Urban Development Institute of Australia (Victoria)

Residential Development Index

September 2022 Update

UDIA RDI Research Sponsors

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EXECUTIVE SUMMARY

In this section

Executive summary

Market overview

- As Victoria adjusts to living with COVID-19, the economy initially shifted to a situation where demand is now exceeding supply, although has now softened. This imbalance across the economy, including in the residential development sector, has been driven by:
  - supply chain constraints, especially in locations where parts and material are sourced such as China;
  - labour force constraints due to reductions in population growth and labour force participation during the pandemic; and
  - geopolitical disruption, especially the war in Ukraine, and climate related impacts such as localised flooding.
- In this 2022 assessment of the Victorian residential market, the following key structural trends have been identified as emerging in the market:
  - the decline in affordability in Melbourne and Geelong's growth areas;
  - the increased cost of finance and the timeframe for recovery in housing prices;
  - return of population growth and housing demand implications;
  - population, rent and the investor market; and
  - the impacts on Melbourne's future competitiveness.
- Overall building approvals for dwellings in Victoria fell slightly to 65,800 in FY21/22 due to a reduction in approvals in the growth areas which is partly offset by townhouse and medium density apartment development in the middle and outer ring of Melbourne.
- This trend continued in the first quarter of FY22/23, with total building approvals in the 2022 September Quarter of 15,000 in Victoria, which is equivalent to an annualised rate of 60,000.

Apartment market

- Overall, the apartment market has increased supply, growing from around 9,000 building approvals in FY20/21 to 13,000 in FY21/22.
- The location and scale of many apartment projects appears to be shifting away from high volume affordable stock to higher price point medium-density development in high amenity areas which are typically purchased by owner-occupier downsizers.
- Confirming this shift, there were no new approvals in the CBD or Southbank for the entire FY21/22 period however approvals in middle Melbourne for FY21/22 grew by 23 per cent and are now nearly three times the volume of building approvals in the Inner Ring.

Melbourne's growth areas

- Total building approvals for new dwellings in Melbourne's growth areas fell slightly to 21,932 in FY21/22 which represents approximately 43 per cent of new approvals in Melbourne.
- Positive drivers over the next 12 to 24 months include:
  a. a shift to working in the office at least part-time may shift the balance of some demand back to Melbourne's growth areas relative to regional Victoria;
  b. early increases in net overseas migration into Victoria will flow through to demand from 2024; and
  c. ongoing feasibility constraints in delivering medium density housing at lower price points in established areas will continue to drive demand for the growth areas.

- Constraints are expected to include:
  a. significant increase in land prices and dwelling costs that will not be affordable for some buyers; and
  b. increases in non-discretionary costs including fuel and energy prices will constrain buyer budgets via bank assessment of loan serviceability.

Regional areas

- Total building approvals for dwellings in regional Victoria for FY21/22 declined to 16,132, down from 20,197 in FY20/21, representing a return to longer term trends.
- The proportion of building approvals for dwellings in regional areas compared with approvals overall in Victoria has fallen back to 24 per cent from around 30 per cent in FY20/21.
- In the medium-term, regional Victoria's share is expected to continue to grow, largely driven by the Geelong market and affordability factors.

Contribution to the Victorian economy and employment

- Victoria's residential construction sector contributed $59 billion in FY21/22, including direct expenditure in the new residential construction sector of just over $26.9 billion, and a further $31.96 billion for the Victorian economy based on the economic value-add measure.
- The residential construction industry has recovered strongly post the pandemic and it has played a key role in continuing to sustain the Victorian economy, however it is now facing a range of challenges including a significant increase in cost inputs and market prices.
- Direct employment in residential construction increased to approximately 54,000 jobs and indirect jobs creation in other sectors supporting residential construction increased to 188,000 in FY2022, creating a total of 241,700 direct and indirect jobs in Victoria in FY 21/22 relative to 156,000 over the previous year.
- The sector has faced labour shortages which has constrained the growth in the economy over the last two years.

Outlook

- Given Victoria's population growth is on target to reach 120,000 persons plus, building approvals will need to increase to 70,000 per annum or greater because a significant proportion of the existing building approval activity is in 'one for one' home replacement in established areas and townhouse development.
- To provide affordable housing stock and support the cross-subsidisation of key worker and social housing projects, a medium-term increase in apartment supply back to volumes closer to 20,000 per annum is required. This will also assist in achieving the aspiration for 70 per cent of new housing development to be in established areas as outlined in *Plan Melbourne*, and in providing a moderation to rental and housing costs for key workers.
- To continue to drive the Victorian economy, strong migration and a more sustainable cost base will be needed over the medium term.

Introduction

The Urban Development Institute of Australia, Victoria (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.

This report provides the annual update of the UDIA Victoria RDI and associated market indicators as of September 2022, and a forecast for the UDIA Victoria RDI for June 2023. Additionally, this research report includes:

- a review of the deteriorating affordability of residential development in Victoria and implications for the Victorian economy and labour force growth;
- review of the recent recovery in population growth and implications for the rental market;
- consideration of the State Government's latest economic and population forecasts and the recovery timeline including how long the interest rate and price cycle typically takes to feed through the market;
- a review and update of activity in individual sub-markets including inner and middle ring and growth areas of Melbourne;
- market commentary and assessment of key drivers and health of the overall market; and
- an economic impact assessment of the Victorian residential development sector, including multiplier impacts on the economy and employment.

Overview of market trends

As Australia and Victoria adjusts to living with COVID-19, the economy has rapidly shifted from a cycle where Governments have supported demand with expansionary fiscal and monetary policy, to an economy where demand is now exceeding supply (although this is now softening). This has quickly shifted the focus of policy makers from a deflationary environment pre and during COVID-19 public health settings to an inflationary environment post COVID-19 public health settings.

The imbalance between demand and supply across the economy, including in the residential development sector, has been driven by:

- supply chain constraints, especially in locations where parts and materials are sourced such as China;
- labour force constraints due to reductions in population growth and labour force participation during the pandemic; and
- geopolitical disruption such as the war in Ukraine and climate related impacts including localised flooding.

These global and national trends have fundamentally altered the Victorian residential market and will ultimately change the way the market grows over the next decade.

In this 2022 assessment of the Victorian residential market, the following key structural trends have been identified as emerging in the market:

- the decline in affordability in Melbourne and Geelong's growth areas;
- the increased cost of finance and the timeframe for recovery in housing prices;
- return of population growth and housing demand implications;
- population, rent and the investor market; and
- the impacts on Melbourne's future competitiveness.

As Melbourne exits the longest COVID-19 pandemic-related lockdown in the world, these property market trends are driving the changing identity of the Victorian residential property market and its position in the wider Victorian economy in the coming years.

Affordability pressures in the growth areas of Melbourne and Geelong

The Victorian – and in particular the Melbourne economy – has enjoyed residential and employment zoned land prices that have been relatively competitive compared to Sydney and Southeast Queensland for many decades. This has supported strong population growth and the supply of new jobs on employment land in our growth areas.

Price escalation in Melbourne's growth areas did accelerate from 2016 to 2021, however affordability remained with a combination of Government first home buyer and associated grants and reductions in the cost of finance as interest rates eased. This meant that families and buyers on moderate[1] incomes could still access a significant portion of house and land package product

1. A moderate-income household refers to a household with 2 adults and children with incomes consistent with the Victorian Government Governor in Council approved definition of a 'moderate' income buyer. Budgets for this cohort are defined in research Spotlight section of this Report.

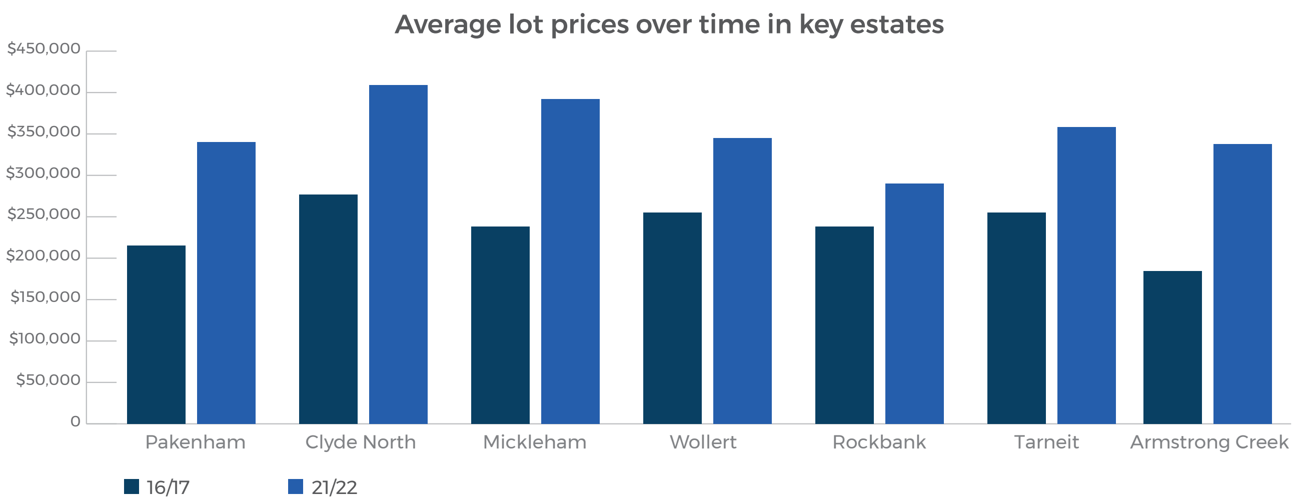
on the market including small and medium size lot product.

There has however been a sudden and dramatic change in these circumstances which will present significant challenges for a large proportion of buyers and policy makers and creates potential risk for the broader economy.

The drivers of deteriorating affordability and buying power have included:

- increases in household living costs which have reduced loan serviceability. Higher living costs have reduced borrowing capacity by cutting the remaining expenditure available to service a loan[2]. This trend is accelerating dramatically as the costs of non-discretionary items;
- increases in the cost of finance combined with higher average loan sizes;
- reductions in real wages as wage growth fails to keep pace with inflation;
- ongoing escalation in land prices due to increased development costs and supply chain constraints; and
- reductions in competing supply and serviced supply in some corridors.

The graph below depicts movements in lot prices over the last five years in Melbourne and Geelong's key estates. The growing price pressures are primarily driven by increased



Source: RPM Group

development costs, including construction costs and subdivision expenses, together with the timeframes and supply chain issues that are impacting on the sector more broadly.

Armstrong Creek now has an average lot price equivalent to Wollert and Pakenham at $338,000. More recent data for 2022 shows that average lot prices across key estates have increased further to $389,400. It is likely that pricing will exceed $400,000 in Melbourne on average over the next 12 months.

2. Financial institutions use an assumed expenditure for households known as the Household Expenditure Measure ("HEM"). This allows a comparison of actual costs with information entered on the loan application to ensure costs are not understated.

The increased cost of finance and the timeframe for recovery in housing prices

The increase in interest rates and associated impacts on housing prices and sales volumes are likely to have cyclical impacts over the next three years. Historic impacts of increased interest rates dwelling prices and building approval activity can be mapped out using Reserve Bank of Australia data on long term interest rate trends.

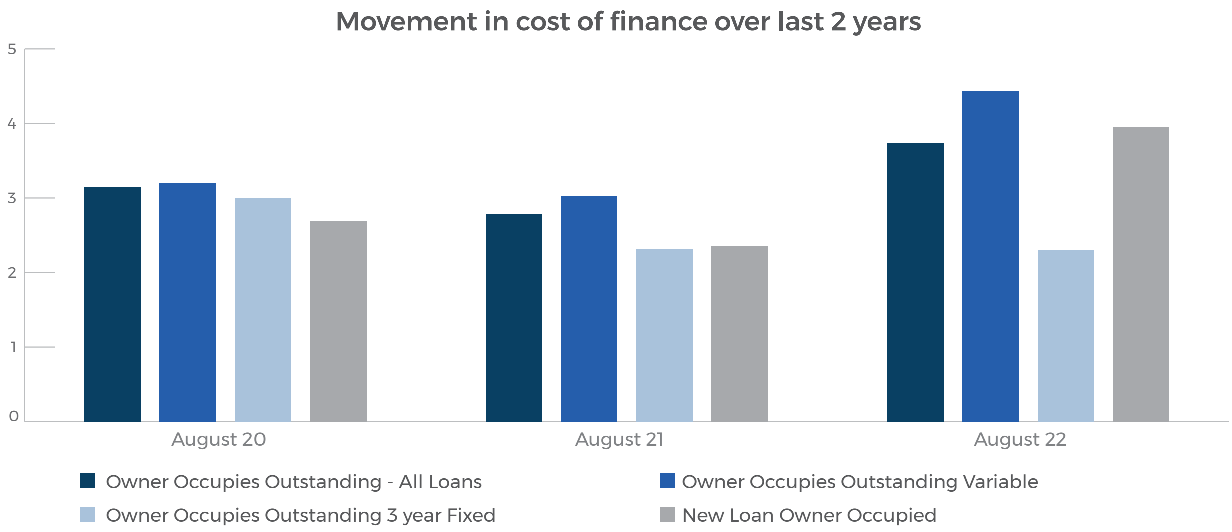
While official interest rate movements flow directly through to variable rates it takes longer to feed through to the blended mix of interest rates that current mortgage holders have due to the existing mix of fixed interest rate mortgages in the market. Therefore, lags in impacts on consumer spending – which the RBA is more focused on dampening – can take time.

The graph below confirms that, according to RBA and APRA data, variable rates for new loans have increased from an average of 2.4 per cent to 4 per cent over the last 12 months, however the broader mix of loans have been less sensitive. For example, the mix of outstanding three year fixed interest rate loans has declined further from 2.36 per cent to 2.3 per cent due to a large volume of new fixed loans in 2021, and the overall mix of rates payable on all outstanding loans has only increased from 3.2 per cent in 2020 to 3.7 per cent in 2022.

However as fixed rate loans expire, the blended average of interest rates on outstanding loans will rise through 2023 and into 2024 even under the current official cash rate, particularly if further increases occur in the cash rate.

This will continue to impact growth in sales prices in greenfield and established areas as well as retail expenditure and demand for non-discretionary items which is what the RBA is trying to achieve.

A pause in rises in the official interest rate in 2023 and potential reductions in late 2023 or 2024 will provide confidence but will take time to feed through to a recovery in cyclical price growth.



Source: RBA

It is also important to consider that the size of mortgages vary significantly nationally and therefore jurisdictions with larger mortgages are expected to have a higher and more protracted impact.

Nationally the average loan size for dwellings is $589,000, with Victoria at $624,000 and NSW at $725,000. However, when the official cash rate was last at 2.85 per cent in 2013 the following average loan sizes existed.

- $352,000 national average
- $405,000 in NSW
- $346,000 in Victoria
- $319,000 in Queensland

This is the challenge the RBA faces in taming inflation: how to dampen retail expenditure without wiping out residential sector wealth.

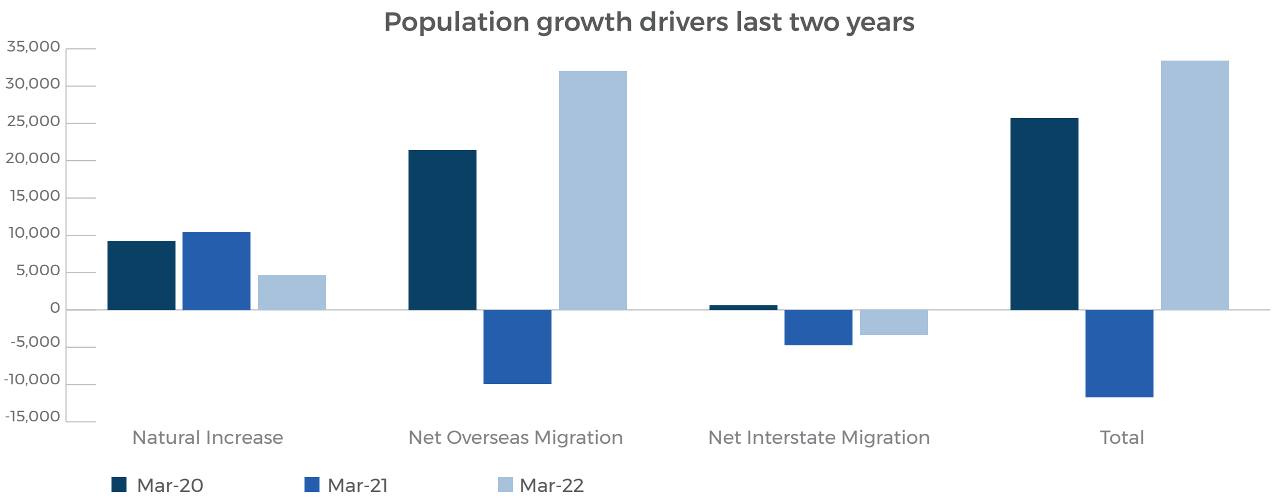
Recent surge in population growth and demand implications

Melbourne and Victoria has suffered one of the most significant population downturns of any capital city in Australia over the last two years. Quarterly population growth in Victoria trended negative in the June quarter of 2020 and remained negative until the December quarter of 2021.

Victoria has recorded a remarkable turnaround in population growth with net overseas migration reaching 32,000 in the March quarter of 2022 and total population growth reaching 33,400.

A recovery in interstate migration over the next 12 months could lead to overall quarterly population growth of well over 40,000 people which would equate to the levels in 2019/20. This would be an extraordinary outcome, however it will lead to a range of new additional pressures on the development sector, particularly new dwelling demand in general and the rental market in particular.

The recovery in population growth is partially supported by a significant increase in student arrivals which have also substantially increased from a low base.



Source: ABS Cat 3101.0

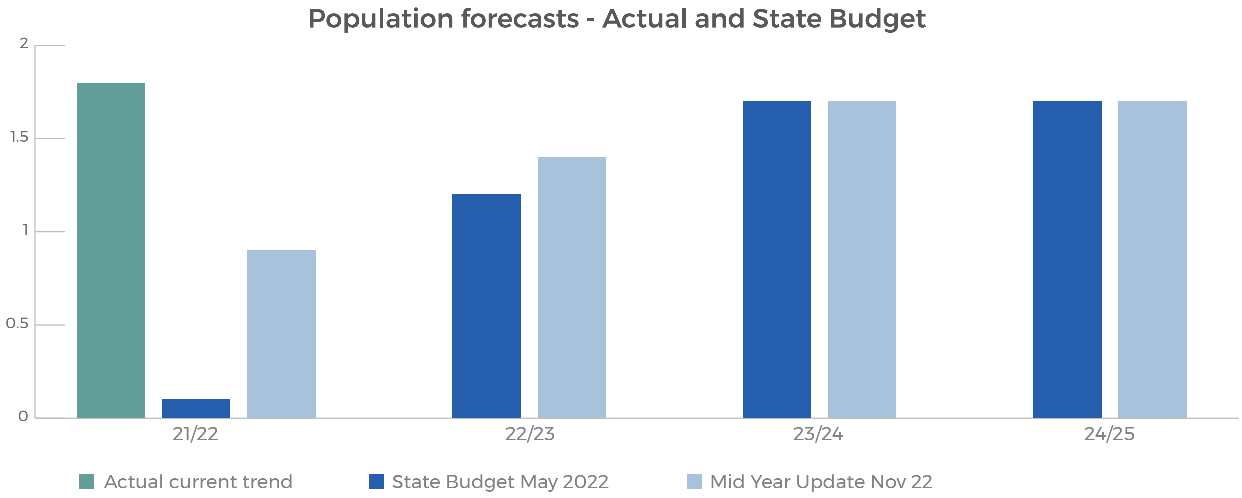
Key components of recent population growth include:

- an increase in net international migration equating to 32,000 persons in the March 2022 quarter compared to a loss of 9,900 in March 2021;
- declines in the loss of population interstate at 3,350 vs 4,800 in March Quarter 2021; and
- an increase in the volume of short-term tourist arrivals and student arrivals with the later at levels approaching pre COVID-19 volumes particularly from countries including India, the Philippines and Singapore.

The recent surge in population growth will impact on housing demand and the broader housing market. Recent forecasts in the Victorian Government November Budget update included population forecasts of 1.4 per cent over the year to June 2023 returning to 1.7 per cent by June 2024.

Based on population growth in the March Quarter of 2022 – if this figure was annualised – Victoria was already growing at a rate of 1.8 per cent in early 2022. This growth was despite interstate migration losses and recovering natural population growth. If these subcategories normalise Victoria could return to two per cent or more annual population growth as soon as late 2022. This would be a positive outcome given our recent history.

This level of population growth would quickly lead to a new dwelling requirement of 70,000 new dwellings per annum in Victoria. This demand would sit on top of a number of years of housing undersupply and add further pressure to the demand and supply balance.



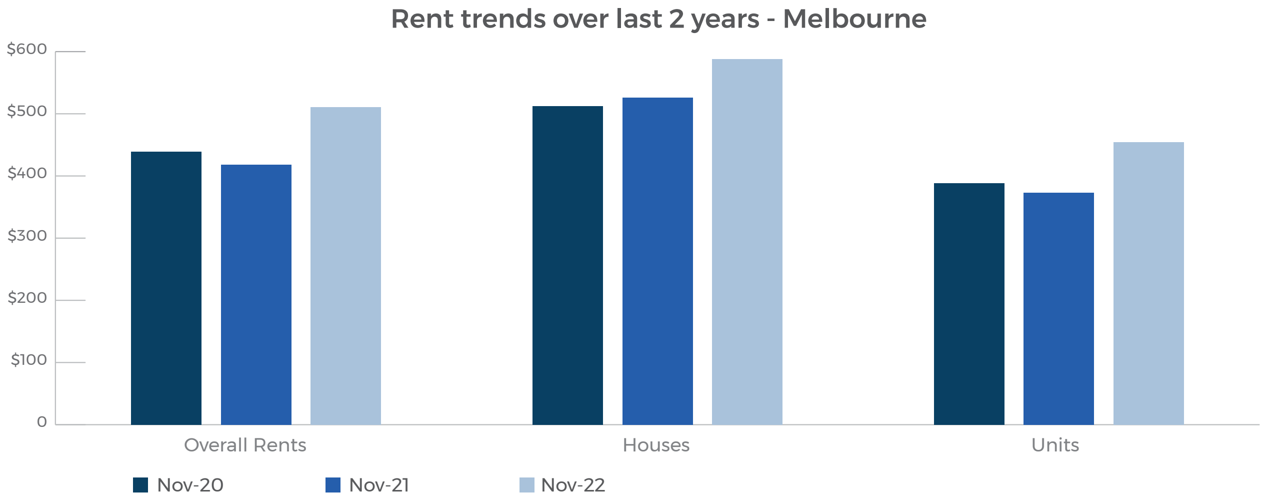
Source: ABS and Department of Treasury & Finance Budget Papers

Population, rent and the investor market

Prior to the recent upswing in population growth, Melbourne and Victoria had been experiencing a significant tightening of the rental market with reduced volumes of vacant properties and increased rental prices across all categories of housing.

The tightening of the rental market was happening even with a backdrop of moderate population growth for several reasons including:

- strong population growth prior to March 2020 which is still flowing through the housing market with new household and family formation;
- longer term under supply in housing in Melbourne and Victoria over the last decade – particularly of affordable rental accommodation; and
- housing costs and reduced mortgage serviceability are forcing many potential owner occupiers to re-enter or remain in the rental market.



Source: SQM Research 2022

The pressure on rental costs is likely to be pronounced throughout 2023 and 2024 as new migrants typically rent prior to purchasing a new home while they establish employment and new relationships.

While the increase in rental yields will create ongoing challenges for renters, it will lead to some positive medium-term outcomes:

- improved rental yields for investor product adding to confidence for investors and unlocking project feasibility / sales prices;
- an increase in dwelling supply in established areas and the inner ring which has been decreasing as a share of the market over time; and
- add to the feasibility of new Build to Rent projects with improved income escalation.

Implications for Melbourne’s future competitiveness

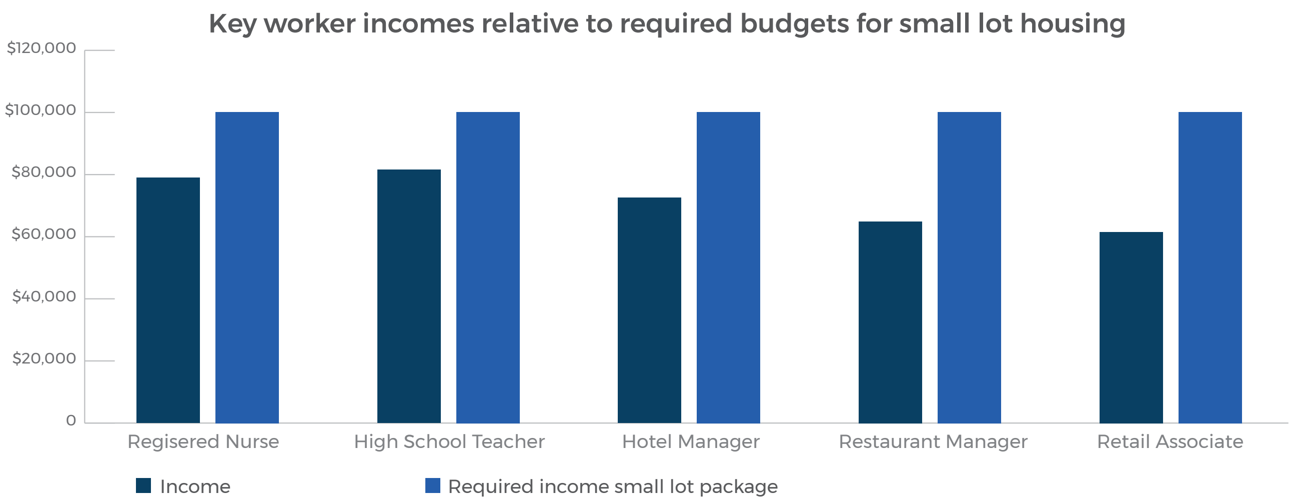
Melbourne’s economy has been supported by a competitively priced house and land package market in the post-war era. Melbourne’s natural geographic advantages and release of land for residential and employment purposes along road and rail corridors has allowed moderate income residents and workers to buy a dwelling and access services and employment effectively.

Melbourne’s growth areas play a critical role in housing existing and new residents in the critical service and trade related sectors of the economy including key workers and those in the industrial and manufacturing sectors. Those workers can support the economy by being able to commute to local and regional employment from relatively affordable housing.

If new residents to Melbourne earning moderate incomes are unable to purchase a house a land there is a risk this will lead to a labour force drain from our economy. Key workers are not able to work remotely from the regions and will be forced to either rent or seek housing and work interstate. In the case of recent migrants this may mean a return to their homelands or a shift to other countries.

If we cannot competitively house our key workers, we will be left with a constrained and expensive labour force with broader productivity and inflationary impacts across the economy. Workers including teachers, nurses, emergency services and retail / tourism workers will be priced out of the opportunity to buy a dwelling. Some may decide to rent indefinitely however this may not be an acceptable long-term outcome.

The graph below compares key worker incomes with the income required to purchase a small lot house and land package as a single buyer across Melbourne’s growth areas and Geelong. The average income required in late 2022 now equates to $100,140 to enable a single adult to finance a small lot house and land package averaging $409,000.



The broader impacts of housing affordability on Melbourne’s medium term economic growth are therefore critical to understand in any debate related to strategic planning and housing supply.

Snapshot of building approvals for dwellings by region

Victoria Summary					
Victoria – All Regions	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments - In a four or more storey block	20,631	11,087	12,442	7,958	11,990
Flats units or apartments - Total	22,204	12,061	13,451	9,012	13,147
Houses	39,568	36,747	36,166	47,751	40,047
Semi-detached, row or terrace houses, townhouses - Total	13,841	10,916	10,445	10,917	12,291
Total Residential	**75,613**	**59,724**	**60,062**	**67,680**	**65,485**

Inner Melbourne					
Inner ring – Total Dwelling Approvals	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments - In a four or more storey block	11,855	4,895	8,286	3,887	4,448
Flats units or apartments - Total	12,074	5,078	8,464	3,991	4,569
Houses	493	313	383	351	313
Semi-detached, row or terrace houses, townhouses - Total	900	524	652	658	478
Total Residential	**13,467**	**5,915**	**9,499**	**5,000**	**5,360**

Middle ring Melbourne					
Middle ring – Total Dwelling Approvals	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments - In a four or more storey block	7,020	4,732	3,607	3,600	5,227
Flats units or apartments - Total	8,062	5,286	4,155	4,367	6,045
Houses	4,053	3,454	2,847	3,126	3,230
Semi-detached, row or terrace houses, townhouses - Total	6,591	4,863	5,198	5,578	6,846
Total Residential	**18,706**	**13,603**	**12,200**	**13,071**	**16,121**

Outer ring Melbourne

Outer ring – Total Dwelling Approvals	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments – In a four or more storey block	-	1,091	543	275	802
Flats units or apartments - Total	1,211	1,183	657	293	896
Houses	2,038	1,693	1,255	1,107	1,350
Semi-detached, row or terrace houses, townhouses - Total	1,971	1,846	1,552	1,347	1,994
Total Residential	**5,220**	**4,722**	**3,464**	**2,747**	**4,240**

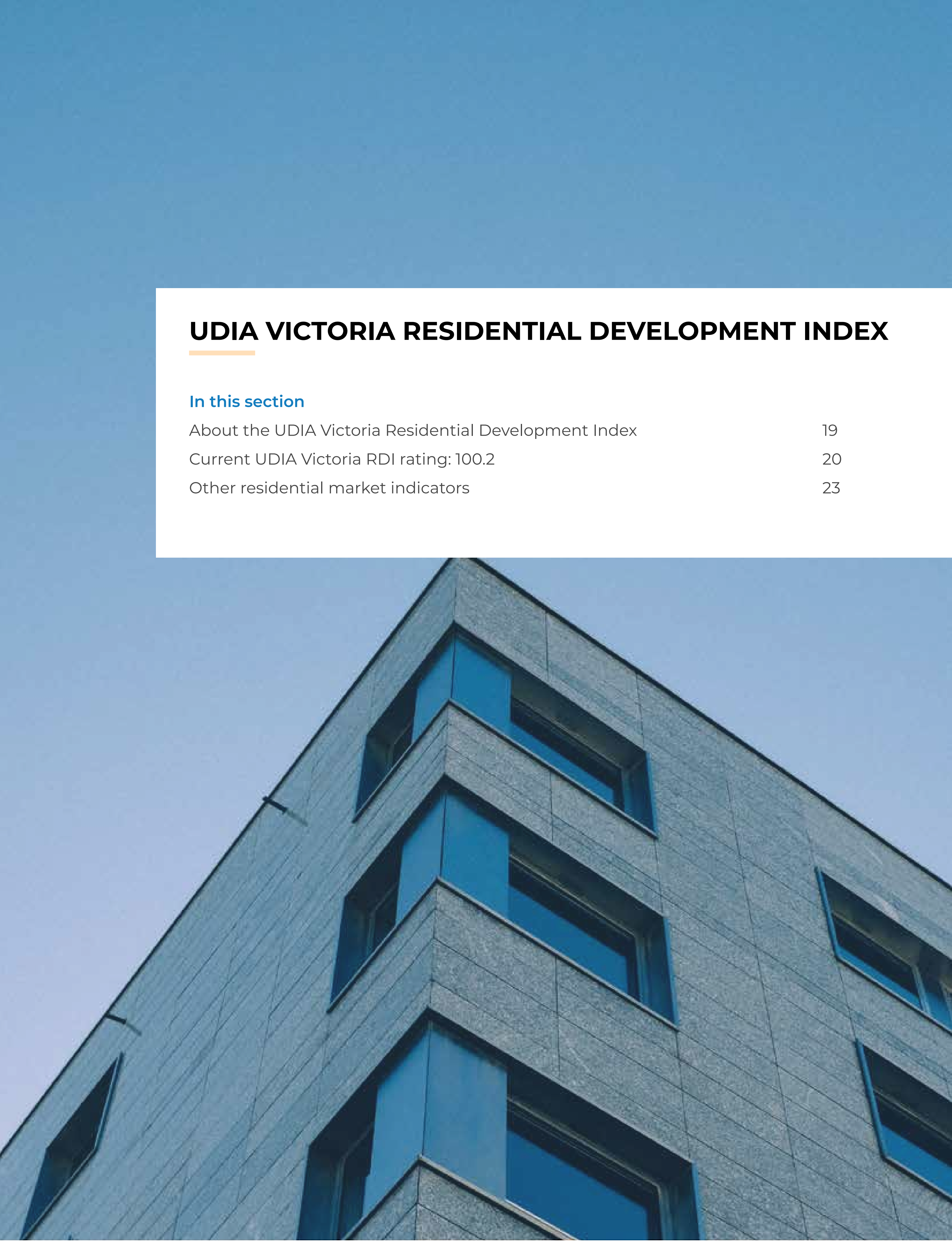
Melbourne's growth areas

Melbourne's growth areas – Total Dwelling Approvals	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments – In a four or more storey block	-	189	-	145	134
Flats units or apartments - Total	-	238	79	164	192
Houses	19,585	17,297	18,695	24,811	19,565
Semi-detached, row or terrace houses, townhouses - Total	2,511	2,140	1,610	1,688	2,175
Total Residential	**22,345**	**19,675**	**20,384**	**26,663**	**21,932**

Regional areas

Regional areas – Total Dwelling Approvals	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Flats units or apartments – In a four or more storey block	-	180	6	51	58
Flats units or apartments - Total	-	276	96	197	139
Houses	13,399	13,988	12,984	18,354	14,865
Semi-detached, row or terrace houses, townhouses - Total	1,868	1,540	1,433	1,646	1,128
Total Residential	**15,875**	**15,804**	**14,513**	**20,197**	**16,132**

Source: ABS, 2022



UDIA VICTORIA RESIDENTIAL DEVELOPMENT INDEX

In this section

About the UDIA Victoria Residential Development Index

The UDIA Residential Development Index (UDIA RDI) considers demand for residential development, purchasing power, and the overall cost of finance.

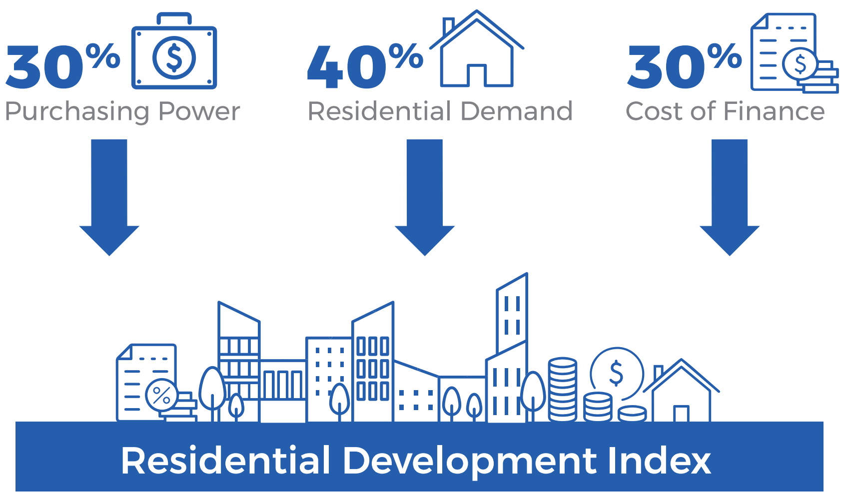
The development of the RDI is an ongoing process that considers emerging mega trends including dramatic changes in population growth, relative housing supply, and other market drivers including the costs of finance and living costs.

In considering these factors, the UDIA RDI acts as an interface between top-down demand driven by demographic factors together with market affordability to consider the overall health of the industry, relative to historical trends.

The index has been revised to include the following components:

1. **Residential Demand:** This component considers population growth in Victoria. Calculated as annual per cent growth over 12 months to March 2021 which is then indexed. Index = [annual per cent change + 1] x 100. The index is weighted at 40 per cent.
2. **Purchasing Power.** This component considers employment growth in Victoria. Calculated as annual per cent growth to June 2021 which is then indexed. Index = [annual per cent change + 1] x 100. This is weighted at 30 per cent.
3. **Cost of Finance.** This component considers the ratio of mortgage sizes relative to household income and the relative cost of finance rate for residential home loans. These components are then indexed. Index = [annual per cent difference + 1] x 100. This is weighted at 30 per cent.

It is acknowledged that other factors influence the operation of the residential construction sector, including 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 UDIA Victoria RDI. The UDIA Victoria RDI (including its weightings) will be updated over time as drivers of the market are continually assessed and re-calibrated.



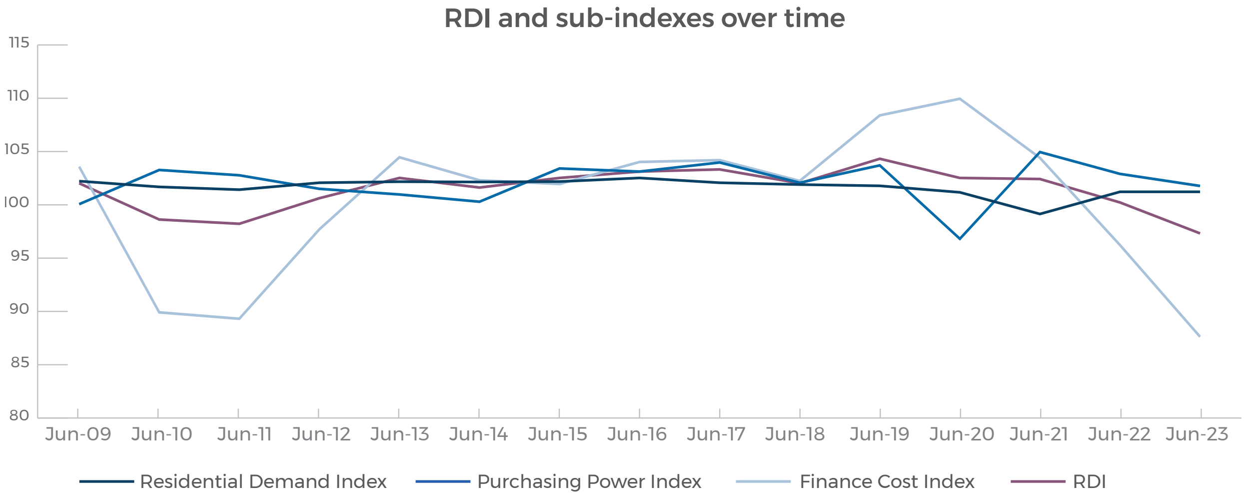
Current UDIA Victoria RDI rating: 100.2

The results for the UDIA RDI and its components are depicted in the below figure.

Based on the twelve years of analysis between June 2009 and June 2022:

1. The index has experienced a significant decline in June 2022 to 100.2 from 102.4 in June 2021, which puts it below the 10-year average of 101.4, based on the updated methodology that now considers the cost of finance relative to mortgage sizes and incomes.
2. Based on expected interest rates and budget forecasts for key variables in 2023 the index is expected to deteriorate further to 97.3.
3. While the updated UDIA Victoria RDI is much less volatile than the previous measure, values above 100 are an indication of strong residential market and any value below 99 to be indicative of particularly harsh conditions.
4. The index was at its lowest point in June 2011 (98.2) when the cost of finance was significantly higher than it is now however relative loan sizes were lower.
5. While there was a significant decline in the 2022 UDIA RDI, a further decline in 2023 is expected as interest rate increases continue to impact on activity.

Current UDIA Victoria RDI and 2023 forecast



Source: APP Group 2022

Components of UDIA Victoria RDI

The UDIA RDI uses purchasing power, residential demand, and the cost of finance as the inputs to drive the index year to year. These have been chosen as they are representative of broader sub factors across the Victorian economy without requiring data points for each individual variable.

Purchasing Power

The level of employment within Victoria is a key driver for purchasing power. Employment is contingent on wider economic conditions and is directly affected by the level of investment within the economy. The indirect factors of employment comprise gross state product (GSP), wage growth and consumer and business confidence.

In the post COVID-19 era, there has been an expansionary trend in such factors. GSP, wages and confidence levels have been rising steadily over the last year. This is being driven through the renewed optimism which has come with the easing of lockdowns in Sydney and Melbourne and significant expansionary spending by State and Commonwealth Governments in FY21 and 22.

There are however early signs that consumer expenditure – particularly on discretionary items - is starting to slow as the impact of uncertainty, inflation, and higher mortgage costs start to flow through to household budgets.

Residential Demand

On a state-wide basis, residential demand is primarily driven by the growth of population. While the natural birth rate is a steady, reliable source of population growth, migration levels have a significantly greater impact, especially within Victoria. The attractiveness of a city or state for migrants is driven by both factors of employment, as discussed, and through a range of non-economic factors.

These non-economic factors can include the quality of education and lifestyle which are becoming increasingly important in the post COVID-19 era as workers have more choice of location with the advent of remote working. In the case of Victoria, a large percentage of population growth has come from interstate and international migration.

The opening of international and interstate borders is already having an impact with positive net international migration in the last quarter of 2021 and the March quarter of 2022. This trend is expected to continue to accelerate. New residents in Victoria which will continue to increase the level of residential demand offsetting the demand constraints to some extent from higher finance costs.

The State budget forecasts for migration are relatively conservative and it is possible that international and interstate migration – the later which is still currently negative – could become stronger drivers than forecasts suggest. Migration is a critical factor for the functioning of the economy, the labour force mix, and as an input to business costs.

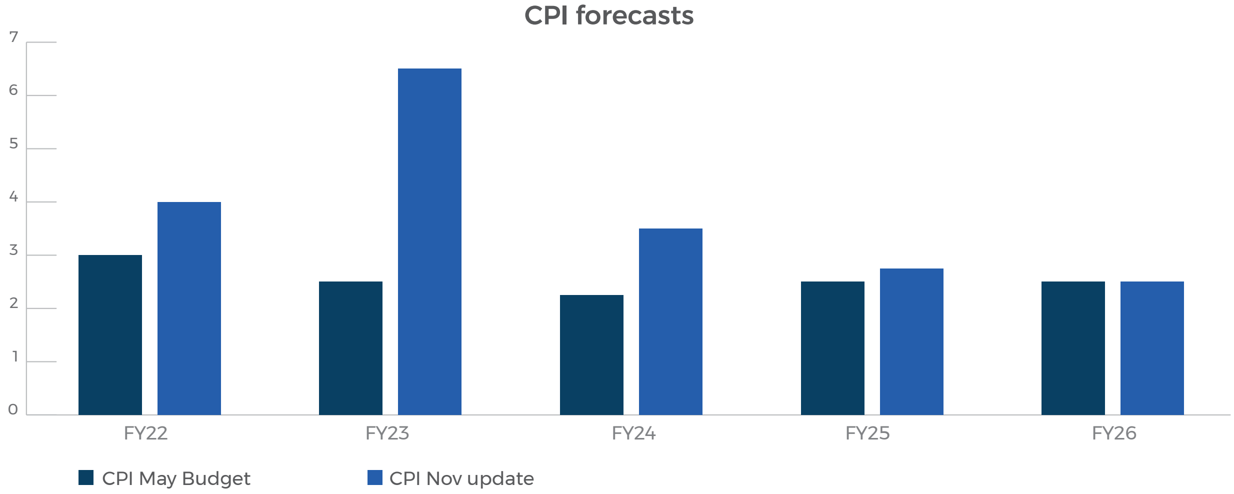
Cost of Finance

The cost of finance is directly driven by the RBA cash rate set within the current economic environment. Given monetary policy is used with consideration of inflation, employment and consumer and business confidence, these sub-factors are considered to drive this input. In the coming year it is expected that interest rate increases will conclude. The impact on buyer budgets and the economy will however lag as many households are still on fixed interest rate contracts.

The forecast for the FY23 UDIA RDI assumes a peaking in the cash rate and considers the relative size of outstanding mortgages in Victoria. While there have been higher official interest rates during the long term assessment of the UDIA Victoria RDI, they have occurred during a period where mortgages balances where much lower.

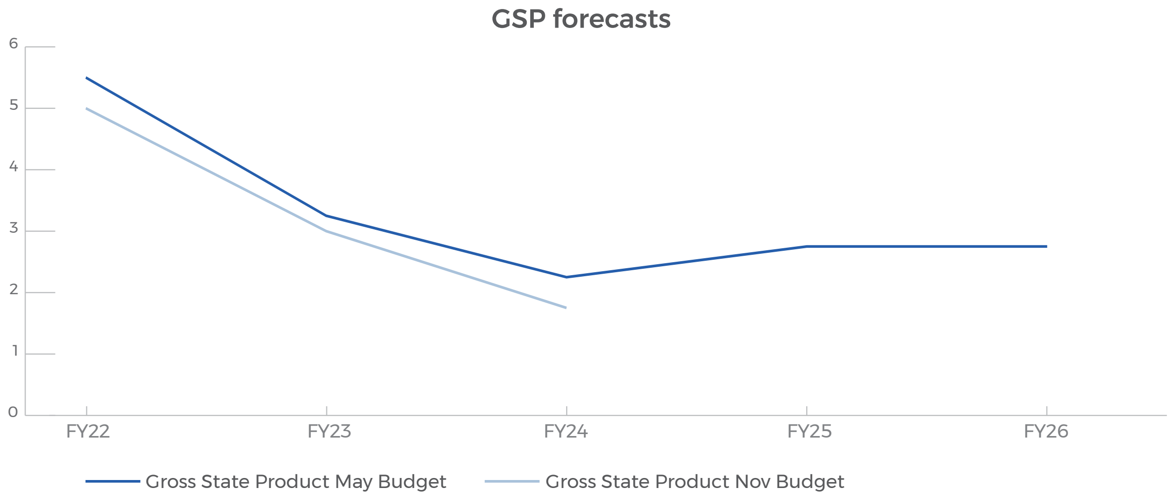
Five year forecast of key variables

Victorian Consumer Price Index (per cent Change)



Source: Victorian State Budget 2022 and State Budget Update

Victorian Gross State Product (per cent Change)



Source: Victorian State Budget 2022 and State Budget update.

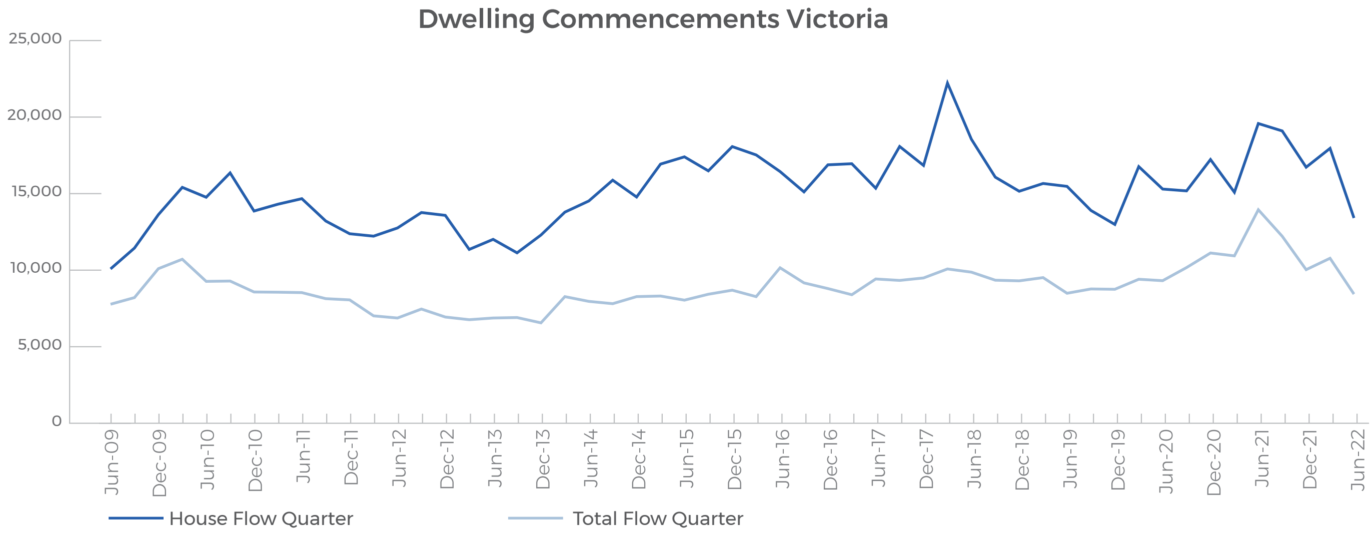
Other residential market indicators

Dwelling commencements

Since 2010, dwelling commencements have stayed relatively steady, hovering around a quarterly average of 15,000.

Commencements increased sharply between March and June quarters of 2021, but they have stabilised in the remainder of 2021 and are now declining to levels below 15,000 per quarter.

Based on this trend heading into FY 22/23 it will be difficult to achieve dwelling supply targets over the coming 12 months which will have further medium term impacts on affordability.



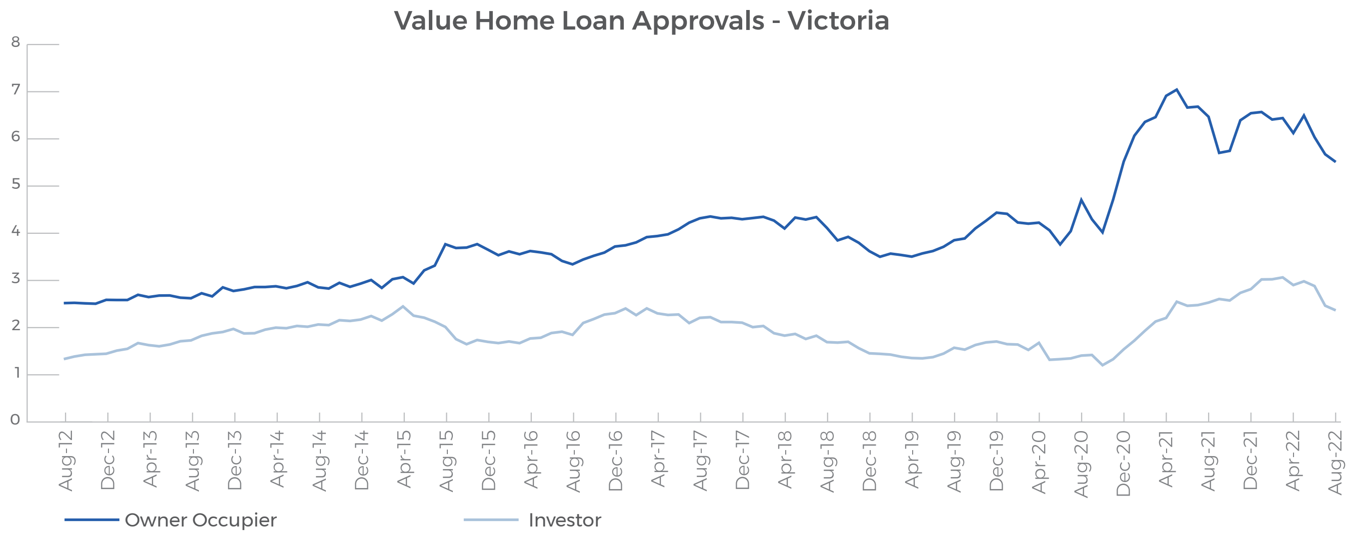
Source: ABS, 2022

Home loan approvals and average loan sizes

During 2020 and 2021 there was a significant trend upward in new loan commitments including owner occupier and investor loans. This shift in activity was driven by record low interest rates and Government grants for new housing.

However, the increase in interest rates from early 2022 has impacted volumes, particularly from May 2022, with loans for owner occupation in Victoria falling from 7,050 per month in May 2021 to 5,510 in August 2022. This volume is still well above monthly averages during 2018 to 2020.

The volume of loan approvals is expected to continue to decline throughout 2022. This indicator should be watched closely over the next six to twelve months as it is typically a leading indicator of increases in residential sales prices.

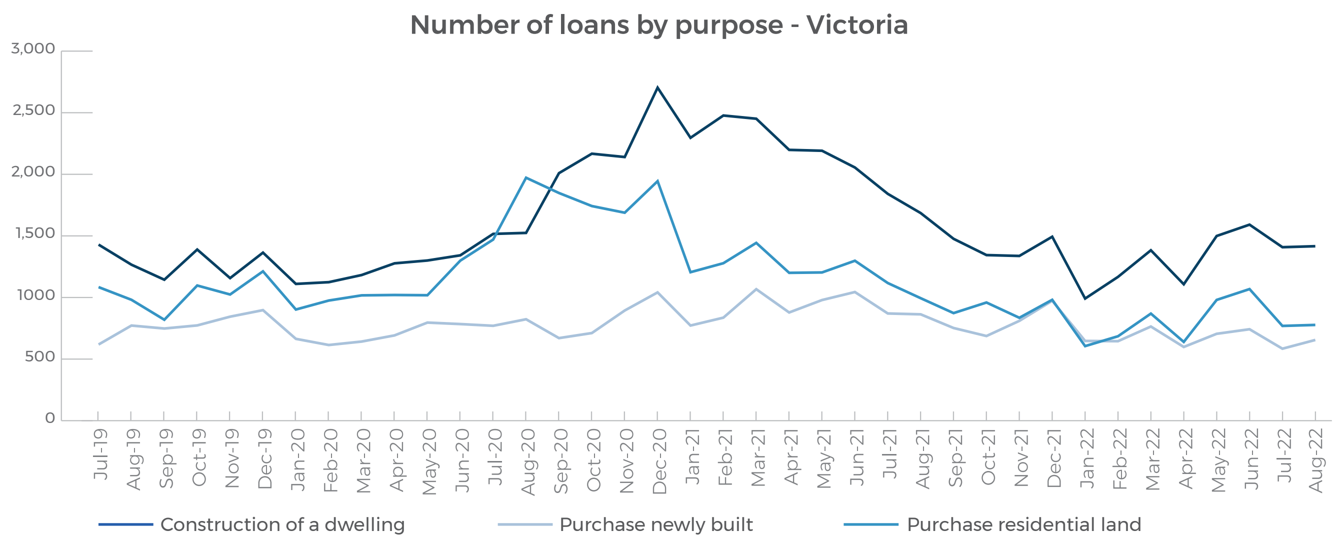


Source: ABS, 2022

Further to this, the proportion of new home loan approvals by purpose has been shifting significantly over the last two years.

Loans for the construction of a dwelling peaked at 2,700 in December 2020 and have recovered to trend levels after falling to less than a 1,000 a month in January 2022. Loans for the purchase of residential land peaked prior in August 2020 but are now stabilising at around 750 per month.

However loans for the purchase of newly built dwellings – including apartments and townhouses - have continued to decline and this will lead to a drag on sales over the next three to six months.



Source: ABS, 2022

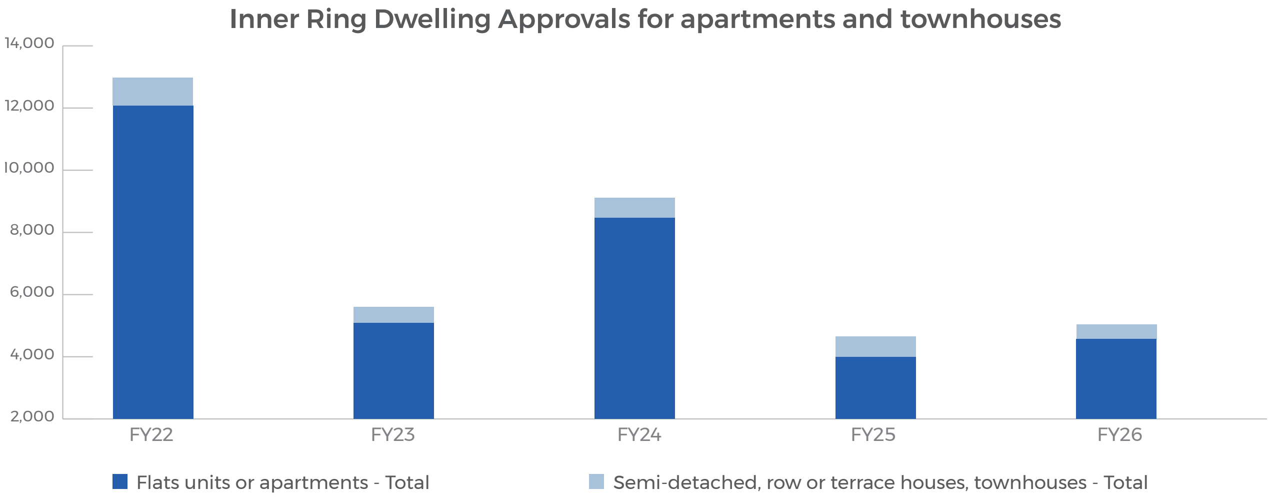
RESIDENTIAL DEVELOPMENT TRENDS BY REGION

In this section

Trends in Victoria and Melbourne

- Overall building approvals for dwellings have fallen slightly to 65,800 in FY21/22 due to a reduction in approvals in Melbourne's growth areas although this was somewhat offset by approvals for townhouse and medium density apartment development in the middle and outer ring of Melbourne.
- Overall, the apartment market has also increased supply growing from around 9,000 building approvals in FY20/21 to 13,000 in FY21/22. The location and scale of many apartment projects appears to be shifting away from high volume affordable stock to higher price point medium-density development in high amenity areas. This will unfortunately do little to relieve rental pressures as higher price point apartments are typically resided in by owner occupier downsizers.
- The proportion of building approvals for dwellings in regional areas compared with approvals overall in Victoria has fallen back to 24 per cent from circa 25 per cent in FY18/19 and FY19/20 and 30 per cent in FY20/21. In the medium-term regional Victoria's share is expected to continue to grow driven by Geelong and affordability factors with diminishing land supply in Melbourne.
- So far, overall building permit activity has shifted below trend in the first quarter of FY22/23. Total building approvals in the September Quarter of 2022 equated to 15,000 in Victoria (equivalent to an annualised rate of 60,000).
- Approvals of detached dwellings in the September quarter 2022 are in line with FY2122, however townhouse and apartment approvals reached only 4,900 in the quarter equating to an annual rate of less than 20,000.
- With population growth on target to reach 120,000 persons plus, building approvals will need to increase to 70,000 per annum or greater as much of the existing building approval activity is in 'one for one' home replacement in established areas and townhouse development that involves detached dwelling demolition.
- To provide affordable housing stock and support the cross subsidisation of key worker and social housing projects it will be important for a medium-term increase in apartment supply back to volumes closer to 20,000 per annum. This will assist in achieving the aspiration for 70 per cent of new housing development to be in established areas as outlined in Plan Melbourne, and in providing a moderation to rental and housing costs for key workers.

Inner ring of Melbourne

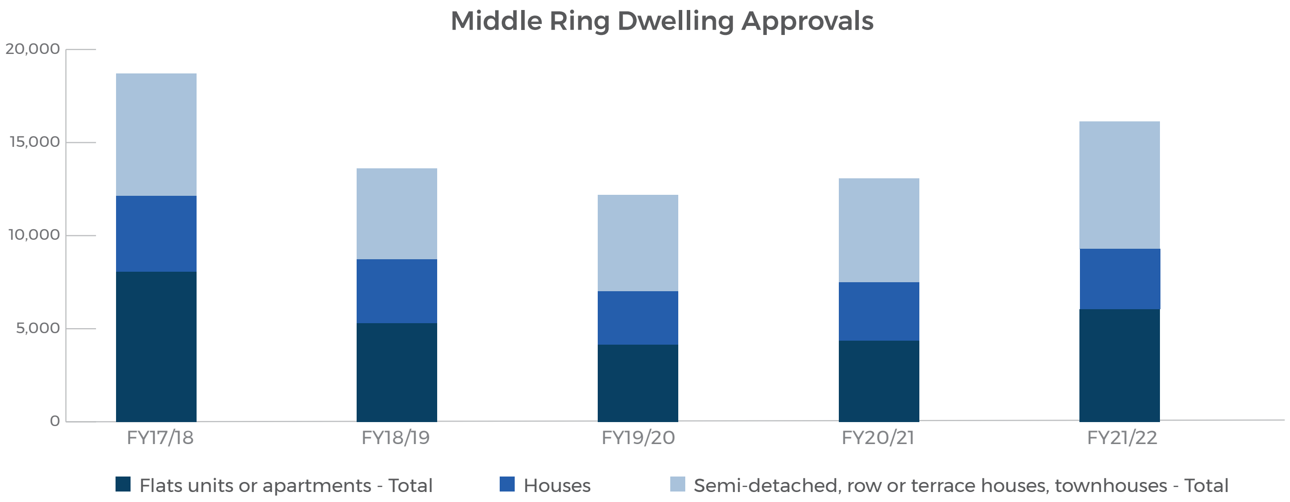


Source: ABS, 2022

Trends across the inner ring of Melbourne

- ABS building approvals for dwellings show that total dwelling approvals in inner Melbourne for FY21/22 continue to trend at low levels with around 5,000 approvals consistent with levels in FY20/21. The past four years continue to be well below the volume of 13,467 dwelling approvals in FY17/18.
- The majority of building approvals for dwellings in the inner ring comprises of four storey plus projects, which remain at levels around 4,500 in FY21/22. This number of approvals continues to be well below longer term averages.
- The City of Melbourne has resumed its role as the primary supply location for new dwelling supply in the inner ring however the activity continues to be located out of the CBD. Approvals in the City of Melbourne LGA for medium and high-density projects increased to 2,370 in FY21/22. However, activity is primarily confined to Docklands, West Melbourne, and Carlton / Parkville. There were no new approvals in the CBD or in Southbank for the entire FY21/22 period.
- Port Phillip (including South Melbourne and St Kilda) and Stonnington (including Prahran and South Yarra) continue to be strong markets in the inner ring with Prahran Windsor achieving nearly 500 approvals.
- Maribyrnong (including Footscray) and Yarra exhibited a significant decline in activity.
- The overall trend in the inner ring is a shift in activity away from high rise / high volume projects facing growing costs and tighter development margins to lower density projects able to achieve higher price points in high amenity established markets.

Middle ring of Melbourne

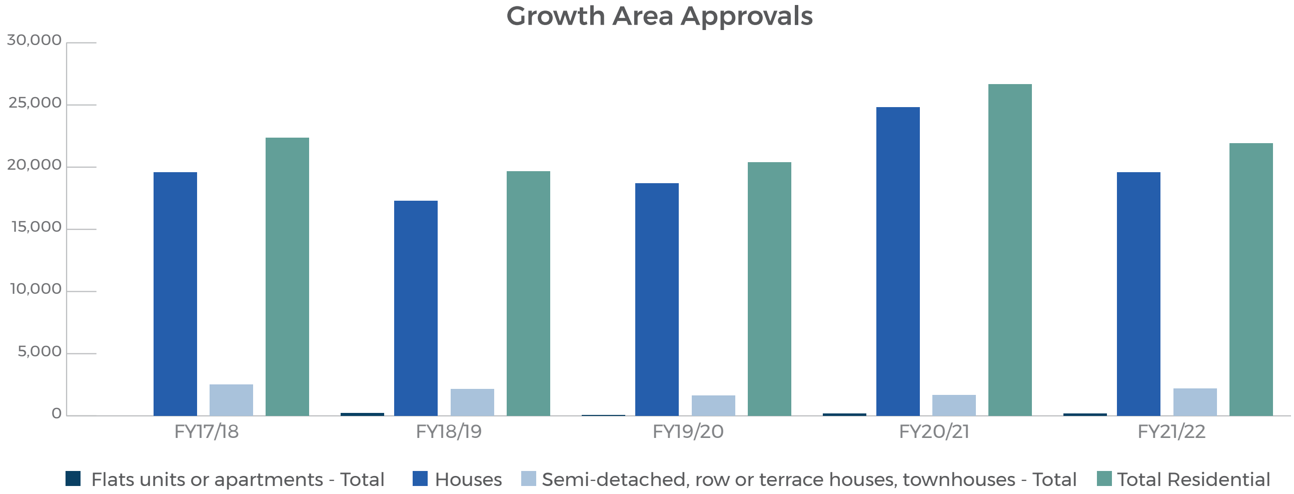


Source: ABS, 2022

Trends across the middle ring of Melbourne

- ABS building approvals for dwellings show that total dwelling approvals in middle Melbourne for FY21/22 grew by 23 per cent and are now nearly 3 times the volume of building approvals in the inner ring.
- While all building types are experiencing growth in approvals, medium and high-density apartment projects represent a higher proportion compared to the previous financial year.
- Approvals for apartments reached 6,045 trending toward the historically high volumes of 8,000 in FY17/18. Townhouse approvals were at record levels reaching 6,850 in the FY21/22 period. This category of development continues to become more important as a supply source in Melbourne
- Bayside, Banyule and Moonee Valley all recorded significant growth in new approvals with hotspots including:
  a. Brighton and Brighton East (770 approvals)
  b. Heidelberg West and Banyule (1,109 approvals) partly driven by new social and affordable housing
  c. Flemington and Moonee Ponds (930 approvals)
  d. Merri-bek (Moreland) including Brunswick and Coburg
- Development values on average are increasing significantly pointing to reductions in private affordable stock due to increasing cost pressures.

Melbourne's growth areas



Source: ABS, 2022

Trends across the growth areas of Melbourne

- Total building approvals for dwellings in the growth areas of Melbourne were 21,932 for FY 21/22 which represents a significant decrease from FY20/21 but is still relatively high compared to historical averages.
- Houses account for 89 per cent of all Growth Area dwelling approvals in FY21/22 slightly down from the figure of 93 per cent last year. This may be due to emerging small lot housing and growth in townhouse development in established parts of Casey and Whittlesea.
- Over the last year Growth and Regional Areas combined have delivered circa 38,000 new houses. Of this, approximately 16,100 of these were in Regional Areas and 21,900 in Melbourne's growth areas.
- More recent activity is declining due to the cessation of COVID-19 grant programs and the increasing cost of finance for buyers. There is risk that there could be further declines in supply due to emerging affordability issues and reduced loan servicing capacity from buyers highlighted elsewhere in this report.

Market drivers in growth areas

Melbourne's growth area housing supply of 21,932 new dwellings in FY21/22 equated to circa 43 per cent of the overall new approvals in Melbourne. When accounting for the fact that townhouses and detached dwellings in established Melbourne involve the demolition of existing stock their share of 'net' new supply is likely to be closer to 50 per cent.

There are several issues influencing demand in the growth areas of Melbourne over the next 12 to 24 months. Positive drivers include:

- A shift to working in the office at least part-time may shift the balance of some demand back to Melbourne's growth areas relative to regional Victoria.
- Early increases in net overseas migration into Victoria will flow through to demand from 2024
- Ongoing feasibility constraints in delivering medium density housing at lower price points in established areas will continue to drive demand for the growth areas.

Constraints on the growth areas are expected to include:

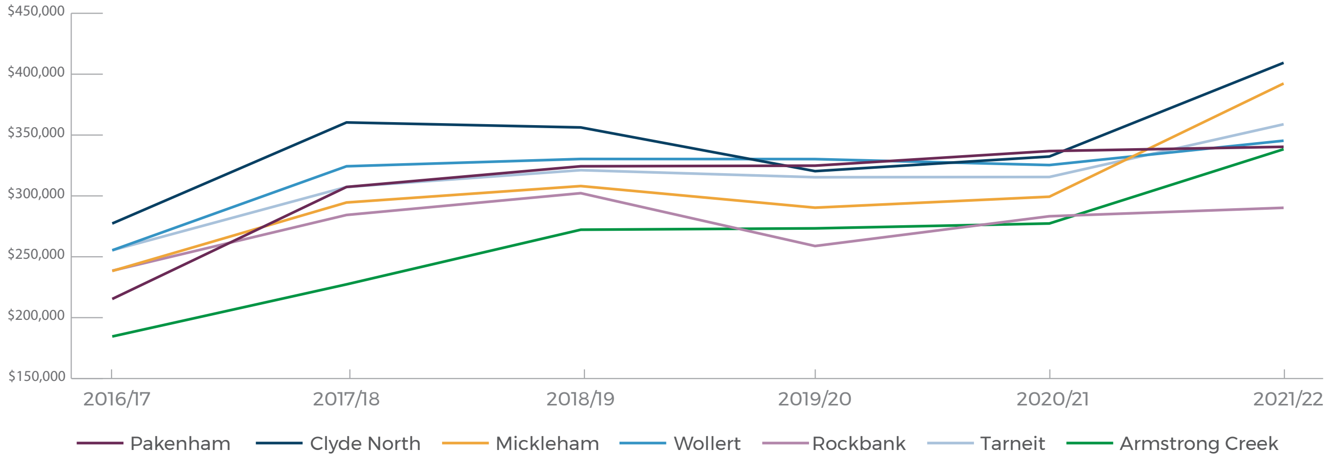
- Significant increase in land prices and dwelling costs that will not be affordable for some buyers.
- Increases in non-discretionary costs including fuel and energy prices will constrain buyer budgets via bank assessment of loan serviceability.

Trends in lot sales in growth areas

RPM Group, a UDIA Victoria Member, has provided additional details of lot sales in the growth areas of Melbourne, including in key estates which complements dwelling approvals data from the ABS.

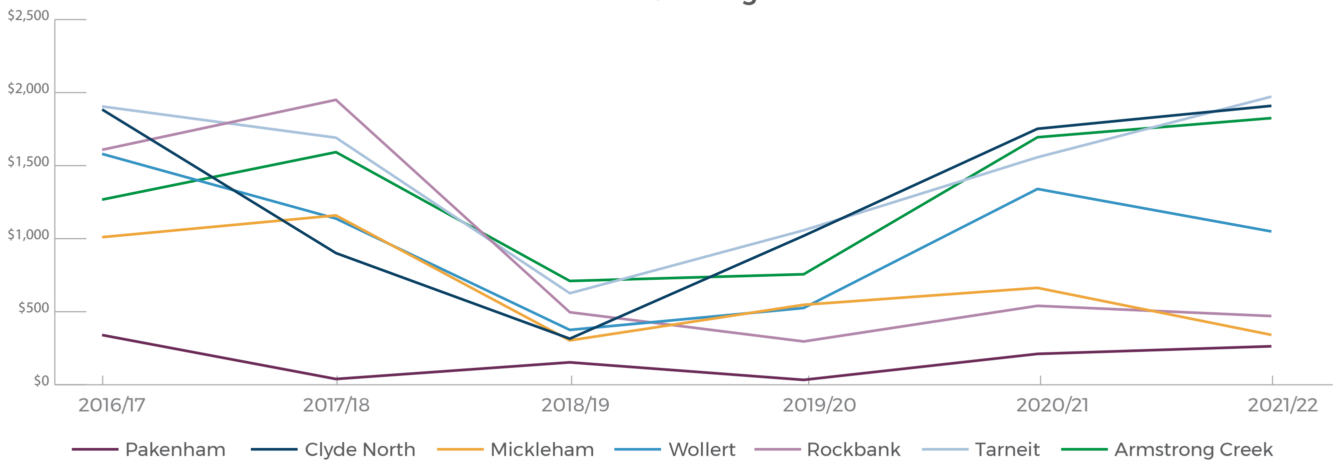
- Market price data for sales of new lots in the growth areas of Melbourne show a flattening in pricing throughout FY19/20 and FY20/21 followed by significant price escalation during FY21/22. Of key estates monitored Rockbank was the only estate providing lots at an average price point sub $300,000.
- Armstrong Creek now has an average lot price equivalent to Wollert and Pakenham at $338,000. More recent data for 2022 shows that average lot prices across key estates have increased further to $389,400. It is likely that pricing will exceed $400,000 in Melbourne on average over the next 12 months.
- Lot sales volumes increased strongly in Clyde North, Armstrong Creek and Tarneit throughout FY21/22, however sales volumes moderated in Wollert, Mickleham and Rockbank.
- Based on sales volumes in the June Quarter of 2022 volumes are down at least 35 per cent on the same period in 2021.

Melbourne and Geelong lot price trends



Source: RPM, 2022

Melbourne and Geelong lot sale trends



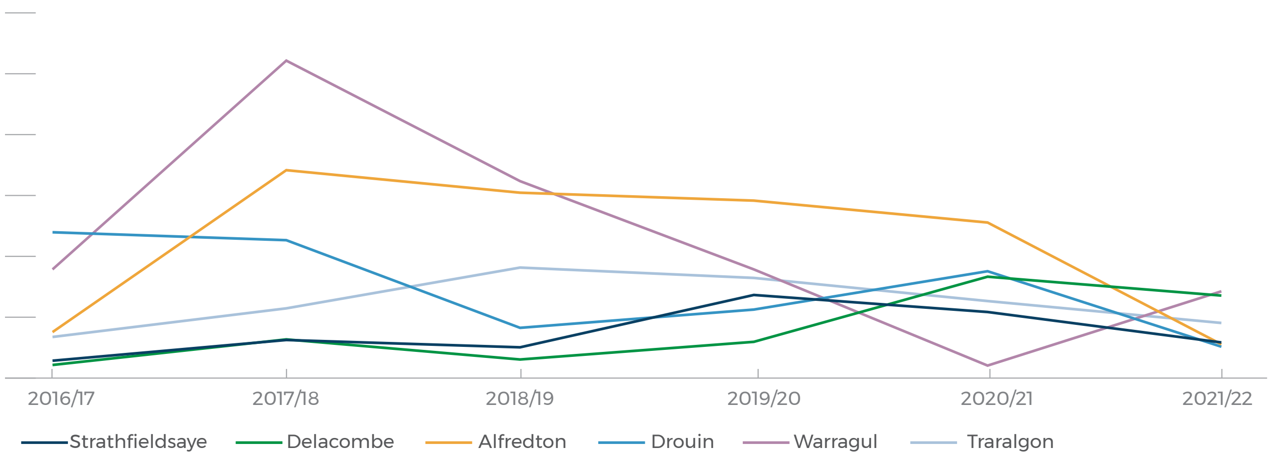
Source: RPM, 2022

Regional areas

Trends across the regional areas of Victoria

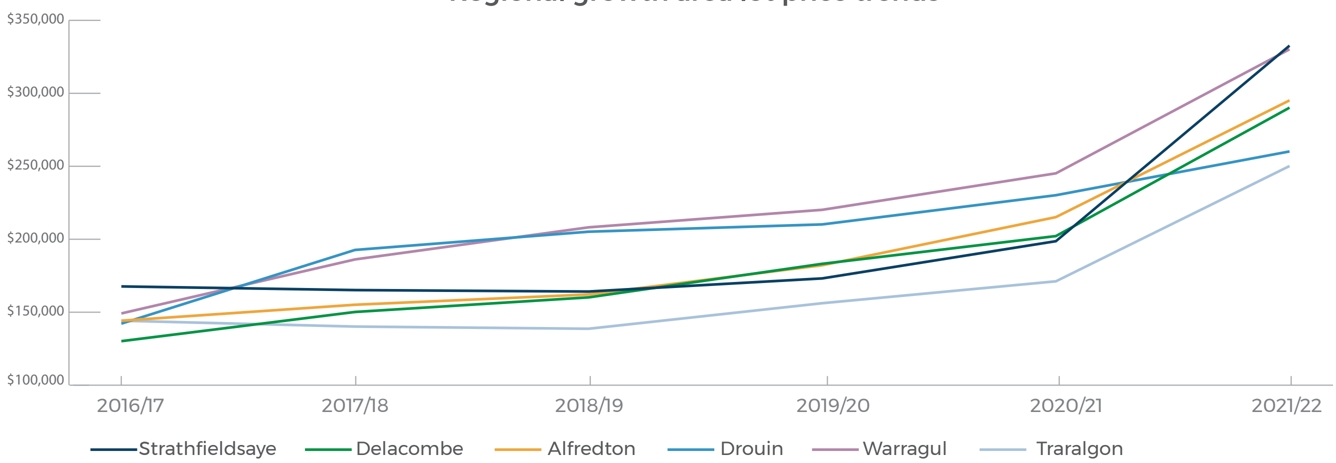
- Total building approvals for dwellings in regional Victoria for FY21/22 declined to 16,132 down from 20,197, in FY20/21 representing a return to longer term trends.
- At an LGA level lot sales have declined significantly from the peaks of FY20/21. In Greater Geelong lot sales reached 3,400 in FY20/21 and based on quarterly data for June 2022 are now trending to an annualised volume of closer to 1,200.
- Other LGA's including Bendigo, LaTrobe and Baw Baw experienced lot sales in June quarter 2022 down by between 30 and 50 per cent. This trend is likely due to lower buyer incomes in some of these municipalities combined with reduced serviceability together with a reduction in Melbourne based investors.
- Market price data for sales of new lots in regional areas show an increase in pricing in FY21/22 to $262,500 with more recent data in the June quarter of 2022 showing further increases to $281,000. Pressure on buyer budgets over the next 12 to 18 months combined with a reduction in the focus on regional Victoria post COVID-19 may moderate price growth.
- Lot sales in all estates have moderated to around 80 to 150 per annum with noticeable declines in Warragal and Alfredton.

Regional growth area lot sales

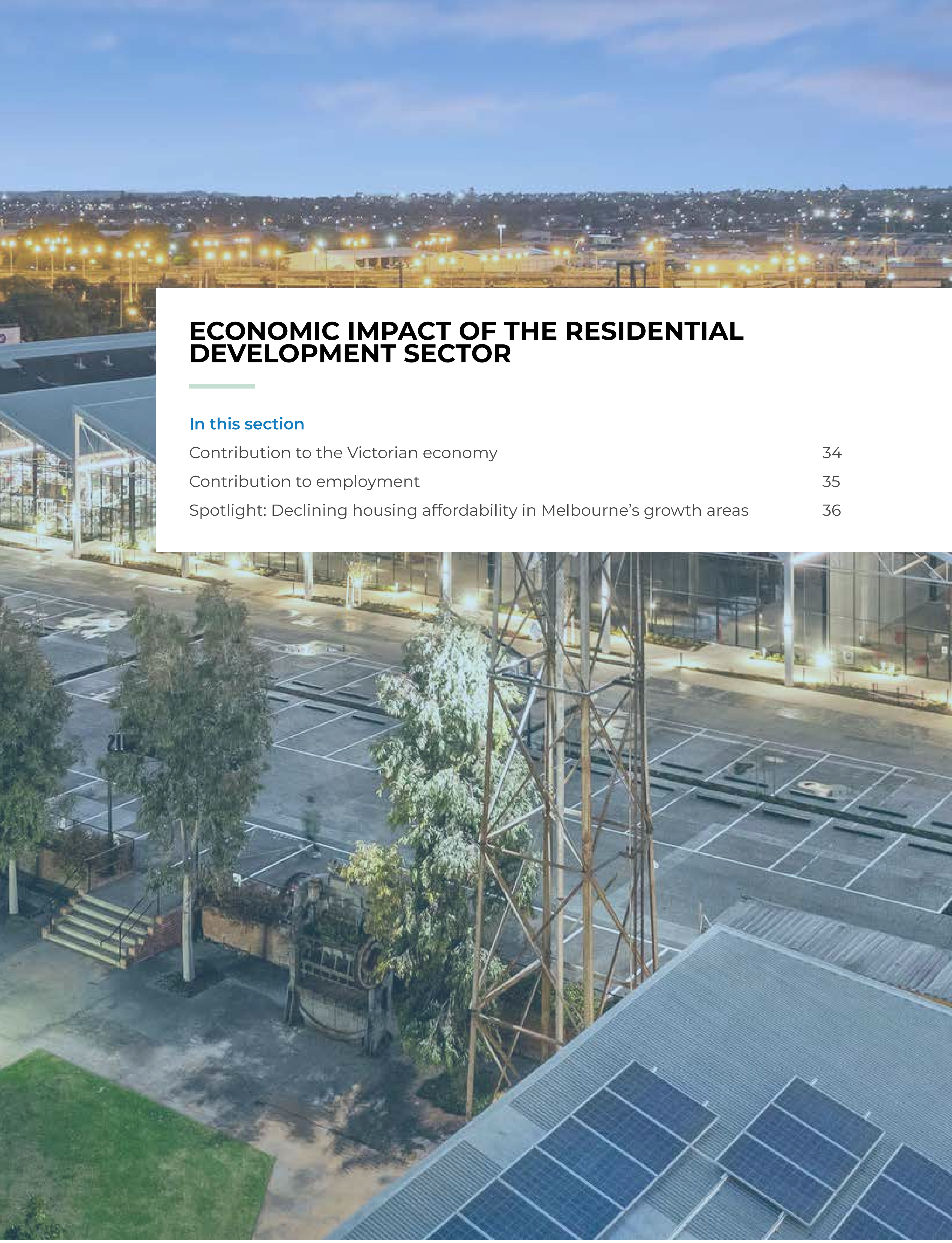


Source: RPM, 2022

Regional growth area lot price trends



Source: RPM, 2022



ECONOMIC IMPACT OF THE RESIDENTIAL DEVELOPMENT SECTOR

In this section

Contribution to the Victorian economy

The total expenditure in the new residential construction sector in FY21/22 amounted to just over $26.9 billion. Based on the economic value add measure, this expenditure generated a further $31.96 billion for the Victorian economy. Of this, around $7.77 billion was directly generated by the residential construction sector.

These figures indicate the residential construction industry has recovered strongly post the pandemic, and it has played a key role in continuing to sustain the Victorian economy.

The sector has faced a range of challenges including a significant increase in cost inputs and market prices which have constrained the measure of real growth in economic activity after inflation.

Expenditure ($m, 2022, real), total residential construction					
	FY17/18	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Expenditure ($m)	$24,658	$20,860	$21,602	$22,247	$26,857

Economic value add ($m, 2022, real), total residential construction					
	FY17/18	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Direct value add ($m)	$7,126	$6,028	$6,265	$6,452	$7,775
Indirect value add ($m)	$21,970	$18,586	$19,226	$19,800	$23,916
Total value add ($m)	**$29,096**	**$24,615**	**$25,490**	**$26,251**	**$31,691**

Note:
*Expenditure has been updated to reflect prices as of 1 January 2022
** 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 ye

Source: APP & REMPLAN 2022

Contribution to employment

The residential development sector was estimated to sustain 241,700 direct and indirect jobs in Victoria in FY 21/22. This figure represents employment in the construction of new residential projects and excludes the impacts of alterations and additions and non-residential construction activity. 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 increased to approximately 54,000 jobs. Indirect jobs creation in other sectors supporting residential construction increased to 188,000 in FY2022 relative to 156,000 over the previous year.

This employment growth is estimated based on typical employment multipliers and the on the ground constraints the sector has faced, including the labour shortages, that have limited the growth in the economy over the last two years. To continue to drive the Victorian economy, strong migration and a more sustainable cost base will be needed over the medium term.

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.

Job creation ($m, 2022, real), total residential construction					
	FY17/18	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Direct jobs creation	49,315	41,720	43,203	44,494	53,713
Indirect jobs creation	172,603	146,018	151,209	155,728	187.995
Total jobs	**221,918**	**187,738**	**194,411**	**200,222**	**241,708**

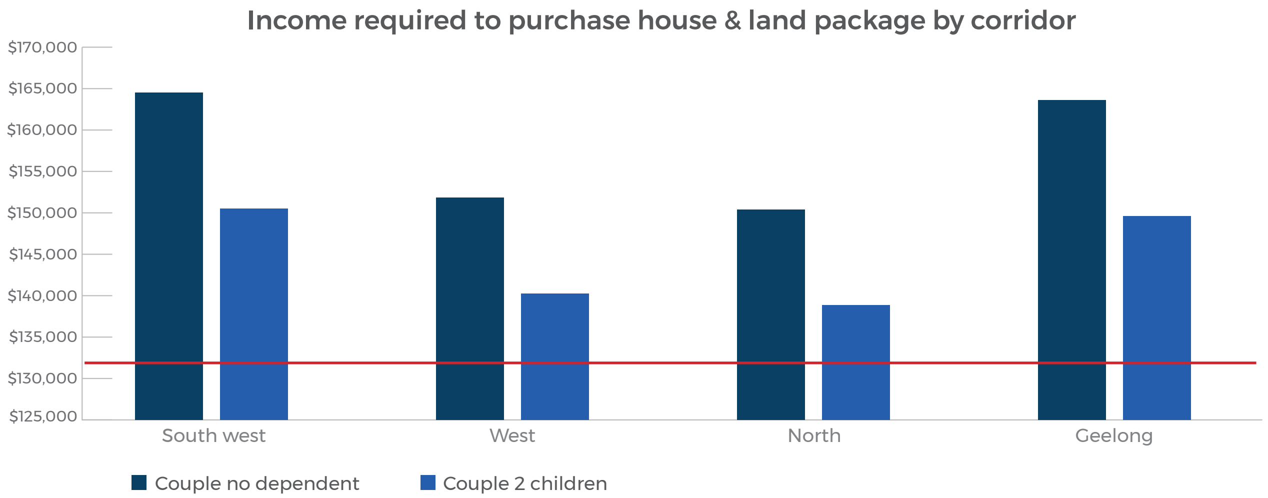
Spotlight: Declining housing affordability in Melbourne’s growth areas

As discussed in the key market trends section of this report, there has been a dramatic reduction in the affordability of house and land package product in the growth areas of Melbourne for moderate income buyers.

Impacts of these trends have been rapid and have meant that a moderate-income household earning $130,000 per annum in 2020 could afford a significant majority of house and land packages on the market in Melbourne’s growth areas. However, in late 2022 this same moderate income household undertaking a similar finance application process would be constrained in raising finance to acquire a conventional lot house and land package and would also be challenged in affording a majority of small lot house and land packages in the market.

To access finance for a conventional house and land package across various growth corridors in late 2022, households with children now need to earn a total income of between $150,000 and $165,000.

The graph below provides details on income required for a household with two adults and children to access a conventional sized lot and house packages in Melbourne’s growth corridors and Geelong. The State Government definition of a moderate-income household with two parents and two children is also depicted confirming that moderate incomes in 2022 equate to around $132,000 for this cohort.



Source: APP Group and UDIA research partners: 2022

This situation is expected to persist in 2023. This is particularly concerning as Melbourne's greenfield house and land package market has been the primary source of affordable housing for moderate income cohorts for a long period of time.

A reversal of this paradigm will require either:

- a significant reduction in interest rates, which is unlikely in the short to medium term;
- a reduction in household expenditure costs flowing through to increased serviceability, which is unlikely even if inflation is expected to stabilise, because non-discretionary cost items won't fall relative to wages; and
- increased real incomes that offset household costs - this equation may stabilise in the medium term.

What does Government need to consider?

In response to the emerging affordability constraints policy makers should be mindful of how direct and indirect costs influence household budgets and the ability of households and individuals to enter the housing market.

Over the next two to three years, households will be particularly sensitive to land prices and costs of living. Government should consider the following issues:

- how increases in existing or new development charges and levies that are embedded in development costs and land prices impact affordability;
- what opportunities exist to bring forward infrastructure and services to reduce the cost of living such as road connections that reduce commute time or local community, health, and education services that support a reduction in household budgets; and
- being mindful that financial institutions assessment of loan applications are going to remain relatively static over the next two to three years, therefore other costs including public transport and taxes and charges will have impacts on non-discretionary cost items included in inflation.

This is a significant threat to the functioning of Melbourne's economy as the economic development of this city – including its industrial and more recently services base – has relied on a diverse growing labour force who in turn have relied on affordable housing.

While some new residents in Melbourne accept apartment style accommodation over the medium and longer term, our migrant communities and the culture of extended families has led to an ongoing preference for affordable three and four bedroom housing stock.

The sudden increase in interest rates combined with a reduction in loan serviceability due to increased costs of living and inflation is not the fault of any one policy area, and has been driven by broader macroeconomic factors. The Government however needs to be mindful that if Melbourne is to continue its recovery as a productive and efficient city it needs access to a growing labour force who can enjoy a range of housing choices including house and land packages that have commuting access to employment.

Evolving buyer budgets

Based on the buyer budgets outlined above, an overview of the impacts on buyer budgets of the changing interest rate and living cost environment has been estimated. The budgets outlined below consider interest rates at the time of application and impacts on income including family tax benefits.

The analysis in the table below confirms that there has been a dramatic deterioration in buyer budgets across each example cohort in Melbourne.

This decline in buying power applies both to house and land packages in the growth areas and off the plan apartment or townhouse purchases in established areas. As recently as 2020 a moderate-income couple with two children could reasonably comfortably afford a house and land package in most growth corridors. Today the ability to acquire product in the market is heavily constrained meaning that they either need to rent and save or seek housing elsewhere.

Household type	Income Cohort	Budget in 2020[3]	Budget in 2022	Budget early 2023
Couple no dependent	Moderate	$634,700	$458,500	$395,000
Single parent one child	Moderate	$915,200	$560,700	$487,000
Couple two children	Moderate	$845,000	$501,000	$430,000

Source: UDIA and research partners

The UDIA and its research partners are currently undertaking more detailed analysis on the impacts of the current finance market on buyer budgets and what implications may exist for the State Government in its strategic planning, including the delivery of existing and future PSP's in the growth areas. This research will be delivered shortly.

Definition of moderate-income households and what they can afford

The State Government defines low- and moderate-income earners in the annual Governor in Council Order. This enables the market to understand the price points of housing stock that should be targeted to achieve the delivery of affordable and social housing.

The definition provides guidance for very low, low, and moderate income households based on existing income deciles within the population and is derived from annual area median income from the Australian Bureau of Statistics 2016 Census of Population and Housing.

For example, a moderate-income household is assumed to have the following income ranges as at June 2021:

- $62,620 to $93,920 for a couple with no dependents.
- $87,670 to $131,500 for a family with dependent children and one or two parents.

3. Based on midpoint of defined moderate income range

These household income ranges have in the past been adequate to support the purchase of apartment style product in Melbourne and house and land packages in the growth areas or rental accommodation of a range of housing typologies.

This situation has rapidly changed in the last twelve months. While price points in the market from 2018 to 2020 were increasing, buyer budgets were adequate given the ongoing reduction in interest rates and increased serviceability. This acted as an artificial buffer to the underlying market position.

Living costs and the Household Expenditure Measure

The Household Expenditure Measure (HEM), developed by economic research group the Melbourne Institute, is the standard benchmark lenders use to estimate a loan applicant's annual expenses.

This figure becomes part of the calculation some lenders use to assess an applicant's borrowing capacity to determine if they can afford the home loan they're applying for.

The Household Expenditure Measure accounts for a range of things such as the borrower's location, number of dependents, and their lifestyle standard (student, basic, moderate or lavish). The 'basic' lifestyle estimates annual expenses at $32,400 and is traditionally used.

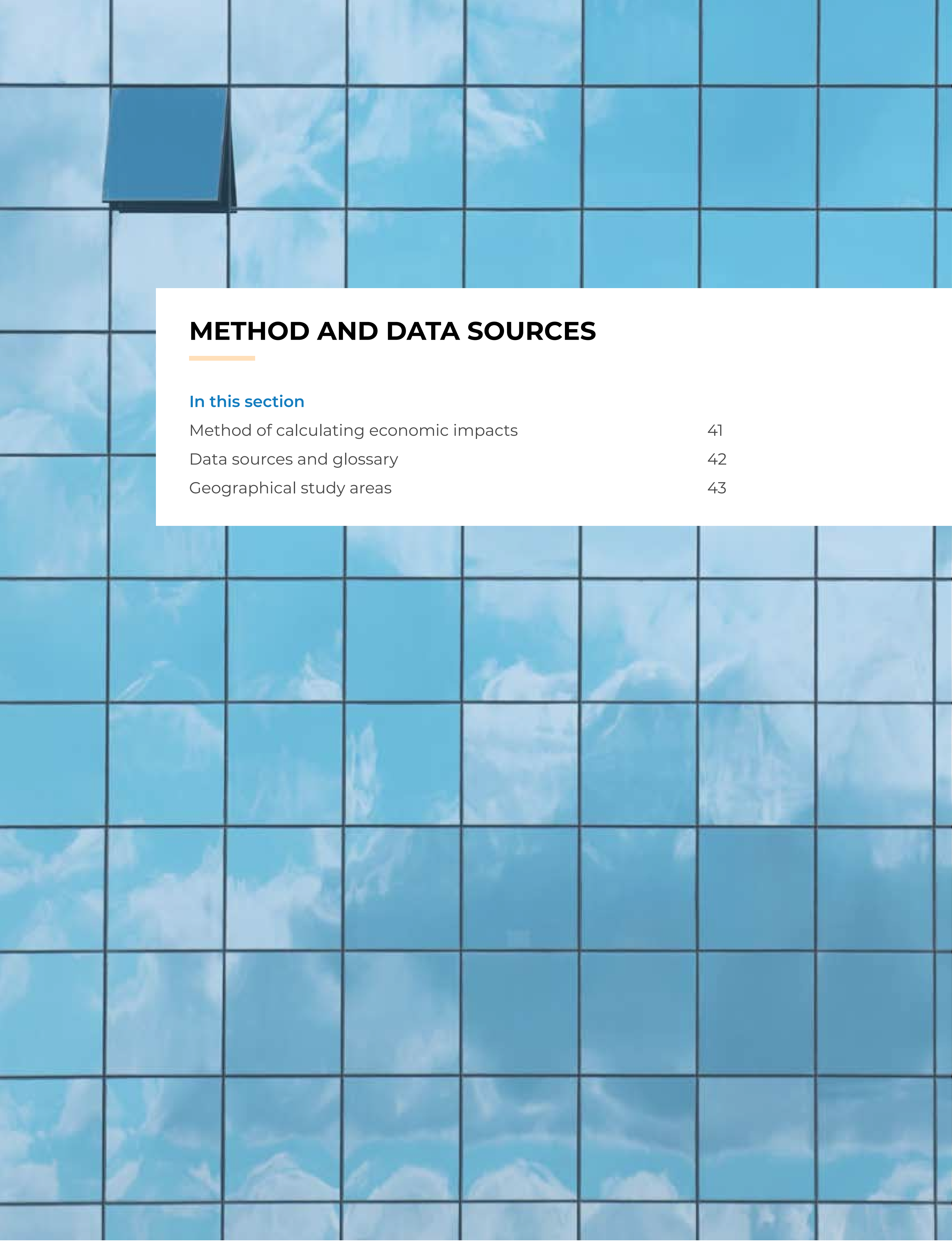
It is estimated that 80 per cent of all home loans in Australia were approved using the HEM benchmark in 2017. However, financiers understand that households are likely to be spending much more, arguing that the 'lavish' measure would provide a more accurate estimation of expenses (the lavish lifestyle estimates annual expenses at +$50,000).

More than 600 items in the ABS Household Expenditure Survey are classified by the HEM as either absolute basics (e.g. most food, utilities, transport, communication, children's clothing), discretionary basics (e.g. takeaway food, alcohol, entertainment, adult clothing, dining out, childcare) and non-basic, luxury expenses (e.g. overseas holidays, gardeners). Rent or mortgage payments are not included in HEM.

HEM is calculated as the median spend on absolute basics plus the 25th percentile spend on discretionary basics, while non-basics are excluded.

In applying for a home loan, many lenders will require an estimation of weekly or monthly spend on things like groceries, transport, and utilities. Some lenders provide a living expenses calculator to help you work out your average weekly or monthly spend.

It's then expected the lender will compare the living expenses figure provided by applicants against the HEM calculation for someone in a similar location with a similar household structure. The lender may then take the higher of these two figures (declared expenses versus the HEM estimation) in deciding whether the loan is serviceable.



METHOD AND DATA SOURCES

In this section

Method of calculating economic impacts

Method of calculating economic impacts

ABS dwelling approvals data (value estimates) has been used 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. REMPLAN[1] 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.

Data sources and glossary

Abbreviations	
ABS	Australian Bureau of Statistics
Census	Census of population and housing
DA	Dwelling Approvals
DBA yield	Estimated yield of dwellings to dwelling approvals (used to forecast supply)
DELWP	Department of Environment, Land, Water, and Planning (Victoria)
DTF	Department of Treasury and Finance (Victoria)
LGA	Local Government Area
Pandemic	COVID-19 global health pandemic
UDIA	Urban Development Institute of Australia
RDI	Residential Development Index
RPM	RPM Real Estate Group
State Budget	Budget Papers released by DTF

Study Areas & Usage of Data

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

1. Each geographical catchment has been referenced against defined LGA's.
2. For the Melbourne geographical catchments (also shown on the following page's map):

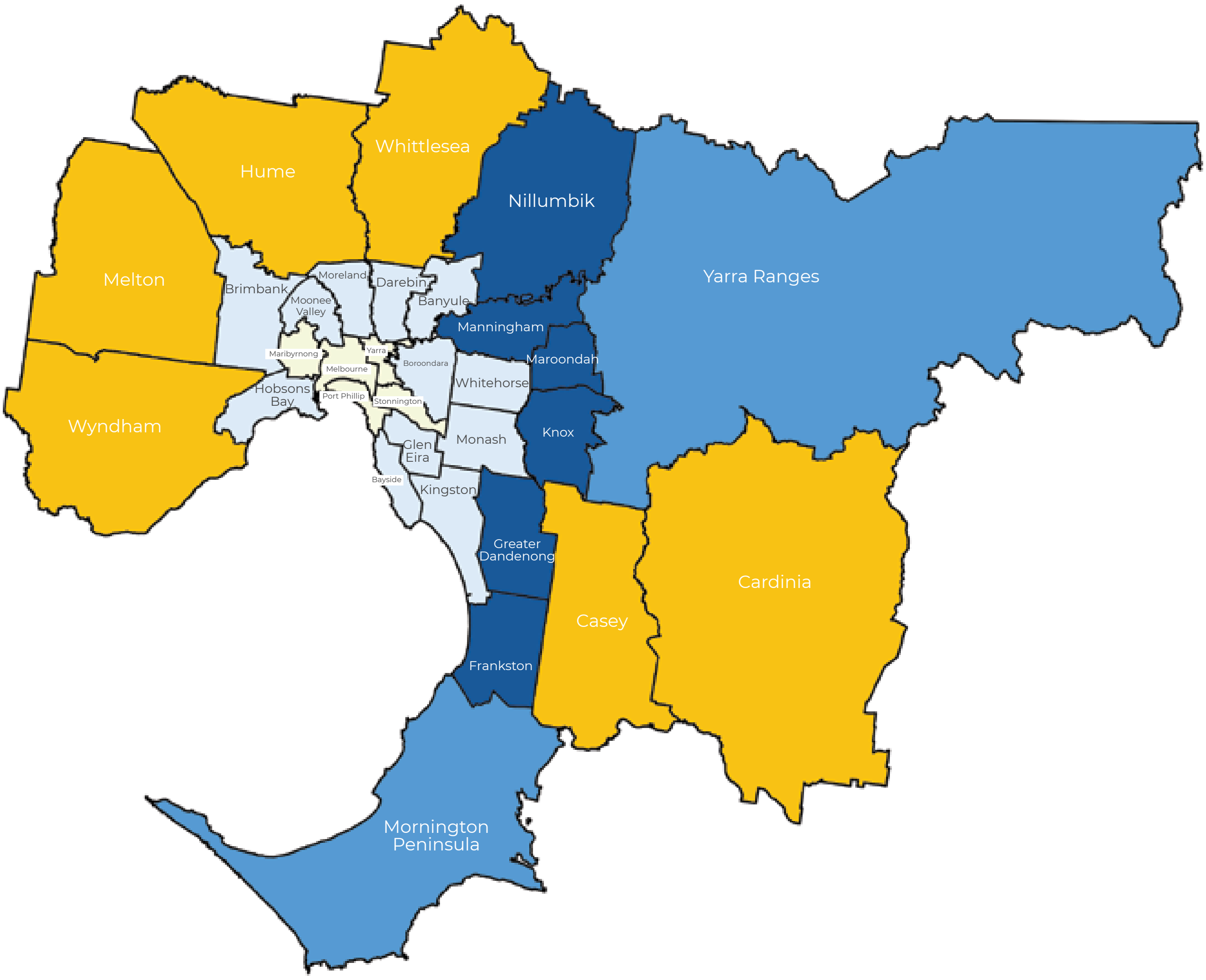
- Inner ring // This term throughout the Report refers to Melbourne's inner ring LGA's (<10km from CBD). LGA's within inner ring Melbourne include; Melbourne, Port Phillip, Yarra, Maribyrnong and Stonnington.
- Middle ring // This term throughout the Report refers to Melbourne's middle ring LGA's (10-20 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.

Data & Information Sources

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

- Australian Bureau of Statistics.
- DTF Budget Papers including forecasts of population and employment.
- RPM Group – UDIA Member

Geographical study areas



Geographical Catchments

- Inner ring
- Middle ring
- Outer ring
- Growth area

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