation to housing typologies and highlights of specific regions within the Growth Areas of Melbourne are provided below.

- ABS dwelling approvals data show that total dwelling approvals in the growth areas of Melbourne for FY19/20 have increased marginally to 20,348 from 19,675 in FY19/20 representing annual growth of 4%.
- Houses account for 92% of all growth area dwelling approvals in FY19/20, an increase of 4% over the prior year.
- A decline for apartment and townhouse approvals was less significant between FY18/19 and FY19/20 with a fall recorded of 67% and 25% respectively, albeit comprising a small proportion of outer ring approvals.
- Growth area and regional areas are both projected to deliver circa 20,000 building approvals for new houses, with the regional market trending to comprise 70% to 80% of the size of the total housing market, led by major regional centres including Bendigo, Ballarat and Geelong.
- A decline in dwelling approvals was most significant in Cardinia LGA, which recorded a fall of 42%, with the strongest growth recorded by Melton, which recorded growth of 49%, with all other LGA's being generally stable over FY19/20.
- More recent activity is also strong representing strong lot sales over the last 12 to 18 months.

Market drivers in growth areas

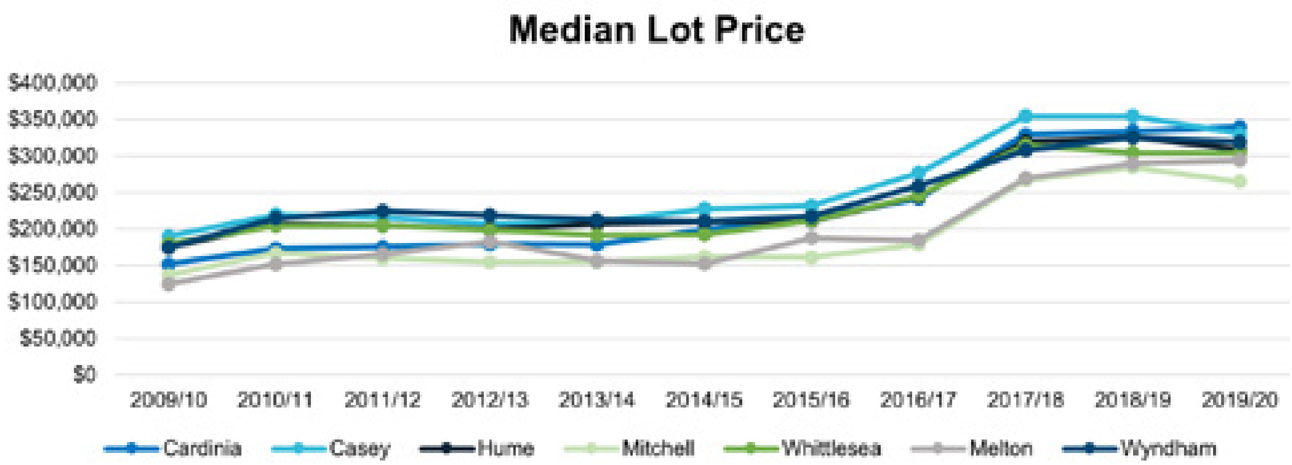
There are a number of issues influencing demand in the growth areas of Melbourne. These include:

- Significant pool of pre COVID-19 migrants who will be shifting from renters to buyers
- Other longer-term renters deciding it's a good time to buy.
- Melbourne residents cashing out, downsizing, losing work and taking early retirement

Market trends in growth areas

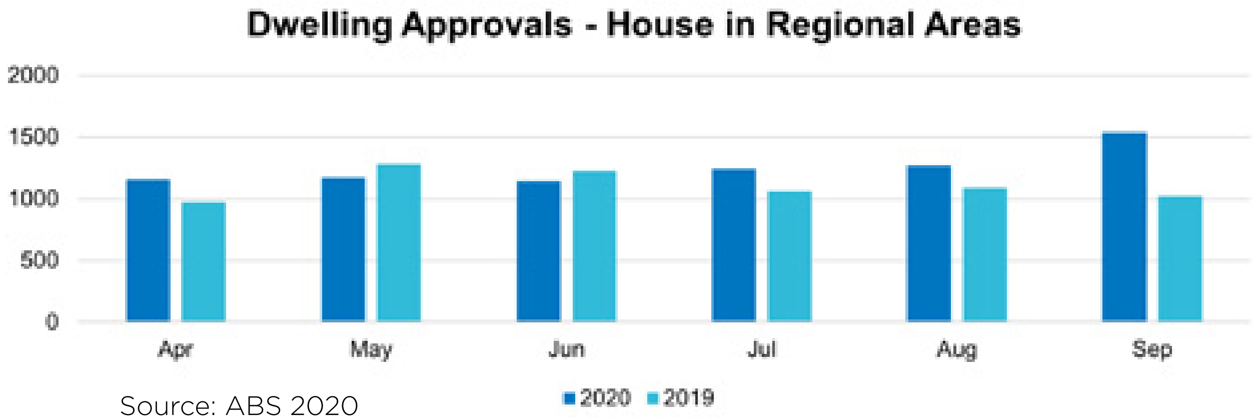
UDIA Victoria Research Partner RPM Real Estate Group, has provided updated details of lot sales in the growth areas of Melbourne, which has been compared with dwelling approvals data from the ABS.

- Growth areas now account for 45% of all building approvals in Melbourne up from 37% in FY16/17. This could increase further over the next two years.
- Market price data for sales of new lots in the growth areas of Melbourne generally show a flattening in pricing when comparing FY18/19 to FY19/20.
- Lot sizes and lot pricing have stabilised between FY18/19 and FY19/20, despite consistent growth between FY14/15 to FY18/19.
- There is likely to be competition from product in regional Victoria, and this trend is expected to continue.
- In FY18/19 median lot prices were 43% higher in growth areas of Melbourne relative to regional Victoria.
- In FY19/20 this price premium reduced to 37%.

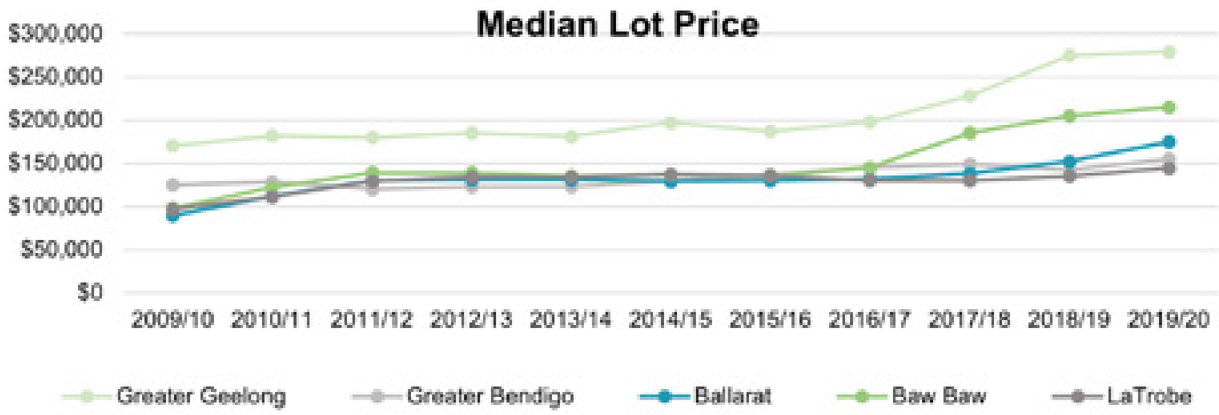


Source: RPM Real Estate Group, 2020

Regional areas



Source: ABS 2020



Source: RPM Real Estate Group, 2020

Current trends in dwelling approvals

Dwelling approval trends in relation to housing typologies and highlights of specific regions within the Regional Areas of Melbourne are provided below.

- Total dwelling approvals in the regional Victoria for FY19/20 have decreased marginally to 14,513 from 15,804 in FY19/20 representing an annual decline of 8%.
- Houses account for 90% of all regional dwelling approvals in FY19/20, a decrease of 7% over the prior year. Despite this, there has been a recorded increase of 28% for house approvals when comparing September quarter 2019 against September quarter 2020.
- A decline in dwelling approvals was most significant in the apartment market which experienced a 65% decline, while approvals for townhouses each declined by 7% over FY19/20.
- A decline for apartment and townhouse approvals was less significant between FY18/19 and FY19/20 with a fall recorded of 67% and 25% respectively, albeit comprising a small proportion of outer ring approvals.
- Dwelling approvals for FY19/20 has followed strong lot sales in FY17/18 and FY18/19, particularly in Greater Geelong.
- Recent results in the September Quarter 2020 have been exceptionally strong. The increase over the year equated to 25%.
- Growth area and regional areas both projected to deliver circa 20,000 for building approvals for new houses, with the regional market trending to comprise 70% to 80% of the size of the total housing market, led by major regional centres including Bendigo, Ballarat and Geelong.

Where are the buyers coming from?

There are a number of issues influencing demand in regional Victoria. These include:

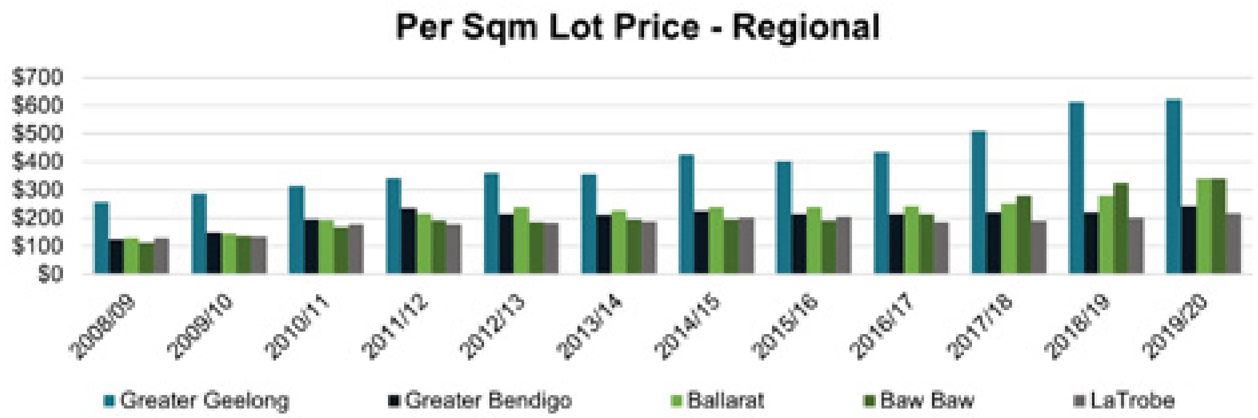
- Growth area buyers wanting larger lots
- Professional services workers commuting to CBD one day a week
- Services and facilities health / education / institutions more established in some regional centres relative to growth areas.

While there has not been strong evidence yet of a dramatic increase in building approvals in Regional Victoria it is expected that lot sales in the last 12 months will continue to translate to new building approvals.

Lot prices and lot sales

UDIA Victoria Research Partner RPM Real Estate Group, has provided updated details of lot sales in regional Victoria.

- Market price data lots in Regional Victoria confirm a reduction in the price gap when comparing to FY18/19 to FY19/20.
- Median prices in Greater Geelong now sit at $280K relative to $320K in Wyndham. However, lot prices in Ballarat and Bendigo are still competitive with markets like Melton and Hume. This may suggest opportunity for further escalation over time, particularly where regional markets and growth areas start to directly compete against each other.
- Sales of new lots in regional areas generally show high levels of growth from FY18/19 to FY19/20 with 15% growth in Ballarat and 9% growth in Greater Bendigo.
- Geelong sales have however declined in FY19/20



Source: RPM Real Estate Group, 2020

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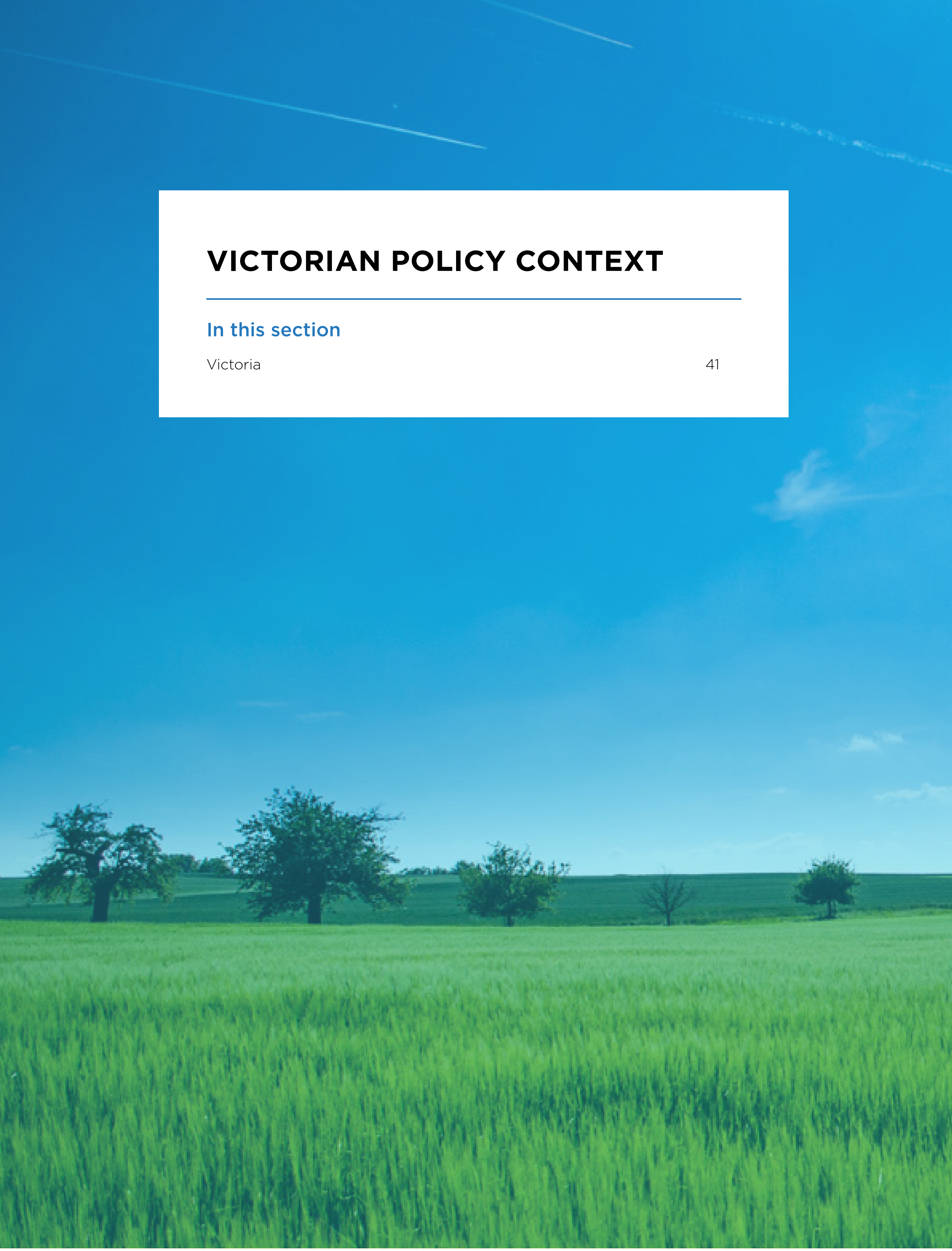


VICTORIAN POLICY CONTEXT

In this section

Victorian policy context

This section summarises Victoria's policy context as it relates to the residential development sector.

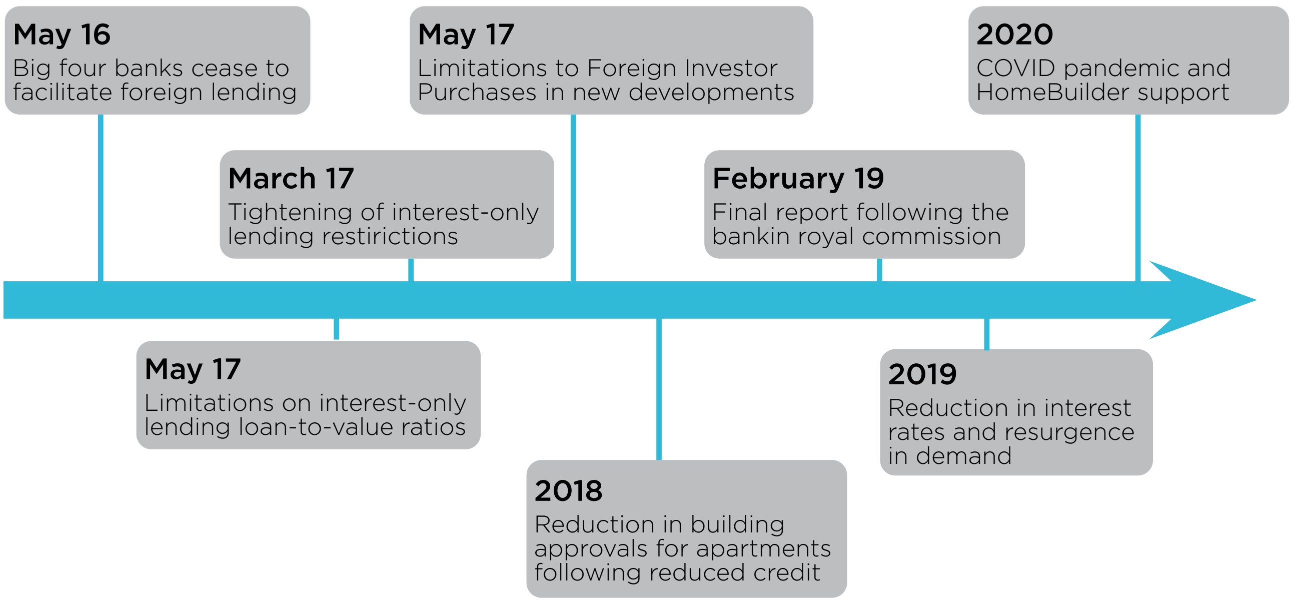
Trends leading up to the coronavirus pandemic

Melbourne's residential development market was starting to recover in late 2019 from what had been a challenging 18 months during 2017 and 2018. The residential development sector faced several headwinds in 2017 and 2018 including:

- The Banking Royal Commission and credit restrictions;
- Constraints on supply in the central city and surrounds;
- Relatively weak income growth from buyers;
- Reductions in demand from foreign buyers due to state and national policy deterrents; and
- Increasing costs and feasibility constraints due to competition for labour from major projects

Consequently, residential construction of 70,000 dwellings per annum had declined to less than 60,000 per year throughout 2017 and 2018, primarily due to declines in medium and high-density housing.

In late 2019-early 2020, the market was beginning to trend back to normalised supply that was in line with population growth and consistent with longer term activity. For this reason, the 2019-20 financial year activity is not solely characterised by COVID-19.



Current context

Recent building approval and dwelling commencement trends indicate that Victoria's residential development sector is yet to feel the full brunt of COVID-19. JobKeeper has provided a level of employment support that has helped maintain homebuyer purchasing power, and the Homebuilder Scheme has provided support for demand, encouraging buyers of lots to commence construction of new dwellings.

Purchasing power

In terms of buyers' ability to purchase new homes, it is important to note that the people whose employment has been hit particularly hard by the pandemic include those under 35, single persons and those in casual work. These market segments are not typically major participants in the new housing market. In contrast, to date, typical buyers of new dwellings including couples with permanent jobs and downsizing empty nesters, who appear to have been less impacted by the economic shock of COVID-19. However, with both JobKeeper and HomeBuilder due to expire in early 2021, there is likely to be significant deteriorations in buyer demand.

Population growth

While dwelling commencements and building approvals remain at reasonable levels, this reflects historically strong immigration to Victoria – from overseas and interstate – that was still running up until March 2020.

The end to population movements post March 2020 have been sudden and without precedent. Between March 2020 and September 2020 short term visitor arrivals to Victoria declined to just 3,250 down by nearly 98% compared to the same period in 2019. Returns of residents from overseas were also down by a similar margin.

There is a significant lag between the cessation of population growth and dwelling demand. The residents buying dwellings in 2020 are a mix of current residents upsizing and downsizing, and first homebuyers including immigrants who arrived in 2017, 2018 and 2019.

The impacts of a shut-off in immigration in 2020 will therefore begin to be felt in 2021 and more deeply in 2022 and 2023.

Victorian State Budget

The recently announced Victorian State Budget provides a strong support mechanism for the overall Victorian economy in 2020/21 and 2021/22, with an injection of new capital spending of $19.8 billion over the next four years.

Investment in housing includes:

- $3.2 billion in dwelling investment for Social and Affordable Housing over four years from 2020/21. This will support around 12,000 new dwellings, or approximately 3,000 per year on average, offsetting around 15 to 20% of the expected decline in private sector stock volumes.
- Stamp duty waiver of 50 per cent for residential property transactions of up to $1 million for contracts entered between 25 November 2020 and 30 June 2021;
- $500 million fund to contribute to the purchase price of a home in exchange for equity interest to accelerate Victorians into home ownership;

- 50 per cent land tax discount for parts of the build-to-rent; and
- extension to the $20,000 First Home Owners Grant for regional Victorians.

Investment in planning system modernisation includes:

- $52 million to implement the Commissioner for Better Regulation's planning reforms and to increase housing supply through the Victorian Planning Authority's work program;
- $59 million for targeted planning system reforms including structural system reform and a review of the Planning and Environment Act 1987;
- Creation of a new fast-tracked development assessment model for major projects over $50 million, making the assessment process simpler and faster for these important projects; and
- Critical ongoing upgrades to the state's digital planning system platform, reducing the regulatory burden for applicants and approval authorities.

This significant investment in housing and planning will support our economic recovery by encouraging property activity and interstate migration until international migration resumes at a meaningful level.

NATIONAL POLICY CONTEXT

In this section

National policy context

This section summarises the national policy context as it relates to the development sector with a focus on the implications for Victoria.

HomeBuilder

Introduced in June 2020, the HomeBuilder scheme provides eligible owner-occupiers (including first homebuyers) with a $25,000 grant to build a new home or substantially renovate an existing home. HomeBuilder aims to assist the residential construction sector by encouraging the commencement of new home builds and renovations.

The scheme has helped support the demand profile, particularly in growth areas across Australia and assisted with stimulating a broader positive sentiment across industry. As of November 20, 2020 there had been over 7,600 applications for HomeBuilder in Victoria with 81% for new homes. Victoria has recorded the largest amount of applications for the Scheme across the nation with 32%, followed by Queensland (25%) and NSW (18%).

UDIA National has advocated strongly to the Commonwealth Government to extend and partially redesign the HomeBuilder initiative to ensure maximum value is delivered by the scheme. The key elements of the redesigned extension to HomeBuilder announced on 29 November (through to March 31) is around expanded construction commencement timelines, and more generous new build property thresholds, up to $850,000 in Victoria.

JobKeeper

The JobKeeper program provides eligible employers with a wage subsidy to eligible employees and has been a critically important component to keeping people in employment and supporting the residential demand profile. JobKeeper 2.0 is operational between 28 September to 28 March 2021 and incorporates changes to the wage subsidy amount and the turn-over test.

JobKeeper has been especially important for Victoria through the extended lock-down period with Treasurer Frydenberg in August estimating that six out of every ten of the 2.24 million people set to be JobKeeper in the December quarter are expected to be in Victoria.

First Home Loan Deposit Scheme (New Homes)

The First Home Loan Deposit Scheme (FHLDS) is an Australian Government initiative introduced in January 2020 to support eligible first home buyers to build or purchase a new home sooner. The Scheme is administered by the National Housing Finance and Investment Corporation (NHFIC).

Usually first home buyers with less than a 20 per cent deposit need to pay lenders mortgage insurance. Under the Scheme, eligible first home buyers can purchase or build a new home with a deposit of as little as 5 per cent (lenders criteria apply). This is because NHFIC guarantees to a participating lender up to 15 percent of the value of the property purchased that is financed by an eligible first home buyer's home loan.

In the 2020-21 Federal Budget, the Australian Government announced an additional 10,000 FHLDS places for the 2020-21 financial year, specifically for eligible first home buyers building or purchasing new homes. These additional places are known as the First Home Loan Deposit Scheme (New Homes) or FHLDS (New Homes).

There are currently 27 participating lenders across Australia offering places under the Scheme with the Federal Treasurer announcing on November 1 an additional 10,000 allocations to first home buyers to be available until 30 June 2021 – intended to drive more jobs and support jobs in the economy across Q1 and Q2 2020.

National Housing & Homelessness Agreement (NHHA)

The Federal Government allocates more than $1.5 billion a year through the National Housing and Homelessness Agreement (NHHA) to states and territories.

The NHHA aims to improve Australians' access to secure and affordable housing across the housing spectrum. Under the NHHA, States receive funding to support the implementation of housing and homelessness strategies and contribute to improved data collection and reporting.

Under the agreement Victoria will receive an estimated $2.0 billion over the five term commencing 2018/19, with the Victorian government required to match the Commonwealth's homelessness funding estimated at $122.8 million over this five year period.

The key Victorian Government strategy for addressing demand for housing and homelessness is Homes for Victorians, which endeavours to introduce a more diversified approach to housing assistance, including through the Social Housing Growth Fund (to provide capital and rental subsidies for new supply) as well as low cost loans and guarantees to the community housing sector – to help stimulate growth and shape the affordable housing market into the future.

National Affordable Rental Scheme (NRAS)

The National Rental Affordability Scheme (NRAS or the Scheme), which commenced in 2008, aims to increase the supply of new and affordable rental dwellings by providing an annual financial incentive for up to ten years. This incentive is issued to housing providers to provide affordable rental dwellings at least 20 per cent below market rates.

The Scheme seeks to address the shortage of affordable rental housing by offering annual financial incentives for up to ten years, to rent dwellings for eligible NRAS tenants at 80% or less of the market value rent. NRAS aims to encourage medium to large-scale investment in affordable housing (usually 100 or more homes). This means it is not generally available to small-scale, private, individual investors in the property market.

As at September 2020 there had been a total of 5,470 NRAS allocations in Victoria representing 16% of the National total. Of the active allocations in Victoria, 55% were directed to apartments, 23% to studios and 17% to townhouses. Current government projections highlights that all of the State's active allocations will have expired by 2025.

On 1 April 2020 the National Rental Affordability Scheme Regulations 2020 come into effect which introduced a number of new and changed provisions including: transfers, allocations and redirections.

METHOD AND DATA SOURCES

In this section

Method of calculating economic impacts

We have utilised ABS dwelling approval data (value estimates) to calculate estimated expenditure in the new residential construction sector and employment generation.

Economic contribution is a measure comprising all market related expenditure generated by a specified industry or an activity. Economic contribution studies do not consider the substitution impacts to other industries (i.e. what might happen to expenditures if the specific industry or activity were lost). As such economic contribution is a gross measure rather than a net measure.

To estimate economic contribution, this study adopts an input/output approach to calculate the direct and indirect (wider) economic impacts. REMPLAN1 was engaged to develop input/output multipliers that reflect the specific characteristics of the Victorian economy.

REMPLAN is essentially an input/output model of the Australian economy and regional economies. Input/output models trace the revenue and expenditure flows that link industries and workers within and outside economic regions. For instance, an increase in output in one industry (the "direct impact") would give rise to demand for inputs from other industries (industrial effect) as well as labour (consumption effect). In turn, these support industries would demand further inputs, labour, and so on. This may be referred to as the multiplier or indirect effect.

REMPLAN modelling provides the ability to calculate the value of gross regional product. REMPLAN's key advantage over other input/output models or "off the shelf multipliers" is that it is region specific.

Three common indicators of an industry or economic size or value are:

- **Gross industry output** – Market value of goods and services produced, often measured by turnover/revenue. Gross output is also referred to as 'gross economic contribution' or 'gross expenditure'
- **Value added (Gross State/Regional Product)** – Market value of goods and services produced, after deducting the cost of goods and services used.
- **Jobs** – Number of jobs generated by an industry or attraction.

Based on the expenditure estimates, it is possible to estimate the value add to an economy from the construction of new dwellings as well as the number of jobs sustained by this industry

Method of calculating the UDIA Residential Development Index

The UDIA Residential Development Index (UDIA RDI) considers demand for residential development, the ability to purchase property reflected by the employment status of property buyers, and overall supply.

Index of Residential Activity

Methodology

To support the assessment of the relative level of activity in the Victorian residential construction sector, EY has developed an index of activity (Residential Development Index) that considers demand for residential development, the ability to purchase property reflected by the employment status of property buyers and overall supply.

In considering these factors the RDI acts as an interface between top down demand and bottom up supply and can be used to consider the overall health of the industry, relative to historical trends.

The index is depicted in the opposite diagram and includes the following components:

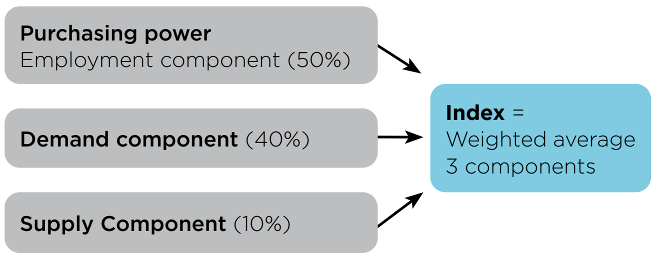
1. **Demand component of index.** Considers population growth in Victoria. Calculated and forecast as annual % growth over 12 months to June 2019 as an index.
   Index = [annual % change + 1] x 100.
   The index is weighted at 40%.

2. **Purchasing power component of index.** This component considers employment growth in Victoria and the relative purchasing power by those who are employed by considering wage growth relative to inflation. The sub-component of the index is calculated using two factors:
   Input 1: Employment. Calculated and forecast as annual % growth over 12 months to June 2019 as an index.
   Input 2: Relative Wage Growth. Calculated as the growth of wages over the year, compared to CPI as a ratio. Index = [Wage / CPI] x 100.
   Both inputs are averaged to create an index, which is weighted at 50%.

3. **Supply component of index.** Considers dwelling commencements over the last 12 months relative to the previous 12-month period. This component is weighted at 10% of the overall index due to the higher level of variability in supply that has been observed over time.

The outputs from the index of activity appear in Section 8 of this report. EY continues to undertake assessment of the correlation between the RDI and dwelling unit commencements as a measure of residential construction activity.

It is acknowledged that other factors influence the operation of the new residential construction sector including interest rates, sales volumes, vacancy rates and other economic drivers. These factors are assumed to directly and indirectly influence the three key drivers that act as inputs to the RDI. The RDI (including its weightings) will be updated over time as drivers of the market are continually assessed and re-calibrated.



Data sources and glossary

Abbreviations	
ABS	Australian Bureau of Statistics
EY	Ernst & Young
BA	Building Approvals
DA	Development Approval
LGA	Local Government Area
UDIA	Urban Development Institute of Australia
RDI	Residential Development Index
DBA yield	Estimated yield of dwellings to dwelling approvals (used to forecast supply)
Census	Census of population and housing
DTF	Department of Treasury and Finance (Victoria)
DELWP	Department of Environment, Land, Water, and Planning (Victoria)
State Budget	Budget Papers released by DTF
RDI	Residential Development Index

Data and information sources

In completing components of this report, we have utilised existing sources of data including the following:

- Australian Bureau of Statistics
- DTF Budget Papers including forecasts of population and employment
- EY proprietary data and research
- RPM proprietary data and research

Study areas and usage of data

For the dwelling approvals analysis we have made the following assumptions:

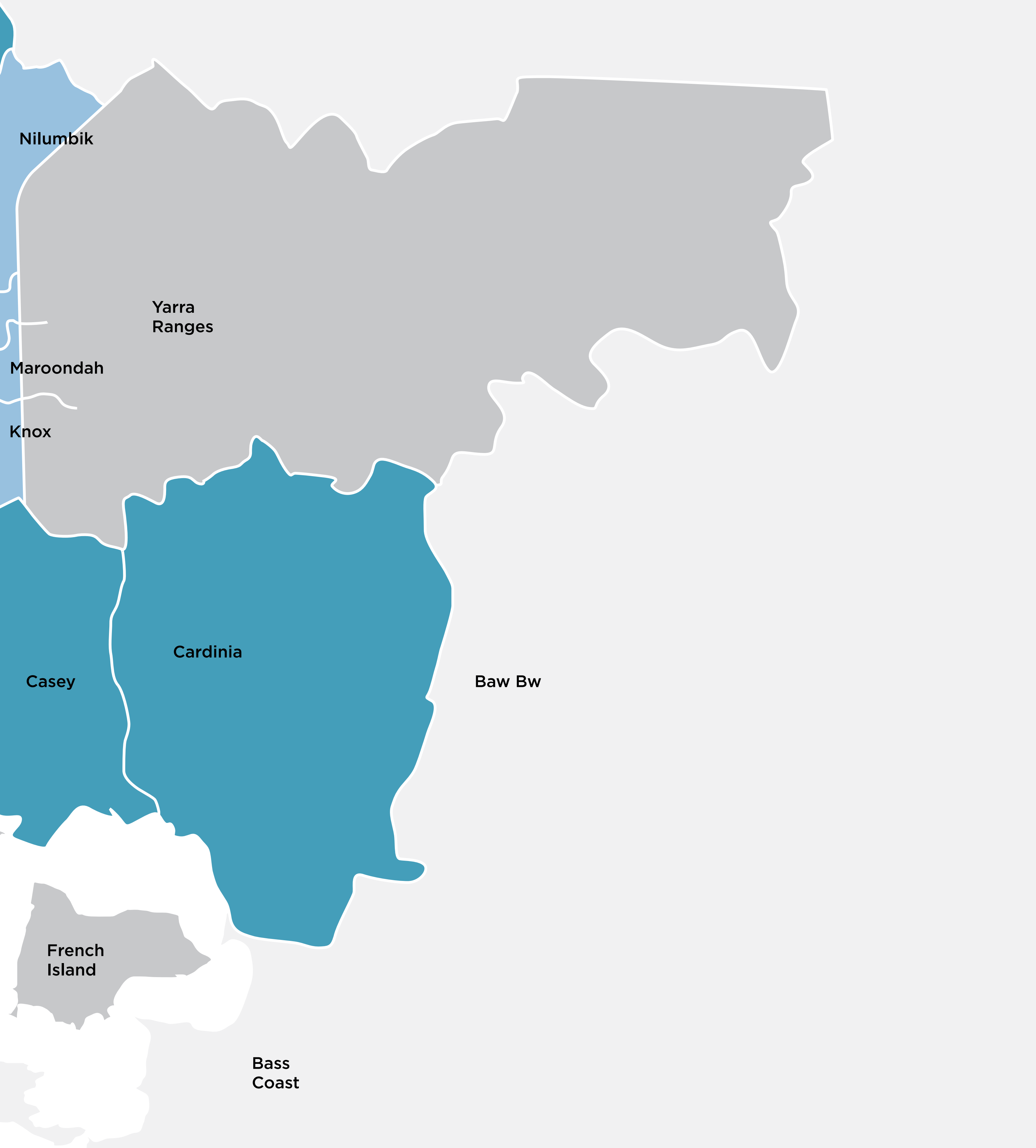
Each geographical catchment has been referenced against defined LGA's.

For the Melbourne geographical catchments (also shown on the following page's map):

- **Inner Ring //** This term throughout the Report refers to Melbourne's inner ring LGA's (<10km from CBD). LGA's within inner ring Melbourne include; Melbourne, Port Phillip, Yarra, Maribyrnong and Stonnington.
- **Middle Ring //** This term throughout the Report refers to Melbourne's middle ring LGA's (10-20 kms from CBD). LGA's analysed within middle ring Melbourne include; Moreland, Darebin, Banyule, Boroondara, Glen Eira, Manningham, Whitehorse, Monash, Bayside, Kingston, Moonee Valley, Brimbank and Hobsons Bay.
- **Outer Ring //** This term throughout the Report refers to Melbourne's established outer ring LGA's (>20kms from CBD). LGA's analysed within outer ring Melbourne include; Nillumbik, Maroondah, Knox, Greater Dandenong and Frankston.
- **Growth Areas //** This term throughout the Report refers to the defined Melbourne growth areas. LGA's analysed within Melbourne growth areas include; Hume, Whittlesea, Mitchell, Casey, Cardinia, Melton and Wyndham.
- **Regional Victoria //** This term throughout the Report refers to parts of Victoria excluding metropolitan Melbourne.

Geographical study areas

Geographical Study areas utilised throughout the Report



Nilumbik
Yarra Ranges
Maroondah
Knox
Cardinia
Casey
Baw Bw
French Island
Bass Coast

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