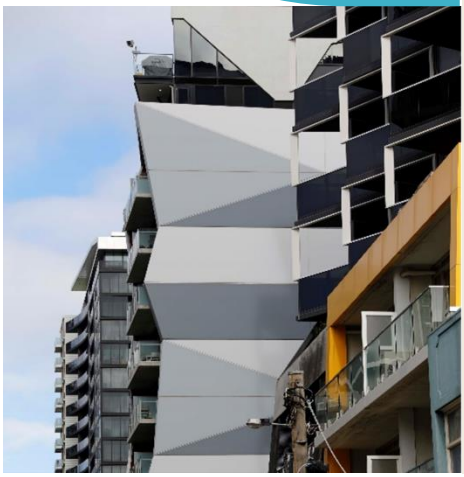
INFRASTRUCTURE VICTORIA

March 2023

Policy evidence for more housing options in Victoria



About us

Infrastructure Victoria is an independent advisory body with 3 functions:

- preparing a 30-year infrastructure strategy for Victoria, which we review and update every 3 to 5 years
- advising the government on specific infrastructure matters
- publishing research on infrastructure-related issues.

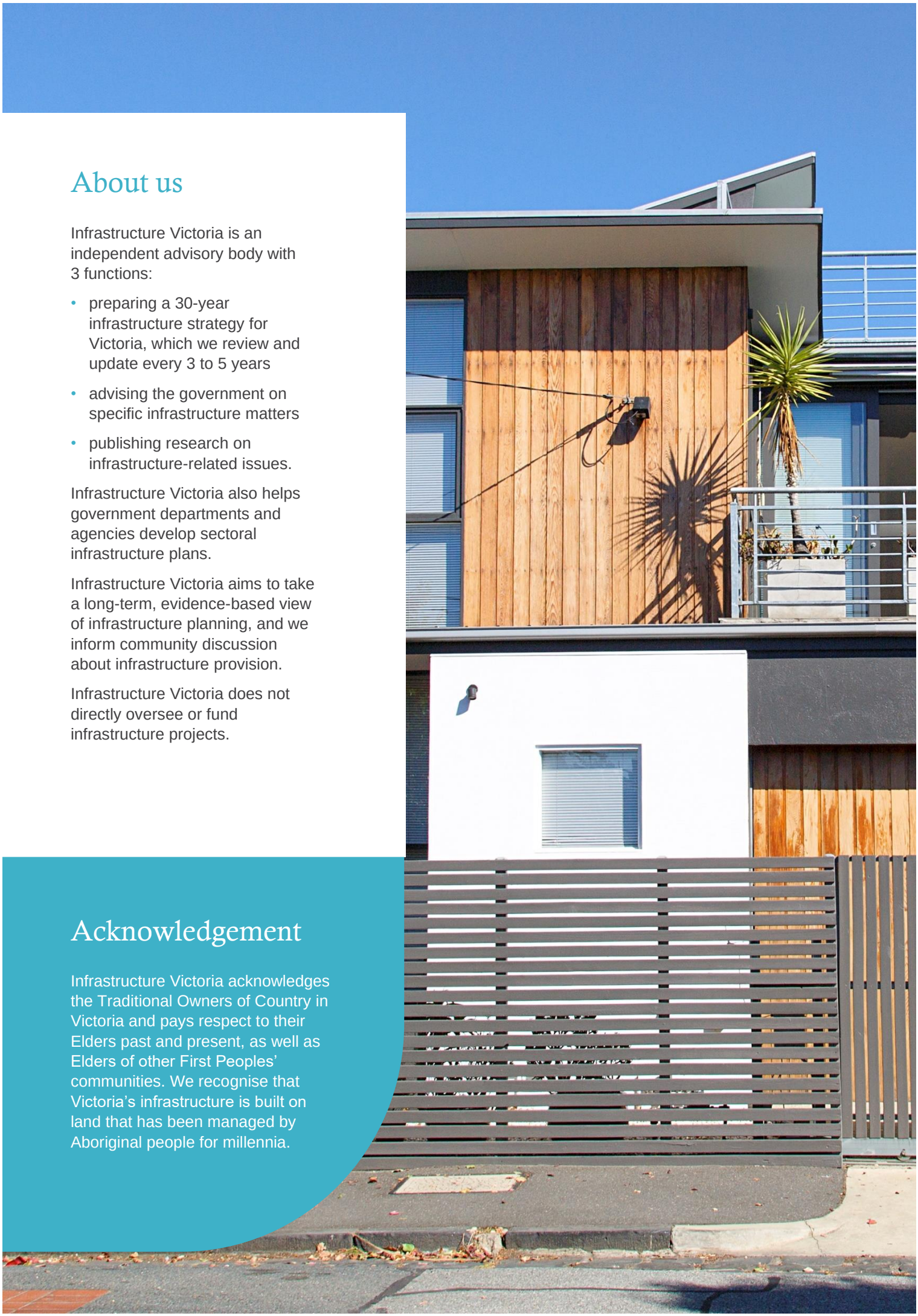
Infrastructure Victoria also helps government departments and agencies develop sectoral infrastructure plans.

Infrastructure Victoria aims to take a long-term, evidence-based view of infrastructure planning, and we inform community discussion about infrastructure provision.

Infrastructure Victoria does not directly oversee or fund infrastructure projects.

Acknowledgement

Infrastructure Victoria acknowledges the Traditional Owners of Country in Victoria and pays respect to their Elders past and present, as well as Elders of other First Peoples' communities. We recognise that Victoria's infrastructure is built on land that has been managed by Aboriginal people for millennia.



Contents

Summary

This report documents the extra evidence underpinning our research project on the factors affecting housing choices. People's home choices, and the location of new home building, affects the amount and location of infrastructure needed to support them. This report details the evidence behind policy options for the Victorian Government to help facilitate building more homes that can substitute for homes in new growth areas.

We present 3 groups of policy options for established suburbs. The first group of options aims to help build more homes in established suburbs for people to choose from. The second group focuses on reducing price disincentives to buying homes in established suburbs. The third group of policy options are opportunities to create more diverse and better quality housing.

In the following sections, we define the problem that each option addresses and propose possible government policy responses. We present different ways each option can be delivered, including where the option can apply geographically, methods for refining the option, and the possible timing for implementation. We identify the potential benefits and drawbacks of each policy option. We qualitatively assess each policy option against relevant criteria (see Table 1) and identify where different options can work best together.

During the project, we scanned the literature for relevant information. This review showed that many factors influence whether new homes are built in established suburbs. These factors include land and construction costs, planning requirements, design quality, development financing and demand for new homes. Appendix 1 summarises those findings and identifies the policy options relevant to each factor.

We also examined literature on households' location and dwelling feature preferences and trade-offs when making housing decisions. Appendix 2 presents our main findings. Appendix 3 documents characteristics of households choosing to live in greenfield areas and discusses housing submarkets in Melbourne.

Our final report, *Our home choices: how more housing options can make better use of Victoria's infrastructure*, draws on the evidence in this paper and our other research into housing choices.

Table 1: Qualitative assessment of options

Criterion	Description
Supply	Increases housing supply in established suburbs
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs
Quality	Improves quality and/or child friendliness of housing types
Price	Means more moderate income households can afford to live in established suburbs
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene
Feasible	Is politically feasible and acceptable to stakeholders including state and local governments, industry and the community
Scalable	Is a scalable action that is likely to increase the supply of new housing over time

Options to reduce price disincentives to buying in established suburbs

Reform infrastructure contributions to send the right price signals

Develop a clear, efficient and transparent infrastructure contribution system that better reflects the true cost of infrastructure in different development settings and supports better use of existing infrastructure.

The current infrastructure contributions system is inadequate and inefficient

Victoria has no dedicated revenue source to fund Victorian Government infrastructure to support building new homes outside of new growth areas. To ensure infrastructure can keep up with extra demand, the Victorian Government will need to invest in infrastructure to maintain and improve existing levels of access and amenity. Upgrading, co-location, better use and new approaches to infrastructure delivery can support growth in established suburbs.[1] A revised infrastructure contribution system can contribute to funding these approaches to ensure infrastructure supports new development.

Victoria's local and state infrastructure contributions arrangements are also inefficient. The economic argument for funding infrastructure with developer contributions, rather than with taxes or council rates, is to encourage the efficient use of land. According to the Productivity Commission they can give 'developers an incentive to take account of a wider range of infrastructure costs when deciding where and when to develop land.'[2]

Lagging infrastructure investment constrains new housing supply in urban renewal precincts

Outside Melbourne's new growth areas, the government has no consistent mechanism for collecting development contributions to fund state infrastructure such as public transport or government-owned education, health or justice facilities. While small-scale incremental development in established suburbs can often use existing infrastructure, development in brownfield urban renewal precincts might require considerable infrastructure investment.

Urban renewal precincts offer large-scale opportunities to build more homes in established suburbs. Infrastructure contribution charges are one way to contribute the revenue needed to undertake infrastructure works to make brownfield precincts functional for redevelopment.

The Red Tape Commissioner found that a 'lack of infrastructure, in most cases, is the underlying reason why a site remains undeveloped.'[3] In urban renewal precincts, infrastructure costs might be higher due to the condition of existing infrastructure, the rate of population growth and the longer-term strategy for infrastructure development. These precincts might also incur larger costs due to the need to transition to a new use, while remaining operational for existing occupiers during the transition. Challenges include transitioning the streetscape from an industrial use to act as active transport corridors, managing flooding and stormwater, legacy issues such as contamination and poor public transport access.[4]

In some cases, delayed investment in public transport infrastructure can hamper private investment in commercial and residential development. Fishermans Bend is Australia's largest urban renewal area, aiming to house 80,000 people and 80,000 jobs. Despite its proximity to Melbourne's central city, Fishermans Bend does not have enough transport options to fulfil its proposed home and employment aspirations. A tram extension to the Sandridge and Wirraway sub precincts is now in early planning stages, with an estimated cost of $1-1.5 billion.[5] Modelling by PwC found delayed delivery of the tram can lead to lower-density housing outcomes which can constrain future higher-density opportunities.[6] More recent media reporting suggests delayed delivery of the tram extension is now holding back commercial development.[7] In 2021, Infrastructure Victoria recommended the Victorian Government immediately fund the extension (Recommendation 43).[8]

In the absence of a state infrastructure charge or other value capture mechanism, infrastructure delivery in precincts is likely to fall more heavily on general government revenue. A reformed infrastructure contributions system is one way to help fund infrastructure to support housing growth in urban precincts.

Existing local and state infrastructure contributions charges do not reflect infrastructure costs

The Productivity Commission justifies the argument for funding infrastructure with development contributions, rather than by taxes or council rates, on economic efficiency grounds because it encourages more efficient use of land. According to the commission, they give 'developers an incentive to take account of a wider range of infrastructure costs when deciding where and how to develop land, which can facilitate more efficient provision of homes and associated infrastructure.'[9]

However, in Victoria a patchwork of infrastructure contributions mechanisms exists for funding state and local infrastructure. This constrains the overall efficiency of the infrastructure contributions system, limiting its potential to influence the location of new homes. Uncertainty around infrastructure charges in established suburbs can have a negative effect on housing supply. Research shows where infrastructure costs are variable and uncertain, smaller developers might struggle to remain competitive.[10]

We analysed growth area housing development and confirmed that state and local infrastructure costs are higher than in established suburbs, where capacity exists to support more homes. Infrastructure Victoria published research comparing the infrastructure costs in different development settings (IPIDDS).[11] This work examined different types of infrastructure, including the local essential infrastructure to support new homes, but excluded transport and open space from its direct cost comparison. It found infrastructure provision costs in growth areas can be up to 4 times higher than in established suburbs. Significantly, even where established suburb infrastructure is at capacity, total infrastructure costs are unlikely to exceed those in growth areas.[12]

Research by SGS Economics and Planning found the Victorian Government will be required to invest around $50,000 for every new growth area home to deliver the state and regional infrastructure required to service Melbourne's growth areas.[13] Over a 30-year period, the total investment required is estimated at around $11 billion.[14] While the Growth Areas Infrastructure Contribution (GAIC) will recover some of this cost, around $6,100 per new dwelling, most of this investment will be funded by the taxpayer. To achieve the efficiency benefits of infrastructure contributions charges, these higher costs in growth areas can be considered in the design of state and local infrastructure charges.

Infrastructure Victoria, among many others, has previously called for the introduction of a broad-based state infrastructure charge. This charge has scope to send a price signal that influences the location of new development.[15] This can be based on consideration of the relative differences in infrastructure costs in different development settings such as growth areas, incremental development and major urban renewal sites. It can also consider dwelling structure, such as by introducing a higher charge for detached homes. This recognises that in established suburbs there is often existing infrastructure that can be upgraded and better used, and that the Victorian Government has policy goals to facilitate more homes in established suburbs.

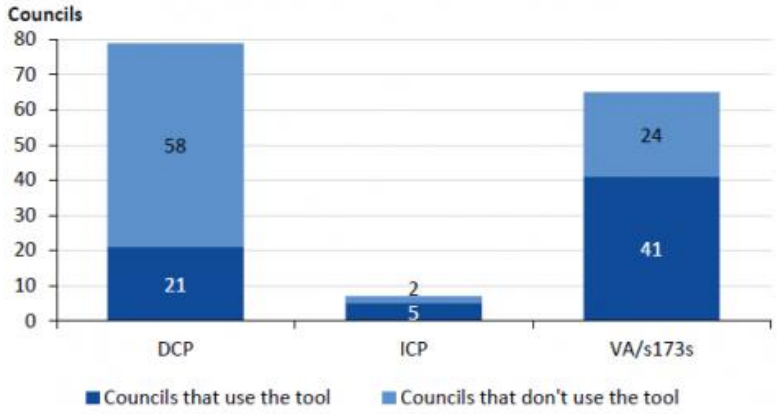
The current contribution system has a variety of approaches

Victoria has several mechanisms to fund local infrastructure. The main tools are Infrastructure Contributions Plans (ICP), Development Contribution Plans (DCP) and Section 173 / voluntary agreements. The ICP system was introduced in 2015 to fund basic and essential community infrastructure and initially planned to phase out the DCP tool. However, roll out of the ICP program in Melbourne's established suburbs stalled after being introduced in growth areas.

DCPs are complex to design and deliver.[16] This contributed to DCPs being inconsistently applied by local councils in Melbourne. VAGO found that only 24 councils collected DCP contributions in 2018-19 (Figure 1).[17] This means that many local councils rely on ad hoc voluntary agreements to fund infrastructure to support development. VAGO notes that voluntary agreements 'are unsuitable for supporting infrastructure

delivery at the scale offered by the DCP and ICP programs.'[18] Development industry stakeholders note that 'that in some cases councils withhold approval for planning permits unless they get contributions to infrastructure from s173 agreements.'[19]

Figure 1: Councils' use of development contributions tools to collect levies



Note: (i) VA/s173s data was based on 65 councils that responded to our survey. (ii) DCP and ICP data is based on information from DELWP. (iii) ICPs are limited to the seven GIE councils. (iv) One GIE council is awaiting ministerial approval of their ICP.

Source: VAGO, Managing development contributions, 2020, p47

The Growth Areas Infrastructure Contribution (GAIC) is a per hectare charge on growth area development used to fund state and regional infrastructure. The government introduced it in 2010 and it applies to land rezoned for urban growth after 2005 in Melbourne. GAIC funding is allocated to 2 funds - the Building New Communities Fund and the Growth Areas Public Transport Fund. These 2 funds can contribute to the costs of new regional and state infrastructure such as schools, justice and health services, regional open space and public transport. It is forecast to contribute up to $3–3.5 billion over 30 years, estimated to be 15% of the infrastructure costs of regional and state infrastructure required to service Melbourne's new growth areas.[20]

Melbourne's established suburbs have no equivalent state infrastructure contribution scheme. By contrast, New South Wales has an existing Special Infrastructure Charge in urban renewal and growth areas that contributes towards the cost of state and regional roads, public transport infrastructure, pedestrian and cycling paths, health facilities, emergency services, schools and open space.[21]

Introduce a broad-based infrastructure charge for state and local infrastructure contributions

The Victorian Government can design a broad-based infrastructure charge to better reflect infrastructure costs in different settings. This charge can be area or dwelling structure based.

Victoria's infrastructure strategy 2021–2051 recommends the Victorian Government create a consistent and efficient infrastructure contribution system that contributes to Victorian and local government infrastructure costs.[22] Strategy recommendation 34 suggests that this scheme can be broadly applicable to all subdivisions that create an extra new home. This can give greater certainty to developers, mitigate boundary effects, help minimise charges and more equitably distribute infrastructure costs. While our research supports changes to the infrastructure contributions system to be more efficient, we found that an equitable rate can reflect different infrastructure costs of developing in different settings.

Plan Melbourne 2017–2050, the Victorian Government's metropolitan planning strategy, includes an action to introduce an 'infrastructure contributions system for strategic development areas in the established suburbs of Melbourne' (Action 109).[23] Our research into infrastructure provision in different development settings[24] shows a place-based charge for some major brownfield urban renewal sites can operate alongside a broad-based infrastructure charge.

A Victorian Auditor-General's (VAGO) report published in March 2020 found that:

> Victoria's development contributions are not delivering the infrastructure needed by growing communities to support their quality of life…This is largely because state agencies have not managed development contributions tools strategically to maximise their value and impact. Instead, they manage the tools in isolation, with overlapping roles and no overarching strategy, goals or plan to drive and measure their collective success.[25]

Since VAGO published this report, the Victorian Government initiated a further review of the infrastructure contribution system. An Infrastructure Contributions Advisory Committee was established in 2020, but the government has not published their findings yet.

NSW progress on infrastructure contributions

New South Wales (NSW) has recently committed to reforming its development contributions system, although reform stalled after consultation on the draft reform package.[26] The draft reform package would introduce a broad-based contribution system to fund regional infrastructure by introducing a flat rate levy on development.[27] The scheme would be rolled out in 4 regions – Greater Sydney, Illawarra-Shoalhaven, Central Coast, Lower Hunter. Funds would be spent in the same regions in which they are collected.[28]

NSW is also considering a structure-based charge that includes a higher per dwelling charge for different housing types and locations. For example, in the Greater Sydney Region, the base rate for the regional infrastructure contribution would be charged at $10,000 per dwelling for apartments and units, $12,000 per dwelling for houses (detached, semi-detached and townhouse) and $12,000 per lot in growth area settings. Depending on the price, an area-based or structure-based charge can more efficiently signal the costs of infrastructure provision in different development settings. This has several benefits including encouraging urban consolidation and new homes that more efficiently use existing or new infrastructure.

The package also includes a transport project component. This involves a variable charge designed to contribute to the cost of delivering major transport projects. It will be applied in defined service catchments where major public transport supports more development opportunities.

The draft NSW system offers a model for the design of a broad-based infrastructure contributions charge. Infrastructure Victoria's research about infrastructure costs in different development settings could be drawn on to support design of an area-based charge that accounts for differences in infrastructure costs between new and established suburbs. This charge can be dwelling based, similar to NSW draft proposal, or area based.

A reformed system can better support new homes in established suburbs

A revised infrastructure contributions system for local and state infrastructure benefits housing supply in established suburbs. It can also influence the location of new homes if designed to reflect the costs of infrastructure in different development settings. Infrastructure contributions reforms in NSW were found to have the following benefits:

- More housing supply.[29]
- Timely delivery of essential infrastructure including public transport.
- Better community acceptance of density when supporting infrastructure is delivered as new homes are built.[30]

- Social and economic benefits from more services.[31]

The timing of contribution payments can affect home prices

Infrastructure charges can fall on developers, landowners or home buyers depending on how charges are designed and delivered.

Property developers operating in established and growth area markets told us that infrastructure charges are passed on to homebuyers. This is debated by economists, who point out that the residual land value model means that, over time, these extra costs are reflected in the price of land. This is reflected in CIE modelling of NSW's infrastructure charge:

> In our view, the direct impacts of contributions as a cost to a developer should not be passed on into housing prices. This reflects that land prices hold a substantial premium over the opportunity cost of the land for its next best use. Over time, higher infrastructure contributions will be factored into lower land values, rather than higher housing prices. There is a complex temporal issue around this, as it may take years for existing landholder expectations to adjust. This suggests that a slow and predictable transition would be most likely to achieve benefits, without leading to contributions reducing housing supply and increasing housing prices.[32]

Research by the National Housing Finance and Investment Corporation (NHFIC) finds the question of who pays is not straightforward and depends on the strength of the nexus between infrastructure and the beneficiary.[33] While developer contributions are levied on the developer of land, costs can also be passed on to either the landowner (when land is sold) or the buyer of new homes. Where there is a strong nexus, and the perceived value of new infrastructure delivered to homebuyers equals or exceeds the infrastructure charge, developers will seek to pass costs on to homebuyers.

However, the application of this user-pays approach to state infrastructure is limited since homebuyers are less likely to be willing to pay unless there are clear and direct benefits that warrant the extra expense. According to NHFIC, where the nexus is weak 'developer contributions act like a tax.'[34] If these costs are known in advance, developers will work the costs into their feasibility studies, with extra costs being factored into the residual land value (how much developers are willing to pay for sites). If charges are introduced after land has been bought, and developers cannot shift costs on to homebuyers, they can affect development feasibility and run the risk of having a negative effect on housing supply.

Area-based charges need careful design

There is anecdotal evidence that inconsistently applied infrastructure charges can create 'boundary effects' that mean property developers choose to develop outside charge areas.[35] While a broad-based contribution system would address this, a special place-based charge for urban renewal precincts might create a perverse incentive to develop outside the special charge area. The design of precinct-based charges can consider this possibility. However, it would likely be balanced by more development rights (for example height and floor area) in higher density precincts that would keep attracting development.

The Victorian Government can introduce a broad-based state and local infrastructure charge. It can stage broad-based infrastructure charges to support factoring the charge into land values. The NSW Government proposed transitional arrangements for the introduction of the regional infrastructure charge. These include a discount rate of 50% in the first year, 25% discount in the second year, and removal of the discount in the third year.

Infrastructure costs can differ by location

Infrastructure Victoria recommended changes to the infrastructure contributions system to be more efficient. A rate that reflects the infrastructure costs of developing in different settings can be efficient and equitable. Our 2019 *Infrastructure provision in different development settings* report tests infrastructure costs in 4 development settings.[36] It finds infrastructure costs can be 2 to 4 times more expensive in a growth area compared with a similar development in an established suburb, where existing infrastructure has the capacity to support growth. These relative costs can be signalled to the market by creating area or dwelling based charges.

The Victorian Government can also consider extending a reformed contributions system to established suburbs in fast growing regional cities such as Geelong and Ballarat. It can more directly support infrastructure for new homes in existing suburbs as alternatives to greenfield housing.

In *Victoria's infrastructure strategy 2021–2051* we recommended that the Victorian Government complete a review of Victoria's infrastructure contributions schemes in the next 2 years. In the past 12 months the Infrastructure Contributions Advisory Committee produced a final report. The Victorian Government can keep progressing work to review and reform infrastructure contributions.

Synergies with other options

Reformed infrastructure contributions can complement the Victorian Government's delivery of housing targets (see Policy option: **Measure and incentivise progress towards new local housing targets**). A consistent approach to contributions in established suburbs can give more financial certainty to local governments about funding for infrastructure upgrades and improvements to support new homes. When infrastructure is delivered as more homes are built, communities are more likely to accept changes in density.[37] The Victorian Government can start work with local government on both options immediately. It can prioritise measuring local infrastructure capacity to inform the size and location of housing targets and the contributions needed to achieve them.

Table 2: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	An infrastructure contributions system that takes account of costs in different settings in established suburbs can support a variety of new homes' development. Developers can have more certainty about infrastructure costs associated with developing large sites with capacity for many new homes. It can also support smaller scale development by broad geographic application which then minimises the cost to individual developers.
Price	Means more moderate income households can afford to live in established suburbs	Infrastructure contributions in established suburbs can increase home prices if developers pass on the costs to consumers. A clear system that gives developers certainty can lead to more supply and lower prices.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	Expensive land: Reformed infrastructure contributions can make development on larger land parcels in established suburbs more financially feasible Development financing is risk averse: a clear and transparent infrastructure contribution system can give more certainty about the full development cost for new homes

Criterion	Description	How the option addresses the criterion
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene	The Victorian Government can keep working on reforming the infrastructure contributions system and address the inconsistency of contributions in established suburbs. Taking a metropolitan approach is more efficient than individual local governments developing their own contribution systems.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Melbourne's growth areas have contribution systems for local and state infrastructure. Local governments in established suburbs can support a system that helps their infrastructure funding challenges and give more certainty about sources for state infrastructure. A clear system can reduce ad hoc demands on the Victorian Government budget. The development industry values clarity and transparency, which a reformed system can bring. Local communities may be more supportive of more homes in their neighbourhoods if clear funding for upgraded or new infrastructure is available.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	A reformed system can better reflect infrastructure costs in different contexts. Specific area-based charges can support places that are priorities for homes that are substitutes for greenfield houses. Alternatively a per dwelling charge can apply more broadly. Both approaches can be extended to established suburbs in regional cities.

Reform stamp duties that distort home choices

Remove the distortions created by stamp duty concessions and ultimately abolish stamp duties altogether, potentially by replacing them with a broad-based land tax.

Government programs influence people's decisions about where to buy a home

Successive Australian governments have tried to stimulate housing supply and increase home ownership rates for decades. Housing policies have stemmed from the historical issues of the post-war period when population growth threatened to overwhelm the number of homes available.[38] Today, the most prominent issues in housing policy are affordability and the location of development.[39]

The Victorian Government established several schemes to promote home ownership and tackle housing affordability problems. However, these programs inadvertently skew the preferences of homebuyers to favour new homes in growth areas. Our research shows that housing affordability and relative prices for different types of homes are a factor in many people's decision to buy in new suburbs. Many factors influence these relative prices, including the Victorian Government's stamp duty regime and the Australian Government's negative gearing tax concessions.

Phasing out stamp duties (and stamp duty concessions) can reduce the price differentials between homes in new growth areas and other places, especially for people eligible for concessions. This can reduce demand for homes in new growth areas and help encourage people to consider homes in established suburbs.

Home buyers use stamp duty concessions in greenfield suburbs

Stamp duties (or land transfer duties) are a tax on the transfer of land ownership, collected by the Victorian Government on the sale of a property or land. Stamp duties are the major source of property tax revenue for the Victorian Government. They raised $10.2 billion in the 2021–22 financial year, although this is expected to reduce to $8.2 billion in the next financial year.[40]

At face value, the tax creates an extra up-front cost for homebuyers on top of a home deposit. The Reserve Bank of Australia says that 'the cost of stamp duty is small relative to the sale price of a property but … can still be a large initial outlay for buyers.'[41]

Economists debate the extent that stamp duty costs homebuyers, and whether the buyer or seller receives the benefit of stamp duty concessions. In either case, our research shows that the existence of stamp duty, and its concessions, are influencing people's home choices. People are more likely to choose a home eligible for a concession over one that is not eligible. People are also likely to avoid 'upsizing' or 'downsizing' their homes due to the impost of stamp duties. This means they are more likely to prefer a 'forever home' where they can avoid subsequent moves, rather than change their home as their family changes.

Current policies to reduce the financial pressure of stamp duty on first homebuyers come from concessions and exemptions. Victoria has 3 stamp duty exemptions and concession criteria:

- Residential properties up to $1 million in the City of Melbourne are eligible for exemptions and concessions.
- First homebuyers are exempt for residences costing $600,000 or less, and concessions for residences costing between $600,001 and $750,000.
- A one-off stamp duty exemption for pensioners buying a home valued at $330,000 or less, or a one-off stamp duty concession for properties valued between $330,001 and $750,000, to encourage retirees to downsize and improve mobility in established suburbs.[42]

The second concession aims to reduce the cost of the tax on people buying their first home. However, it disproportionately applies to properties in new suburbs, which are more likely to be below the price thresholds. These areas likely contain most of the options to buy an appropriate home for first homebuyers with, or planning for, children (such as with 3 or more bedrooms) for $750,000 or less.[43] Combined, these 2 stamp duty concessions cost the Victorian Government $834 million in the 2021–22 financial year.[44]

Most academics and policy makers agree that stamp duty produces an inefficient use of housing by charging people who move home.[45] This means that stamp duties interfere with the ability of people to buy and sell homes to find the one that best matches their needs at the right prices.

For example, people might avoid gradually upsizing their home as their family grows. Instead, they might try to buy a larger 'forever home' immediately to avoid the impost of stamp duty if they upsized later. This means stamp duty might prompt first homebuyers to buy larger homes earlier than they need. Similarly, an older person or couple might want to downsize to a smaller home, but due to the transaction costs of stamp duty, they remain in their large home.[46] Retirees can be further discouraged from downsizing by the Age Pension assets test, which excludes the family home from assessable assets. This means a larger home in an established suburb is not available for larger household. Economists call this a 'vacancy chain effect'.[47] Stamp duties can interfere with this market mechanism, creating excess demand for larger homes, which can be expressed by excess demand for homes in growth areas.

Reform stamp duty as a first step towards moving to a land tax

The Victorian Government can begin reforming stamp duty with the intention of eventually transitioning to a land tax. It can start by phasing out many of the first homebuyer concessions that are influencing people's decisions to buy homes in growth areas. This can be a selective process, which allows the government to keep concessions that relieve cost-of-living pressures and encourage mobility, such as the pensioner exemption.

Stamp duty is a major source of revenue for the Victorian Government, but it also discourages people from moving homes. The National Housing Finance and Investment Corporation found that Victoria has the largest effective rate of transfer duty in Australia and has the most to gain from stamp duty reforms.[48] Removing stamp duty improves the allocative efficiency of housing markets, including in established suburbs. A more efficient allocation of housing in established suburbs, through a vacancy chain effect, can mean less demand for homes in growth areas.[49]

Expanding land tax to comprehensively cover the housing market is a good candidate for a replacement revenue source. It can help encourage turnover and mobility in the housing market. Unlike stamp duty, a broad-based land tax is more efficient and does not create distortions in the market like stamp duty does.[50] Victoria's existing land tax only applies to extra residences (investment and holiday homes), commercial properties and vacant land.[51]

Many institutions and advocates support broadening land taxes to replace stamp duty. For example, the OECD recommends transitioning away from a system of transaction taxation, such as stamp duties, towards recurrent taxes, such as land or property tax.[52] Replacing stamp duty with a property or land tax has been modelled as increasing home ownership rates among younger people and reducing renting. International studies demonstrate that a land tax can achieve both 'greater economic efficiency [and] "smarter" growth patterns' in sprawling cities.[53] A land tax that makes the use of large amounts of land more expensive can encourage denser development.[54]

Consider models from other states

The Australian Capital Territory (ACT) and New South Wales (NSW) have already started to switch from stamp duty to land taxes.

The ACT Government began phasing out stamp duty in 2012 by slowly reducing stamp duty and replacing it with subsequent rises in property rates to counterbalance the loss of revenue. It is

estimated that the ACT will completely phase out stamp duties by 2032.[55] This option is unique to the administration of the ACT, where the territory government plays the role of a local and state government, and would not be directly applicable in Victoria.[56]

The NSW Government passed the Property Tax (Home Buyer Choice) Bill 2022 on 10 November 2022. This gave first homebuyers an option to 'opt-in' to paying a land tax as a compromise to paying stamp duty, giving them a choice to select a system that will best benefit them.[57] Modelling of home ownership in New South Wales concluded that that some home owners will be better off under the stamp duty system.[58] While this reform model addresses the concerns of home owners, it will take a long time to deliver – it estimated that it will take 23 years to transfer all housing stock in New South Wales onto a land tax system.[59]

Along with these 2 examples, the WA Chamber of Commerce and Industry proposed 2 theoretical models of stamp duty reform. A straight-swap reform abolishes stamp duties outright and replaces them with a land tax applied at a property's Gross Rental Value. This will keep government income from stamp duty relatively stable, and can be introduced alongside short-term measures to address opposition to the tax.[60] An alternative switch-on-sale model introduces a land tax only when a property title changes hands. This approach can reduce concerns for recent homebuyers that they might be forced to pay a land tax after recently paying stamp duties. However, it 'creates an incentive for people to avoid moving to a new house', not unlike the current disincentives caused by stamp duties.[61]

The Victorian Government can explore an opt-in model similar to the NSW approach. This can gently introduce the changes, and give home owners a choice to best suit their circumstances. The government can monitor the degree to which these changes shift home preferences and better mobility.

If changes are occurring too slowly using an opt-in model, or if effects on revenue are not as desired, the Victorian Government can then consider either of the WA Chamber of Commerce models – a straight-swap reform or a switch-on-sale model.

Regardless of the model selected, however, introducing a land tax, and phasing out stamp duty, will require ongoing work. A land tax will need to be reviewed regularly, and keep being adjusted, to keep speed with property values to ensure equity.

Stamp duty reform can help reduce market volatility

Removing stamp duties will allow greater mobility in the market by removing the tax on buying and selling a home. We expect removing price ceilings associated with stamp duty concessions will produce home prices that more accurately reflect market value.

A land tax can also reduce the cost differential between growth areas and established suburbs. It is expected that a land tax will influence homebuyers' choices when it comes to deciding between a larger home in a growth area or a smaller home in an established suburb.[62] This influence will work in tandem with the outcomes described above following the removal of stamp duty.

A regular land tax can also create a reliable, predictable form of revenue for the Victorian Government, in contrast to the volatility of stamp duty which fluctuates with unpredictable volumes of market transactions.[63]

Phasing out stamp duty and phasing in land tax requires careful consideration

Sudden property tax reform risks causing housing market instability. Modelling indicates that the removal of stamp duty can cause a flurry of short-term activity in the housing market.[64] Phasing in stamp duty to land tax reform slowly can help minimise shocks to the housing market. The ACT and NSW approaches to phasing in reforms to stamp duty and land tax over several decades present possible models for Victoria.[65]

Property tax reform, particularly the implementation of recurrent taxes, is not universally popular.[66] Opposition to tax reforms might make them difficult to deliver. Land tax might be particularly unpopular with existing home owners. One study showed existing homeowners prefer stamp duty, or would prefer it was replaced with a consumption tax, rather than replacing it with a land tax.[67] The OECD recommends bundling tax reform together with more popular policies, or with improvements in service delivery, to encourage people to accept a land tax.[68]

A carefully designed transition to a land tax can minimise disruptions to the Victorian Government's revenue base. Economic modelling demonstrates that the transition can be 'revenue neutral', but can cause a revenue shortfall in the short or medium term if taking the NSW 'opt-in' approach.[69] Commentators have suggested that the Australian Government support land tax reforms by covering gaps in the budget during the initial transition period. This assistance could be similar to past National Competition Policy payments, which provided financial support to state and territory governments in exchange for delivering productivity enhancing reforms.[70]

Rushing to introduce a broad-based land tax without detailed consideration to avoid unintended consequences can be risky. For example, a land tax that universally applies taxes based on the size of the property can significantly disadvantage people in rural areas. Also, the transition from stamp duty to land tax can interact with other taxes and government funds in unexpected ways.[71] The OECD recommends a slow transition away from stamp duties towards land taxes to prevent unintended consequences to the housing market, such as a further reduction in housing affordability.[72]

Consider taking time to implement legislative change

The Victorian Parliament is in the process of establishing an inquiry into stamp duties which is scheduled to deliver its findings in late 2023.[73] Any changes to stamp duties and land tax will require legislation to pass the Parliament. Stamp duty in Victoria falls under the Transfer of Land Act 1958 and the imposition of land tax is established under the Land Tax Act 2005.

The introduction of land tax in place of stamp duty would affect all properties in Victoria.

The length of time required to phase out stamp duties and introduce a land tax in its place will depend on the approach the government decides upon. It can start by phasing out many of the first homebuyer concessions that are influencing people's decisions to buy homes in growth areas. This can be a selective process, which allows the government to maintain concessions that relieve cost-of-living pressures and encourage mobility, such as the pensioner exemption. While the initial rollout of a switch can be introduced as part of the regular budgetary cycle, fully phasing out of will take much longer. Both the ACT and NSW government models are expected to take decades to complete. Alternatively, a straight-swap reform model can be a faster alternative albeit with a greater risk of market disruption and consumer concern.

Synergies with other options

Stamp duty reforms need to be carefully phased to minimise the effect on demand, home prices, government spending and revenue. The Victorian Government can phase in a sequence of changes to stamp duty over the medium term so that government revenue effects and costs to home owners are appropriately managed. This option can be packaged with other medium-term policy reforms (see Policy option: **Use government 'shared equity' schemes to encourage established suburb home ownership** and Policy option: **Encourage child-friendly design in new apartments**).

Other related options

Preparing these reforms can occur at the same time as the Victorian Government rolls out planning changes to support more residential development in urban renewal precincts and established suburbs more broadly.

Table 3: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Phasing out stamp duty will not increase housing supply, but it can increase households' willingness to move home, including to established suburbs where price differentials are lower because of its removal. Removing the concessions for greenfield homes can also shift the location of households' demand for homes towards established suburbs. A land tax makes large land holdings expensive and encourages more intense development.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	If households do not need to pay stamp duty, they can buy homes suited to their current needs, upsizing and downsizing as their situation changes.
Price	Means more moderate income households can afford to live in established suburbs	Stamp duty increases the upfront cost of a home where a land tax can distribute costs over time. Home prices can more accurately reflect market value and be more affordable to moderate income households.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	Phasing out stamp duty can reduce demand for greenfield homes. Reducing the price differences between homes in growth and established suburbs can influence developers' decisions to build homes in established suburbs.
Actionable	Is practical to implement and identifies a clear role for the Victorian government to intervene	The Victorian Government is responsible for stamp duty collection and concessions. The New South Wales and Australian Capital Territory governments began slowly implementing stamp duty reform and provide models to consider.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Other state governments began phasing out stamp duty and replacing it with a land tax. Stamp duty is a major source of Victorian Government revenue. A land tax is more economically efficient and leads to more efficient use of land. Transitioning to a land tax will need to be carefully managed so the budget remains 'revenue neutral'. Gaps in the budget during the transition phase might require Commonwealth Government support. Existing home owners might not support a land tax; it will need to be bundled with other reforms or improvements.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	Stamp duty can be phased out over time. NSW offers an opt-in approach.

Remove home subsidies that encourage greenfield choices without improving affordability

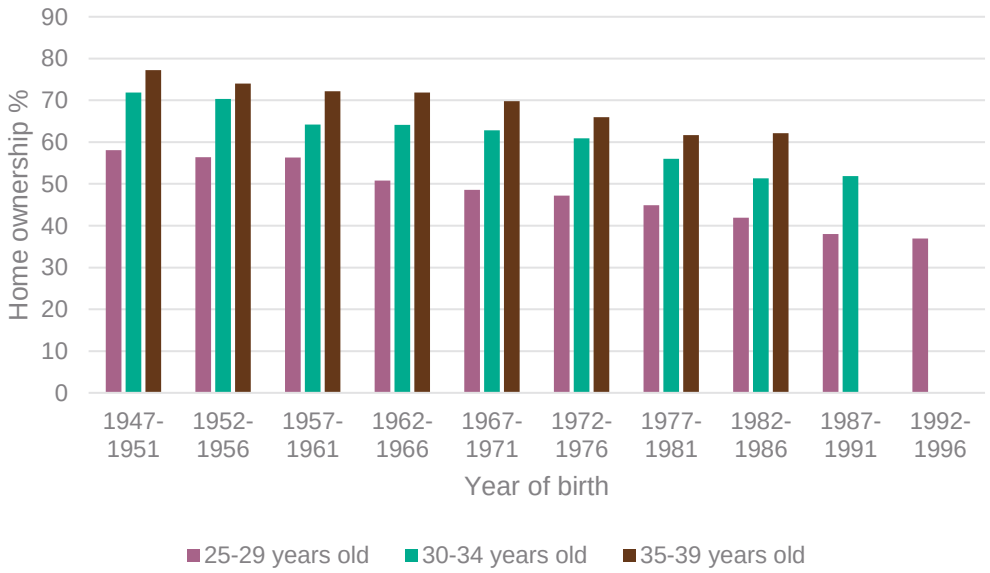
Avoid subsidies that inflate house prices and remove the First Home Owner Grant.

Government subsidies contribute to demand for greenfield homes and push up prices

Our research found available government subsidies and concessions influence many people's home choices. Government homebuyer subsidies, like Victoria's First Home Owner Grant (FHOG), often have criteria that restrict the type of home people can buy with it. For example, FHOG only subsidises newly built homes at prices below $750,000.[74] For people wishing to buy a home large enough for a couple and dependent children, few larger new homes are available below this price outside growth areas. This means these grants can influence people's choice to buy a new home in new suburbs, as they will not receive the subsidy for an existing home in established suburbs at the same price.

First home owner programs have been a staple of federal and state housing policy on-and-off for 60 years. The Australian Government introduced a FHOG in 2000 to offset concerns relating to the introduction of the goods and services tax.[75] It added to this with the First Home Owner Boost in response to the global financial crisis in 2008. More recently, governments delivered extra home owner grant schemes in response to the COVID-19 pandemic, such as the Australian Government's Homebuilder Grant. Applications closed for the Homebuilder Grant on 14 April 2021, but some homes funded by the grant are still being built. Each time the Australian Government introduces a FHOG, home prices spike. Evidence suggests these schemes do not actually increase first home ownership rates because new cash grants add upward pressure to home prices.[76] Yet home ownership rates among young people in Victoria keep declining despite periodic federal and state government first home owner schemes (see Figure 2).[77]

Figure 2 Home ownership rate by birth cohort and age group in Victoria



Source: Australian Institute of Health and Welfare, 'Home ownership and housing tenure', 2 August 2022.

At the time of writing (March 2023), the Victorian FHOG gives $10,000 towards buying a first home, including houses, townhouses, apartments, or units. People can only use it for newly built properties valued at $750,000 or less.[78] The scheme excludes established properties.

A first home owner qualifies if they are an Australian citizen or permanent resident over the age of 18 who did not previously own a residential property before 1 July 2000. But people owning investment properties can still be eligible if they never lived in that home. However, the applicant must use the grant to buy their main place of residence, and they must occupy the property for at least 12 months after settlement or construction. The grant has no income criteria.[79]

The government previously adjusted the grant to stimulate or cool the housing market. It raised the grant to $20,000 for regional Victorian applicants in 2017. It phased out this change on 30 June 2021 after the COVID-19 pandemic caused a surge in regional home prices.[80]

First home buyers typically use the grant to buy homes in new suburban estates of Melbourne and regional cities.[81] This is because the homes are new, often sell below the grant's $750,000 price threshold, and first homebuyers prefer larger homes.[82] In effect, the grant stimulates demand for new homes in growth areas.

Homebuyer grants mainly allow people to buy homes sooner, rather than help people who otherwise couldn't buy a home.[83] Housing supply is relatively inelastic in the short term, meaning sudden shifts in demand translate into home price rises. Home owner grants stimulate demand, but do little to increase the supply of new homes.[84]

Grants artificially push up demand for homes in places where first homebuyers can afford to buy.[85] A 2012 study observed that any increase in the Australian Government FHOG throughout the 2000s resulted in a subsequent house price increase. They concluded that a $7,000 grant effectively increased median house prices by $57,000.[86] A recent study confirmed these findings, stating that FHOGs are 'likely to raise rather than to lower house prices.'[87] The Productivity Commission warned that this can lead to an 'assistance spiral', meaning governments feel obliged to offer more grants and concessions to keep up with the inflated costs.[88]

Remove the First Home Owner Grant

The Victorian Government can remove the First Home Owner Grant (FHOG) to avoid continuing its distorting encouragement of demand for housing in greenfield areas while not actually improving affordability. First home buyers typically use the FHOG to buy growth area homes. This can inflate demand for these homes. Because most people who receive the grant would likely buy a home anyway, even if a little later, it means that it does not improve home ownership rates. Removing FHOGs can likely reduce demand for growth area homes while having few negative consequences for home ownership rates.

The FHOG is a market distortion. Removing it will allow the property market to reflect home preferences more accurately. Homebuyers looking for the best 'value for money' are currently more likely to consider home options in growth areas than other buyers.[89] These homebuyers are also the more likely to consider established home options if they perceive a smaller price differential.[90]

Phasing out the FHOG is in line with Recommendation 10.1 in the Productivity Commission's recent National Housing and Homelessness Agreement study report.[91] They also say that:

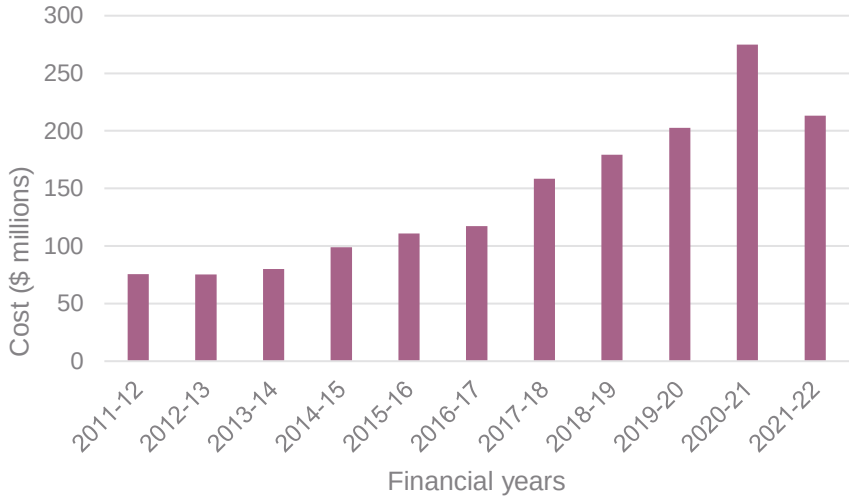
> The case for governments providing assistance to help people buy a home is not strong unless it is targeted at specific cohorts who experience persistent marginalisation in the housing market. Governments would be better spending the money allocated to assist first home buyers to support the housing needs of people who are homeless or at risk of homelessness.[92]

The Victorian Government can save money

The FHOG artificially brings forward housing demand that is disproportionately expressed in new growth suburbs. Removing this demand side distortion can reduce demand for growth area housing, which will in turn affect the places where developers prioritise home building.

The cost of the FHOG to the Victorian Government increased substantially in recent years (see Figure 3). Uptake of the grant reduced from its peak of in 2020-21, following a pandemic-induced housing sale boom, but the Victorian Government spent $213 million in 2021-22 funding the grant – over double the total for 2015-16.[93]

Figure 3 Cost of the First Home Owner Grant to the Victorian Government, 2011-12 to 2020-21



Source: State Revenue Office Victoria, First home owner statistics, 4 November 2022.

Removing the First Home Owner Grant will require management of transitional issues

The First Home Owner Grant (FHOG) remains popular, and its withdrawal might not be well-liked among potential homebuyers and the housing development industry.[94] These groups expect the FHOG to be available, and factor it into their financial decisions, the price-points they build homes for, and the areas people are likely to use it.

Withdrawing the grant has a small risk of disrupting the housing market. This can happen if the government announces the program is ending well in advance of its end date. During this period, first home buyers might rush into the market before the grant is withdrawn. This can create an artificial spike in demand in affordable growth areas, which can translate into a sudden home price rise and population spike in these places.

The government can avoid this effect if they announce the end of the FHOG with immediate effect. Governments have previously reduced or removed first home buyer grants relatively quickly.[95] This minimises any demand shocks, as people have little time to buy homes early and stay eligible for the grant.

Changing the First Home Owner Grant can happen rapidly

The Victorian Government can repeal the relevant sections of the First Home Owner Grant and Home Buyer Schemes Act 2000 to implement this option.[96] This will require passage of amending legislation in the Victorian Parliament. Governments achieve this with consequential legislation accompanying the Budget.

Removing the FHOG will apply everywhere in Victoria, but will have a larger effect in growth areas, where people typically use the grant.

The government can deliver the option immediately after the repeal of relevant legislation. This type of change is typically backdated to the date of the announcement to avoid disruptions to the housing market.

Synergies with other options

Removing the First Home Owners Grant (FHOG) can be introduced alongside changes to infrastructure contributions (see Policy option: **Reform infrastructure contributions to send the right price signals**) and work to develop housing targets (see Policy option: **Measure and incentivise progress towards new local housing targets**). A short lead time for delivery can help to reduce any sudden increase in homebuyer demand, if people try to buy homes before the grant is removed.

Other related options

Previous budget allocations for the FHOG could be re-directed to an expanded 'shared equity' scheme that is geographically targeted to homes in established suburbs (see Policy option: **Use government 'shared equity' schemes to encourage established suburb home ownership**).

Table 4: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Removing subsidies that inflate prices in growth areas will not directly increase housing supply in established suburbs. It can reduce price differences with homes in those areas and lead to more demand. This can give developers and financial institutions more confidence about residential projects in established suburbs.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	Removing subsidies that inflate prices in growth areas will not directly increase homes with 3 and 4-bedrooms in established suburbs. It can reduce price differences with homes in those areas and lead to more demand.
Price	More moderate income households can afford to live in established suburbs	Removing housing subsidies can reduce inflated home prices.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	FHOG influences the demand for houses in growth areas, which are the most accessible product for first home buyers. Removing this subsidy would likely reduce the imbalance in demand between growth areas and established suburbs.
Actionable	Is practical to implement and identifies a clear role for the government to intervene	The Victorian Government can choose to phase out their First Home Owners Grant with the passage of amending legislation.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	The First Home Owners Grant (FHOG) is popular with households and the development industry, even though it does not improve affordability and distorts choices. Phasing out the FHOG can reduce the Victorian Government's spending on the scheme, but will need to be paired with other options to be politically feasible.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	Phasing out housing subsidies such as the FHOG can reduce demand for greenfield housing and increase demand for established area homes as the price difference between the areas decreases. This can also occur in regional cities with large growth areas.

Use government ‘shared equity’ schemes to encourage established suburb home ownership

Over time, change the locations eligible for the Victorian Homebuyer Fund, to encourage people to buy homes in established suburbs.

Better ways to support home ownership

The Victorian Government has established several schemes to promote home ownership and tackle housing affordability problems. But these programs might inadvertently encourage homebuyers to choose more homes in growth areas. Shared equity schemes can be a helpful tool to improve access to home ownership. They can be a better choice than stamp duty concessions or cash grants for government budgets. This is because the government keeps an ownership share in exchange for financial support, and it can recoup the funds when the homeowner sells the home or buys back the government share. This means the government can recycle the funds and help many more people.

The Victorian Homebuyer Fund is biased towards greenfield rather than established suburb home ownership

The Victorian Homebuyer Fund is a Victorian Government shared equity scheme. The scheme assists home ownership by taking part ownership of the home. It had more than 3,000 participants as at October 2022. The Victorian Government made a 2022 election commitment to create another 7,000 spaces.[97]

The scheme aims to reduce inequity in the housing market. It has specific lending criteria. It supports homebuyers with an income of less than $128,001 a year who saved a 5% deposit.[98] For eligible participants, the government contributes up to 25% of the price of a home. The scheme offers up to a 35% contribution to Aboriginal and Torres Strait Islander applicants who have a 3.5% deposit. In return, the government receives an equivalent ownership share of the home.

The scheme has several conditions, including yearly eligibility reviews and property maintenance requirements.[99] The scheme’s current maximum home price is $950,000 in metropolitan Melbourne and Geelong, and $600,000 in other eligible regional locations.[100]

The government already targets the scheme at specific locations. It spatially limits the scheme’s eligibility to greater Melbourne and regional towns, including new suburban estates.[101] It set these limits so many people can participate in the fund.

The scheme expects home owners to buy back the government’s share of the home over time. It requires mandatory repayments if participants meet any of the following criteria:

- the home owner’s gross annual income exceeds the applicable threshold on 2 consecutive annual reviews
- the home owner receives a windfall gain, such as an inheritance or lottery win, of over $10,000
- the home owner made a mandatory payment and their gross annual income increased by 10% or more and the home owner has lender approval to increase their home loan.[102]

The scheme also accepts voluntary repayments, but these must exceed at least 5% of the fund’s share in the property. Home owners need special approval to repay the full amount of the fund’s contribution, or to reduce the state’s equity below 5%, for 2 years after first buying the home.[103]

If a home owner does not reach any of the mandatory criteria or make any voluntary repayments, the government keeps its share in the property until the home owner decides to sell. If the home owner sells, the fund receives a proportional share of the home's sale price.[104]

Like other demand side measures, such as first home owner grants, shared equity schemes can stimulate housing demand. By taking part ownership in a person's home, the government allows people to buy a home they cannot otherwise afford. This can increase home ownership rates when it allows people to enter home ownership who otherwise would have been lifelong renters. These schemes are most likely to support people with lower incomes or those seeking to buy more affordable homes. If they wish to buy a larger home to accommodate children, new growth areas are likely to offer the most feasible options.[105] This can elevate demand for these homes.

The fund can be limited to established suburb homes

The Victorian Government can change the existing geographical boundaries for fund eligibility, by limiting the fund to established suburbs to encourage people to buy in these places.

The scheme is still in its early stages, and we do not have enough data to assess its effect on housing demand. However, if the fund is popular and keeps growing, changing its eligibility criteria to exclude homes in new suburbs can encourage people to buy more homes in established suburbs.

The Victorian Homebuyer Fund has very few limits on its spatial eligibility criteria. The government can use the scheme as a policy instrument to encourage changes in housing choices and can influence both developers and homebuyers. The government can make this change at the same time as other changes, such as phasing out the First Home Owner Grant and reforming stamp duty. This uses the fund to encourage development in established suburbs, and increases the appeal of established suburb homes to 'value for money' driven homebuyers. Combining this change with other measures that stimulate the supply of new established suburb homes can help avoid causing demand-induced price increases.

Shared equity can improve housing affordability in good locations

The Grattan Institute found that shared equity schemes are a more effective tool to encourage first home ownership than grants and concessions.[106] If existing first homebuyer grants are abolished, shared equity schemes can become the main source of government assistance for first homebuyers.

International examples of shared equity schemes support this conclusion. In the UK, the Help to Buy Equity Loan scheme, first launched in 2013, successfully grew the UK housing market. It caused a housing demand increase that boosted investment and confidence in the housing market. New home building grew by 43% by 2015 'over and above what would have been built in the absence of the policy.'[107]

Using shared equity schemes as the major government support program for first home buyers can give the Victorian Government a more precise policy tool to improve housing affordability. Between 1989- 2015, the Western Australian Government's shared equity program had helped over 85,000 low and moderate income households enter into home ownership, with the government only making a loss in 1999.[108]

Schemes can have financial risks

Shared equity schemes are demand-side interventions in the housing market. They allow more people to buy homes, or buy them at higher prices, than they can otherwise. This produces some risks.

Schemes can expose the government to greater financial risk. Shared equity applicants are more likely to be at greater risk of market insecurity, which will heighten the risk of the government being exposed to financial risks during a market downturn.[109]

The government's willingness to improve housing affordability might be negatively affected. Shared equity schemes use direct government investment to deliver housing outcomes. Compared to grants, shared equity allows the government to maintain greater control over its investment. This can include attaching lending

conditions, and capital recycling. However, unlike grants, these schemes expose the government to the financial risks of the housing market. A large shared equity scheme creates an incentive for governments to counter home price falls, as these affect the government's financial position.

These schemes can increase housing demand. If this extra demand is not matched with extra supply, prices can rise, effectively cancelling out any affordability improvements from the scheme.[110] A very large or poorly targeted scheme, not matched by more supply, can be ineffective in improving housing affordability.

To use the Victorian Homebuyers Fund effectively to influence home choices, the fund must be sufficiently popular with first home buyers. The fund supports a very small percentage of all homebuyers, having only 3,000 participants as at October 2022. The Victorian Government promised to expand the scheme to 10,000 participants during the 2022 Victorian election.[111] The size of the scheme's effect on housing choices is related to the number of participants. A small scheme will likely have a small effect on home choices.[112]

Stakeholders told us that one cause of the relative popularity of the Victorian Homebuyer Fund, compared to the earlier HomesVic Shared Equity pilot program, is its more generous eligibility requirements.[113] In contrast, the government restricted the HomesVic program to 33 'priority areas' of selected suburbs in Melbourne, peri-urban areas and regional towns.[114] This means that if the government makes sudden or drastic changes to the Homebuyer Fund, potential homebuyers might not use it. Too many restrictions on the places or home types eligible for the fund can also expose the fund to greater financial risks because it will have a less diverse portfolio of assets.

The Australian Government also funds support for first home buyers, regional home owners and single parents under the Home Guarantee Scheme. The Australian Government is also proposing a national shared equity scheme.[115] Using the Victorian Homebuyer Fund to influence housing choices might be affected by its interaction with any new federal scheme. For example, a new federal scheme might inhibit the effectiveness of using the scheme to affect housing policy in Victoria.

Changes to the existing scheme can be straightforward

The Victorian Homebuyer Fund is a 'homebuyer scheme', as defined under Part 2A of the First Home Owner Grant and Home Buyer Schemes Act 2000.[116] The Act says that, once declared in the government gazette, the Commissioner of State Revenue administers homebuyer schemes on behalf of the Treasurer.[117] This means the government can change the details of a homebuyer scheme without changing the Act. This includes changes to the areas eligible for the Victorian Homebuyer Fund.

The government can specify that the fund only applies to homes in established suburbs.

Shared equity can be more influential over time

The fund might need more time to become established before it can successfully influence home choices. We expect that it will become effective more quickly if the government concurrently pursues other options we present in this report, such as phasing out the First Home Owner Grant and reforming stamp duties. As the fund becomes more popular, its use as a tool to influence home choices gets stronger.

Synergies with other options

Targeting the Victorian Homebuyer Fund to established suburbs can help moderate income households achieve home ownership in areas that have existing infrastructure to support children's needs such as childcare and schools. It can help direct demand for better designed apartment buildings that incorporate child-friendly design. Updating standards to achieve improved apartment design outcomes can happen in the next 1 or 2 years but changes in actual projects will take longer. In the medium term, households with children can have greater confidence that apartments can be a suitable substitute for a greenfield home.

The Victorian Government also needs more time to understand the effects of the Victorian Homebuyer Fund. When considering scheme changes, it can consider improving access to home ownership for households with children.

Other related options

Over time, budget allocations for homebuyer subsidies such as the First Home Owners Grant can re-direct to an expanded Victorian Homebuyer Fund to continue Victorian Government support for home ownership.

When households demand more homes in established suburbs and are supported to buy using a shared equity scheme, developers are likely to respond. Any extra homes that they build will contribute to meeting housing targets.

Table 5: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	A shared equity scheme will not increase housing supply but can create extra demand for homes suitable for moderate income households. This can give developers confidence that demand exists for their developments.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	A shared equity scheme can create extra demand for homes with 3 and 4-bedrooms. This can give developers confidence that demand exists for their developments.
Price	Means more moderate income households can afford to live in established suburbs	The existing Victorian Homebuyer Fund is limited to moderate income households. By restricting eligibility to established suburbs, more demand will exist for homes in this areas. However, if this extra demand is not matched with extra supply, prices can rise.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	The geography of demand: a revised shared equity scheme can restrict home eligibility to established suburbs and create more demand in those locations. This can give developers confidence that demand exists for their developments.
Actionable	Is practical to implement and identifies a clear role for the Victorian government to intervene	The Victorian Government has a small, existing shared equity scheme. It can choose to expand the scheme with revised geographic eligibility if it is popular.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	The Victorian Government has committed to expanding the Victorian Homebuyer Fund. Limiting eligibility to established suburbs can create demand for homes in those places and support development activity in places well-served by existing infrastructure. The development industry and financial institutions are likely to support a geographically-targeted shared equity scheme as it can increase demand for projects in established suburbs. It can give greater certainty of a return on investment. Generous eligibility requirements make the current scheme popular. Changing those to restrict eligibility to established suburbs can support households that otherwise can only afford a greenfield home.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	The Victorian Government committed to expanding the Victorian Homebuyer Fund to 10,000 participants. A larger scheme can have a bigger effect on home choices in established suburbs.

Options to build more homes in established suburbs near transport and services

Measure and incentivise progress towards local housing targets

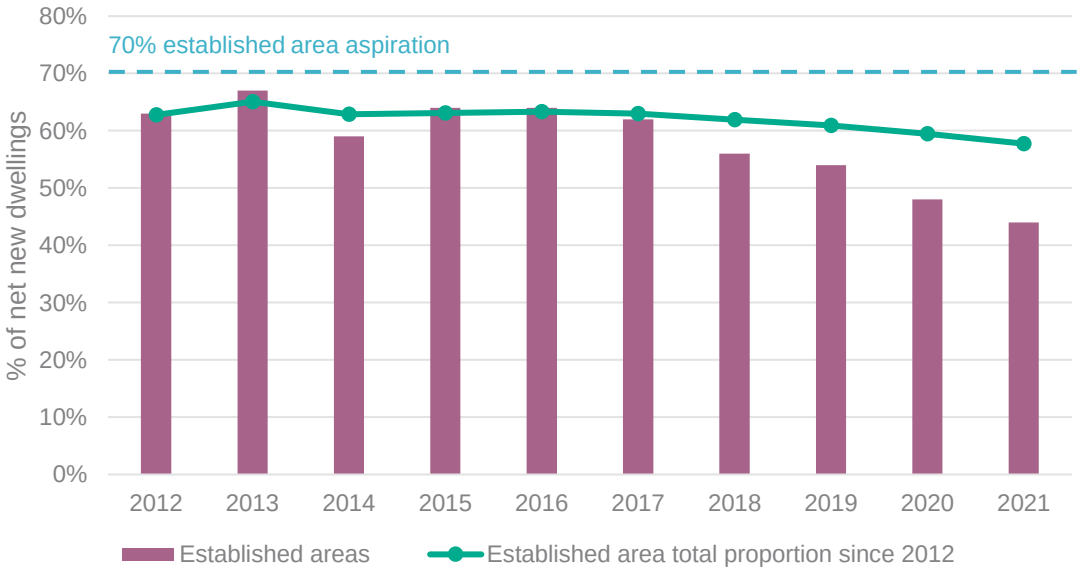
Set targets for the number, type and size of new homes in each Melbourne local government area, in collaboration with local governments. Offer local governments incentives to meet the targets. Measure progress by closely monitoring new housing supply and publishing detailed statistics at least every year, including by home type and characteristics.

The share of homes built in established suburbs is diminishing

The number and variety of new homes built affects home prices, and whether people can buy a home they want. It affects the housing market's ability to meet household preferences, including the type, location, and cost of homes.[118] Despite building one million new homes in the last 10 years, Australia has fewer dwellings per thousand people in contrast to most other OECD countries.[119] The Productivity Commission recommends setting national and state dwelling targets to address this, 'facilitated by planning reforms and better co-ordination of infrastructure'.[120]

Plan Melbourne 2017–2050 includes an aspirational scenario to build 70% of new homes in Melbourne's established suburbs by 2051 and building 30% in Melbourne's greenfield suburbs.[121] Home building trends shows that Melbourne is not on track to achieve this aspiration (Figure 4).[122]

Figure 4: Share of net new dwellings in Melbourne's established suburbs, 2012 to 2021



Source: Department of Transport and Planning, *Urban development program*

Some local government areas have few new homes, while others accommodate many more. For example, the Melbourne, Wyndham, Melton, Casey and Hume local governments approved over 40% of Melbourne's new dwellings from 2018 to 2022.[123]

Only a few types of new homes get built

Almost half the homes in inner local government areas have 1 or 2-bedrooms (in the Port Phillip, Stonnington, Yarra and Melbourne local government areas).[124] In contrast, new homes in the growth areas of Melbourne, Ballarat and Geelong are more likely to have 3 or more bedrooms. These new homes are sold at lower prices compared to equivalent homes in established suburbs.[125] More new homes with 1, 2 or more than 4-bedrooms were built in Melbourne than 3-bedroom homes.[126]

Many households buy homes in new growth areas because they cannot meet their housing preferences elsewhere. Cheaper 1-bedroom or 2-bedroom homes do not meet their needs, and they cannot afford 3-bedroom or 4-bedroom homes in established suburbs. Developers find building new homes in established suburbs challenging and more expensive compared to greenfield estates.[127]

Medium density, 3-bedroom homes in established suburbs can 'provide more affordable market entry points for first homebuyers'. They can be an alternative to buying growth area homes for households with children and downsizers.[128]

Governments do not have good data to accurately measure progress

Accurate housing supply monitoring each year can help governments regulate and plan for future housing supply. The Productivity Commission recommends coordinating dwelling targets with 'a stronger performance and monitoring framework'.[129]

The Victorian Government only collects housing supply data on large scale developments in established suburbs, and for greenfield development. It monitors major residential redevelopment projects with 10 or more homes in established suburbs.[130] It does not capture small scale development in established suburbs, like new townhouses or dual occupancies.[131] The Victorian Building Authority collects data on the number of homes given building permits, but does not specify home types. This data also does not accurately account for demolitions, so cannot reliably estimate net new homes.[132] The census is the only data source that measures housing type and number of bedrooms but is only collected every 5 years.

The government needs better housing data if it wants to measure 'changes in housing stock, density, zoning and supply of land at key points in the development pipeline', as recommended by the Productivity Commission.[133] The housing supply data must include demolitions and housing type to accurately measure net dwellings and the types of homes being built.

Set housing targets, including by type and characteristic

The Victorian Government can set housing targets that consider geographic areas, dwelling types, and time horizons.[134] They can do so by working with local government to draw on local knowledge and build goodwill and support. The government can also set housing sub-targets for individual geographic areas and the desired home types in each.

Places with significant infrastructure investment can have more detailed housing targets that set out the desired mix of home types for the community, such as in urban renewal sites and activity centres (see Policy option: **Prioritise and streamline approvals for urban renewal precincts**)

The government can plan for a large proportion of new homes to be within a defined distance of activity centres, National Employment and Innovation Clusters, good public transport, and other places with good infrastructure access. Toronto used density targets to encourage housing supply near good public transport.[135]

In local government areas that include growth suburbs, housing targets can distinguish between homes in established and greenfield suburbs. 'Greenfield suburbs' can be defined as greenfield growth corridors with completed precinct structure plans or plans under development.

The government can disaggregate targets by home type, such as for townhouses and apartments. Individual medium and high density developments can also have dwelling type targets. For example, setting a minimum percentage of 3-bedroom units in apartment buildings can discourage developers from building too many 1-bedroom and 2-bedroom units. Developers can prioritise building these smaller units to maximise the number of apartments in their development. For instance, in Fishermans Bend, the City of Port Phillip has dwelling attribute diversity targets in the local planning scheme (section 22.15-4.2). The council will assess developments over 100 dwellings against their policy that 20% to 30% of the units in these buildings should have 3-bedrooms.[136]

Other jurisdictions have housing targets

New South Wales

The Greater Sydney regional plan includes district[1] housing supply targets for the next 5 years, and 6-to-10 year local government area housing targets, set in collaboration with councils.[137] The NSW Department of Planning approves, monitors and catalogues local housing strategies to support these housing supply targets.[138]

Some NSW local government areas also have housing diversity targets. North Sydney council requires that no more than 55% of units in multi-dwelling housing and residential flat buildings are studio or one bedroom.[139] In buildings of 20 or more units, 10% to 20% must have 3 or more bedrooms.[140] Sydney's housing targets have had mixed success. Almost half the local government areas are not reaching their targets.[141] Some local governments supported setting, communicating and planning for housing targets, because they were an opportunity for transparent policy communication between local governments and the NSW Government.[142] The people of Sydney largely support housing targets, although many do so because they want to restrict new home building, rather than directing or supporting it.[143]

Vancouver

In Vancouver, housing targets are set by dwelling type, with separate targets for apartments and townhouses.[144] Vancouver City Council also introduced a rezoning policy that requires 35% of units to have 2 or more bedrooms in new apartment buildings, and at least 10% must have 3-bedrooms.[145] The Minister of Planning can waive the requirements when a proposal offers a community benefit or has individual complications that make the targets difficult to achieve.

England and the United Kingdom

Housing targets for affordable and market housing are common in the United Kingdom. The conservative party set a target for 300,000 homes per year during the 2019 election campaign.[146] Local governments (boroughs) are responsible for 5-year metropolitan housing supply targets that reflect UK government targets. They set the targets based on housing studies that measure available land, infrastructure capacity and local housing needs.[147]

The UK Government incentivises local governments to meet their targets with the New Homes Bonus to support associated costs and infrastructure delivery.[148] A study of the New Homes Bonus found that planning officers regarded it as a 'powerful incentive', and that the community was less opposed to new home building after it started.[149]

[1] Districts divide Sydney into 5 areas and are spatially between regional and local areas. They are Central City, Eastern City, North, South and Western Sydney. (https://greatercities.au/district-plans)

Penalties can also apply. Local governments that achieve less than 75% of their target must approve residential projects that demonstrate sustainability principles, but that conflict with existing planning policies.[150]

Since the 2019 housing supply commitment, net new homes are still less than 250,000 a year.[151] Fifty out of 309 English local authorities delivered less than 75% of their housing target over 3 years.[152]

Monitor progress towards meeting targets

Housing targets are only meaningful if they are accompanied by a reliable monitoring system that can accurately track net housing supply. Housing data must include small scale developments and account for demolitions to be correct. It can also include planning and building approvals. The Victorian Government can monitor data by reinvigorating or building on its Housing Development Data project, which was last updated in 2016. That project gave detailed information on small lot residential development by region.[153] The government can expand the scope by including dwelling type and attributes such as bedroom numbers to effectively monitor targets. Alternatively, or as well as this, the Victorian Building Authority can require building surveyors to include dwelling structure descriptions and bedroom numbers in their building permit database, and can link this to demolition permit data.

The Victorian Government can also pursue a long-term goal to integrate state housing data into a national system administrated by the Australian Bureau of Statistics. Ideally, data monitoring should be independent and not solely premised on setting housing targets. But national housing supply tracking will require some standardisation of state planning and building systems, which will take longer to develop.[154]

Targets can apply to local government areas

Ideally, each of Melbourne's local government areas would have housing targets. The Victorian Government priority precincts can also include targets (see Policy option: **Prioritise and streamline approvals for urban renewal precincts**).[155] If monitoring finds that Melbourne is building more alternatives to homes in new suburbs, the Victorian Government can consider extending the approach to regional cities. Updated *Regional Growth Plans* could include targets, similar to the *Land Use Framework Plans* for Melbourne's regions.[156]

Targets can be in state and local policies

The Victorian Government can include housing targets and housing diversity policies in the final *Land Use Framework Plans*, and any future updates to Plan Melbourne. *Plan Melbourne 2017–2050* includes an aspirational scenario for 70% of new homes to be built in established suburbs, and the remaining 30% to be built in greenfield suburbs.[157] Plan Melbourne also has a goal for housing diversity 'that offers choice and meets changing household needs'.[158] Victorian planning policies do not translate this goal into a clear definition or specific guidelines that set out the desired proportion of home types.[159] Plan Melbourne's 6 draft *Land Use Framework Plans* include aspirational housing supply targets, based on the 70/30 aspirational scenario, and consider places proposed for transport, job and education investments.[160] These supply targets can be the foundation for more specific housing targets, and offer a mechanism for targets to be monitored and evaluated.

The Victoria Planning Provisions (VPPs) can also incorporate housing targets. The government can incorporate the housing diversity policy in the municipal planning framework by including a clear definition and direction to local government (for example, in clauses 02.03-5). The government could change clauses 10-19 to include housing diversity policies, such as in the settlement (section 11) and housing (section 16) clauses.[161]

Measuring the infrastructure capacity in places selected for housing growth can help set achievable targets.[162] Governments can best achieve local area planning for housing targets by updating local

government housing strategies to measure capacity, infrastructure needs, and map out preferred places for medium and high density housing.[163] Housing strategies can identify target locations for more new homes, which can then translate to local statutory changes. More permissive zones can be applied to target locations, using schedules and overlays such as the Activity Centre Zone, Residential Growth Zone and Mixed Use Zone, as well as by using design and development overlays.

Incentivise local governments to adopt targets

The Victorian Government can develop programs to incentivise local government to complete housing strategies to inform target development and progress towards meeting those targets. The government can work with local governments to set targets, based on local knowledge and in circumstances where local governments have good information about their capacity to accommodate more homes and confidence that the necessary infrastructure and services will be delivered.

Under *Melbourne 2030*, a past strategic planning policy framework for greater Melbourne, the Victorian Government funded consultants to help local governments to develop structure plans.[164] The Victorian Government Expert Assistance Program also supported councils to develop and deliver housing strategies and structure plans.[165] A new grants program can similarly fund local governments to analyse infrastructure capacity and develop strategies and plans to develop and achieve housing targets.

The Victorian Government can also include local governments in funding programs or in consideration for major projects. For example, the Growing Suburbs Fund, which is restricted to outer suburbs and peri-urban councils, could include any LGA that meets its housing targets.[166] Implementing policy options such as a dual occupancy and townhouse code, improving standards for apartments up to and over 4 storeys and expanding residential zones which support higher densities can support increased housing supply and local government progress in meeting targets.

Effective targets need clear timelines for completion and mechanism to evaluate, approve and reward local governments that complete housing strategies. California applies housing targets to local governments by using compulsory housing strategic plan elements, that the state government tracks and assesses. Local government earn points under the target measuring system. When local governments have enough points, they are eligible for infrastructure funding.[167]

Victorian Government funded housing development projects can also help meet targets. The homes built by Development Victoria or similar agencies can contribute to local government targets, particularly in precincts that are well-suited to demonstration projects (see Policy option: **Prioritise and streamline approvals for urban renewal precincts**).

Some local governments might be unwilling to set targets or make changes to their planning rules and systems to achieve the targets. In these circumstances, the Victorian Government could restrict local government access to certain Victorian Government funding, grants or beneficial programs. The Victorian Government can also establish or task a body to deliver planning changes, such as rezoning or streamlining development applications in underperforming local governments.[168] For example, the NSW Government proposes that the state 'address shortfalls in supply through…planning intervention'.[169]

Work on targets can start now

This option will have most impact if strategic work starts now. Once targets are decided, the Victorian Government can publish detailed statistics at least every year.

Strategic plans can include a long-term fixed housing target, in addition to a short-term yearly or periodic goal. For example, Greater Sydney has 5, 10, and 20-year strategic housing targets.[170] In the UK, the national housing target is yearly, while municipal boroughs like London have changed their housing target timelines from a 10-year to a 5-year target between the 2016 and 2021 strategic plans.[171]

Defined time periods in which local governments can achieve targets can be a valuable policy tool and can encourage local governments to plan future for housing and infrastructure capacity. However, they can be poorly aligned with the realities of business cycles and the lead in time required in housing projects.[172] For example, apartment projects can take many years to finish. In 2019, it took over 19 months, on average, for apartments and units to progress from building permit approval to completing construction. This does not include the estimated 12 to 18 months needed to gain planning approval.[173]

Targets can prioritise housing supply in established suburbs

Housing targets that plan for more new homes near public transport and jobs centres in established suburbs can encourage efficient use of infrastructure and active transport.[174] This supports Infrastructure Victoria's recommendation 35 in *Victoria's infrastructure strategy 2021–2051* that the Victorian Government support more homes in priority established places.[175]

More homes in established suburbs and slower consumption of greenfield land can have economic benefits, such as efficiently using infrastructure and services, and preserving land for agricultural production.[176] It can also benefit ecosystems and biodiversity by reducing the amount of land used for urban development.[177] Monitoring housing supply will create extra benefits by providing the Victorian Government with better data on the distribution of new homes. This would help forecast future infrastructure needs and service requirements in each local government area. The Productivity Commission advises that state and local governments should better coordinate the delivery of infrastructure to align with new housing supply in both greenfield and established suburbs.[178]

Monitoring and incentivising local government to achieve housing targets can uncover geographic differences in successful delivery of new homes and create an opportunity to reward high-achieving councils. Without policies that encourage more new homes in established suburbs, growth areas will keep generating a large proportion of new homes by building in new suburban estates.

Housing targets can benefit the development industry. They can be 'a strong mode of policy articulation' that 'give[s] clarity to private sector actors operating in real estate sectors'.[179] Local government involvement can give developers confidence that councillors and planning officials will support more new homes in their area. Accurate monitoring can also help small housing developers to understand 'niche demand, and to innovate to meet unaddressed housing needs'.[180]

Incentives that reward successful communities can also operate collectively, by helping boost local advocates that welcome new homes and denser, livelier, and more sustainable communities. The New Homes Bonus in the UK has positively affected community perceptions of density by delivering community-wide benefits when communities welcome more new home construction.[181]

Setting targets requires careful consideration of local housing markets

A singular focus on inappropriate targets can compromise development location and suitability assessments. If solely pursuing targets, local governments can replace holistic housing policies with a technical focus on generating new homes and taking less care in achieving good qualitative outcomes from urban development.[182] For example, local governments might approve projects with many 1-bedroom and 2-bedroom apartments more readily than those with more diverse sizes but fewer total units. In NSW, some local governments meet targets by allowing high-rise apartment developments in inferior locations.[183] Victoria can mitigate this risk by setting sub-targets and enforcing other policies that encourage housing diversity and building quality.

Housing targets in some established suburbs might be achieved by producing more luxury homes, especially if these places have high demand, high development costs and high land prices.[184] Places could achieve targets for housing attributes, such as for 3 or more bedroom homes, by producing expensive homes that only high income households can afford.[185] In Sydney, new homes have not 'delivered the diversity and affordability needed', and proposed developments in some local government areas were typically 1-bedroom or 2-bedroom luxury apartments that were unaffordable or not suitable for households with children.[186] In London, private developers build too much luxury housing and do not produce enough housing for middle-income households.[187]

Targets will be most effective if accompanied by other policies that influence the type, size, location, and quality of new homes, and provide enough infrastructure for them. Governments can use housing targets to drive policy changes that encourage building particular dwelling types. The Vancouver housing target system suggests that some new homes will be second homes on existing single dwelling sites, which are permitted as-of-right.[188] The Victorian Government can design a similar target to encourage local governments to use

our proposed medium density housing code (see Policy option: **Develop a dual occupancy and townhouse code**).

Housing targets will not generate new homes in places or in development contexts where builders and developers will not make a return on their investment.[189] Unsuitable targets, or an excessively punitive incentive system, can adversely affect local government areas with lower land values. Some local government areas already accommodate many new homes and are likely to meet targets with relative ease. Areas with lower property values might not be able to easily incentivise growth. The Victorian Government can consider this risk when setting targets and designing local government incentives.

Local governments can oppose housing targets, especially if the targets do not consider factors such as local context and infrastructure capacity. Ambitious housing targets can be difficult to meet in established suburbs with strong heritage controls.[190] In London, higher income boroughs have the smallest housing targets and are still unlikely to meet them.[191] Lower income areas might be more likely to meet their housing targets and but risk over-development. Western Sydney local government representatives believe the NSW Government expects them to do 'the heavy lifting' to accommodate more homes.[192]

Local government officials might be concerned about the larger workload associated with strategic planning to develop targets, more development assessment and monitoring housing supply.[193] But local governments that accommodate many new homes can be rewarded and recognised through incentives. The Victorian Government can also consider providing funding to local governments to monitor housing supply.

Housing targets have synergies with other options

Infrastructure contribution reform complements housing targets

Infrastructure contribution reforms can complement housing targets (see Policy option: **Reform infrastructure contributions to send the right price signals**). A consistent approach to infrastructure contributions in established suburbs can give more financial certainty to local government about funding for infrastructure upgrades and improvements to support more new homes. When infrastructure is delivered with new homes, communities are more likely to accept this growth.[194] The Victorian Government can start working with local government on both options now. An early priority can be measuring local infrastructure capacity to help decide the size and location of housing targets, and the infrastructure contributions needed to achieve them.

Other related options

The Victorian Government can implement other policy options help local government achieve housing targets. Introducing a dual occupancy and townhouse code which removes planning approval assessment can support increased supply of these types of homes in the short term. Improving standards for low-rise apartments (4 or fewer storeys) and expanding where those apartments can be built can result in a larger number of homes on sites than is currently permitted, and help increase supply. Apartments which better address the needs for children can add homes in local government areas in the medium term.

Proceeding with these 3 options supports setting, monitoring and achieving housing targets

When urban renewal precinct planning is further progressed, the Victorian Government can pilot housing targets as a subset of local government area targets.

Table 6: Evaluation of housing targets option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Targets alone do not guarantee more supply but can indicate where more homes are a government priority. Incentives for local governments can help achieve more supply. Monitoring generates evidence of changes in supply and allows for further adjustment and direction.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	Targets alone do not guarantee housing diversity but specifying the type of home and monitoring progress will generate evidence of changes in supply. Incentives for local governments can help achieve diversity.
Price	Means more moderate income households can afford to live in established suburbs	More supply can lead to improved affordability.
Targeted	Addresses at least one of the barriers to increasing the supply of new homes in established suburbs	Targets make clear where local governments are planning for and inclined to approve more homes.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	The government can incentivise local governments to develop and work towards meeting targets. Existing residents might resist targets as they indicate where more homes are a priority, but targets can also clarify their future location. Targets communicate governments' priority areas for more homes to the development industry.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	*Land Use Framework Plans* can be the foundation for more specific local government area targets for the number, type and size of new homes. Future updates to *Regional Growth Plans* can include targets for regional cities. Those local governments can also incorporate targets into updated housing strategies.

Prioritise and streamline approvals for urban renewal precincts

Prioritise urban renewal precincts for development, with streamlined planning approvals. Set targets in each precinct for the number, type and size of new homes. Develop suitable housing demonstration projects that specifically include 3-bedroom homes.

Prioritisation and coordination of precincts needs clarity

Precincts are strategic locations with concentrations of jobs and population, a mix of activities, good public transport and typically under-utilised land suitable for redevelopment.[195] They are important opportunities for accommodating new home building. Melbourne's metropolitan planning strategy, Plan Melbourne, identified many 'places of state significance that will be the focus for investment and growth.'[196]

However, Plan Melbourne does not prioritise precincts for Victorian Government action. It recognises more than 130 centres as places for future jobs, services and housing growth including National Economic and Innovation Clusters (NEICs), major and metropolitan activity centres, state-significant industrial precincts, transport gateways, health and/or education precincts, and strategic transport locations.[197] While the *Major Transport Projects Facilitation Act 2009* and *Suburban Rail Loop Act 2021* are 2 examples of legislation that have sought to introduce streamlined planning for areas close to future infrastructure projects, other important precincts identified by the government do not have access to the same provisions.

In state-led priority precincts, strategic planning processes occur slowly (for example, Arden), plans remain as drafts (for example, the NEICs), and machinery-of-government changes shift lead Ministers and departmental responsibilities. While each precinct has its own unique challenges, the Victorian Government can be clearer about its goals for precincts, including the types of economic, social and environmental outcomes (including housing) it wants to achieve.

Progress on precinct planning and development is unclear

Precincts require consistent, ongoing monitoring and re-appraisal to measure whether long-term growth is producing desired outcomes for the people of Victoria. The Red Tape Commissioner's planning and building approvals process review found that stakeholders view improved transparency, accountability, and monitoring in the planning process as ongoing priorities.[198] No consolidated process or platform reports on the progress of all metropolitan precincts, although Victorian Government departments and agencies deliver individual updates on business precincts and greenfield structure plans.[199] More detailed and current precinct reports are usually available from the relevant authority such as the local council or taskforce. Standardised performance assessments of precincts can help the Victorian Government assess progress towards meeting the policy goals articulated in Plan Melbourne and create an opportunity to re-evaluate future investment.[200]

Precinct planning and delivery is challenging, and not well documented. For example, some precincts benefit from Victorian Government investment (such as the $66 million upgrade of Ringwood station and bus interchange) but assessment of any related residential land use change or lessons learnt are not available publicly.[201] The Victorian Auditor-General's analysis of Revitalising Central Dandenong said that while progress occurred, the program did not have 'sufficiently clear, agreed and monitored performance standards' which created challenges in measuring its performance.[202] Nonetheless, academics found that place-making efforts in Dandenong contributed to more people living in units and townhouses.[203]

Precincts benefit from strategic coordination of housing and infrastructure

Plan Melbourne's 5-year implementation plan for precincts prioritises jobs and does not indicate a preferred housing outcome in these locations. New homes near precincts can use the existing infrastructure and can also attract jobs. For example, current framework plans for Latrobe, Sunshine, Monash and Dandenong

NEICs have either had or will receive Victorian Government infrastructure investment, including the Suburban Rail Loop (SRL).[204] These are examples of places that can accommodate more new homes.

Although Melbourne's middle and outer suburbs have more infrastructure and services than growth area suburbs, residential projects that require large capital investments and development financing are rare.[205] Developers want to maximize the profitability of their investment, rapidly sell the new homes, be certain of a return on their investment, and potentially increase value from planning actions. They balance these factors against minimising design and construction cost for their target markets' price ranges. Projects in established suburbs can have more timing and cost uncertainties than greenfield development. Development application review processes vary in length depending on the quality of information, third party objections and how these are addressed, and experience uncertainty in the timeline and cost of utility connections.[206] This means developers reduce risk by building new projects similar to already successful ones, rather than innovate.[207] The Victorian Government's own housing development projects are often on land already owned by government but not necessarily in precincts. For example, only half of Development Victoria's established suburb residential projects in Melbourne are in activity centres or NEICs.[208]

New homes in established suburbs are often minor projects built by small developers.[2] However, these developments often do not achieve much density in good locations, improve amenity, or align with existing strategic planning.[209] Precinct-scale renewal is particularly appropriate to build many more new homes than is possible in small incremental projects, by developing larger, financially viable sites.[210]

Develop a prioritisation framework and clear governance for precincts

Infrastructure Victoria recommended that the Victorian Government empower an appropriate entity to monitor infrastructure delivery, including in precincts.[211] Necessary preconditions include establishing clear outcomes and consistent governance for precincts. A pathway to secure cross-departmental Victorian Government funding can help to create clearer expectations of options for negotiation during strategic planning processes.

A prioritisation framework and clear governance system can facilitate precinct master planning and development. The Victorian Government can identify and publicly declare priority precincts based on a standardised framework. This will focus government investment and clarify the planning and decision-making authority for these places.

The Red Tape Commissioner's Planning and Building Approvals Process review recommended that the Victorian Planning Authority (VPA) and precinct coordination branches of the Department of Transport and Planning and Department of Premier and Cabinet (formerly in the Department of Jobs, Precincts and Regions) establish selection criteria and a pipeline of sites of strategic importance.[212] This can improve coordination of the 'delivery of the major infrastructure required to underpin development, while ensuring sound planning principles are applied'.[213]

The VPA has now developed an internal, bottom-up prioritisation approach for their activity centre planning pipeline. It assesses land opportunities, capacities and development readiness. This prioritisation approach is only relevant for areas of VPA involvement and is not widely shared with other stakeholders.

The Victorian Government can develop a more comprehensive precinct planning pathway to streamline planning processes and coordinate government agencies and stakeholders. Legislative tools could also be used to identify streamlined identification and approval pathways for critical state-led precinct projects.

[2] 'The number of houses built in middle and outer LGAs1 remained stable at about 9,000 each year. The number of semi-detached and low-rise apartments approved in middle ring and outer LGAs – mostly in the form of small scale development – more than doubled from about 4,000 in 2005 to nearly 11,000 in 2017.' DELWP, Monitoring land use planning outcomes, Victorian State Government, 2018, p.7, https://www.planning.vic.gov.au/__data/assets/pdf_file/0017/121724/Housing-outcomes-in-established-Melbourne.pdf accessed 23 January 2023

Housing targets can help produce more diverse home types in precincts

Precinct-based housing targets can be a subset of local government area housing targets (see Policy option: **Measure and incentivise progress towards local housing targets**).

Strategic plans for each precinct can include specific housing targets to contribute to meeting Plan Melbourne's 70% of new homes in established suburbs aspiration and specifically aim to improve the amount, quality and diversity of new homes, including 3 or more bedroom homes, in areas well-served by existing or planned infrastructure.

Housing targets can consider the capacity, development context and intended use of the precinct. For example, some urban renewal areas are better prioritised for industrial and commercial use. Plan Melbourne describes housing growth in NEICs occurring only 'in some instances.'[214]

Developers in precincts benefit from land value uplift from state infrastructure investment and Victorian or local government land rezoning. Planning authorities can adopt housing diversity requirements such as a mandatory minimum number of 3-bedroom units in apartment developments on rezoned sites. For example, the City of Port Phillip has dwelling attribute diversity targets in its local planning scheme for Fishermans Bend (section 22.15-4.2). The council will assess developments over 100 dwellings against their policy that these proposals should include 20-30% (varies according to precinct) 3-bedroom units.[215]

Precinct housing targets can include a quota or government commitment for a proportion of residential demonstration projects per precinct.

Build demonstration projects on Victorian Government-owned land in precincts

Precinct planning processes can identify opportunities to pilot innovative and best practice medium and high density housing projects in partnership with the private sector. High quality demonstration projects can help to address community concerns about density and model the development feasibility and marketability of high-quality home design.[216]

The Victorian Government can expand Development Victoria's (DV) role in building new homes in established suburbs. This could include housing diversity goals in all future developments. Several recent projects included such goals. For example, Fitzroy Gasworks aims to have 3 or more bedroom apartments represent 10% of total homes.[217] Landcom, the NSW Government land developer, aims to model best practice residential development, demonstrate development viability to the private sector and increase housing diversity.[218]

Using government-owned land can facilitate Victorian Government partnerships with private developers by removing land cost barriers to development or offering a form of financial equity to encourage a desired housing outcome. Homes Victoria's recent joint venture projects to deliver social housing renewal, for example Preston Crossing, can offer lessons for working closely with the private sector on government-owned land.[219]

Bowden, South Australia

Renewal SA, the South Australian Government's urban development agency, is responsible for managing the redevelopment of Bowden, a 16-hectare site located 2.5 kilometres from Adelaide's CBD into the state's first high density precinct.[220] The South Australian government invested in the soil remediation of the formerly industrial land, in addition to over $264 million in roads, open space and essential services.[221]

Private sector developers buy individual lots from Renewal SA. Design credentials are one of the buyer criteria. Renewal SA works closely with site owners by using the Bowden Design Review Panel and design guidelines to ensure high quality outcomes.[222] It aims to achieve a minimum of 160 dwellings per hectare using a mix of medium and high density residential projects.[223] Bowden includes completed projects with 3-bedroom terraces, townhouses and apartments. It also has affordable apartments with "the much-loved attributes of a suburban home."[224]

Renewal SA supported Nightingale Housing's entry into the South Australian market by committing to underwrite part of its Bowden development. To reduce Nightingale's risk in obtaining pre-sales, it provided certainty to the developer and secured the delivery of the state's first affordable zero-carbon apartment building. The project was ultimately so well received that all homes sold within 24 hours, and the underwrite was not necessary.[225]

Figure 5 Bowden, South Australia

Sources: Renewal SA, Bowden promotional photography.

Designate precincts and develop strategic plans, including for infrastructure

The Victorian Government can designate priority precincts according to whether they present economic opportunities and can accommodate new jobs and homes.[226] Priority precincts can prompt Victorian Government intervention over a sustained period of time (10 to 20 years) in areas such as:

- Existing significant state infrastructure investments and/or planned investments
- Intervention and coordination of land, for example unlocking land potential and improving sites by remediation and land acquisition
- Collaboration between Victorian Government departments, local governments and existing major stakeholders (for example, education and health precincts).

Identifying priority precincts and establishing a responsible planning authority should ideally come with an ongoing Victorian Government commitment to infrastructure investment and precinct governance over the long term. It can improve private sector confidence and catalyse housing market development by implementing Infrastructure Victoria's previous recommendations on infrastructure coordination and precinct delivery.

Victoria's infrastructure strategy 2021–2051 recommended that first, the Victorian Government should produce public plans for priority infrastructure sectors.[227] Cross-sectoral infrastructure planning and transparent communication can help sequence the delivery of homes with infrastructure access.[228]

Melbourne's established suburbs have many precinct opportunities

New homes in precincts in Melbourne's middle and outer areas are more likely to be sold at a price similar to homes in growth areas given similar median house and unit prices in those locations. Developing more 3 or more bedroom homes in these precincts can support Plan Melbourne's aspiration for 70% of new homes in established suburbs and offer an alternative to growth area homes.

The Suburban Rail Loop (SRL) project has identified the areas around its future stations as precincts, and the SRL Authority act as planning authority in these areas under the *Suburban Rail Loop Act 2021*.[229] The project's Precinct Development Framework emphasises diverse and affordable housing, with the business and investment case noting that with more households living in SRL precincts, fewer households are expected to live in Melbourne's growth areas.[230]

This approach can be expanded over time to include other activity centres near good public transport. These places have opportunities similar to precincts for encouraging density around public transport, and can be considered for a second phase that draws on lessons learnt from the proposed monitoring and evaluation system. In the short term, planning for these places can receive Victorian Government assistance, based on the Expert Assistance Program for activity centre structure planning.[231] In the longer term, some can be classified as priority precincts by applying the prioritisation framework.

Prioritise in the short term and plan for future development

The Victorian Government can deliver a precinct prioritisation framework and governance approach in the next 12 months. This can be formally endorsed by government and then incorporated into any future updates to Plan Melbourne. This can also support a whole-of-government approach to these precincts and any associated infrastructure investment. Precinct planning for selected priorities can draw on work already completed (including draft *Land Use Framework Plans*, draft NEIC framework plans and activity centre structure plans).

Land acquisition can and should be a component of precinct planning, particularly for future government-owned facilities. However, this takes time and ongoing government effort. For example, in 2008 Places Victoria bought a 9,000 square metre site adjacent to Footscray station as a strategic land acquisition identified in the Melbourne 2030 Transit City plan.[232] In 2012 the Victorian Government designated the land as a priority development zone with the Minister for Planning as Responsible Authority.[233] However, the 2014 elections and change in government priorities lead to the site's disposal in 2017.[234]

A monitoring system can assess progress against precinct plans every 3 years and allow for revisions to reflect changes in projected population and housing growth.[235] Progress on housing targets can also be measured (see Policy option: **Measure and incentivise progress towards local housing targets**). Targets should be reviewed every 3 years and can take changing market conditions into account. These regular assessments can also offer evidence to inform future metropolitan planning strategies.

Precincts can produce diverse homes for engaged local communities

Housing growth in precincts supports more homes in good locations. Precincts typically have existing infrastructure, including public transport, and are concentrations of activities and services. These locations are well-suited to more new homes that can have different densities and home types.[236] For example, the

highest density homes can be sited next to high frequency public transport, low-rise and medium-rise apartments within 400 to 800 metres and townhouses between 800 and 1,200 metres. Townhouses are most likely to be substitutes for homes in new growth suburbs in the short term (see Policy option: **Develop a dual occupancy and townhouse code**), with the low-rise and high-rise apartments increasingly substitutes in the medium to long term (see Policy option: **Develop better standards for low-rise apartments** and Policy option: **Encourage child-friendly design in new apartments**).

Prioritisation of particular precincts, infrastructure coordination and integration with housing policies can generate more private developer activity in precincts. Clear Victorian Government and infrastructure contribution plans (see Policy option: **Reform infrastructure contributions to send the right price signals**) and delivery commitments can demonstrate community benefits associated with new residential projects. This can help alleviate local concerns about large scale development. Government infrastructure plans also offer transparency and certainty to the private sector.

Early and meaningful engagement with local communities during strategic planning processes can established clear visions and goals for precincts. This means streamlined approval processes that remove third party appeal rights can reduce private sector development risk from time and cost uncertainty.[237] Housing targets also give clear government intentions for individual precincts.

Precinct infrastructure planning, including cost estimates, and pilot development on government-owned land can give assurance to the development industry of the Victorian Government's ongoing support to develop priority places.

Precincts benefit from ongoing government commitment

Alternative governance models rely on good communication and consistent policy approaches between different levels of government and can risk community and local government disengagement from planning.[238] Where local government is replaced by a state authority, precincts can be poorly integrated into the surrounding region.[239] For example, NSW's place infrastructure compacts (PICs) were at times in conflict with strategic and statutory plans for the existing precinct areas.[240]

The financial cost of preparing and delivering precinct plans can vary substantially by location and level of government investment. Not all precinct planning processes have a clear and ongoing Victorian Government role. Some expect more local government involvement, and reliance on private partners differs. For example, NSW's PICs have developer contribution schemes but rely on government funding. The Western Parkland City received $10 million in funding from the NSW Government and $5 million from the Australian Government to develop the PIC pilot and associated technical models.[241]

The Victorian Government is dependent on the private sector to build residential development projects even where Development Victoria is the project developer. The same risks that all private development faces can affect projects. Development Victoria's Nicholson development is a high-profile example of construction risk, when it was discovered that 10 to 15% of its surface area had combustible cladding.[242] Demonstration projects that are intended to trial or model innovation can have more financial risk and generally cost more than standard build-to-sell developments.[243]

Synergies with other options

Strategic master plans for priority urban renewal precincts can recommend the dual occupancy and townhouse code to increase the short-term supply of greenfield housing substitutes. They can nominate the Residential Growth Zone for places close to good public transport for low-rise apartments to increase the supply of housing. Plans can also identify areas suited to lower minimum car parking requirements near train stations or tram stops to reduce development costs. Combining these 3 options can have a larger impact than when used separately.

Planning should start after initial reforms to housing targets, infrastructure contributions and home subsidies. Planning will require considerable time but delivery can be relatively rapid. This should occur within 3 years.

For example, streamlining of development approval in priority precincts can be achieved by property owners choosing to use the dual occupancy and townhouse code.

Other related options

Development progress in precincts can be measured by yearly assessing precinct-based housing targets as a subset of local government targets.

Table 7: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Precincts can contribute to more housing supply in established suburbs, but they cannot be the only places with greenfield housing substitutes. Precincts are well-suited to denser housing types including dual occupancies, townhouses, low-rise apartments and apartment buildings over 5 storeys.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	A variety of types of homes in precincts can increase the number that have 3 and 4-bedrooms. Precincts with new homes currently tend to have high-rise apartments with 1 or 2-bedrooms.
Quality	Improves quality and/or child friendliness of housing types	Child-friendly demonstration projects can be piloted on Victorian Government-owned land in precincts to build industry confidence in building greenfield housing substitutes.
Price	Means more moderate income households can afford to live in established suburbs	More homes in precincts can lead to lower prices. A prioritisation framework can consider potential land capacity and development feasibility for affordable new homes.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	**Planning needs clarity:** Developers can have more confidence in their projects with streamlined planning and approval processes, including limiting or removing third party appeals, in precincts **Development financing is risk averse:** Demonstration projects in precincts by agencies such as Development Victoria can give private sector developers confidence that different approaches are financially feasible, and demand exists for affordable 3 and 4-bedroom homes.
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene	The Victorian Government can build on existing precinct work done by departments to develop a precinct prioritisation framework and governance approach. Governance of precincts is complex and requires collaboration with local government and major land holders. For some precincts, government agencies might be given a clear role to lead with demonstration projects to show that 3 and 4-bedroom homes can be built and sold at an affordable price

Criterion	Description	How the option addresses the criterion
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Local communities' and government involvement in precinct strategic planning can establish main goals, including homes that can be greenfield substitutes. Streamlined approval processes that remove third party appeal rights can reduce private sector development concerns about associated time and cost implications. Local governments might prefer to have development control over precincts but some might prefer the Victorian Government making decisions on major developments. This can bypass potential disputes with local communities.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	Precinct prioritisation can apply to areas the Victorian Government has already identified. Over time the same process can be applied to more places, including in regional cities.

Develop better standards for low-rise apartments, then increase their supply by expanding use of the Residential Growth Zone

Develop better standards for low-rise apartments (4 or fewer storeys) in the Victoria Planning Provisions. Introduce more low-rise apartments by supporting local governments to rezone more residential areas near transport and services to the Residential Growth Zone.

Residential development regulations are not producing well-designed low-rise apartments

Builders find it difficult to design and get planning approval from local government using the current residential development standards in the Victoria Planning Provisions (VPPs).[244] This means they are not supporting supply of well-designed homes.

Residential planning proposals in Victoria are regulated by the residential development standards (ResCode) in planning provision clauses 55 and 56.[245] Local governments assess low-rise apartment projects (4 storeys and under) according to qualitative and quantitative metrics in ResCode, to consider development contexts and their placement in surrounding neighbourhoods, which are typically low density.[246] Local government assessment of low-rise apartments that focuses on neighbourhood character and community concerns 'has come at the price of reduced certainty of outcomes, and hence delays and disputes'.[247]

The Victorian Government introduced the Better Apartments Design Standards (BADS) in 2017. They aim to improve the design of new apartments and have overcome some of ResCode's challenges. They provide specific guidance for apartment developments of 5 or more storeys under clause 58 of the VPP,[248] and a selection of BADS objectives and standards are included in ResCode clause 55.07. However, the standards focus on general design quality and internal amenity issues such as solar access and private open space, rather than external amenity effects and neighbourhood character.[249] Apartment applications for 4 storeys and under are subject to the same assessment procedure as lower density townhouses and terraces.[250]

Land use zoning practices can exacerbate community tensions around higher density development and foster unreasonable expectations that zoning will protect suburbs of larger detached homes from change: 'planning strategies and zoning schemes that aim to concentrate redevelopment in centres, along transport routes and in 'growth zones' (Melbourne) have fostered an expectation in the community of limited or no change outside of those locations.'[251]

Local communities express discontent with proposed projects by lodging third party objections and appeals at VCAT. Third party notification and appeal rights generate extra uncertainty and risk that discourages apartment development in established suburbs.[252] In one example, a low-rise apartment proposal in the General Residential Zone received numerous objections and was referred to VCAT. The developer anticipated this would add 6 months to the development and hundreds of thousands of dollars in costs.[253] Of the almost 1,300 multi-residential project cases heard before VCAT in 2021–22, over 800 were eventually approved.[254] Analysis of the Planning Permit Activity Reporting System shows that over 25% of planning permits for new homes take over 6 months to assess.[3,255] The time delays and subsequent costs can disincentivise developers from investing time and resources into developments in established suburbs.

Community research to support *Victoria's infrastructure strategy 2021–51* indicated that local communities are willing to support higher density residential developments under the right conditions. The research identified quality urban design as the most important principle for communities when considering density,

[3] Note that requests for further information which should have been included in the original application from project proponents also contribute to these time periods.

including a built form that is well integrated into local design character.[256] There is an opportunity for the VPPs to better support the community's view of density done well in new low-rise apartment developments.

Local governments zone few areas for low-rise apartments

The Victorian Government reformed Victoria's residential zones by introducing the Neighbourhood Residential Zone (NRZ), General Residential Zone (GRZ) and Residential Growth Zone (RGZ) in 2013. Local governments had 12 months to identify the zones before existing residential zones defaulted to the GRZ. Given this time constraint and councils' concerns about losing their lowest density zones, only 20 metropolitan local governments submitted their own proposals for the geographic distribution of the new residential zones.[257]

Established suburbs can support more higher density developments. However, development is restricted by the limited application of residential zones that support higher densities. For example, the RGZ aims to 'promote housing intensification in locations close to jobs, services and facilities serviced by public transport including activity centres,' but local governments inconsistently apply it to places well served by infrastructure.[258] Approximately 1% of existing residential areas in Melbourne's middle suburbs are zoned RGZ.[259] Some middle ring councils extensively apply the NRZ but rarely use the GRZ. For example, the City of Glen Eira applied NRZ to 80% of the municipality, 19% for the GRZ and 1% for the RGZ.[260]

Middle Melbourne's residential zones can theoretically support more density.[261] However, the NRZ 9 metre (or 2 storey) height limit prevents low-rise apartment development over 2 storeys. The GRZ allows heights of up to 11 metres (3 storeys) while the RGZ has a maximum building height up to 13.5 metres (4 storeys).[4,262] Given its density potential, the RGZ can be the most appropriate residential zone to indicate to developers where the Victorian and local governments prefer low-rise apartments. The Victorian Government's residential zone taskforce also noted that: 'the height provisions and development objectives of the RGZ provide developers with significant certainty that applications in RGZ area will achieve high yields.'[263]

Local governments in established suburbs facilitate higher residential densities primarily in activity centres and urban renewal precincts by using permissive zones such as the Commercial 1 Zone, Activity Centre Zone and Mixed Use Zone. Developers are more likely to build high-rise than low-rise apartments in these locations, if permitted by land use zoning and if land values are high.

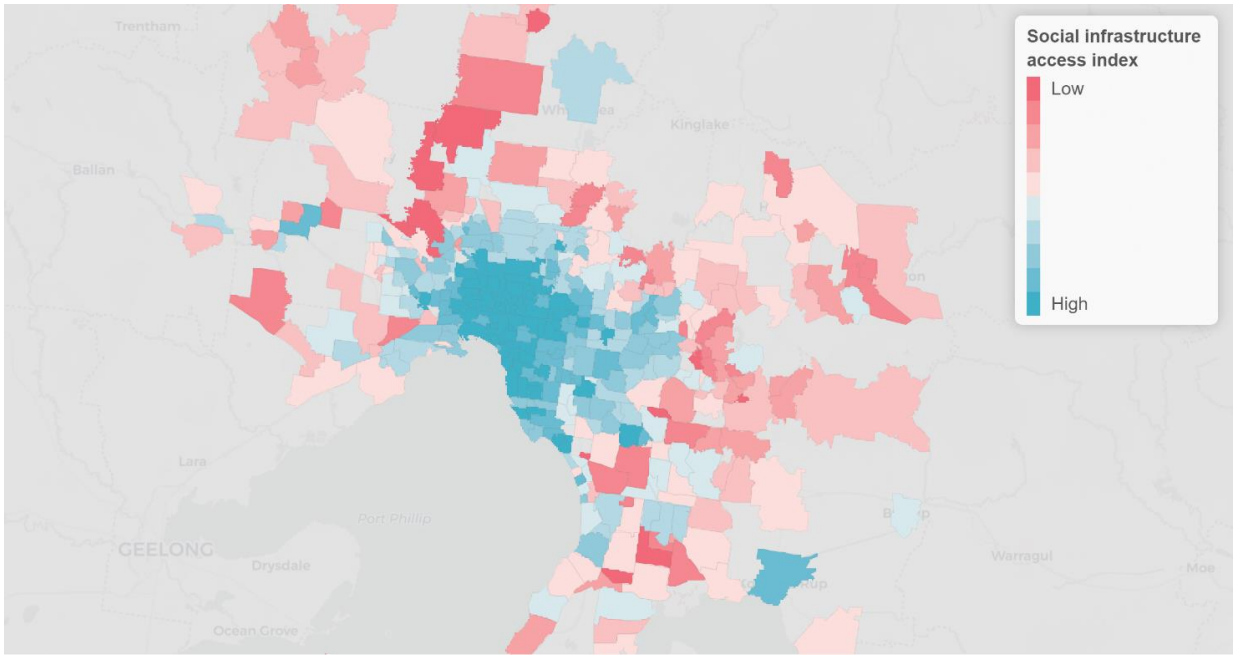
Recent housing projects are not substitutes for greenfield homes

Limited development in middle suburbs produces few housing options other than detached homes and townhouses in many cities.[264] Existing post-war housing stock is now ageing and does not meet contemporary energy efficiency and sustainability standards. The dominance of detached homes produces low density neighbourhoods, typically fewer than 25 homes per hectare.[265]

Many of the homes in these suburbs have better access to Melbourne's train network, local infrastructure, shops and services than outer suburban or greenfield areas. Data from the Australian Urban Observatory demonstrates access to a variety of social infrastructure and services in Melbourne's suburbs, with blue showing better access (see Figure 6).

[4] This height may vary as specified in a schedule to the zone, or in relation to local context.

Figure 6 Social infrastructure access index

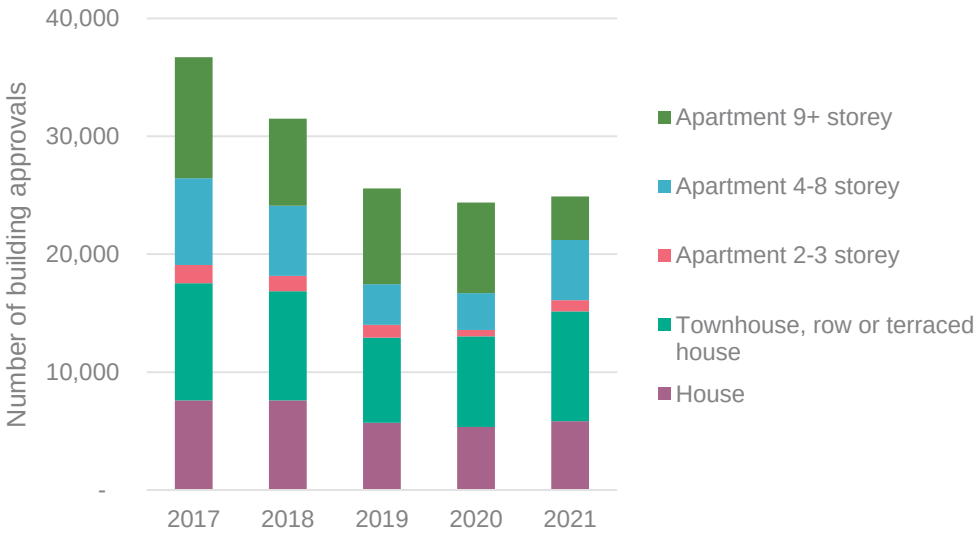


Source: Australian Urban Observatory, https://auo.org.au/portal/metadata/social-infrastructure-mix-index/, accessed 25 January 2023

Achieving Plan Melbourne's aspiration for 70% of new homes in established suburbs will not be possible without more well-designed homes that can substitute for housing in greenfield areas. Governments will need to reform existing policies, standards and regulations to increase the supply of all types of housing in established suburbs, including low-rise apartments.

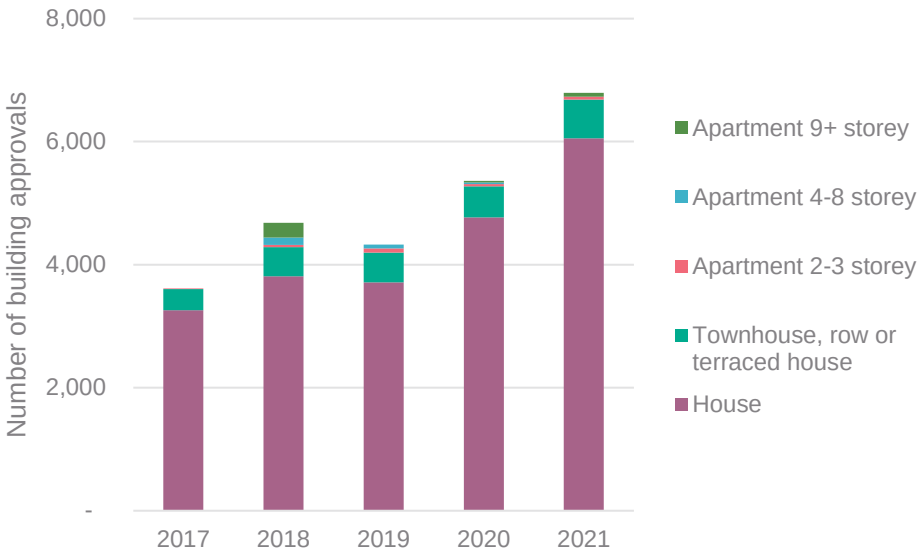
In Melbourne, most new homes in established suburbs are characterised by 2 development types: high-rise apartments in inner Melbourne and incremental developments in middle and outer suburbs.[266] Figure 7 shows that low-rise apartments (2 and 3 storeys) are a small proportion of new homes in Melbourne's established suburbs. New low-rise apartments are not common in middle suburbs. They are even less common in Ballarat and Geelong (see Figure 8).

Figure 7 Number of dwellings approved by dwelling type, Melbourne established suburbs



Source: Australian Bureau of Statistics, Building approvals, Australia, 2022

Figure 8 Number of dwellings approved by dwelling type, Ballarat and Geelong LGAs



Source: Australian Bureau of Statistics, Building approvals, Australia, 2022

Develop better standards for low-rise apartments

The Victorian Government can support local government review of proposed low-rise apartments by creating specific objectives and residential development standards for buildings with 4 or fewer storeys. Standards can clarify and help developers with project design and improve the likelihood of local government permit approval. They can also reduce the number of specialised schedules to residential zones in individual local government areas.[267]

Improved standards can be added to Clause 55.07 of the VPPs, or inserted into Clause 57 which is blank. Changes can prioritise and appropriately customise ResCode's site layout, building massing and amenity impacts clauses (55.03 and 55.04) for 3 and 4 storey buildings. For example, the impact of taller projects in relatively low density contexts can be reduced by locating buildings at the front of sites, open space to the rear and consolidating carparking in one area.[268]

Support low-rise apartment development with more appropriate zoning

The Victorian Government can lead the development of criteria to identify where zones in established suburbs can be expanded to support more low-rise apartments as a greenfield housing substitute. The criteria can specify appropriate levels of access to public transport, infrastructure and services that can feasibly offer opportunities to increase housing density in Melbourne and large regional cities such as Ballarat and Geelong. The Victorian Government can work with local governments to deliver the zoning changes.

To support more low-rise apartments, the Victorian Government can also review the effectiveness of residential zones in supporting the 2017 aspiration for 70% of new homes in established suburbs. This can include analysis of the number and location of new low-rise apartments.

New Zealand Planning Reform

In 2020 the New Zealand Government announced their *National policy statement on urban development*, aiming to ensure that New Zealand's towns and cities are well-functioning urban environments that have 'sufficient development capacity to meet the different needs of people and communities.'

The policy directs 'tier one' councils in metropolitan areas to enable building heights of at least 6 stories in metropolitan centre zones, and within a walkable catchment of rapid transit stops and the surrounding areas of city and metropolitan centre zones.[269] Some areas in these catchments are exempt due to 'qualifying matters' such as heritage and national or cultural significance.[270]

The government gave local authorities 2 years to implement intensification policies. This means the policy's effectiveness cannot be accurately assessed as yet. The New Zealand Government supported the planning reform with other policy measures in the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021.

Use a collaborative design process to improve development standards

Although more housing diversity is a direction in Plan Melbourne,[271] future updates can be more specific about the types of housing needed, including low-rise apartments, to offer more housing choices in established suburbs.

The Victorian Government can work closely with local governments and the development industry, as both have detailed knowledge and experience of working with ResCode. Drawing on the experience of developing the Better Apartments Design Standards (over 4 storeys) and Future Homes (up to 3 storeys), it can involve the Office of the Victorian Government Architect, examine existing local government approaches and test options by using a design process with industry to demonstrate the effects on costs.[272] Maroondah City Council's extensive work on Greening the Greyfields also offers insights, particularly as it appears to have a high level of community acceptance as it moves into the delivery phase.[273]

Efficient zoning and statutory planning reform works best with communication and information sharing between state and local governments, and enough time to create durable change. Local governments will benefit from funding to assess the performance of their residential zones and schedules, and to update them.

Future Homes

Future Homes is a Victorian Government initiative to encourage high-quality 3 storey apartments in established suburbs by setting high design standards in exchange for streamlined planning approvals. The program offers ready-made architectural designs of 3 storey apartment buildings for development in selected trial locations in the City of Maribyrnong's GRZ.[274] All applications will be assessed by the Department of Transport and Planning in collaboration with the Office of the Victorian Government Architect, with limited third-party notification and removal of appeal rights. The project is in a 2-year pilot phase with the City of Maribyrnong.

Figure 9 Future Homes designs

Designed by (from left to right): McGregor Westlake Architecture, Spiral Architects Lab, Strategy Architecture with IncluDesign and LIAN Architects.
Source: Department of Transport and Planning, Future Homes

Greening the Greyfields

Greening the Greyfields aims to achieve renewal of low density greyfield housing stock in existing suburbs. Greyfields are residential areas with high land values and older homes, typically in the middle and outer suburbs.[275] It introduces a new approach to residential redevelopment by facilitating small lot subdivision and lot consolidation.[276] The project is a collaboration between Maroondah City Council, Swinburne University, the CRC for Low Carbon Living and FrontierSI, in partnership with the Victorian Government.[277] The pilot project included extensive community engagement and encouraged widespread support for density among current home owners in the region. Local governments are encouraged to involve their statutory planners in testing proposals against ResCode and identify where changes can be made to meet design intentions.[278]

The Minister for Planning approved the Greening the Greyfields amendments in Maroondah City Council's planning provisions at the end of 2022.[279] The chosen pilot locations are yet to see development to test the suitability of the amendments or prove their development feasibility and market value.

Identify good locations for low-rise apartments

To guide further assessment, and ensure consistency in different areas, the Victorian Government in collaboration with local government, can develop more specific guidance on what types of locations are suitable for low-rise apartments. For example, the draft *Land Use Framework Plans* identify an 800 metre catchment around train stations and activity centres as appropriate places to support medium and high density housing, consistent with the principles of the 20-minute neighbourhood.[280] Future Homes also has geographic criteria for sites in the GRZ: within 400 metres of an activity centre or train station, adjacent to Transport Zone 2 or 3, and on a street nominated by the local government.[281]

This policy option can also be applied in regional cities subject to further analysis of regional land use planning and residential zoning. Victoria's regional cities can also benefit from more diverse housing alternatives to more greenfield expansion to accommodate population growth and protect conservation areas and agricultural land.[282] Victoria's peri-urban areas also experience significant development pressure as large land parcels transition from primarily agricultural to small-lot residential use.[283]

Immediate effort can have medium-term effects

Starting strategic work as soon as possible can more quickly improve consistency of the effect of local planning controls on housing outcomes and State Planning Policy. Providing more clarity in the VPPs for low-rise apartments would ideally happen after a complete review, but the Victorian Government can act immediately on this option, '(with the operation of standards clarified), ideally with new provisions to better support development of 3-storey and 4-storey buildings.'[284]

This policy option's benefits will be realised over the medium term. It will take time for households' confidence in low-rise apartments to improve (see Policy option: **Develop a dual occupancy and townhouse code** to support more supply of these homes as more immediate greenfield substitutes).

More high quality housing choices in good locations

Low-rise apartments in established suburbs located close to public transport, jobs and services can deliver environmental, social and economic benefits, including:

- Less embodied energy and material use[285]
- Improved thermal efficiency, for example from sharing floor plates and party walls[286]
- More opportunity and choice for households to live near public transport and existing infrastructure and services
- Health and economic benefits, such as supporting more local and walkable retail, and travel time savings with shorter commutes if households have more choices to live closer to their workplace[287]
- Clarity in housing policies, objectives and development standards benefit both developers designing low-rise apartments and local governments assessing those proposals.[288]

Clarity can alleviate concerns but can risk discouraging innovation

An overall increase in housing supply might lead to better housing affordability but this is not certain. The housing market's 'frictions, sunk costs, barriers and externalities…make the effects of aggregate supply increases highly uneven and, in many cases, involve unintended or contradictory effect'.[289] Increasing the areas in which low-rise development can occur in established suburbs might produce more luxury homes in areas with high demand and land costs. Stronger policies and better standards can produce more homes that are appropriate and affordable for moderate income households.

Some established suburb residents and local governments can resist more homes in their neighbourhood. Their belief in negative effects of higher densities such as congestion, loss of amenities, and effects on neighbourhood character and existing property values can act as significant disincentives to new development.[290] Third party appeals from current residents can cause delays in the planning system and prevent significant housing growth.[291] Importantly, 'establishing a clear regulatory framework and setting high standard for design can reduce negative community reactions while providing certainty over the location and acceptable types of intensified development that developers, community and local government seek.'[292] Clarity is also necessary for 'where the priority is protection of existing character and those where a new preferred character is to be pursued.'[293]

However, developing appropriate and clear residential development standards is complex and time consuming as the standards need to operate in different neighbourhood contexts. Local governments can customise standards to address neighbourhood characteristics, but this can contribute to differences between jurisdictions of which developers and designers need to be aware. Extensive codification of development standards can potentially curb opportunities for innovation: 'It is challenging to formulate controls that prevent poor design without stymying cleverer responses.'[294]

Synergies with other options

Strategic master plans for priority precincts can nominate the Residential Growth Zone for locations close to good public transport for low-rise apartments as a medium-term greenfield housing substitute. They can recommend the dual occupancy and townhouse code to increase the short-term supply of housing substitutes. Plans can also identify areas suited to lower minimum car parking requirements. Combining these 3 options can have a larger impact than when used separately.

Planning should start after reforms to housing targets, infrastructure contributions and home subsidies. Planning will require considerable time but delivery can be relatively rapid. This should occur within 3 years. For example, streamlining of development approval in priority precincts can be achieved by property owners choosing to use the dual occupancy and townhouse code.

Other related options

Targets for the number, type and size of new homes can be met by more dual occupancies, townhouses, low-rise and child-friendly apartments. These 3 options support setting and achieving housing targets, with monitoring providing evidence of progress.

Table 8: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Expanding the use of the Residential Growth Zone (RGZ) in good locations can produce more sites where developers can build low-rise apartments. Low-rise apartments can improve the development potential of a site and contribute to more housing supply.
Quality	Improves quality and/or child friendliness of housing types	Better standards can improve apartment design quality and make them more attractive as a substitute for greenfield homes, including for households with children.
Price	Means more moderate income households can afford to live in established suburbs	More use of the RGZ can facilitate more low-rise apartments and more home choices in established suburbs. Larger apartment developments, offering economies of scale, can contribute to more affordable prices than detached homes in established suburbs can.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	**Design quality is variable**: Improved standards can contribute to both clarity and better design outcomes that can alleviate existing residents' concerns **Planning needs clarity**: Clarity of standards can reduce delays and speed up development. More use of the RGZ can create more opportunities to increase supply and reduce home prices.
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene	The Victorian Government can start the strategic work now to improve standards for low-rise apartments. More clarity in the Victoria Planning Provisions would ideally happen after a complete review, but the government can act immediately. It can also fund local governments to start their strategic work on expanding the RGZ.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Larger areas of RGZ can show where the Victorian and local governments prefer low-rise apartments. This can give more certainty to the development industry and local communities. Strategic work by local government and supported by the Victorian Government can determine the appropriate locations for more RGZ and this will require early engagement with communities.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	Introducing more RGZ in good locations can support developers to build more low-rise apartments in Melbourne and regional cities' established suburbs.

Options to increase diversity and choice of homes in established suburbs

Develop a dual occupancy and townhouse code

Give property owners as-of-right permission to bypass red tape and supply more diverse homes when they comply with the new dual occupancy and townhouse code. Give better visual guidance for well-designed dual occupancies and townhouses.

Poor housing design limits suitable options for households with children in established suburbs

Clause 55 of the Victoria Planning Provisions (VPPs) regulates developments with 2 or more dwellings (ResCode). It includes objectives, qualitative and quantitative standards that address neighbourhood contexts, site layout, amenity and detailed design.

Even with comprehensive objectives and standards, ResCode does not always produce high quality small-scale residential development (such as townhouses and dual occupancies, or 2 homes on a single block). A common project configuration has 1 or 2 homes facing the street with more units behind (Figure 10). With an integrated garage for each home, sites have long concrete driveways to service those at the rear.

Figure 10 Typical townhouse development, West Footscray

Source: N Bertram, L Khor, O Sainsbury, R Power, M Stevens, Codev townhouse model: design research report, November 2020, p.3

While there are examples of good townhouse and dual occupancy design, siting of built elements in relation to solar orientation, open space, carparking, and environmental performance can be particularly deficient. Poor design decisions affect the number of homes a site can accommodate and development costs, leading to 'low quality infill outcomes that currently dominate the housing market' and do not 'deliver high quality dwellings of this type at an affordable price'.[295]

Under clause 55, townhouse siting and designs should, but do not consistently, take account of solar orientation. This contributes to poor building thermal performance and causes higher construction costs to meet energy performance requirements (currently 6 star and rising to 7 star in October 2023[296]). These can also add to residents' operating costs, such as by relying on air conditioning for indoor comfort where natural ventilation is inadequate.[297] Experts observe similar issues with the Small Lot Housing Code, along with concerns about inadequate on-site management of stormwater and very limited landscaping opportunities.[298]

This code is limited to growth areas although Development Victoria is proposing to use it for sites in Brimbank and Knox municipalities.[299]

Local governments can exercise discretion in assessing proposals under clause 55, however the Victorian Government is increasingly adopting streamlined approval processes based on compliance with quantitative standards alone. Examples include VicSmart, a simplified evaluation process for planning permit applications such as for tree removal and car parking reductions, and the proposed Performance Assessment Module (PAM) which is a standardised assessment process where council approval can be given based on meeting quantitative measures.[300]

Existing codes do not provide visual guidance

Clause 55 does not include or refer to any examples of preferred built form and site layout outcomes to demonstrate how projects can better meet subclauses' objectives and standards, except for 3 diagrams accompanying standard B4, B17 and B19 (with no new visual guidance included in the proposed PAM). The Victorian Government's 2015 Planning Practice Note 27 Understanding the Residential Development Standards (ResCode) includes diagrams to explain the application of standards but these mainly focus on single dwelling projects and have not been updated since the increase in projects with 2 or more dwellings.[301] For example, the Small Lot Housing Code review occurred 8 years after its adoption as 'both development typologies and housing densities have shifted.'[302] The review recommended that the accompanying practice note, which includes illustrations, also be updated.[303]

Planning delays have development cost implications

Time delays in the planning approvals process contribute to the cost of developing housing.[304] These time delays are more common in complex housing types and development applications for medium density products. These time delays are also more common in established suburbs that have more complex development contexts. For example, Merri-bek City Council's review of medium density developments found that 40% of applications in 2018 involved 2 dwellings on a lot.[305] The majority of these complied with zoning requirements. However, 1 in 2 received objections from the community. Despite third party appeals adding to the time taken to assess these applications, very few objections lead to changes to plans, and those that did tended to be minor.

Develop a dual occupancy and townhouse code

Encourage better designed townhouses and small-scale developments by implementing an optional small-scale housing development code similar to that of NSW for established suburbs with good access to public transport. The code's use could be incentivised by making homes that meet the code's standards as-of-right, providing developers faster approval than using ResCode's standard permit assessment process. The code could first apply to 2 dwellings on a lot (dual occupancy), and then expand to include projects with 3 or more dwellings (townhouses). Property owners could still choose to apply for planning permission using the existing ResCode assessment process.

The code needs to consider how standards can limit any effects on neighbourhood character, amenity and infrastructure. For example, this can be done by ensuring stormwater is appropriately captured and recycled, minimising overshadowing and overlooking, mitigating urban heat, and appropriate carparking provision and bicycle storage.[306]

Develop accompanying built form guidelines

The code will also need accompanying built form guidelines that give clear directions on achieving sustainability and design outcomes. This can include objective standards that include mandatory environmentally sustainable design (ESD), universal access, and form-based guidance relevant to townhouses. It can also specify functional layouts. These can be based on the Better Apartment Design Standards (BADS) but can also include standards for dining areas and flexible spaces that accommodate home offices, storage, and space for play. For example, the Australian Housing and Urban Research

Institute's (AHURI) submission to the BADS review noted their research found a 'lack of amenity for children and families in apartments – good spaces for families might integrate a communal garden and interactive spaces for children.'[307] Including standards for these dwelling characteristics can improve design quality and consumer confidence that denser homes will meet their preferences.

Also, for projects that do not take up the voluntary code, the Victorian Government can add graphic guidance to ResCode to help achieve higher quality outcomes, for example for building envelopes, frontages, common spaces and waste storage. This will give clearer information to designers, builders, and developers about the desired outcomes of the residential design standards and discourage minimum compliance with ResCode standards.

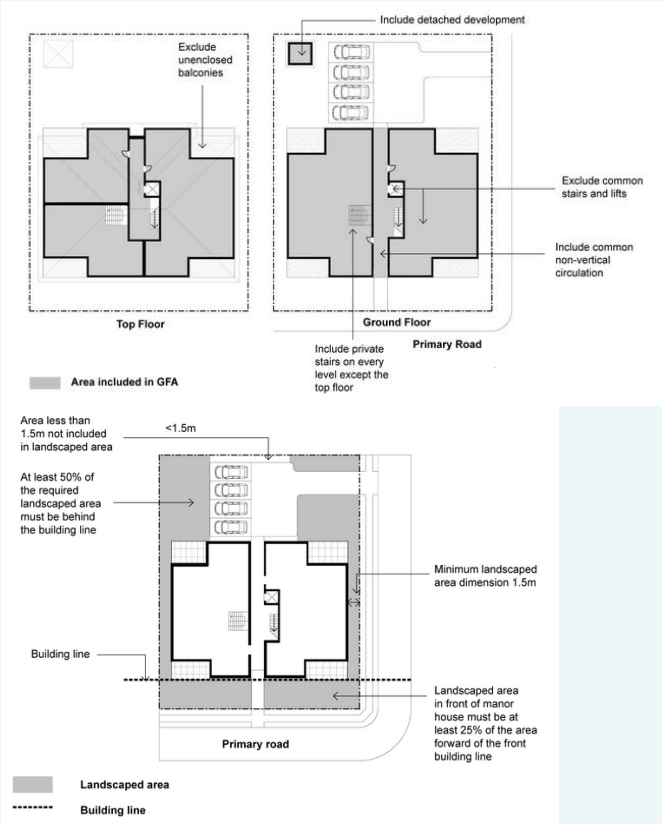
Low-rise housing diversity code, NSW

In 2018, the NSW Government introduced a new code to encourage more housing development in existing residential areas. The code aims to facilitate development of well-designed dual occupancies, manor houses (duplex, 3 or 4-pack apartments up to 2 storeys) and terraces with a 20 day, fast-track process for permits for complying development. These uses are deemed as-of-right in several residential zones (R1, R2, R3, RU5). This pathway avoids standard development assessment (DA) by combining the building and planning assessment process into one approval for a complying development certificate (CDC). Professional assistance is still required to assess applications against the code.

At the same time, NSW produced its Housing Diversity Design Guide to give consistent planning and design guidance for new development.[308] It includes clear visual guidance about the expected outcomes in terms of objective design criteria that must be satisfied to get the CDC. Figure 11 illustrates maximum gross floor area and minimum landscaped area arrangements.

The code's objectives are to encourage more housing diversity by encouraging the construction of alternatives to greenfield detached houses and high-rise apartments. It also has an affordability objective; more codification and fast-tracked decision making will produce 'time and cost savings…through reduced administrative and compliance costs, reduced delays in approval times and greater development approval certainty.'[309]

Figure 11 NSW Development standards for manor houses, certain dual occupancies and attached development: gross floor area and landscape area



Source: NSW State Environmental Planning Policy (Except and Complying Development Codes) 2008, Part3B Low Rise Housing Diversity Code, https://legislation.nsw.gov.au/view/html/inforce/current/epi-2008-0572#pt.3B, accessed 24 January 2023

Build on past experience and consider future tools

The Victorian Government can invite local governments and the development industry to participate in the creation of the optional code that can build support for the approach. Full introduction of the NSW code was delayed for 2 years due to community opposition. NSW followed a 2 stage process: 82 local governments adopted the code in 2018, and the NSW Government then worked through issues and objections from 50 other councils. From July 2020, the code applied to all NSW local government areas.

Development feasibility can inform the code's development. The Victorian Government's Future Homes program tested the market viability and buildability of its 4 design packages and can be a useful resource for this new code.[310]

Developing contemporary visual guidance for dual occupancies and townhouses can build on existing approaches including Planning Practice Note 27 Understanding the Residential Development Standards (ResCode), the VPA's Small Lot Housing Code Practice Note and the Apartment Design Guidelines for Victoria. Local governments including Darebin, Knox and Glen Eira have also prepared residential development guidelines with illustrations of siting, built form and good design outcomes.[311] Merri-bek 's specifically illustrates dwelling outcomes that comply with clause 55.[312] The NSW low rise housing diversity code included a variety of compliant housing types with a range of alternatives to freestanding homes and apartments, including terraces, manor homes and dual occupancies.[313] A consolidated Victorian Government approach can help developers who work in many different local government areas.[314]

In the future, emerging technologies such as Digital Twin Victoria can be used to automate assessment using an e-compliance module. Development Victoria is piloting an e-comply module using the digital twin platform to support faster assessment of dwellings under the Cairnlea Small Lot Housing Code. Successful application of digital assessment tools for small scale development would require a prescriptive code, based on objective and quantitative standards. This code can be designed to encourage design excellence and address a full range of development standards, including ESD.

Apply the code to good locations

Developers' use of the optional code and eligibility for fast-track approval can be limited to particular locations.

The draft *Land Use Framework Plans* identify areas within 800 metres of a train station or activity centres as opportunities for denser housing. However, the plans do not specifically suggest where dual occupancy and townhouse development are the most appropriate outcomes. Research for the Office of the Victorian Government Architect (OVGA) notes that locations suitable for small scale projects such as townhouses include:

- 7 to 25 kilometres from the CBD.
- Suburbs developed between 1950 and 1979.
- Areas with good proximity to public transport networks.[315]

Reducing minimum car parking requirements close to good public transport can produce better design outcomes with fewer garages and driveways in dual occupancies and townhouses (see Policy option: **Allow homebuyers more parking options**).[316]

These criteria also align with areas suitable for greyfield redevelopment and can apply in regional cities.[317]

To address the risk of dual occupancy underdevelopment, a Victorian code for 2 dwellings on a lot can be limited to the NRZ (designated for minimal change) and can be applied in the incremental change GRZ with extra conditions. For example, application in GRZ can be limited to a maximum lot size of 300 square metres for each new home.

Prioritise visual guidance and code development

Future updates to Plan Melbourne can identify the code's development as a priority action to help generate high quality greenfield substitute 3-bedroom housing options in established suburbs.

Writing the code is likely to take several years: a first draft of the NSW code was released in 2016 and finalised in 2020. Reviewing and building on NSW's and other jurisdictions' approaches can help expedite this work. Participating local governments can then pilot the code and help evaluate its effects.

Updated visual guidance to supplement residential development standards can be developed under a much shorter timeframe in partnership with metropolitan and regional city local governments and the OVGA.

Fast track supply to increase housing choices

A voluntary code can improve consumer choice by improving design and streamlining approvals of dual occupancies and townhouses. These housing types can meet many of the preferences of households that would otherwise prefer greenfield housing. Evidence supports the premise that incentivising well designed homes that are sustainable and accessible improves the standards of townhouse design: '…voluntary tools are important for helping to shift the performance goal posts for sustainable housing. They do this by providing an alternative way to move systematically beyond minimum standards.'[318]

Fast-tracked approval times will facilitate faster housing supply by allowing developers to begin construction sooner and reducing the pressure on local government to approve more complex developments.[319]

Townhouses in established suburbs have similar prices to greenfield detached homes and have more similar housing attributes than apartments. The NSW low rise diversity code anticipates that the price of new attached dwellings will be around 25% more affordable than a detached home in the same neighbourhood, by facilitating more housing construction that is affordable by design.[320]

A codified approach can have limitations

If poorly designed, residential development codes can conflict with neighbourhood character. By removing standard development assessment processes, they cannot assess projects' impacts on local contexts. Existing built form outcomes under ResCode's quantified neighbourhood character standards such as setbacks, site coverage, permeability and landscaping show that the codes do not guarantee high quality, context sensitive design responses. Developing a prescriptive code with objective standards while at the same time encouraging site responsive designs will be difficult. However, site-specific heritage, environment and landscape controls should continue to trigger a planning permit application.

Care should also be taken that neighbourhood character provisions are not used to prevent housing diversity or density in established suburbs.

Fast-tracking can mean minimum compliance with development standards. ResCode standards are not prescriptive but rather support local governments to assess whether projects meet policy objectives such as preferred neighbourhood character. This allows for innovation and flexibility in applying qualitative and quantitative standards, with dwelling designs able to respond to local site conditions. The simple application of ResCode's quantitative standards can result in poor built form outcomes demonstrated in Figure 12 where 'side-facing rows of townhouses, frequently partly cantilevered over driveways and with private open space provided as heavily-screened side-facing balconies. Tree canopy is often minimal. These forms achieve poor internal amenity outcomes, have an excessive amenity impact upon on neighbours, and align poorly with Plan Melbourne's aspirations for urban greening and cooling.'[321]

Figure 12 Melbourne townhouses

Source: iStock

Infill housing design innovation can be encouraged using streamlined processes, but they can be reliant on a 'champion who could ensure that business-as-usual (BAU) standards were exceeded'.[322] Champions can include architects working in local councils or 'an astute development manager' motived to exceed minimum standards.[323] Fast-tracking in most other instances can risk the proliferation of poor design quality standards 'with few avenues for recourse'.[324]

The successful use of prescriptive rather than performance-based controls needs to promote high design quality. A housing development code should avoid conflicting standards and unclear definitions.[325] Including too many standards might also act as a disincentive to voluntary use; consultants identified this risk if more ESD standards are added to the Small Lot Housing Code.[326] Comprehensive and easy-to-use form-based guidelines can support standards and help minimise the number required. Piloting the code and evaluating built form outcomes can help to identify any issues.

Planning Panels Victoria has noted that a code assessment approach's removal of third party appeal rights is balanced by introducing improved mandatory standards for development that account for adverse amenity impacts such as overshadowing and overlooking.[327]

Development feasibility modelling in an independent review of the NSW low rise housing diversity code found that land costs and site sizes challenge the viability of the manor and terrace house typology.[328] In inner Sydney, the subdivision pattern and resulting narrow lots do not support the required 15 metre frontage for a duplex or triplex, or 18 metres for a fourplex. Development requires site consolidation, adding to land acquisition costs. Developers can choose smaller returns on investment, but these are likely to be very small-scale builders rather than medium and larger builders/developers. In Melbourne and regional cities, smaller developers active in middle and outer areas with lower land values can find a code and visual design guidance helpful.

Guidelines to encourage better design can 'provide clear visual communication, [but] there is a need to reiterate that the diagrams only represent one design approach and should not be used as the only solution to a design responding to a specific standard.'[329]

Synergies with other options

Strategic master plans for priority urban renewal precincts can recommend the dual occupancy and townhouse code to build more greenfield housing substitutes. They can nominate the Residential Growth Zone for locations close to good public transport for low-rise apartments as a medium-term substitute. Plans can also identify areas suited to lower minimum car parking requirements. Combining these 3 options can have a larger impact than when used separately.

Planning should start after reforms to housing targets, infrastructure contributions and home subsidies. Planning will require considerable time but delivery can be relatively rapid. This should occur within 3 years. For example, streamlining of development approval in priority precincts can be achieved by property owners choosing to use the dual occupancy and townhouse code.

Other related options

Targets for the number, type and size of new homes can be met by building more dual occupancies, townhouses, low-rise and child-friendly apartments. These 3 options support setting and achieving housing targets, with monitoring providing evidence of progress.

Table 9: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Developers can choose to use the code and visual guidance that both clarify design outcomes. Making the design process easier and approvals as-of-right can both help accelerate development of these homes and add to supply that is a substitute for greenfield detached housing.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	Dual occupancies and townhouses are already well-suited to including 3 and 4-bedrooms. The code and visual guidance can help improve their quality and build buyers' confidence that these homes are a substitute for greenfield houses.
Quality	Improves quality and/or child friendliness of housing types	Clarification by a code and visual guidance can contribute to developers building better quality housing

Criterion	Description	How the option addresses the criterion
Price	Means more moderate income households can afford to live in established suburbs	Shorter time in planning processes when developers choose to use the code can help reduce development and construction costs. More dual occupancies and townhouses can contribute to more affordable prices than for detached homes in established suburbs.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	The code's standards can give more planning clarity and certainty, and developer confidence in building dual occupancy and townhouses. More industry familiarity with and construction of these types of homes can potentially lower costs produce by allowing economies of scale Providing as-of-right approval when using the code can reduce the time taken for planning assessment and reduce development costs. The guidance can clarify design issues and contribute to higher quality outcomes. Built projects can help improve consumer and local community confidence. Development financing risk aversion can be reduced as the dual occupancy and townhouse code focuses on housing products that do not require pre-sales to access loans.
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene	The Victorian Government can build on its own important work (Future Homes, Better Apartment Design Guidelines) in developing the code and visual guidance.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	As-of-right approval when using the code can reduce the time and costs associated with appeals processes which benefits both developers and local government (as planning approval authorities). Existing residents might resist the removal of the right to object to proposed homes. Developers use of the visual guidance can improve local government and community confidence in the quality of dual occupancies and townhouses. Households interested in living in established suburbs will welcome more, better quality dual occupancies and townhouses.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	The government can apply the code and visual guidance to all suburbs in Melbourne and regional cities to improve housing choice and diversity

Allow homebuyers more parking options

Reduce or remove compulsory minimum parking requirements to improve choice and affordability of new established area homes, close to good public transport. Allow homebuyers to choose how much onsite parking they want to pay for above minimum requirements.

Parking requirements disincentivise development and reinforce car dependence

Victoria's default minimum parking rates require 1-bedroom and 2-bedroom homes to have 1 car space onsite for each home, and 2 car spaces onsite for homes with 3 bedrooms or more (clause 52.06 of the Victoria Planning Provisions). Development applications that propose fewer parking spaces require a planning permit. This imposes an extra regulatory burden on new homes with less parking, forces homebuyers to pay for carparking they might not want and discourages developers from building larger homes.

Victoria's minimum parking requirements theoretically ensure that new residential developments do not cause more demand for street parking. Evidence from the USA shows that minimum on-site requirements effectively reduce the cost of driving on local streets, because providing parking reduces the overall cost of car ownership. This can then lead to localised congestion. Concerns about congestion rather than parking spaces is more likely the cause of community resistance to denser residential development. Minimum car parking requirements can contribute to making new higher density housing development more difficult.[330]

Parking minimums can cause inefficient land use outcomes that further reinforce car dependency.[331] People consider many factors when choosing whether to own and drive a car, including the availability and cost of parking. Widely available onsite parking and free street parking reduces the perceived costs of driving. This influences the mode of transport people choose and makes driving and parking easier, which can have negative environmental, social and economic consequences.[332]

Parking minimums make new homes more expensive

Off-street residential parking can add between $40,000 and $80,000 per space to the cost of development in the City of Melbourne.[333] Other studies put the costs even higher. An Australia-wide study estimated costs per space of between $50,000 and $126,000 for onsite parking, depending on the type of parking space.[334] Modelling of the effects of different variables on home prices from 2017 to 2022 shows that a second car space can, on average, increase the cost of a new house by $52,000, a new townhouse by $61,000 and a unit by $186,000.[335]

Minimum parking rates can also influence developers' decisions about the number of homes they can profitably build. A West Footscray residential research project targeted to first home buyers examined the effect of car parking on the number of 3-bedroom units the developer could build.

Table 10 shows that reducing at-grade (or above-ground) car spaces from 2 to 1 per dwelling allowed the project to build an extra home while decreasing the sale price for each unit. The number of homes that could be built doubled from 4 to 8 when basement (or underground) car parking reduced from 2 to 1 per dwelling, and the sale price fell by over 30%. In general, 'substantial spatial and efficiency benefits can be gained if parking is reduced to one vehicle per dwelling (irrespective of number of bedrooms).'[336]

Table 10: At-grade carparking effects on development feasibility, West Footscray townhouses

Examples	At-grade carparking **3 bed, 2 bath, 2 car**	**3 bed, 2 bath, 1 car**	Basement carparking **3 bed, 2 bath, 2 car**	**3 bed, 2 bath, 1 car**
Land price	$900,000 (fixed)	$900,000 (fixed)	$900,000 (fixed)	$900,000 (fixed)
Total units	3	4	4	8
Total cars	6	4	8	8
Gross revenue	$3,150,000	$3,400,000	$4,340,000	$5,480,000
Project margin	15% (fixed)	15% (fixed)	15% (fixed)	15% (fixed)
Unit sale price	$1,050,000	$850,000	$1,075,000	$685,000
Gross profit	$374,500	$425,000	$513,000	$637,000

Source: N Bertram, LA Khor et al, 2020

Parking minimums discourage developers from building larger homes

Minimum parking rates impose more costs on residential development and encourages developers to build more 1 and 2-bedroom rather than 3+ bedroom homes to maximise site yields. This produces a uniform product attractive only to one group of homebuyers. Research on the barriers to development in established suburbs found a 'lack of flexibility prohibits the development of diverse housing and can, in fact, prevent the development of any housing at all if the cost of providing parking pushes the development into the unprofitable pile.'[337]

Removing parking minimums is likely to benefit households who might choose less parking if they had the option. Households usually have no choice but to pay for a parking space whether they need it or not.[338]

Reduce or remove minimum parking rates for new homes with good public transport access

Reducing or removing the minimum parking rate in clause 52.06 for new housing development can initially apply to homes near metropolitan train stations and tram stops. An analysis of 2016 census data found people living in apartments within 400 metres of public transport have lower than average car ownership rates.[5339] When controlling for other factors, public transport supply (quality and frequency) had a larger effect on whether households own a car than distance to the Principal Public Transport Network (PPTN).[340] Car ownership rates were lowest when services ran every 5 minutes in the morning peak, with 40% of apartment households within 800 metres of the PPTN owning no car (see Figure 13).

[5] Note: housing typologies other than apartments were not included De Gruyter, Truong and Taylor's study

Figure 13 Relationship between car ownership and public transport service frequency

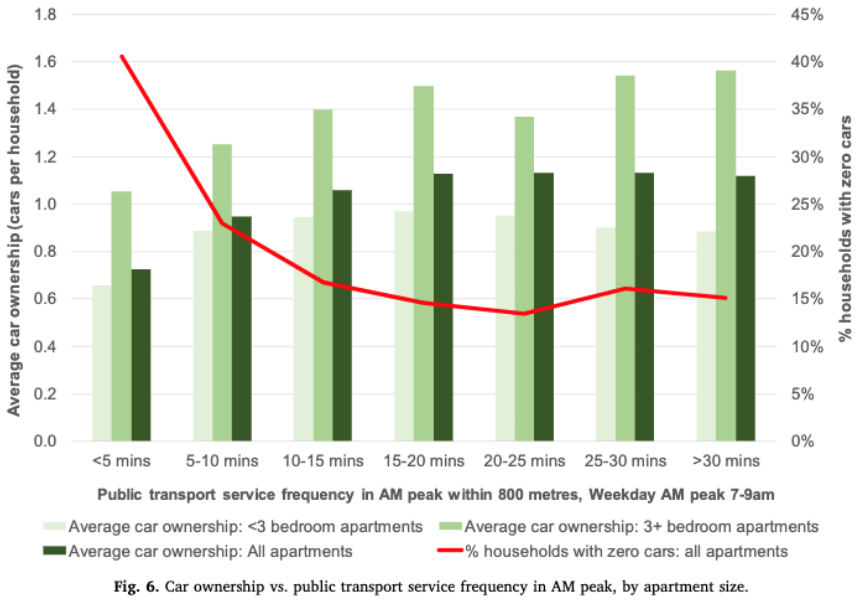


Fig. 6. Car ownership vs. public transport service frequency in AM peak, by apartment size.

Source: C De Gruyter., LT Truong and EJ Taylor, 2020, p 8

Current minimum parking rates encourage developers to build more parking than many people need. Figure 14 shows car ownership by apartment residents who live near public transport. This research found: 'car ownership levels tend to be lower for apartment households located within 300 to 400 metres of the PPTN, particularly those located within 100 metres of the PPTN.' On average, car ownership levels were between around 1-1.4 per 3+ bedroom apartments located within 400 metres of public transport. This suggests that current minimum carparking standards can supply too much carparking.

Figure 14 Relationship between car ownership and distance from PPTN

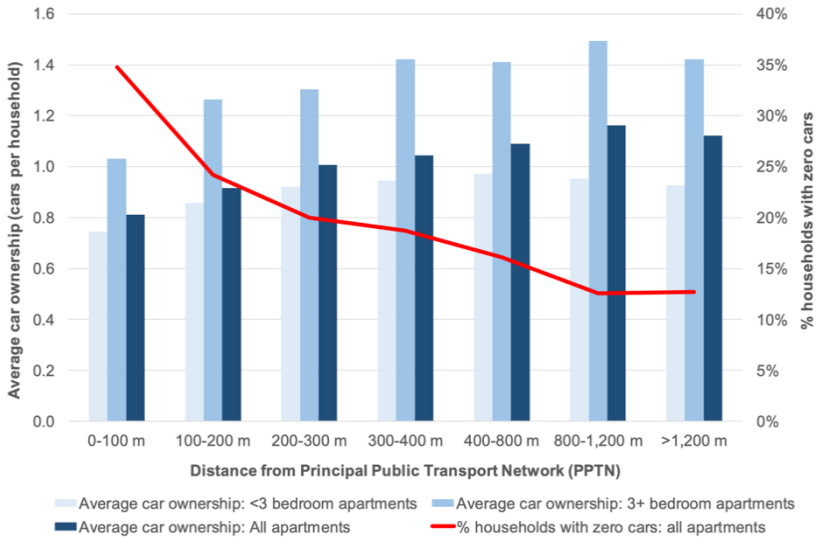


Fig. 4. Car ownership vs. distance from PPTN, by apartment size.

Source: C De Gruyter, LT Truong and EJ Taylor, 2020, p 8

Change planning provisions and support local government to manage on street parking

The Victorian Government can prepare an amendment to clause 52.06 in the Victoria Planning Provisions (VPPs). It can also add an option for developers to meet minimum requirements more flexibly, for example by providing dedicated, publicly accessible car sharing spaces.[341] The Victorian Government can also consider supporting 'unbundled' parking that 'is sold or rented in a separate market to housing.'[342] Build-to-sell developments can find it difficult to unbundle parking because banks prefer parking on title.[343] In the future, people can more easily rent a parking spot in their building or nearby, rather than have to buy one with their home.[6]

Local governments manage street parking. The Victorian Government can support local councils to better manage their parking where it is congested. We have previously suggested that the Victorian Government can expand and increase the car parking congestion levy to inner Melbourne councils, with revenue sharing between the 2 levels of government.[344] Discussions with local government can help decide other ways to assist, such as by supplementing funding or giving technical expertise. Changes to parking minimums can be phased in over a transition period, during which the government can support councils to adopt better parking management practices before the changes take effect.

Reduce parking requirements close to good public transport

Minimum parking requirements can be reduced in several ways. For example, parking requirements for 3-bedroom apartments can be reduced to one on-site car space, while compulsory parking minimums might be removed for smaller apartments located near good quality, frequent public transport services. Developers can provide more than the minimum requirements, or homebuyers can choose to pay for more parking if they need it.

The Victorian Government can reduce or remove minimum parking rates from clause 52.06 for homes near train stations or tram stops. It can also consider locations near any good quality, frequent public transport service, including bus services, with ideal locations having a service frequency every 5 to 10 minutes. This can also include regional cities. This approach can be included in the dual occupancy and townhouse code where property owners using the code can automatically reduce car parking in these locations (See Policy option: Develop a dual occupancy and townhouse code).

Build on existing analysis and stage changes over time

Future updates to Plan Melbourne can signal the intent to review parking minimums in good locations. This can include evidence that demonstrates that carparking can affect the cost of residential development and housing affordability.[345]

The Victorian Government can deliver changes to minimum parking rates over time, starting in locations with good access to public transport and close to the central city. This allows for monitoring and evaluation of the impact, including on car ownership, transport mode and street parking.

Less parking can result in more housing

Reforming car parking minimums can encourage building more, lower-priced homes in established suburbs, and give more certainty in development processes. Excessively high parking minimums reduce development yields,[346] encourage building smaller homes with fewer bedrooms,[347] and increase home prices.[348]

Reducing or removing minimum car parking rates can give people more home choices, allowing households to choose how many parking spaces they want and reducing the cost of housing accordingly. It can also

[6] In higher density areas residents already have access to an emerging market for parking. Park hound and Spacer are 2 online marketplaces which exist in Melbourne.

lower development costs by allowing builders to use the available floor area for homes, rather than carparking. It also increases the financial feasibility of building new homes.

Onsite parking is non-negotiable for many people considering homes in new growth suburbs

Some households prefer to buy onsite parking even if they will not use it, thinking that it adds to their home's resale value. Banks share this perspective.[349] Building more new homes with less parking in established suburbs might make these homes a less appealing alternative for households comparing buying a home in a new growth suburb.

But developers are likely to build extra onsite parking anyway if it increases profitability. The planning scheme does not need to force them to remove car parking altogether.[350] Some households might still choose to pay extra for parking, but reducing minimum requirements allows individual households to choose the amount of parking they want to own.

Manage concerns about spill-over effects

Existing residents might worry that excess demand for parking will spill over onto surrounding streets.[351] This can lead to disputes when medium or high density developments propose to vary or waive parking provision. People sometimes blame higher density housing for driving demand up for street parking.

But a 2020 study of street parking demand questioned this logic. It found that 'the majority (77–83%) of on-street residential parking use is by residents of detached housing. Most users of on-street parking have enough off-street parking, and half use garage space for storage or housing purposes.'[352] The study found that people living in apartments use comparatively less street parking and are not eligible for resident on-street parking permits. The City of Melbourne also found apartments typically provide too much onsite parking, with surveys of Southbank and West Melbourne finding that between 26% and 41% of parking spaces sit empty.[353]

Governments can address any spill-over effects at their source (the street), by introducing and enforcing paid parking in places with high demand.[354] The City of Melbourne removed parking minimums, while managing spill-over effects by using paid parking, timed restrictions and better parking enforcement. This shifted expectations that free parking is a right, at least in the central city. It also helped manage the amount of expensive land dedicated to street parking, and potentially allows more valuable uses.[355]

In other inner and middle suburbs in Melbourne and regional cities, where free street parking is widely available, some residents can resist parking management changes. They might be unhappy paying for street parking that was previously free. The Victorian Government can support local governments to introduce, monitor and enforce parking restrictions (including paid parking) in places with heavy demand for scarce parking, to help prevent any shift in demand for local street parking from new residential developments.

Synergies with other options

Strategic master plans for priority precincts can identify areas suited to lower minimum car parking requirements near train stations and tram stops. They can also recommend the dual occupancy and townhouse code to supply more greenfield housing substitutes and the Residential Growth Zone close to good public transport for low-rise apartments as a medium-term substitute. Combining these 3 options can have a larger impact than when used separately.

Planning should start after reforms to housing targets, infrastructure contributions and home subsidies. Planning will require considerable time but delivery can be relatively rapid. This should occur within 3 years. For example, streamlining of development approval in priority precincts can be achieved by property owners choosing to use the dual occupancy and townhouse code.

Table 11: Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	Reducing the required number of parking spaces in multi-unit developments can encourage developers to build more units
Diversity	Increases the supply of 3 and 4-bedroom homes in established suburbs	Less carparking space can increase the area available for bedrooms
Price	Means more moderate income households can afford to live in established suburbs	Less carparking can decrease development costs which can be reflected in lower home prices
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	Carparking raises development costs, which lead to higher home prices. Requiring extra planning processes for carparking reductions adds time and cost to development.
Actionable	Is practical to implement and identify a clear role for the Victorian Government to intervene	The Victorian Government can implement the reform by changing the Victoria Planning Provisions
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Local communities can be concerned about lower on-site carparking requirements leading to more demand for on-street parking. Some local governments such as the City of Melbourne already introduced lower carparking minimums while others experience opposition. Developers are likely to welcome reform that reduces costs.
Scalable	Is a scalable action that is likely to increase the supply of new housing over time	Lower carparking requirements can apply to places with good public transport, including in regional cities. It can be expanded to other areas that have future public transport infrastructure and service improvements.

Encourage child-friendly design in new apartments

Update the Better Apartments Design Standards to specify better access, versatility and safety features so apartments are more attractive for households with children. Introduce voluntary design guidelines for best practice child-friendly apartment design.

Households with children rarely choose to live in apartments

Household intentions to have children, and whether they already include children, influences decisions to stay in or leave established suburbs. Our research found that households with children do not often live in denser locations in Melbourne because those places do not have homes that meet their needs.

Households are more likely to migrate outside their neighbourhood if they live in a high density neighbourhood and they have children, or intend to have children in the near future.[356] Dwelling type is the most significant factor in intention to move and actual changes in location.[357] Households in high density areas are less likely to move if they live in a home that suits their needs.[358]

Qualitative research on London's high-rise housing found that while residents were satisfied with their housing, they planned to move before they had children or before their children grew.[359] This was due in part to apartment design and number of bedrooms. Only 13% of respondents were living in a unit with 3 or more bedrooms. Most households could not afford to upgrade to a larger unit and some expressed concern that they could not afford their current apartment of top of their expenses of raising children.[360]

These findings are relevant in Victoria, where households with children are similarly less likely to consider or accept homes with fewer than 3-bedrooms. A study of low-income households found that 78% of respondents considered the number of bedrooms to be their most important housing attribute, and 90% of couples with children preferred a home with 3 or more bedrooms.[361]

Worsening housing affordability has a further effect. Households with children are more likely to choose to live in 'more affordable 'investment corridors' of low rent housing in outer metropolitan areas, far from employment and amenity' to still afford their preferred housing type.[362] The 2021 census reports that almost 60% of Melbourne's growth area residents were households with children compared to 40% in established suburbs.[363]

While other housing types like townhouses offer more readily available substitutes for greenfield housing, in the future, low-rise and high-rise apartments will also need to be child-friendly to accommodate the scale of required growth in Victoria.

Existing apartment design and quality are not suitable for children

To be child-friendly, apartments must offer adequate alternatives to the features and amenities common in detached, greenfield housing.[364] Household satisfaction is influenced by design, safety and security features inside the apartment and the surrounding complex.[365]

Open play spaces in apartment complexes help cater for the physical and mental wellbeing of children.[366] A New Zealand study found that households with children in apartments considered the lack of private open spaces such as backyards as a significant motivation to move.[367] Current apartment designs requirements for open space are 'insufficient'.[368] Many apartment complexes in Melbourne do not have functional communal indoor or outdoor spaces that are designed for children.[369]

Play spaces and units in apartment buildings also do not offer acoustic privacy, both to minimise outside noise that might disturb children, but also to allow children to make noise without complaints.[370] The Inquiry into apartment design standards identified that the minimum residential development standards for Melbourne apartments do not require reducing the noise created inside apartment buildings, either inside units or between apartments or storeys.[371] This same issue was reinforced by participants in our focus groups.

Improve existing apartment development standards

Working with the Office of the Victorian Government Architect, the Victorian Government can improve the mandatory residential development standards for apartments to improve quality and address the concerns of consumers. The government can best change the quality and amenity of high-rise apartments of 5 or more storeys by updating the Better Apartments Design Standards (BADS) in the VPP clause 58: Apartment developments. It changes to BADS that regulate apartment size, noise and open space requirements. It can introduce more qualitative standards to support usability, design innovation and assessment of floor plans.[372]

BADS includes minimum dimensions for bedrooms and living areas but does not have an overall minimum apartment size due to concerns about stifling innovation.[373] The Legislative Assembly's Environment and Planning Committee's Inquiry into apartment design standards recommended that the Victorian Government adopt a minimum size in the next update to BADS to improve design outcomes.[374] While NSW's minimum size standard does not guarantee enough space for residents' activities or furniture, discretionary design guidance addresses space usability.[375] Adequate application and assessment of both regulatory and discretionary approaches, and providing design guidance, can produce more usable spaces.[376]

An updated BADS can also include objectives to address noise impacts and require designs to exceed the National Construction Code minimum standards.[377] It can introduce stronger shared space requirements for the design of indoor and outdoor communal spaces to allow for play.[378]

Changes to the standards can be reviewed using the Victorian planning scheme amendment process.

Future updates of Plan Melbourne can be more specific about requiring diverse housing in good locations and for child-friendly apartments that offer a suitable alternative to greenfield affordable detached housing. It can include a policy on child-friendly homes to support the aspiration for 70% of new homes in established suburbs.

Develop apartment design guidelines to address children's needs

The Victorian Government can also create voluntary design guidelines and exemplar design intent plans for apartments of 5 storeys or more. Voluntary child-friendly guidelines can exceed the minimum standards set in BADS to support developers achieving higher design standards without mandating significant, uniform changes.

Options to consider in voluntary guidelines include specifications for floor plan, indoor and outdoor spaces, and noise, including:

- design standards for floor plans that have the 'capacity for modifications of layouts over time' and space for child-friendly design features such as pram and crib access, and storage spaces[379]
- design approaches for play areas that are child-safe and allow parental supervision,[380] such as Toronto's 'communal living room' concept which includes spaces for 'play and art projects, a music practice room, [and] a toddlers' play room'[381]
- building design, such as a minimum wall thickness or building layouts that avoid the placement of bedrooms near busy streets, neighbouring living rooms and walls that are shared with machinery and utilities[382]
- design policies that encourage community interactions, such as co-location of child-friendly homes and extra shared spaces,[383] such as in Toronto's Growing up guidelines, which recommend that grouping the units suited for children together is more likely to foster community and encourage socialisation.[384]

The voluntary design guidelines can be modelled on the Future Homes project. Future Homes is a partnership between the Department of Transport and Planning and the Office of the Victorian Government Architect. It encourages innovation and industry participation by holding a design competition for 3-storey apartments with private architects and developers.[385]

Success of design guidelines in other countries

Vancouver improved the quality and quantity of child-friendly high density housing by mandating zoning requirements and guidelines for high density housing for households with children. In a 2008 post-occupancy survey of a Vancouver precinct, Vancouver's child-design policies 'catered well to the needs and preferences of children' in 'public spaces and built environment.'[386] At the time of the survey, 13% of the high density precinct's population was under the age of 19 which suggests some success in attracting households with children.[387]

Rotterdam introduced Child Friendly Rotterdam in 2007 to provide child-friendly apartment and neighbourhood guidelines. In its first 3 years, the 11 pilot neighbourhoods were home to more households with children, and 'measures of child-friendliness improved in 4 of the 9 targeted neighbourhoods, and were stable in 4 more.' [388] Public spaces also had visible child-friendly improvements such as more public play spaces and safer, all-ages active transport.[389] The program received a national prize for its progress.[390]

Lead with infrastructure that supports child-friendly demonstration projects

The Victorian Government can model best-practice in child-friendly design. Agencies like Development Victoria and Homes Victoria are involved in housing projects in Melbourne, including those that build affordable homes for moderate income households. Government demonstration projects can influence building industry practice and help change community perceptions of medium density housing by showing the feasibility and commercial appeal of innovative child-friendly designs.[391]

The Victorian Government can also upgrade or build new infrastructure to support development sites identified as suitable for child-friendly apartment buildings. For example, high density neighbourhoods designed for children in Amsterdam embedded the school in the neighbourhood.[392] The Victorian Government made some progress towards integrating planning of new schools in high density urban renewal areas such as Fishermans Bend and Arden. This integrated approach can be part of strategic land use and infrastructure planning processes, rather than being done in isolation by development site or precinct.[393]

Offer incentives to use voluntary guidelines

The Victorian Government has options to further incentivise developers to adopt the voluntary design guidelines by reducing other barriers in the planning approvals, construction, and sale of apartments. It can create a voluntary accreditation scheme for developments or developers that demonstrate quality and promote buying by households with children, similar to sustainable building accreditation programs such as the Green Living Accreditation by Master Builders Victoria,[394] or LEED certification (Leadership in Energy and Environmental Design).[395]

Accreditation could enable fast-tracked planning approval. Using the voluntary guidelines can allow developers to access streamlined assessment which can reduce costs associated with planning applications and time delays. As of August 2022, planning approval for high-rise developments under BADS can take 12-18 months.[396] The Victorian Government can create a pathway for planning approval by local government. For example, the Future Homes program offers a streamlined planning approval process that is estimated to take less than 4 months from the referrals stage to receiving a permit.[397] Early review by a state-based specialised design advisory panel can also support faster project assessment. The Inquiry into apartment design standards proposed design review panels to support innovation and compliance with design standards, aligned with recommendation 35 in *Victoria's infrastructure strategy 2021-2051*.[398]

Higher development yields (such as greater building height) in return for using the voluntary guidelines can occur by using density bonuses or floor area uplift to compensate for any higher cost per unit. In Portland Oregon, the Better housing by design project has amenity bonuses where children's play areas allow 5% more density, and 5-10% more density if 10-20% of units contain 3-bedrooms.[399]

The Victorian Government can underwrite homes that use the design guidelines or offer to buy them for social housing if they remain unsold.

The Victorian Government can encourage local government acceptance and promotion of child-friendly design guidelines by linking the proposed local government housing target incentives to child-friendly design outcomes as a form of housing diversity (See Policy option: **Measure and incentivise progress towards local housing targets**). It can also support the provision of child-focused infrastructure by introducing more options in Developer Contributions Plan Overlays in appropriate locations. For example, Vancouver has a voluntary cash or in-kind amenity contributions scheme for property developers who benefit from upzoning, for amenities such as childcare facilities and open space.[400] These support local governments to meet the infrastructure and service needs of households with children.

Updated standards can apply in a variety of good locations

Changes to the Better Apartments Design Standards and voluntary design guidelines would both apply to apartment developments of 5 or more storeys. That means this policy option is likely to influence residential development outcomes in areas suited to high density development such as central Melbourne and inner-city activity centres and urban renewal precincts.

These standards and guidelines are also relevant for more intense development in Melbourne's established middle and outer ring suburbs that have existing infrastructure. These locations have amenities that appeal to households with children such as open space, playgrounds, and schools. Local governments can use their planning approval authority to approve use of the design guidelines in 'the most appropriate sites for family apartments'.[401] A planning overlay can identify areas that have high child and parent amenities and are suitable for the standards and voluntary guidelines. For example, in Vancouver sites are recommended to be within 800 metres walking distance of necessary child infrastructure such as schools and play centres, as well as 400 metres to a playground and a public transit stop.[402]

Victoria's regional cities such as Bendigo, Ballarat and Geelong can also benefit from policy interventions to improve high density housing for households with children. More demand for apartments is likely to continue in regional cities due to growing populations, housing prices and land cost.[403] There has also been more demand for housing diversity and smaller housing units from some segments of the population such as retirees.[404] More apartments with improved child-friendly design such as better accessibility and housing diversity can suit older households and people with disabilities. Australians who want to downsize to flats and apartments have difficulty finding suitable homes.[405] They value accessibility and location features more common in established suburbs such as proximity to infrastructure.[406]

Better apartments for children are a medium-term option

Some jurisdictions, such as Rotterdam, reported results within 3 years of introducing the policy. One to 2 years of strategic and statutory planning by the Victorian and local governments would likely be required before the changes can be delivered.

At present, high-rise apartments are not considered to be suitable greenfield substitutes for households with children. As a result, this option is likely to become more important as options for housing become increasingly limited with projected housing growth patterns.

Better designed apartments are a more attractive substitute for greenfield homes

Improving the design of apartments to better suit households with children will help generate more housing options in established suburbs and potentially contribute to shifting some demand away from greenfield areas. This policy option will more immediately influence future residential development and household preferences.

Children can benefit from living in established suburbs in 'density done well'. Established suburbs offer access to existing infrastructure including schools, childcare and public transport.[407] Children are more likely to participate in organised activities and socialise with peers if they live in areas with higher population density.[408] More residential density has also been positively associated with children's independent walking and cycling.[409] This helps with their physical health, mental wellbeing and future development.[410]

High-rise homes suitable for households with children help adults in single parent and dual income households to stay in the workforce.[411] Providing housing close to jobs centres and public transport hubs helps offer an alternative to new greenfield homes with shorter commute times and less dependence on owning a car.[412]

Standards can escalate development costs

Developing design guidelines, updating the planning scheme, and reviewing designs have associated costs. The City of Rotterdam made a €15m investment in Building Blocks for a Child-Friendly Rotterdam.[413]

If the Victorian Government introduced too many mandatory design requirements, they might disincentivise development by adding to the development costs. The Property Council has expressed concern that the mandatory BADS requirements might significantly reduce apartment yield, add to construction costs, and generally make development more difficult.[414] Developers might be more likely to prioritise cost-efficiency over innovative design features due to a greater demand for this housing type from investors, one of the main markets for apartments.[415]

A voluntary process where developers receive a financial or planning based incentive is an appropriate first step. In the long term, if a market is developed for this type of home, incentives might no longer be required. If the market does not respond but the policy intention to direct growth to established suburbs remains, the Victorian Government has the option to shift from voluntary to mandatory child-friendly apartment design requirements.

Synergies with other options

Targeting the Victorian Homebuyer Fund, the Victorian Government's shared equity scheme, to established suburbs can help moderate income households achieve home ownership in locations that have existing infrastructure to support children's needs such a childcare and schools. It can help direct demand for better designed apartment buildings that incorporate child-friendly design. Updating standards to achieve improved apartment design outcomes can happen in the next 1 or 2 years but changes in actual projects will take longer. In the medium term, households with children can be more confident that apartments are a suitable home for their children.

The Victorian Government also needs more time to understand the impact of the Victorian Homebuyer Fund. When considering changes to the scheme, it can specifically consider improving access to home ownership for households with children.

Table 12 Evaluation of the option

Criterion	Description	How the option addresses the criterion
Supply	Increases housing supply in established suburbs	The updated standards and design guidelines alone will not increase supply. However once demonstrated, the market will be more confident to respond and increase in the supply of child-friendly apartments. Streamlined planning approval associated with using the guidelines can help accelerate supply.
Diversity	Increases the supply of 3- and 4-bedroom homes in established suburbs	The updated standards and guidelines alone will not increase diversity, but can help clarify requirements and information to developers on designing child-friendly apartments with 3 or 4-bedrooms
Quality	Improves quality and/or child friendliness of housing types	Design guidelines can demonstrate how to better meet the needs of households with children. When used, they can help improve the quality of child friendly apartments.
Price	Means more moderate income households can afford to live in established suburbs	When more apartments better meet the needs of households with children, established suburbs can offer alternative housing options at affordable prices.
Targeted	Addresses at least one of the barriers to increasing the supply of new housing in established suburbs	**Design quality is variable:** Encouraging child-friendly design by improving standards and design guidelines addresses common perceptions that medium and high density housing is poor quality and inappropriate for households with children.
Actionable	Is practical to implement and identifies a clear role for the Victorian Government to intervene	The Victorian Government can update the Better Apartment Design Standards and lead the development of the design guidance. Local government and the development industry can also be involved.
Feasible	Is politically feasible and acceptable to stakeholders including state and local government, industry and the community	Updating the existing standards will give more clarity to developers and those assessing their proposed projects which specifically include homes that address children's needs. Involving the property industry in developing design guidelines and accreditation can build their capacity and improve the quality of their projects. Using the voluntary guidelines to give developers access to streamlined planning approval will require local government and communities to agree to the need for more choice for households with children in their communities.
Scalable	Is a scalable actions that is likely to increase the supply of new housing over time	Over time, all suburbs in Melbourne and regional cities can benefit from more child friendly housing choices in locations with good access to infrastructure.

Appendix 1: Issues influencing the supply of new housing in established suburbs

Expensive land contributes to high costs and prices

Land acquisition and construction cost are the 2 main supply side drivers of house prices.[416] Land cost can be up to a quarter of the total cost of a property or development.[417] Landowners are price setters and developers are price takers, and both operate in a competitive market. Existing owners have bargaining power when selling to developers and can choose to hold their land until prices rise.[418] Changes to the profitability of a potential development affect the price developers are willing to bid for the parcel of land for the development. This means the profitability associated with a development and its site, and the overall amount of developable urban land available in the market affect the supply of new housing and its market price.

The cost of land varies spatially: in Melbourne's middle ring suburbs, lower land values reduce the economic feasibility of building new homes at higher densities. In these locations the market price of an apartment is unlikely to exceed the costs of development, including land acquisition. Over the last 10 years in these locations, townhouses are more feasible than apartments for developers to build.[419]

Land values are generally higher on 'scarce high-amenity land within…capital cities'.[420] Constraints on development in established suburbs and on old industrial sites include land values, costs associated with removing existing structures and infrastructure improvements where required.[421] The number of potential homes in the Victorian Government's Urban Development Program (UDP) redevelopment pipeline have fallen since 2016, which suggests that larger sites suitable for residential development in established suburbs can be in short supply.[422] Many of these sites had previous uses that require remediation and new or upgraded infrastructure to make them suitable for non-industrial uses, both of which can be costly.[423]

What we heard

The City of Merri-bek (formerly Moreland), a local government in Melbourne's north, includes inner, middle and outer suburbs. Land values vary considerably in different areas. These differences are associated with different location values related to access to infrastructure, including public transport, jobs and services. Conversations with stakeholders working in the property industry and local government captured how these differences in land value produce different density outcomes.

Brunswick, located in the southern end of Merri-bek, is well serviced by public transport with multiple connections to central Melbourne and the Parkville university and medical precinct. It is renowned for its local arts, design and food industries. In the past 2 decades Brunswick's apartment market transformed the areas around the Sydney Road and Lygon Street activity centres. Growing demand for apartments in these locations translated into rapidly rising land values.

One developer described rapid price escalation around Anstey Station (6 kilometres from central Melbourne) over the past 15 years as more apartments were built:

We started in 2007 for $500 per sqm, it's rapidly climbed. Brunswick market [recently] was bought for $5,500 per sqm… We didn't think the land would go up because of Brunswick's natural limitations but other developers have infiltrated.[424]

For this developer, competition for land makes it harder to buy well-located sites along the Upfield rail corridor where most of their projects are concentrated.

Inner and middle suburbs with lower land values experience residential intensification with townhouses rather than denser apartment buildings. A middle-ring council officer described how the demand for townhouses surpassed what council had expected:

The reality with townhouses is that the underlying land value has reached a point where the competition is between individual home buyers and developers buying a site. Our inner-ring council has seen way beyond what was projected in townhouse growth. They are the dominant housing outcome delivered by the market in parts of the municipality that are further from central Melbourne.[425]

The officer reflected that townhouses are the preferred housing outcome delivered by the market in areas that are further from central Melbourne:

It goes back to the economics of land value when there are large post-war blocks. It's really hard for a council to encourage denser developments in well-serviced local centres. There's a completely different development market for townhouse developers than apartments. A different economic model and different development companies. Part of that model is that townhouses have far less risk than apartments. No presale involved, and though it's still speculative they are price-taking in a predictable submarket that is very resilient to overall market downturns. It's just asking: 'how much did that one down the street go for?' That matters for the developers asking for financing as well. [426]

Where no established demand exists for apartments, land use planning has few options to incentivise density. In these types of locations, one stakeholder noted that strategic planning policies that aspire to deliver more residential density face feasibility constraints in many locations across Melbourne.[427] They added that:

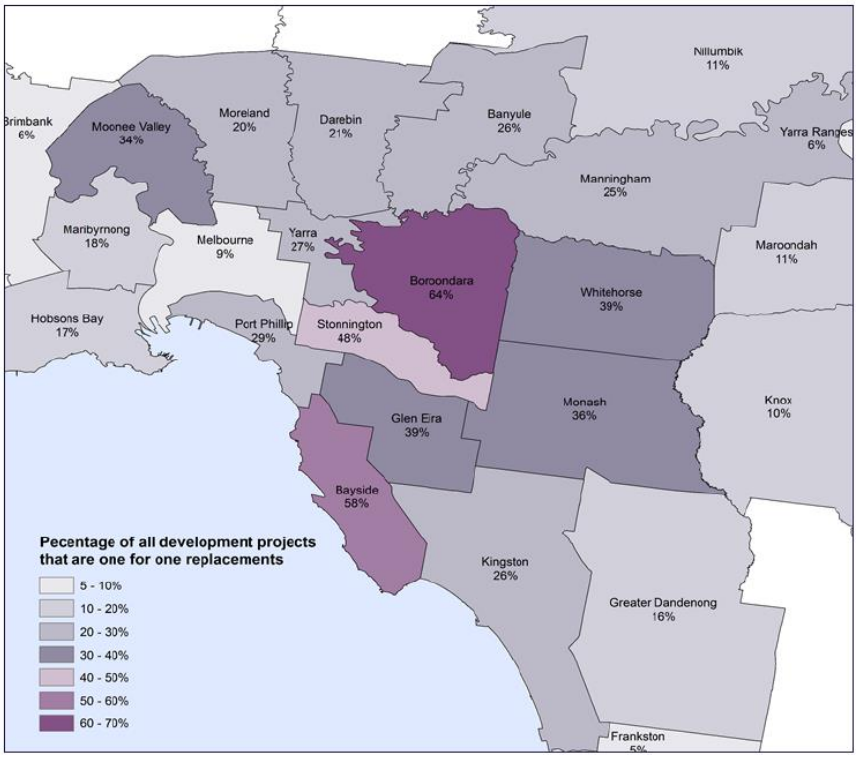
The economic conditions to support apartments were reasonably straightforward in 2019. Suburbs in established areas where a detached home sold for $1.2 million or more would attract demand for townhouses at $1 million, and buyer support for apartments at $600,000 to $800,000. Three years ago these prices supported sales revenue that covered construction and delivery costs. Today buyer budgets are shrinking and development costs have grown by up to 30%. The old feasibility model for many projects won't return until costs stabilise and buyer budgets grow.[428]

Some stakeholders reflected that in areas with a lower location value and weaker demand for apartments, the supply of new townhouses is responding to demand for affordable, larger-sized homes:

To give people an affordable housing choice we need a range of housing types, sizes and price points, including more quality townhouse type product. Duplex and townhouse product can provide a smaller and lower-priced housing option across existing and new suburbs that is attractive and affordable for households that cannot afford the traditional house and land offering. More townhouse product is also generally required before apartments become a viable development proposition.[429]

A large proportion of new housing in Melbourne's established suburbs is one-for-one replacements (also defined as knock-down-rebuilds) or small lot subdivisions with 2 to 4 townhouses that meet existing planning scheme rules.[430] Figure 15 illustrates one-for-one replacements using the Department of Environment, Land, Water and Planning's (DELWP) Housing Development Data (HDD) between 2005 and 2016, with the highest proportions in inner and middle eastern local government areas. The Australian Bureau of Statistics' Building Approvals for 2006 to 2016 show that 19% of new homes in Melbourne's established suburbs were townhouses.[431]

Figure 15 One-for-one replacements 2005-2016, established Melbourne



Source: DELWP Planning Group, Housing outcomes in established Melbourne 2005 to 2016. Monitoring land use planning outcomes, The State of Victoria, 2018, p.22

Over this time period, Melbourne's brownfield (formerly industrial) areas had only 5% of the city's new residential development projects which accommodated 27% of all new homes, mainly due to large site availability in those areas. While other established suburbs had 46% of new residential development projects, these only contributed 19% of the overall increase in homes.[432] New townhouses can offer an affordable alternative to a detached home for some households, but this type of incremental development can also create infrastructure challenges. For example, smaller sites are less able to adequately include open space and other amenities. In some established suburbs, well-located larger land parcels can be scarce and there can be barriers to assembling land into sites that can accommodate higher density housing types like apartments.[433]

Landowners can sell sites with planning permits where approved projects exceed local policies but for which enough market demand does not immediately exist. These approved permits make sites more valuable, so owners can sell the land at a profit 'without entering into the messy and risky business of constructing buildings.'[434] The extra value generated by a planning or policy decision is also described as betterment, but it is not taxed in Victoria. For projects approved under NSW's Major Projects planning reform between 2006 and 2011, 22 of the 77 expedited approvals for multi-unit developments totalling 9,000 homes had not started construction up to 5 years later.[435] In 2018, Sydney had over 1 million approved but unbuilt homes representing about 3 years of supply. Construction was delayed by factors beyond planning such as cost or feasibility, or sites were on-sold.[436] For projects that are actually built, developers often receive planning approvals that exceed implemented scope.[437]

Market participants can also influence housing supply by creating scarcity, such as through speculative vacancies.[438] The Victorian Government has a self-reported vacant property land tax to disincentivise property owners from buying homes as an investment and leaving them empty. This is particularly challenging in established suburbs if individuals inherit land or homes.[439] The current tax is not enough for the scale of the vacancy issue.[440] A 2019 study found that Victoria's tax levied only 2.6% of the vacancies identified; this indicates compliance issues or extreme lenience in properties exempt from taxation.[441]

Construction costs affect home prices

New dwelling supply can be constrained by construction costs with established suburb developments, such as townhouses, more expensive to build. This further disincentivises the development industry to build homes in these places. Construction costs in Victoria in March 2022 had the largest quarterly growth since 2000.[442] More dwelling approvals contribute to construction worker and material supply shortages.[443]

In a unique Australian study, development industry professionals in Perth report that construction costs for medium density developments were higher than detached houses.[444] This was due in part to less industry expertise in designing and building medium density housing in a cost-effective way, rather than being associated with fixed costs such as land value.[445] This includes not having skills in lightweight, alternate construction methods.[446] In Australia, residential development other than detached houses is predominantly built with heavy materials such as reinforced concrete, steel and masonry products.[447] Timber framing is used in 70% of Australian detached dwelling construction,[448] but is underused in Australian multi-unit residential developments despite being more cost and time efficient, and less energy intensive over their life-cycle.[449]

What we heard

Recent construction costs increases were a common theme in our discussions with stakeholders posing challenges to the supply of new apartments. Issues raised in our interviews included rising complexity (National Construction Code Class 2 domestic apartment buildings[450]), materials shortages and labour shortages.

The Victorian Government's General Residential Zone, which applies to the largest area of residential land uses in Melbourne, permits apartments up to 3 storeys. The National Construction Code classifies low-rise apartments as Class 2 buildings which have more construction requirements compared to detached homes or horizontally attached dwellings such as townhouses.

Class 2 buildings can have additional elements (sprinklers, parking basements or stackers, lifts etc) and additional regulatory costs (cladding levy, etc) which introduce more levels of complexity than townhouses. [Although] 2-3 storeys can be less challenging in contrast to 5 storeys. [451]

Stakeholders generally acknowledged that construction becomes more complex for apartments and particularly for buildings over 5 storeys. These buildings have extra building and planning regulatory requirements. Developers in established housing markets suggested that some of these extra requirements produced geographic variations in construction costs:

If we were to build at the city's edges, single story, volume built homes in Greenfield's estates, we might be paying as low as $1200 per m^2. Construction of medium density housing is much stricter and much more expensive. We need to respond to multiple layers of regulation such the local planning provisions, council design standards, better Apartment Design Standards, all in addition to the National Construction Code.[452]

Some property industry stakeholders also raised the issue of rising construction costs due to recent supply chain disruptions produced shortages of some materials and labour shortages. One gave anecdotal evidence of how recent price inflation had hurt the feasibility of some existing speculative developments:

The cost escalation we've seen means that a lot of projects are underwater. One of my friends who we have also worked with bought two development sites, one in Collingwood and one in Thornbury. He's selling the Collingwood one to pay down the debt on the Thornbury one, to then just sit on it. He can't afford to build either of them unless he flips to a non-speculative model.[453]

A few stakeholders linked more competition for construction labour to the Victorian Government's Infrastructure Big Build program, meaning the residential sector could not compete with infrastructure for labour or new trainees:

Essentially what we're seeing is a record pipeline of infrastructure projects drawing on the available labour force. Government projects are longer term and secure and this makes access to contractors difficult. That's driver A in terms of feasibility. Driver B is an increase in the cost of materials in some cases by between 30 and 60% combined with supply chain issues.[454]

Ultimately these recent construction cost increases are likely to constrain the supply of new apartment buildings in the near term:

We hugely underestimated the cost of the development, and we don't know if that's going to end up feasible at the end. Given the cost of construction etc. we're actually not sure if this one will work out. Our misjudgement is we usually work at an urban scale like the Docklands. Smaller/medium scale projects in well-established suburbs are very challenging and I don't think we'll be going back there.[455]

Ad hoc voluntary agreements

Victorian local governments negotiate voluntary affordable housing agreements – including for moderate income households – on a case-by-case basis at the personal discretion of council planners, ideally informed by an affordable housing strategy. Local governments are generally limited to meeting these affordable housing targets using voluntary agreements under section 173 of the Planning and Environment Act 1987.[456] The strength of section 173 agreement is its connection to land title, ensuring that once they are in place, the agreement binds future owners and occupiers of the land.[457] Section 173 agreements follow the *Planning and Environment Act 1987* definition of Affordable Housing from very low income to moderate income households.[458]

These agreements are incentive-based and largely conciliatory where one aspect of planning regulation is compromised for a 'win' elsewhere.[459] The use of section 173 agreements state-wide is not monitored. Significant limitations exist in negotiations between private developers and council representatives, relating to distrust, limited experience, and ignorance of development feasibility and relevant legislation.[460] Voluntary agreements can cause time delays and are often ambiguous: 'the development industry would appreciate some guidance… because there's no set minimum for anything'.[461]

Requests for information and related time delays all add to the cost of housing and contribute to price disparities between greenfield and established suburb housing. Comparing the costs of physical inputs (construction and land value) to market value, development restrictions such as zoning 'contributed materially to the significant rise in housing prices…pushing prices substantially above the supply costs of their physical inputs' in Australia since the late 1990s.[462]

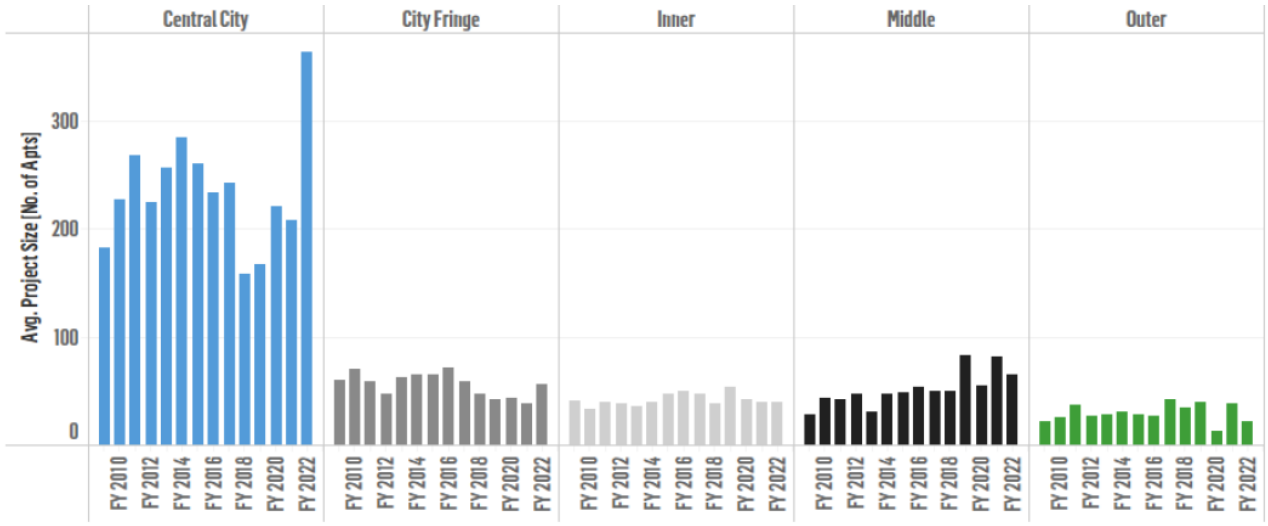
Design quality is variable

Melbourne has experienced rapid increases in high-rise development in the inner-city.[463] Public scepticism towards high and medium density housing is often due to their variable quality and lower amenity compared to low density properties, with poor light, not enough ventilation and compromised visual and acoustic privacy.[464] A 2018 medium density housing review conducted by Moreland council found that 32% were dissatisfied with the quality of materials used in their residence, 34% identified thermal comfort as a major area of improvement.[465] The Victorian Government inquiry into combustible cladding identified 249 affected buildings and found that 10% of buildings under rectification in 2021 had other significant non-cladding defects such as leaking, structural damage, mould and poor insulation.[466] Research links poor public perception to apartment construction in Melbourne post-GFC that included approaches such as maximising floor plates and heights and shrinking dwelling sizes.[467]

In recent years, developers generally build 2 types of higher density housing in Melbourne: inner city apartment towers and expensive multi-unit developments outside the central city (see Figure 16). A gap exists for 'high quality medium density multi-unit or clustered housing types' which present less risk than the high-rise alternative and are denser than detached houses.[468] Proponents of more development in middle

suburbs observe that the property market is ‘risk averse’ and ‘unresponsive’, meaning it does not meet the ‘missing middle’ housing demand.[469]

Figure 16 Apartments by project size, 2010-2022



Source: Charter Keck, State of the Market: Residential Build to Sell (BTS) and Build to Rent (BTR) Apartments. Metro Melbourne H1 2022, August 2022.

Development financing is risk averse

Lenders consider financing housing in established suburbs as risky. Developers entering this market can find it difficult to access finance if they have no track record or must contribute a large proportion of equity in return for a loan.[470] Financial institutions might also only lend funds against the undeveloped site value rather than the full project cost. Further loans required to build the development can only be accessed if secured against other assets. Both restrict the amount project proponents can borrow.[471] Unlike the development of detached houses, banks can require developers to pre-sell a portion of their homes before they can secure finance for multi-level development.[472] This can range between 55% and 60% of homes, or in times of restrictive credit supply, be as high as 90% to 100%.[473] Developers are also not guaranteed an immediate and full return on their investment from pre-sales as buyers’ maximum obligatory deposit is only 10% and funds can be held in inaccessible trusts.[474]

Developers report that long-term relationships with large lenders make accessing finance for new projects easier, although the amount of debt any institution provides is limited due to concerns about over-exposure.[475] Financial institutions are also less likely to lend for projects that use innovative, and unproven, construction techniques.[476] These factors make it difficult for many smaller and independent developers and builders to access finance for developments in established suburbs.[477] Larger developers have a supply of equity that improves their ability to achieve loans and fund further land acquisition.[478]

Policies influence the geography of demand for homes

Rising house prices can be linked to long-term demand factors such as ‘cheaper, more accessible finance,’ and short-term factors such as tax incentives and grants.[479] Housing occupied by a taxpayer is exempt from capital gains tax that they might otherwise pay on investment assets. The cost of this concession was estimated to be $64 billion in the year 2020–2021 and is the largest amount of forgone revenue of any policy in Australia.[480] Capital gains tax and treatment of pension assets resulted in close to $55 billion of tax concessions between 2015 and 2016.[481] The Australian taxation and pension systems also incentivise ownership of multiple homes and investment properties.

First home buyer policies, such as those in the 2020 COVID-19 response, are an example of policies that stimulate housing demand. First home buyer policies can include discounted stamp duty from state governments as well as cash grants from the Australian Government. First home buyer schemes are typically justified to stimulate the residential housing construction sector during an economic downturn, and respond to declining home ownership rates among younger households.[482] During the 2010s, around 20% of total residential property transactions were by first home buyers.[483] Stamp duty concession and first home owner cash grants during this period resulted in $20.5 billion in expenditure and lost revenue for Australian governments.[484] These programs are shown to do little more than bring forward first home buying decisions and increase prices, rather than having any lasting effect on home ownership accessibility or increasing housing supply.[485]

Demand based policy levers to improve the financial capacity of moderate income households, such as improved home buyers grants, rental assistance and silent mortgages, have significant potential to direct more housing supply to specific types of households. These policies would create more demand for affordable housing, and potentially a greater profit incentive for the private housing market to supply it. Yates however does warn that these policies must be synchronised closely with supply measures to avoid 'putting counterproductive upward pressure on prices or rents' as existing mechanisms do.[486]

Changes to housing demand can cause rapid changes to housing affordability. By contrast, changes to supply are likely to only influence the total stock of housing incrementally and therefore put downward pressure on affordability if new supply outstrips demand over a sustained period.[487] In its submission to the Commonwealth Inquiry into Housing Affordability and Supply, the Reserve Bank states:

> Even the most flexible construction sector is therefore limited in how far it can respond to and absorb rapid increases in demand. While some regulatory and other changes can be contemplated that might improve the responsiveness of construction, and thus incremental supply, there are limits to the scope to meet extra demand with more supply.[488]

Appendix 2: Household location and dwelling attribute preferences

This review draws on literature to addresses the following research question:

- What location and dwelling attributes do households in new suburbs consider when making housing decisions?

This collation and synthesis of existing research helped us identify previous relevant findings and gaps. We used this information to inform the design of our qualitative research approach to talking to Melbourne, Geelong, Ballarat and Bacchus Marsh residents. It also informed our subsequent quantitative survey and modelling methods.

The literature scan presents major findings and includes summaries for the 3 most relevant studies for this project on Melbourne, Sydney, Perth and Auckland.

The second section looks at housing preferences for Victorian greenfield buyers between 2016-2021 using buyer survey data.

Literature scan

Housing preferences and trade offs

Previous studies of housing preferences have similar findings and approaches to analyse preferences and trade-offs that people make in their housing choices.

The 3 most extensive and methodologically robust studies, the Grattan Institute, Perth and Peel and Auckland studies, concluded that there are too few semi-detached houses and apartments in the relevant cities. These 3 studies included qualitative focus groups and 2 quantitative surveys, an unconstrained housing preferences survey and a constrained trade-offs survey. The studies have comparable grouping of preferences used in the focus groups and surveys (see Table 13), and modelling methods using survey results (conditional logit modelling). The most important attributes when making housing decisions were similar in the studies (see Table 14). Differences in findings were mainly due to the locations and dynamics of the local housing markets.

Issues identified in the 3 projects include:

- People will always prefer a detached house, but are willing to shift with either budget constraints (Grattan Institute study) or income constraints (Perth and Peel study).
- Community safety consistently ranked as one of the most important considerations in housing preferences.
- Trade-offs for a more preferred location are more likely for lone person and older households (Grattan Institute study), but Auckland residents would prefer to trade-off their current location for a larger home (Auckland).
- Affordability constrains choices available to households and consistently ranked as an important factor in housing choice. Households were likely to trade-off price for a smaller house or trade-off price for a less desirable location.

Table 13: Summary of housing preferences attribute groupings of comparable studies

Grattan Institute – Melbourne and Sydney 2011	Perth and Peel Region 2014	Auckland 2015
Convenience and access	Convenience and access	Convenience and access
Attractiveness of environment	Local environment	The local environment
Safety and security	Local amenities	Proximity to facilities
Dwelling features	Dwelling design	The property
	Dwelling features	The dwelling itself

Source: Grattan Institute 2011, WA Department of Planning and Housing 2014, Auckland 2015

Table 14: Summary of top 3 preferences from various housing preferences studies

Study	Top 3 housing preferences		
Grattan Institute – Melbourne and Sydney Housing Preferences (2011)[489]	Number of bedrooms	Safety for people and property	Near family and friends
Perth and Peel Region – Housing Preferences (2014)[490]	A safe neighbourhood	Easy access to main income earner's work	Easy access to a preferred school
Auckland Housing Preferences (2015)[491]	A safe neighbourhood	Standalone dwelling	Freehold title
Australian housing aspirations survey (2021)[492]	Safety and security	Number of bedrooms	Local shopping
RMIT – Early delivery of transport in new suburbs (2021)[493]	Safety from crime	Affordability of land, housing or rent	Access to freeways or main roads
Whittlesea Community Survey (2019)[494]	Buying a home	Upgrading	To be closer to family and friends
Research on housing and transport stress in outer ring suburbs (2021)[495]	Security and safety from crime	Proximity to family	Access to education and childcare
Culturally diverse backgrounds research in MPE (2017)[496]	Aspiration to own a house (affordability)	Features of the estate	Transport to city
ABS Data – reasons for moving (2008)[497]	To live near family / friends	Attractive neighbourhood	Central location and services

Source: Grattan Institute 2011, WA Department of Planning and Housing 2014, Auckland 2015, AHURI 2021, RMIT 2021, City of Whittlesea 2019, Jonathan Smith, Cathy Waite, Davina Lohm, Meead Saberi & Dharma Arunachalam 2021, Roggenbuck, Christian 2017, ABS 2008[7]

Along with the 3 main studies, other literature gives insights into other factors that influence housing preferences and trade offs.

[7] Note: These studies used different methods to arrive at these top 3 housing preferences, which might impact the overall outcome. This table is provided for high level comparison purposes only.

Housing preferences can also vary by different population groups, including by age and by household type.[8] Couples with children placed greater emphasis on dwelling features and wanted larger sized houses (i.e. more bedrooms) than other household types. Lone person and older households cared more about location attributes and wanted to be in locations with good access to work, services or retail.

Preferences vary by different cultural groups (such as new migrants) and by tenure type (i.e., whether they are renting or owner occupiers). For example, a study on the aspirations of residents from culturally diverse backgrounds moving to master planned estates in growth areas found that people with Indian and Filipino cultural backgrounds wanted a larger house with multiple bedrooms and large recreational spaces. It also found these communities had pre-established social networks in the area and places of worship nearby.[498]

People's housing choices are heavily influenced by their life stage and preferences can change over time as they transition through different stages. For example, the Australian Housing Aspirations Survey (2019) found that housing tenure has a major influence on the decision to move versus stay, with renters being 3 times as likely to move as owners. It also found that life course transitions, especially changes in family composition, feature consistently as important drivers of moves. Singles are 30% less likely to move than couples and couples with children are about half as likely to move as lone persons.[499] Home ownership is also an important influence on household decisions. The desire to get one's own place or move into a larger homes are major drivers of intra-urban or intra-regional moves.[500]

The importance of public transport and access to services by public transport vary between the studies. Some highlight the importance of public transport and accessibility when households make housing choices, while others rank these much lower. Transport costs (including public transport) only became important after people moved to an outer greenfield suburb.[9] These differences in the importance of public transport can depend on the location where the study was completed and whether good public transport connections exist.

Affordability and how it relates to housing preferences and trade-offs is consistently considered but with variations in method. Some studies identify affordability as the most important factor in housing preferences, while in others it is a constraint that limits the available housing options. For example, the Perth and Peel housing preferences study found that affordability drives housing decisions for all but the highest income earners. In that study, residents reported that location attributes mattered most, including safety and security, access to work and schools, and being near family, friends and public transport.[501]

A strong preference for detaching housing with 3 or more bedrooms, and for home ownership is evident in all studies. For example, City of Whittlesea 2019 resident survey found that the large majority of households (90%) preferred to live in a separate detached house, and most already do (91%). It also found that the majority of 1 and 2 person households were living in 3 or 4-bedroom homes, and these households also prefer 3 or 4-bedroom homes.[502]

Housing preferences and choice are related but distinct

Preference refers to the relative attractiveness of an object, while choice refers to actual behaviour. Preferences guide choices but evaluating preferences can take place whether or not a choice must be made. Preference is a relatively unconstrained evaluation of attractiveness. In the case of a house, choice will always reflect the joint influences of preference, market conditions, regulations, availability, and internal and external personal factors (such as lifestyle and social class).[503]

Numerous factors limit the number of realistic possibilities for every household, such as:

- government regulations
- supply factors

[8] For example, the Grattan institute grouped their survey respondents into the following categories to analyse housing preferences by different population groups: Lone person households (split into 3 age groups); Couples without children (split into 3 age groups); Couples with children (split into 2 age groups); and single parents (all ages)

[9] For example, Smith et al.'s study found that for residents in an outer greenfield suburb their concerns about transport increased after they had moved there, as their work opportunities remained clustered elsewhere, as their broader life circumstances changed, and their experience of transport infrastructure (and associated costs) grew.

- preferences of the household
- transparency of the housing market
- household budget.[504]

Because of these factors, actual behaviour (revealed preferences) often differs substantially from their original preferences (stated preferences).[505] Revealed preferences can be examined by observing the choices made by households in where and what type of home they live in.[506] Their actual housing situation might not necessarily reflect underlying preferences because it is influenced by:

- households' financial resources
- market regulation and imbalance
- constraints on moving despite changes to housing needs.

Stated preference approaches ask households what type and location of housing they would prefer the most.[507] Households don't necessarily take account of possibilities so can have varied responses from households that would likely have the same preferences. They might also have unrealistic preferences.

Several of the studies on housing preferences and choices reviewed for this literature scan consider both housing choices, conducting an unconstrained survey on stated housing preferences, and housing trade-offs, modelled using a constrained housing choice survey that shows revealed preferences given household budget and supply limitations.

The Grattan Institute's work on housing preferences in Melbourne and Sydney

The Grattan Institute's 2011 *The housing we'd choose* explores the relationship between the housing we say we want and the housing we have.[508] It tests a hypothesis that housing demand and housing stock do not meet. Housing in our cities might not be a good match for the choices and trade-offs that people would make if they could.

The study included a housing preferences and trade-offs survey of 700 residents of Sydney and Melbourne. Once these trade-offs are taken into account, big differences emerge between the housing Australians say they would choose and the stock we have. In particular, Melbourne and Sydney's middle and outer suburbs have large shortages of semi-detached homes and apartments.

Interviews with developers, banks, builders, councils and combined with the researchers' analysis found a range of reasons why some housing types are not being built where people say they would like to live. These include financing practices, planning and land issues and material and labour costs.

The study included the following components:

- Housing attributes: primary research on the relative importance of different characteristics of housing, or housing attributes.
    - Qualitative research – 6 focus groups to identify desirable housing feature.
    - Quantitative online survey – 706 people asked to prioritise housing features (57 variables relating to dwelling and location attributes).
- Making trade-offs: trade-off survey with constraints on budget (572 people).
- Analysing housing stock and supply: research and interviews with developers, govt etc.

The 6 focus groups were divided by household type and age as outlined in Table 15. Most groups aspired to live in a large, detached house.

Table 15 Focus group breakdown

Group	Melbourne	Sydney
Young couples (25-39) with children	✓	
Middle aged couples (35-50) with children		✓
Older couples (45-59) with or without children	✓	
Lone person (45-59)	✓	
Older households (60+)	✓	✓

Source: Grattan Institute's 2011 The Housing We'd Choose, p.9

The report identified that looking at where people live now to understand housing demand has limitations, including:

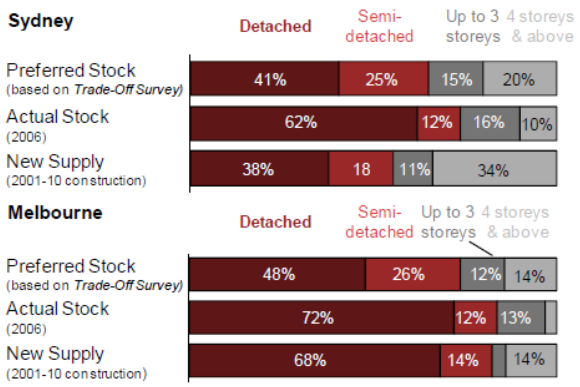
- majority of housing was built over 20 years ago and might not reflect current aspirations
- people stay in the same house for a long time
- relatively few houses are available at any one time
- few local choices means some households can't live in their preferred location.

Looking at newly built homes shows a more current picture of what housing people want. However, this skews the picture towards preferences of those that buy new homes, not the whole population. Both also ignore supply side distortions that can produce construction patterns that don't match with demand. Given these limitations, a survey approach was chosen to ask people what they want, given real-world constraints.

The report identified that there is a clear mismatch between the current stock of housing in Sydney and Melbourne, and the mix of housing respondents say they would choose.

People's choices in the survey suggested a shortfall of semi-detached houses in Zones 2-4. The results also showed a 4% (around 55,000) shortage of apartments in building of 4 storeys and over in Zone 2. Zones are shown on the map below, which were based on land prices using the average price per square metre of vacant residential land transactions in 2010. Zone 1 broadly covers inner Melbourne, zone 2 covers middle Melbourne, zone 3 covers outer Melbourne and zone 4 covers outer and growth areas.[10]

Figure 17 Comparison of preference, stock and supply



Source: Grattan Institute's 2011 The Housing We'd Choose, p.37

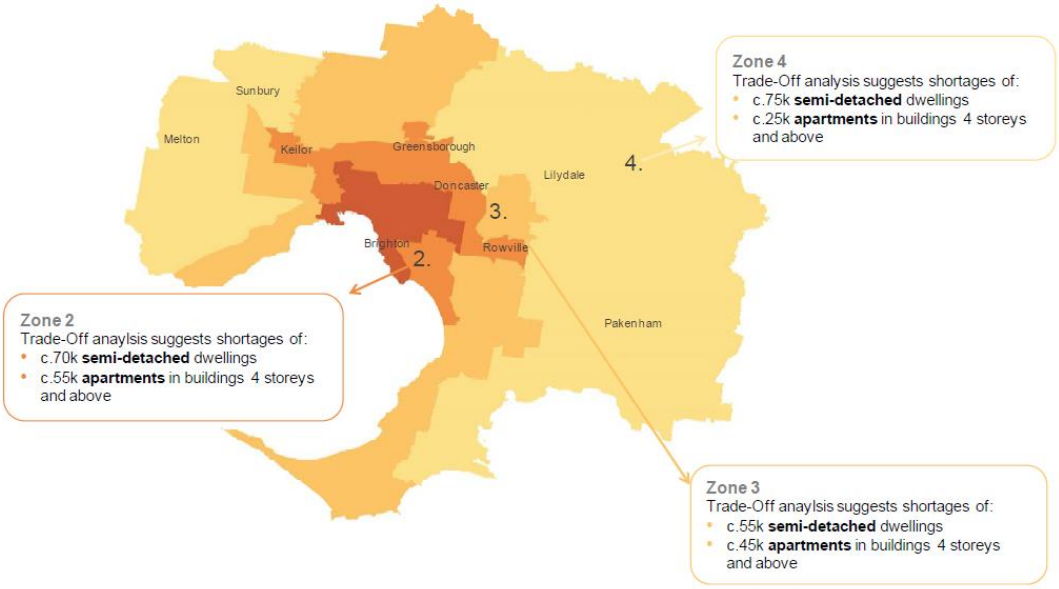
[10] In 2010 there was relatively limited growth area land supply across Melbourne, with the exception of the Casey LGA. Most of the greenfield growth area land came online from around 2014 onwards. This is likely to have impacted the analysis of demand and supply in Melbourne.

Table 16 Overview of the mismatch

Sydney					
	Detached	**Semi detached**	**Up to 3 storeys**	**4 storeys+**	**Total**
Zone 1	-3%	0%	5%	2%	4%
Zone 2	5%	-4%	1%	-3%	-1%
Zone 3	8%	-5%	-1%	-5%	-2%
Zone 4	12%	-4%	-4%	-4%	0%
Total	**22%**	**-13%**	**1%**	**-10%**	
Melbourne					
	Detached	**Semi detached**	**Up to 3 storeys**	**4 storeys+**	**Total**
Zone 1	5%	-1%	4%	-2%	6%
Zone 2	9%	-5%	-1%	-4%	-1%
Zone 3	10%	-4%	-1%	-3%	2%
Zone 4	1%	-5%	-1%	-2%	-7%
Total	**24%**	**-15%**	**-1%**	**-10%**	

Note: values do not sum to 100% due to rounding.
Source: Grattan Institute's 2011 The Housing We'd Choose, p.20

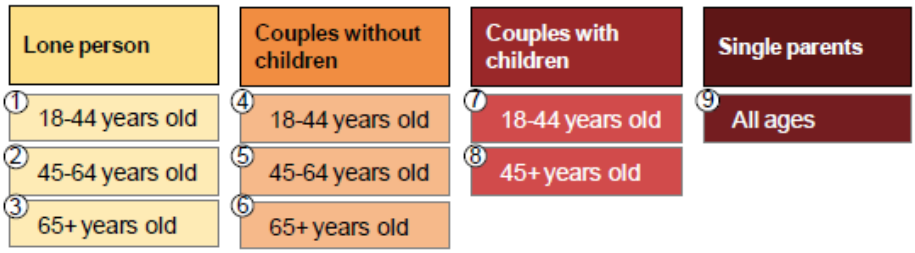
Figure 18 Major shortages in Melbourne by dwelling type and location



Source: Grattan Institute's 2011 The Housing We'd Choose, p.22

The Grattan Institute also published a short working paper, *What matters most? Housing preferences across the Australian population*, in 2011 as an extension to *The housing we'd choose report*.[509] It analysed responses of over 700 residents in a survey on housing and location priorities (in Melbourne and Sydney). Differences in priorities in different population groups are shown in Figure 19, for example, younger couple households compared to older and single person households.

Figure 19 Demographic segments



Source: B Weidmann and J Kelly, *What Matters Most? Housing Preferences Across the Population*, Grattan Institute, Melbourne, September 2011, p.1

Drawing on previous surveys and in consultation with academics and developers, the researchers identified 56 variables that effected house prices (see Table 17). They grouped these into 4 groups (see Figure 20: Overview of attribute categories, with examples).

Survey participants were randomly selected in Sydney and Melbourne metropolitan areas from online panel provider PureProfile. This provided a representative sample in terms of tenure, current housing location, current housing type and income. Participants were presented with 8 attributes of a home and asked to nominate which one matters most to you when choosing housing. Each participant completed this 19 times with a different set of choices each time.

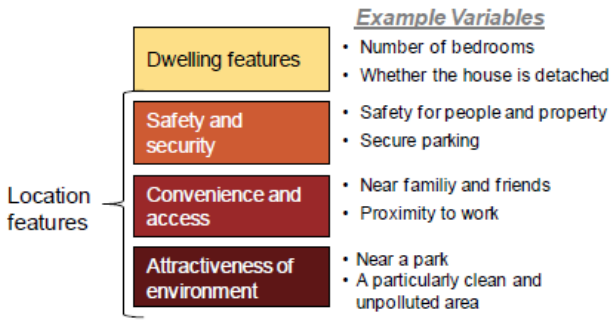
The Centre for the Study of Choice at the University of Technology Sydney designed the survey that they then used to conduct a discrete choice experiment.

Table 17 Variables included in *What matters most* survey

Convenience and Access	Attractiveness of environment	Safety and Security	Dwelling Features
Near family and friends	A natural environment you find attractive	Safety for people and property	The number of bedrooms
Near local shops	A mix of different housing types in the neighbourhood	Has secure parking	The number of living spaces (lounge/living rooms)
Near a shopping centre	A neighbourhood design you find attractive	Away from jails/ correctional facility	Whether the house is detached
Near a bus, tram or ferry stop	Away from a cemetery		Has a garage
Little traffic congestion in the area	Has a diverse mix of people in the neighbourhood		Has air-conditioning
Near general health services	Has particularly good weather		The number of bathrooms / en-suites
Near a railway station	Is in a particularly clean/unpolluted area		Has a big garden (eg. for kids to play in)
Near your work	Near a national park		Has double brick walls
Near cafes and restaurants	Near a park or reserve		Has an outdoor dining space
Near a hospital	Near an airport		Has a separate dining room
Near community gardens/ garden space	Near railway lines		Has walk-in wardrobe(s)
Near recreational facilities (e.g. sports grounds and clubs)			Has floorboards (eg. timber)
Near the CBD (Central Business District)			Whether the dwelling has Stilts or a Concrete Slab foundation.
Near a school and/or university			The number of floors it has (for apartments)
Near the beach			The presence of a water view
Near a local swimming pool			The presence of aged person friendly design
Near aged care facilities			Has weather-board cladding
Near a pre-school			The presence of a city view
Near nightlife (i.e. pubs)			Has a swimming pool within the facility
			Has a fireplace
			Has a gym within the facility
			Has a home cinema
			Whether the house is detached

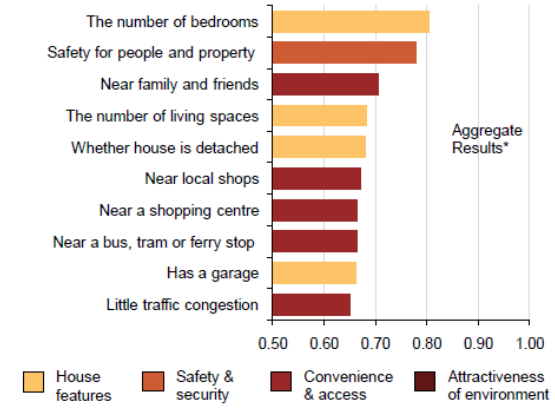
Source: Grattan Institute, 2011 What matters most, p.13

Figure 20: Overview of attribute categories, with examples



Grattan Institute, 2011 What matters most, p.2

Figure 21: Aggregate results of the *What matters most* survey



**Note: aggregate results are weighted by each segment's frequency in the population, not the percentage of the segment in the total sample.*

Grattan Institute, 2011 What matters most, p.7

The survey found that:

- Lone person households are more focussed on location, including features such as security, convenience and access.
- Older households tend to care more about the local area, and size of the home is less important.
- Children make dwelling features a priority, number of bedrooms becomes very important, along with living spaces and having a detached house.
- As the population ages and households shrink, housing preferences are likely to change which suggests future demand for more housing diversity than currently exists in Australian cities.
- Demographic change will drive more demand for housing in locations characterised by convenience, access and safety, which are particularly important to older and lone-person households.

Housing preferences in Perth

The WA Department of Planning and Housing commissioned *Perth and Peel: The housing we'd choose* 2013 to understand the factors that influence types of housing people choose. [510] The project included did focus groups, 2 online surveys (unconstrained and constrained), and matched demand and supply. This method was largely based on the Grattan Institute study from 2011.

The findings for Perth are consistent with the Grattan report for Sydney and Melbourne. Both reports identify a need to shift the balance of new supply away from a focus on separate houses and towards alternative dwelling types: semi-detached options in Perth and semi-detached and apartment options in Melbourne and Sydney.

This work was done in the context of the WA State government target to accommodate 47% of all new housing built by 2031 in Perth's existing suburbs (outlined in Directions 2031 and Beyond[511]).

The study's method included:

- 6 focus groups to determine which attributes mattered most when selecting a home.
- What matters most online survey asked 866 people to prioritise features of homes (for example location, price, dwelling type etc).

- 76 survey attributes were split into 5 broad categories:
  - convenience and access.
  - local amenities
  - local environment
  - dwelling design
  - dwelling features.
- Housing preferences and trade-offs survey of 1,071 people presented a set of housing options and choices constrained by affordability, and required them to make trade-offs between location, house type, house size and features.

The study found that affordability drives housing decisions for all but highest income earners. Location attributes matter most, including safety and security, easy access to work and schools, and being near family, friends and public transport. Location, framed by affordability, is the main driver of the decision process, whereas the home itself is chosen later to satisfy as many of the household requirements as possible, notably the number of bedrooms.

In the 'Housing Preferences and Trade-offs' survey, respondents stated a clear preference for the Inner Central region of Perth but only half of those stating this preference could actually afford a home in that location when constrained by their household budget.

Households are prepared to make housing type and number of bedroom trade-offs, primarily to access a preferred location. Respondents are less willing to trade off the number of bedrooms than they are to trade off the house type

The separate house is the preferred type of home for 78% of respondents but, when constrained by income, only 56% chose a detached house, the majority of the balance selecting a more affordable semi-detached option. Apartments are the least preferred type of home for owner occupiers but the survey indicates some willingness to trade-off a house for an apartment if households can find a preferred location and apartments offer an affordable alternative.

Respondents prefer 3-bedrooms. Almost half of households stating a preference for 4-bedrooms actually chose a 3-bedroom option, primarily because it allowed them to access a preferred location.

When comparing current housing stock with the income-constrained housing preferences of Perth households, the analysis shows a considerable mismatch. Increasing the proportion of semi-detached homes would allow households to make location, house type, bedroom and affordability trade-offs.

When deciding whether to rent or buy, housing affordability was the most important factor framing a decision followed very closely by location. Building design and features were considered only around half as important as affordability, except for those in the highest income group where the order was reversed.

Only 2% of respondents who are renting wanted to remain renting. Future housing demand will likely come from renters seeking to switch tenure.

Housing preferences in Auckland

Auckland Council conducted research in 2014 to understand housing demand, in both an unconstrained and income constrained context.[512] They conducted focus groups, 2 online surveys and choice modelling, and analysis that matched demand with supply. This method was largely based on the Grattan Institute study from 2011.

Six focus groups with 8 to 10 participants each met in different parts of Auckland. The groups tested materials and concepts to help with the online survey design and particularly focused on the list of attributes important to household choice.

The first online survey asked 1,497 respondents to identify the relative importance of 58 housing-related features when unconstrained by income or wealth. The most important individual feature was a safe neighbourhood (87% rating very important, and the next most important were dwelling features: natural light, easy to heat, secure. Results varied by household type. For example, households with children rated features with safety, space for children to play, near school zone and number of bedrooms very important whereas older people rated aged-person friendly design as important.

The 58 features were grouped into 5 broad categories (ranked by importance):

- local environment (rated most important/important)
- the property (next most important)
- the home itself (next most important)
- convenience and access (relatively less important)
- proximity to facilities (relatively less important).

The second online survey of 1,096 participants from the first survey did a discrete choice experiment in which they traded-off housing type, size and location under 'real world' financial constraints. Self-reported financial data defined individuals' budget constraint in choosing from 16 housing types and sizes in 8 broad geographic sectors in Auckland. The costs to buy or rent all housing options were based on new construction of medium quality standard to ensure a consistent standard over all housing options.

Almost half of the respondents (47%), when faced with a set of housing options that they could afford, chose a final housing option that was in the location that they had initially preferred. Detached homes were the final choice of just over half (52%) of all respondents. This preference was similar for both buyers (54%) and renters (50%). The choice experiment also showed a strong preference for other typologies, with 25% of respondents picking an attached home (joined unit), 15% selecting low-rise apartments and 8% selecting high-rise apartments.

In general, following the choice exercise, respondents reported that dwelling value and house type were of more importance in their decision-making process than was location or dwelling features.

The choice survey results were then analysed using a conditional logit regression model[11] to explore the interaction effects between housing size, type, location and price:

- People were more likely to choose attached homes and apartments over stand-alone house when sizes were larger (as determined by the number of bedrooms).
- Trade-offs between size and preferred location: people were willing to trade-off their preferred location to live in a larger home, with respondents being more likely to choose a larger home in a non-preferred location.
- Trade-offs between size and price: as price increases, people became relatively less likely to select a larger home, indicating that there is willingness to trade-off size for lower price. The trade-off between price and attached homes shows a similar effect (albeit at a lower level of confidence). People were less likely to select an attached home as the price increased.

Metropolitan Melbourne greenfield housing preferences

Buyer survey data also shows that location matters

RPM Real Estate surveys its customers when buying either land, a house, or a house and land package in greenfield estates. Data is available for some new greenfield suburbs in Melbourne's west, north and south-

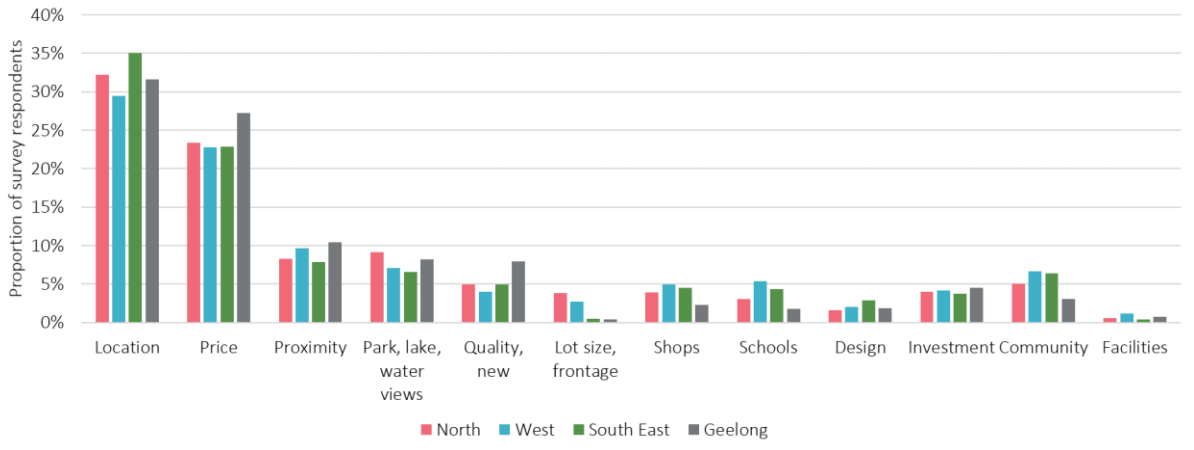
[11] The conditional logit model focuses on the characteristics of alternatives, rather than attributes of the consumer. Instead of having one data point or decision per individual, there are as many data points as alternatives available to the individual. Broadly, a 'conditional' logit model is used when the values of the variables (i.e. characteristics) vary across the choices and the parameters are common across the choices.

east growth areas of Melbourne, and new suburbs in Geelong and Ballarat. Data covers the period from August 2016 to August 2021, and includes a total of 12,216 survey responses in all regions.

Several of the survey questions address housing preferences, including asking survey respondents to rate the importance of different variables in their decision to buy greenfield home. This gives insight into the housing preferences of new residents.

Respondents had to select the best 3 features of their estate from a range of options. In all 4 regions (north, west, south-east and Geelong) location rated the highest, followed by price (see Figure 22).

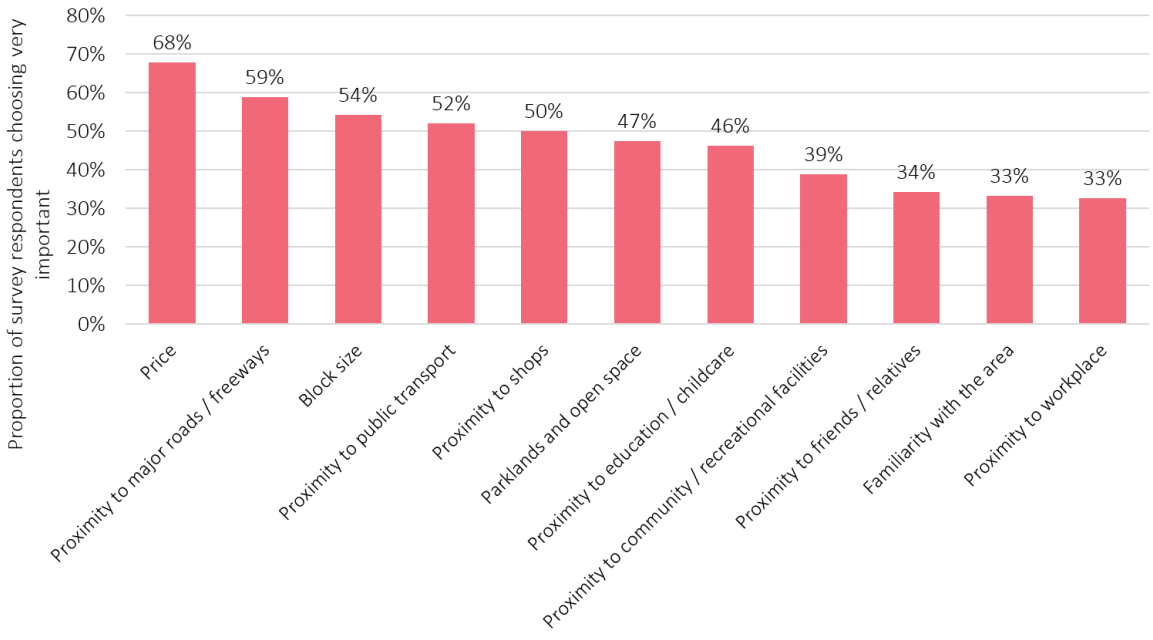
Figure 22 Greenfield buyers survey – best 3 features of the estate by region



Source: RPM Real Estate Data

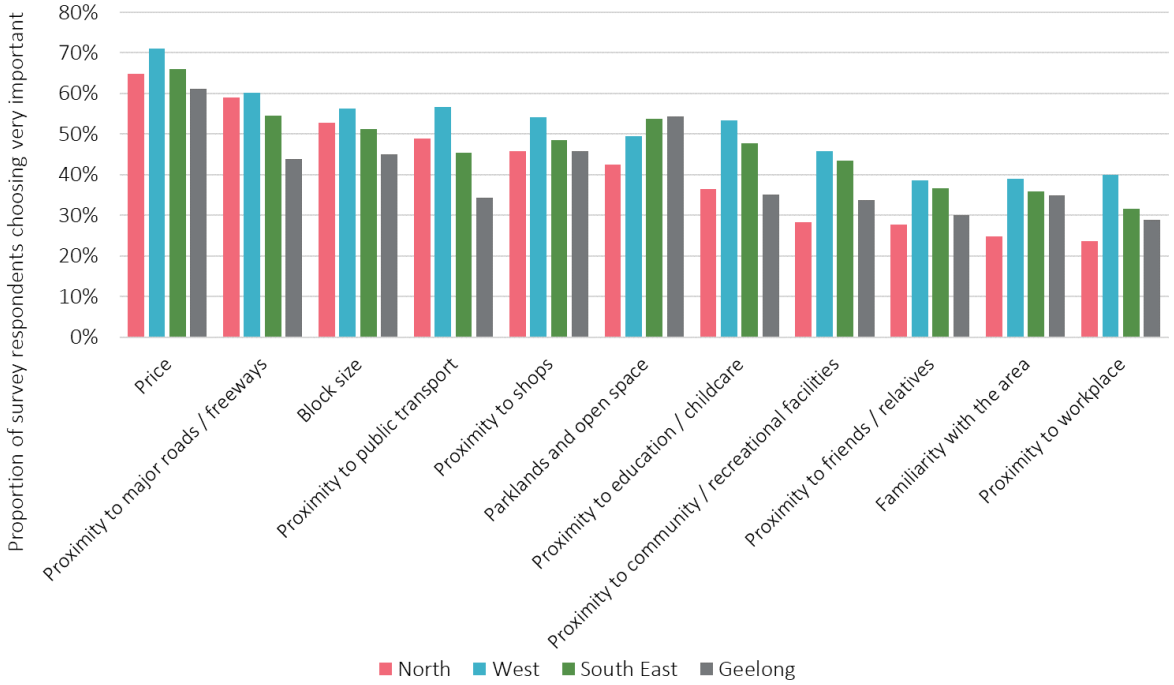
A series of questions asked respondents to rate how much importance they placed on a variety of home and location characteristics. The rating scaled from very important, important, not important, not important at all and not applicable. Figure 23 shows the proportion of respondents who rated the features as very important and Figure 24 includes the same results by region.

Figure 23 Greenfield buyers survey – housing preferences rated as very important, average of all greenfield regions



Source: RPM Real Estate Data
Note: This is the average of the 3 metropolitan greenfield regions – west, north and south-east

Figure 24 Greenfield buyers survey – housing preferences rated as very important, by region



Source: RPM Real Estate Data

Appendix 3: Greenfield housing characteristics

This appendix addresses the following questions:

Are there common characteristics of households who choose to live in greenfield areas?

- Are there common demographic characteristics of households who choose to live in a greenfield location?
- What demographic segmentations are relevant to greenfield households? For example, life cycle, migration status, income, tenure, place of residence 5 years ago etc.
- Are they consistent in different greenfield settings, for example, different metropolitan growth corridors and non-metropolitan locations?
- Are these characteristics stable over time?

How are greenfield housing submarkets defined?

- Are there common approaches to defining housing submarkets?
- What are the strengths or limitations of these approaches when applied to greenfield market segments?
- Do housing submarkets provide a useful framework for further research seeking to understand housing choice and trade-off decisions in greenfield locations?

It presents an overview of the high-level findings from the literature and data review. It presents findings from a literature review of greenfield housing characteristics and housing submarket research. Suburb level data analysis looks at greenfield demographic and housing market characteristics.

Following is more detailed analysis, including profiles of greenfield suburbs. It describes the suburbs in metropolitan and regional growth corridors, data sources and data analysis methods. Suburb profiles are organised by growth area corridor context.

It ends with more detail on the literature and data about moderate income households which are the most common household type in greenfield locations.

Suburb level data, including buyer survey data, is also available in a dashboard.

Greenfield households and housing sub-markets

This section summarises literature for 2 separate but interrelated themes: greenfield household characteristics and housing submarkets.

Greenfield household characteristics

Previous studies identify the types of housing characteristics and submarkets in greenfield locations. The following household and dwelling characteristics are common in the greenfield literature:

- younger age profile characterised by households with children, including more very young children
- large average household sizes
- very culturally diverse

- include a higher proportion of households who are vulnerable to financial and housing stress due to higher transport costs
- high proportion of first home buyers
- homes are mostly large and detached
- recent trend towards smaller lot sizes and diminishing private open space
- lower median house prices.

Greenfield households are young first home owners and often have children

Nationally, greenfield suburbs have similar household characteristics.[513] Most new estates attract similar household types: first home buyers, households with young children and couples intending to have children.

Several recent studies collected data about first home buyers in greenfield areas. The Early delivery of equitable and health transport options in new suburbs project surveyed residents of Selandra Rise in Clyde North (City of Casey), and Allura in Truganina (City of Wyndham) and found the majority of respondents in these 2 estates (57%) were first home buyers.[514] This is consistent with qualitative research on Selandra Rise which found 60% of survey respondents were first home buyers.[515] Buyer survey data published by RPM Group (2021 Q3) similarly observes a high number of first home buyers in the greenfield market, with 54% of sales to owner occupiers.[516]

Life stage has a major influence on household moves to greenfield housing. The majority of households in new greenfield estates are couples and households with children.[517] Growth area households are young; people aged 20-34 years are the largest age group.[518] These households and age groups are very mobile. Life events such as moving out of home, beginning a new relationship, marrying, or planning for children can trigger relocation decisions. As people age into their 30s and 40s they are likely to become less mobile, particularly if they own a home and have children. People in these age groups might move because of life events such as children leaving home, relocation for work or retirement, or a health crisis.

This means large and growing numbers of young children live in greenfield suburbs. Melbourne's 7 growth area councils have around 38% of the metropolitan area's 0 to 4 year olds. Victoria in Future 2016, the state's official population projections, suggests this will increase to 39% by 2036.[519] Table 18 compares the growth in the number of children 0 to 4 years and 5 to 9 years in Melbourne's 7 growth area local governments to other metropolitan local governments.[520] Between 2011 and 2031 the forecast growth rates of children will be far higher in growth area councils (86%) than in other areas (25%). Table 19 shows this data again, but with updated Victoria in Future data from 2019, when the forecast was last publicly released.[521] The growth rate of 0-4 and 5-9 year old's is also expected to be much higher in growth area councils over the next 15 years than other metropolitan areas.

Table 18 Comparison of population growth rates 0-4 years and 5-9 years in growth area versus other metropolitan councils

Age group and area	Actual population 2011	Projected population 2031	Total projected growth	
			Number	Percent
Growth area councils				
0-4 years	79 063	140 500	61 437	78
5-9 years	73 166	142 824	69 658	95
Total	152 229	283 324	131 095	86

Remaining areas				
0-4 years	185 370	224 395	39 025	21
5-9 years	172 637	223 793	51 156	30
Total	358 007	448 188	90 181	25

Source: VAGO, *based on Victoria in Future 2016,* 2017

Table 19 Comparison of population growth rates 0-4 years and 5-9 years in growth area versus other Councils

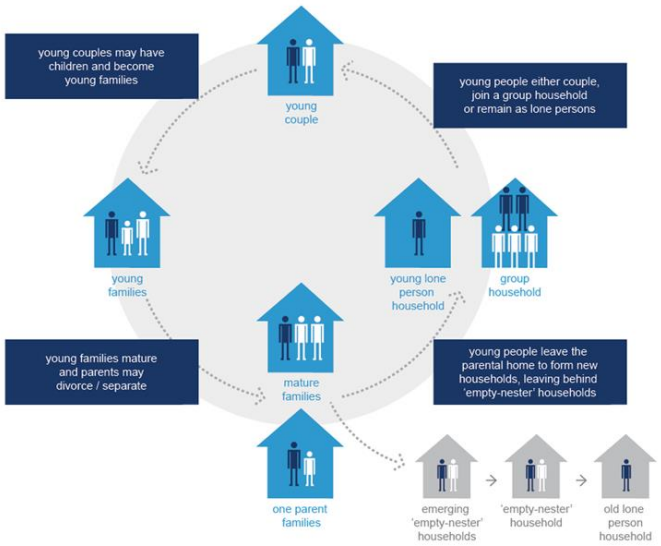
Age group and area	Estimated population 2021	Projected population 2036	Growth	
			Number	Percent
Growth area councils				
0-4 years	123450	153571	30120	24
5-9 years	121195	160903	39708	33
Total	244645	314474	69829	29
Remaining metro councils				
0-4 years	204971	236421	31450	15
5-9 years	208190	231800	23610	11
Total	413160	468221	55060	13

Source: Victorian in Future 2019

.id forecast's analysis of growth area suburban life stages looks at greenfield estates in Victoria, New South Wales and Western Australia.[522] The estates are categorised by 3 development periods: the 1980s, late 1990s and more recent. Change is analysed by comparing the 2006, 2011 and 2016 Census. Conventional wisdom suggests that household sizes decrease in older estates as the first generation of children grow up, move out of the family home and leave behind 'empty nester' households. However .id forecast found that average household size increased in many estates developed in the 1980s and 1990s. More affordable estates were less likely to retain people ageing in place and are more likely to have a higher turnover of population, continuing to attract younger households and young children. At the same time, these estates are more likely to concentrate disadvantage over time (see Figure 25).[523]

The Victorian Council of Social Service similarly observes that the typical pattern of demographic change recorded for suburbs developed in the 1960s and 1970s is not consistent with the life stages of greenfield suburbs.[524] Younger households with children are more mobile now, moving homes after building equity. More homes are bought by investors and are then rented.[525]

Figure 25 Greenfield suburb lifecycle

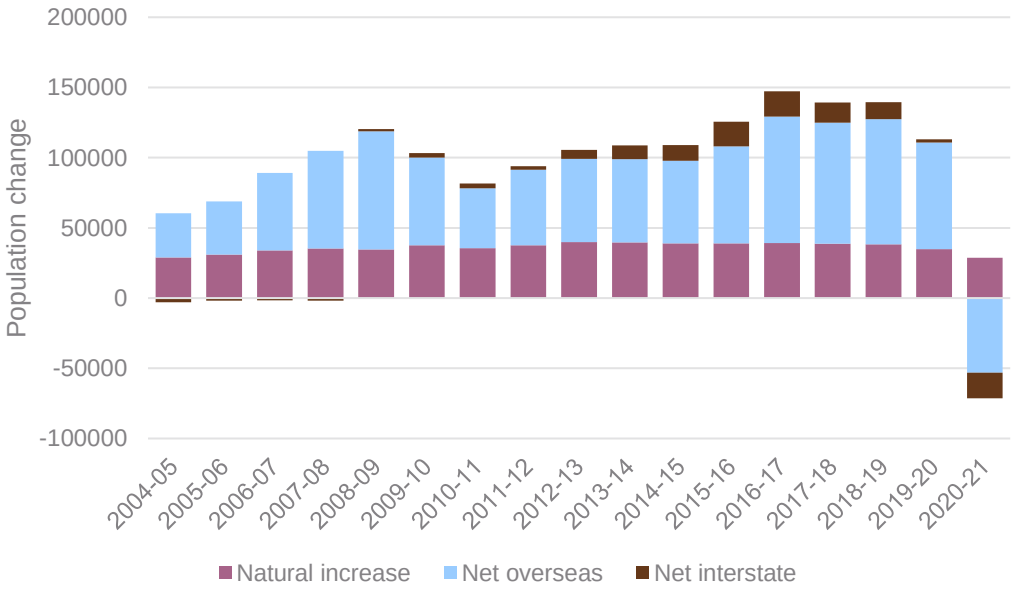


Source: Richard Thornton, Greenfield Futures, 2018

Greenfield households are culturally diverse

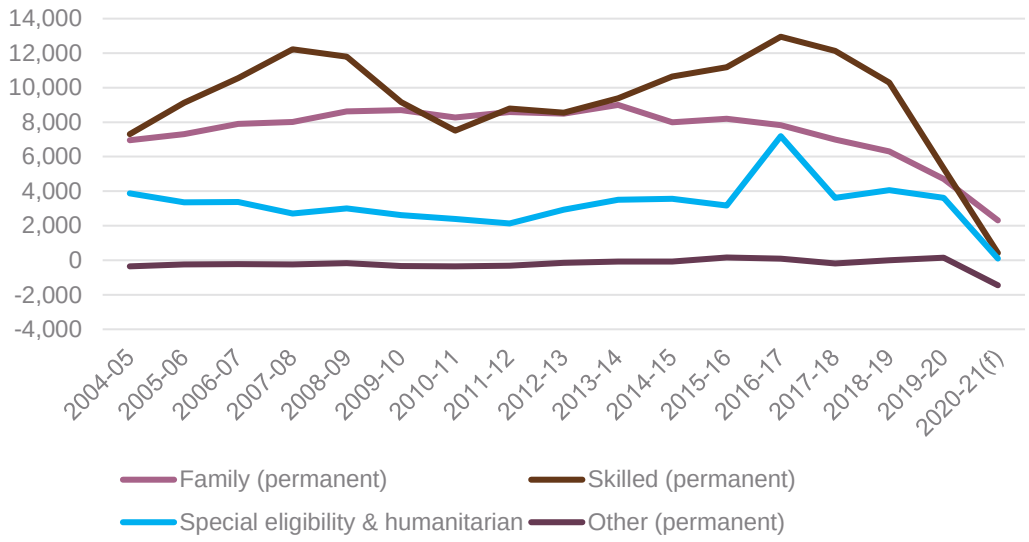
Overseas migration fuels Australia's population growth, and influences the demographic characteristics of Australian cities. Figure 26 shows that until very recently, net overseas migration made a larger yearly contribution to Victoria's population than natural increase (net births and deaths). For example, overseas migration in 2018-19 accounted for 63.8% of new residents. Skilled migrants have been the largest number of permanent visa holders in Victoria for around 10 years, as illustrated in Figure 27. Historically, many of these new migrants settled in Melbourne, following patterns of chain migration that lead them to settle near family and established ethnic and multicultural communities.[526]

Figure 26 Victorian population change by natural increase, overseas migration and interstate migration



Source: ABS 3101.0 National, state and territory population - components of population change, June 2021

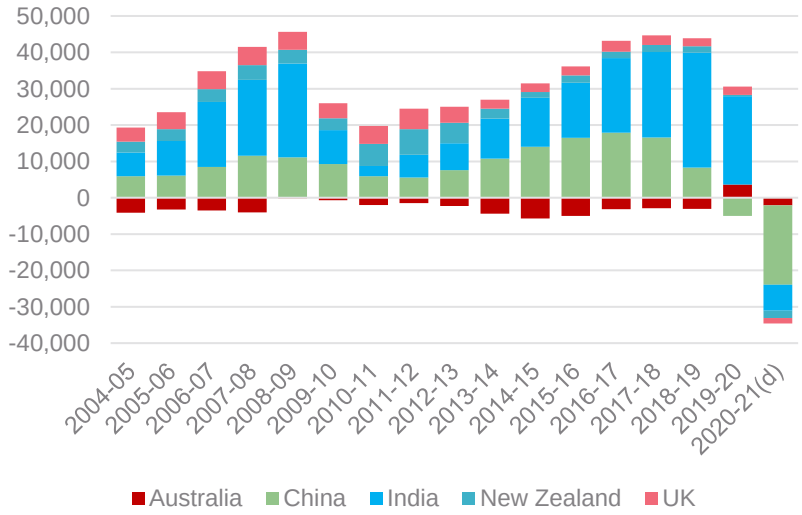
Figure 27 Migration by permanent visa holders by year to Victoria



Source: ABS Overseas migrant arrivals and departures by visa groupings, state/territory - financial years, 2004-05 to 2020-21

The largest groups of migrants over a similar period have come to Victoria from China and India (See Figure 28). In the 2018-19, people born in China or India accounted for 45% of new overseas migrants to the state. Suburb level data analysis shows that Indian buyers are the largest overseas born buyer group of greenfield housing in Victoria (see Profiling).

Figure 28 Overseas migration- top 5 countries of birth Victoria 2004–2020



Source: ABS net overseas migration by Country of birth, financial years, 2004-05 to 2020-21

New migrant communities' location decisions are driven by the availability of affordable housing: 'the location of particular ethnic groups may reflect employment of housing opportunities existing at the time of their peak arrivals.'[527] In recent years, many new migrants settled in greenfield locations where housing is more affordable.

This means they influence the cultural and socio-economic characteristics of outer Melbourne. Research on the perceptions of culturally diverse residents living in Point Cook's growth areas, and both new and older areas of Craigieburn and Packenham found that skilled migrants are attracted to growth areas where they can access the economic opportunities of central Melbourne, and buy a large, affordable home.[528]

While these suburbs share many similar characteristics, socio-economic characteristics and ethnic backgrounds differ among migrants settling in Melbourne new greenfield suburbs. Outer Melbourne's suburbs are 'super diverse ethnoburbs' where 'different ethnic groups exist simultaneously.'[529] Their populations also have diverse backgrounds. Case studies of Craigieburn and Point Cook show that people come from more than 160 different countries. However, while Craigieburn is diverse in terms of the socio-economic status of its residents, Point Cook is far more stratified, with higher levels of educational attainment and higher median household incomes:

'migrants who come from both affluent as well as economically disadvantaged countries around the world, possess relatively higher educational qualifications and economic capabilities in comparison to previous migrants. A new level of residential differentiation patterns have [sic] thus emerged out of this mass immigration of professionals and entrepreneurs, which is more complex and fine-grained (Cheshire et.al. 2013). More class-based residential differentiation has become evident due to more middle and upper class professionals coming to work in Australia.'[530]

Cultural background can shape migrants' housing aspirations and preferences, and for many, this leads them to growth areas where they can live in a larger house and access social and cultural networks in outer Melbourne. Cultural identity shapes the housing aspirations of both Filipino and Indian migrants in new housing estates in Wyndham to varied extents. [531] For Filipino cultural groups, wanting to be around established family and cultural networks was a major factor in the decision to buy in a greenfield location. This was less of a factor for Indian households. They are less likely to have established family networks in Wyndham and were more likely to move from inner Melbourne, trading off location for space. For some, aspirations to bring family from India meant spare bedrooms were highly valued.

Greenfield households have moderate incomes and limited access to infrastructure and jobs

New suburbs have 'cheaper housing/land prices that result from poor connectivity to education, jobs, and services, and/or poor amenity, recreation or safety.'[532] Many of these conditions are more likely in greenfield rather than Melbourne's more established suburbs. This means growth area residents face challenges accessing transport and social infrastructure due to infrastructure provision lags.[533]

Socio-economic characteristics of households in new master planned estates are different to households living in older, more established outer suburbs.[534] Table 20 shows a summary of demographic characteristics of 3 types of communities: 'Planned' describes master-planned communities, 'traditional suburb' refers to outer areas located adjacent to planned communities, and 'urban planned' are inner-urban renewal areas. As Table 20 shows, planned communities tend to be income richer, with more debt, and more dual income households than traditional outer areas.

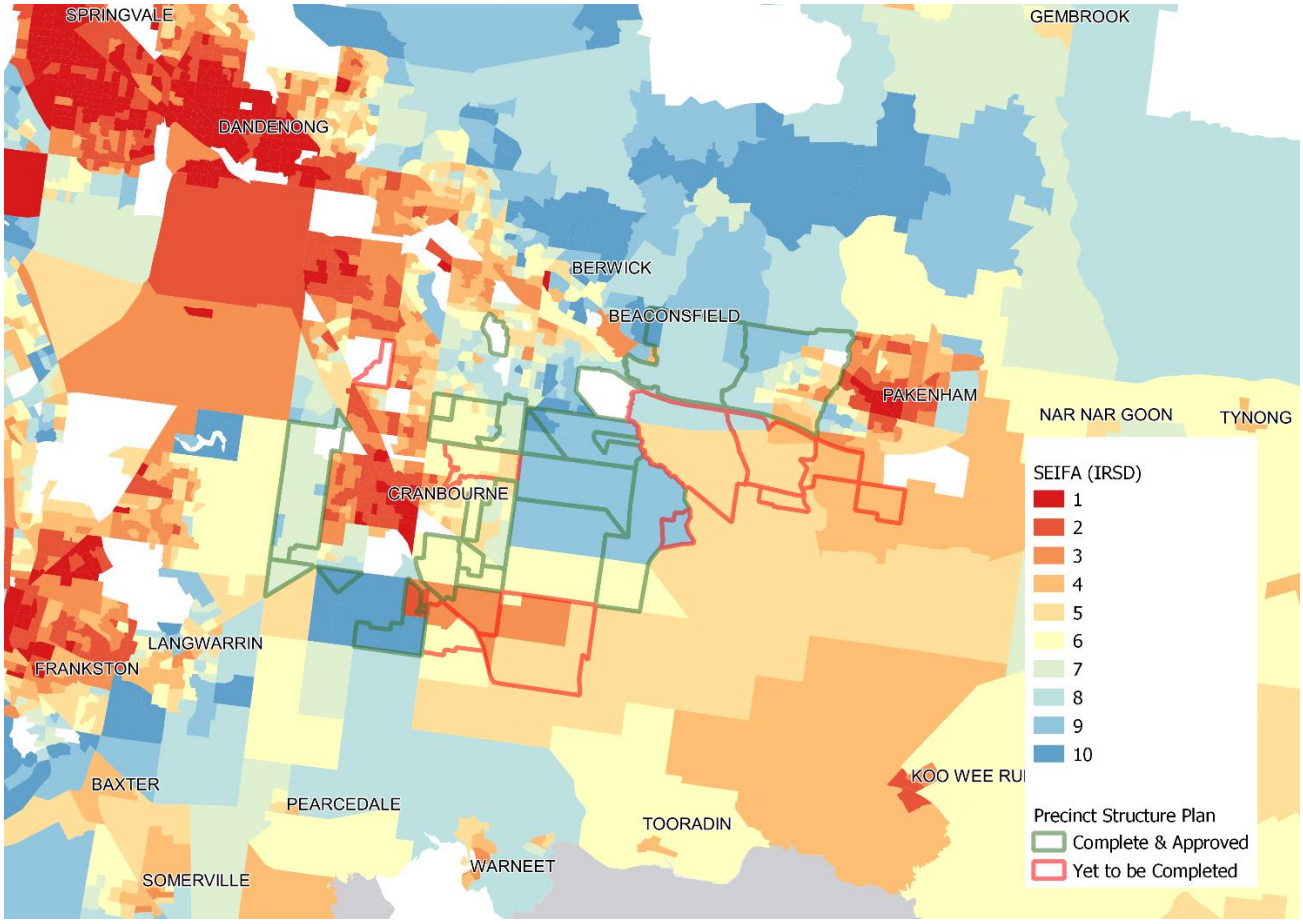
Table 20 Main characteristics of planned, tradition and urban planned suburbs

Characteristic	Planned	Traditional suburb	Urbanplanned
Age of housing	younger	older	new
Age of community	younger, developing	older, deeper	new
Socio-economic difference	income richer	income poorer	affluent
Time difference	time poorer	time richer	time rich
Extended family	sparser	denser	sparser
Sporting facilities	newer, more diverse	older	excellent
Safety	seen as safer	seen as less safe	safe
Design	better designed	less holistically designed	better designed
Debt	more debt	less debt	less debt, high rent
Employment proximity	jobs can be near, or far	jobs nearer	jobs near
Amenities for children	good for pre-teenagers	vary	poor
Amenities for teenagers	poorer for teenagers	vary	poor
Amenities for retirees	poorer	vary	good
Amenities for frail aged	poor	vary	poor
School facilities	diverse	vary	nearby
Family type	more dual earners with kids	more diverse	no kids
Life-cycle	young family	diverse life-cycle	mid-life, retiree

Source: Williams, Philippa, Barbara Pocock, and Ken Bridge 2009

Spatial analysis of SEIFA's index of relative socio-economic disadvantage at a fine grain scale (SA1) indicates differences in socio-economic characteristics of greenfield locations compared to older suburbs in outer Melbourne. Figure 29 maps the south-east growth area, with completed PSPs borders in green and incomplete in red. In comparison to more established south-eastern suburbs such as Cranbourne and Packenham, recently developed Master Planned Estates are less disadvantaged than older parts of outer Melbourne.

Figure 29 SEIFA IRSD showing socio-economic differentiation in the south-east growth corridor



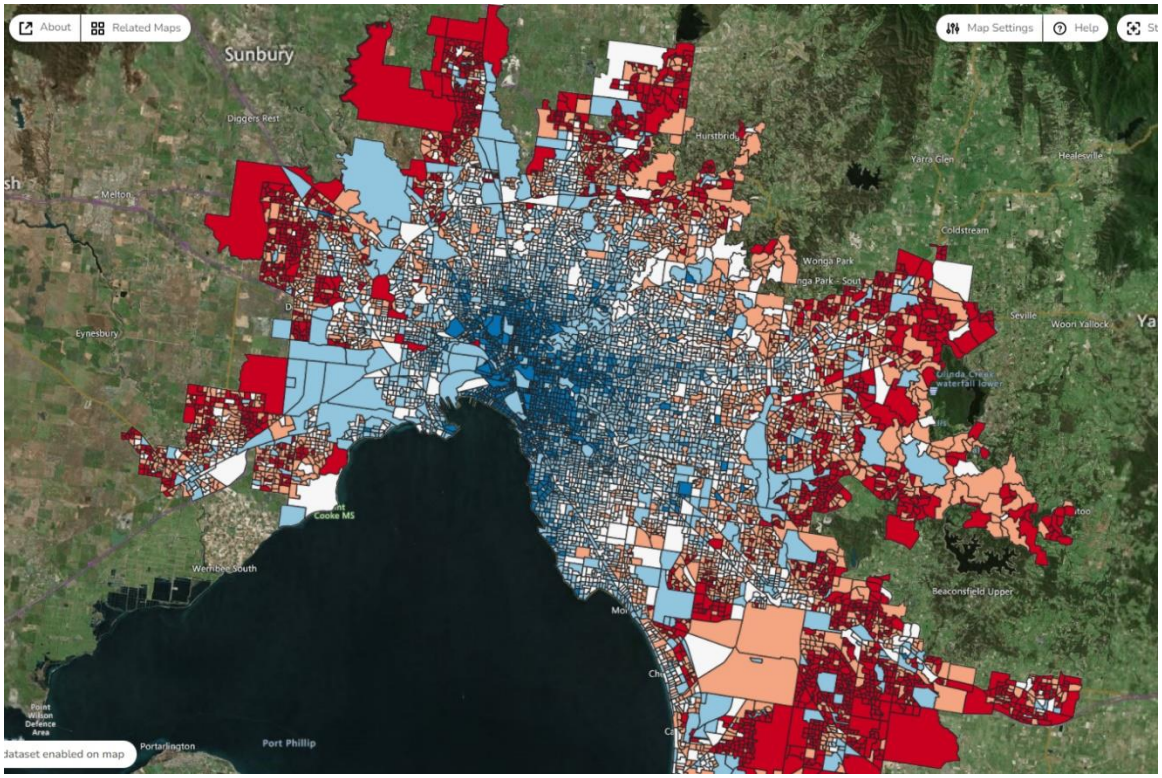
Source: SEIFA 2016

Emerging evidence shows that higher home prices are pushing more moderate-income households to the urban fringe and peri-urban locations in search of affordable housing. ABS 2011 and 2016 Census data shows that 'key workers' - people in professions that provide essential services like cleaning, teaching and healthcare - are moving further from inner-areas and towards less expensive outer suburbs and satellite cities.[535] More moderate-income households are struggling to afford housing in Melbourne and are likely to commute longer distances to access jobs. This has implications for the types of households moving to greenfield areas, who are less likely to experience poverty, but are nonetheless subject to other forms of spatial inequity. Newly developing suburbs usually have few public and active transport options and generally have fewer locally accessible facilities, services and jobs than older established suburbs.[536]

The relationship between location and transport costs have implications for how greenfield households are likely to experience precarity.[537] The VAMPIRE (Vulnerability Assessment for Mortgage, Petroleum and Inflation Risks and Expense) index considers the relationship between residential location, housing and transport costs. The index is based on 4 variables: (1) median household weekly income; (2) proportion of households owning 2 or more vehicles; (3) proportion of people traveling to work by car; and (4) number of homes with a mortgage.[538] Figure 30 shows that vulnerability to mortgage, petroleum and inflation risks are likely to increase with distance from central Melbourne. As this map demonstrates, most locations in the 3 growth corridors are very vulnerable to rising transport costs.

The VAMPIRE index does not account for the proportion of household income spent on housing, relative to transport costs. This means it does not account for the likelihood that lower housing costs in growth areas can insulate some households in growth areas Melbourne from financial stress if transport costs rose.

Figure 30 Vulnerability Indices for Mortgage, Petroleum and Inflation Risks and Expenditure (VAMPIRE), Melbourne 2016



Source: RMIT Centre for Urban Research (CUR) commissioned by AURIN, 2016

On average, a greater proportion of household income is spent on transport in growth areas than in inner areas of Melbourne (see Figure 31).[539] Conversely, households in growth areas are likely to spend less on housing, as a proportion of income, compared to parts of inner and middle Melbourne (Figure 32). Figure 33 combines these 2 metrics, showing that lower housing costs on the urban fringe balance higher transport costs, resulting in lower housing and transport cost ratios in growth areas compared to other locations in middle and outer Melbourne.

Figure 31 Proportion of household income spent on transport costs (SA2)

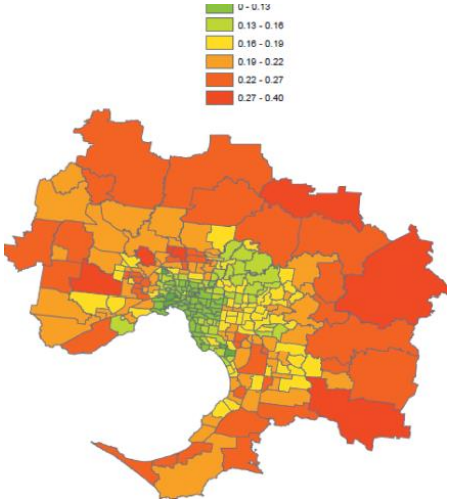
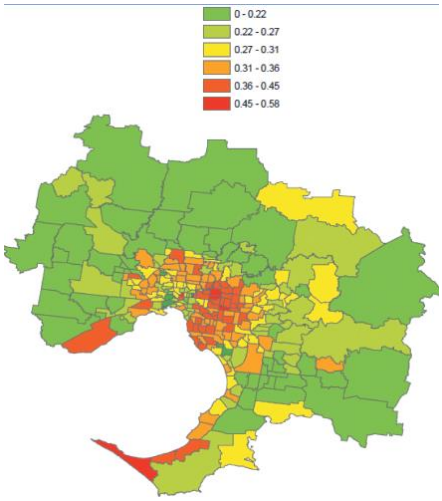
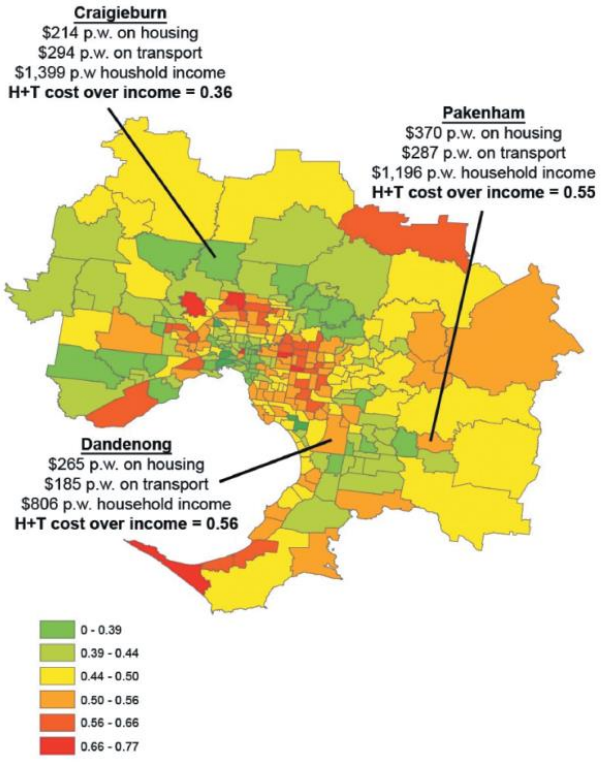


Figure 32 Proportion of household income spent on housing costs (SA2)



Source: J Smith, C Waite, D Lohm, M Saberi and D Arunachalam, 'Understanding the Lived Experiences of Housing and Transport Stress in the 'Affordable' Outer Ring: A Case Study of Melbourne, Australia,' *Urban Policy and Research*, 2021, 39(2): 191-207, doi:10.1080/08111146.2021.1898939

Figure 33 Proportion of average income spent on housing and transport costs combined by SA2



Source: J Smith, C Waite, D Lohm, M Saberi and D Arunachalam, 'Understanding the Lived Experiences of Housing and Transport Stress in the 'Affordable' Outer Ring: A Case Study of Melbourne, Australia,' *Urban Policy and Research*, 2021, 39(2): 191-207, doi:10.1080/08111146.2021.1898939

Access to jobs declines with distance from inner Melbourne, with the highest concentration of jobs in the city's central business district and inner suburbs. Employed people from greenfield households on the fringe of Melbourne travel longer distances on average to access their jobs, which can be in the central city but also

can require suburb-to-suburb commutes.[540] Figure 34 illustrates effective job density which measures the spatial concentration and access to jobs between different locations. Effective job density has 2 components: density of jobs per hectare and travel time to jobs by car and public transport.

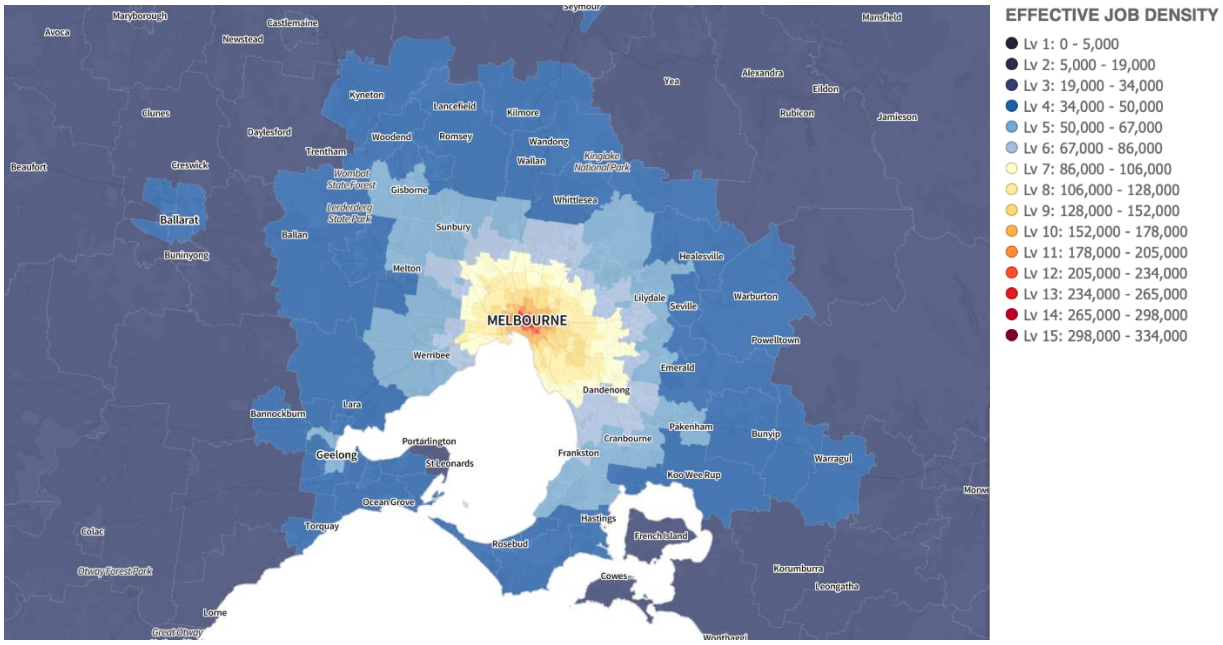
For households without a car, or people engaged in caregiving for children or relatives, distance can severely restrict job participation. People in outer areas are more likely to experience barriers to accessing jobs, with women especially vulnerable and more likely to have:

- lower labour force participation
- higher unemployment
- a job for which they are overqualified.[541]

The physical distance from work can also negatively affect greenfield residents' health and social opportunities. In new greenfield communities, the 'scarcity of employment and the lack of local destinations lead to long travel times, with 63% of residents…stating that travel times had a negative impact on their family life and 47% that it had a negative impact on their health.'[542]

Three in 5 working greenfield residents worked from home at least one day a week since March 2020.[543] This produces benefits for households, with workers spending less time commuting (46%) and less money on transport (46%), and net positive effects on work life balance, with people having more time to relax (54%) and exercise (48%). Notably, people not working said they were more likely to seek part time work if they can work from home (53%).

Figure 34 Effective job density



Source: SGS Economics and Planning Pty Ltd, Effective Job Density, https://www.sgsep.com.au/maps/thirdspace/australia-effective-job-density/

Households move homes within corridors

Internal migration in Melbourne is generally spatially contained, with the majority of movements into greenfield suburbs originating from the same LGA or an adjoining one. Analysis of net flows of Melburnians between the 2001 and 2006 Census shows that movements:

- follow an outward pattern consistent with Melbourne's urban expansion
- are normally over short distances, with people moving between inner to middle, middle to outer and outer to growth areas, and are less likely to skip from inner or middle to a growth area

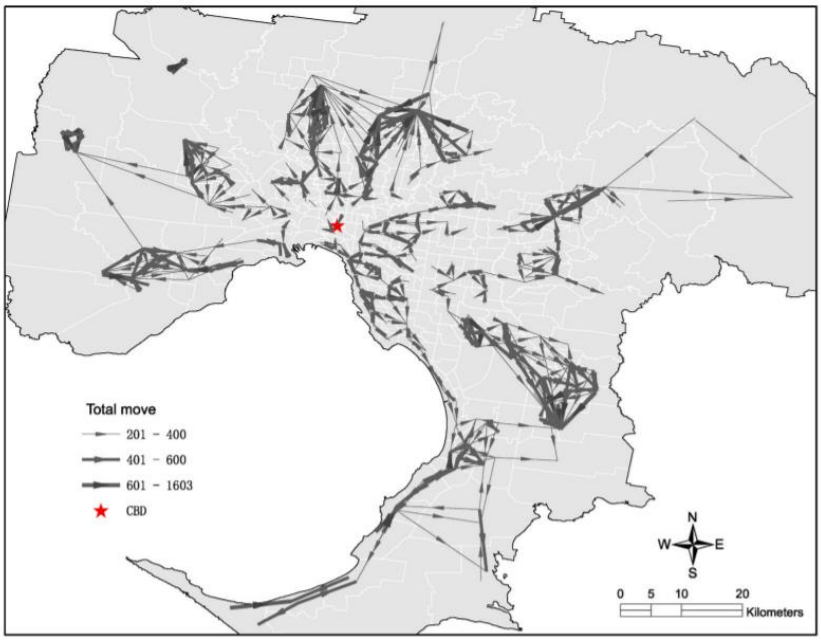
- are contained in geographic regions and often in the same LGAs
- are less likely for households in outer Melbourne out of their existing LGA than inner Melbourne residents who are far more mobile.[544]

These differences in mobility patterns relate to life stage and housing tenure. As Section 0 highlighted, young people and renters tend to be more likely to move house, more often. Given growth area LGAs' higher share of households with young children, households are more likely to make localised moves, to minimise disruption to childcare, schooling and other social connections.

Residents of fringe LGAs are more likely to relocate outside the capital city boundary. Cardinia and Melton, growth area LGAs, had the largest population movements to regional Victoria between 2001 and 2006. Consistent with broader internal migration patterns, these moves were also local, with the highest flows to adjacent peri-urban LGAs such as Baw Baw and Moorabool.[545]

More recent analysis of major residential movements using 2016 Census data are consistent with these earlier findings. Most major flows of people stay localised and outwards to locations further from the central city. [546] Flow mapping of major internal migration in Figure 35 shows that large volumes of movements tend to occur in geographical corridors. Most migration to Melbourne's new growth areas originate from a specific growth corridor or adjacent LGA. For example, new residents in Clyde North were likely to move outwards from more centrally located eastern and south-eastern suburbs.[547]

Figure 35 Mapping major internal migration movements in Melbourne 2011–2016



Source: Li, Shiran and Dodson 2021

Housing sub-markets

Academic literature takes a variety of approaches to defining housing sub-markets and researchers have used different methods to define Melbourne's sub-markets. Nonetheless housing sub-markets generally have dwellings (supply) that are relatively close substitutes for consumers (demand).

Housing sub-markets can be defined spatially (such as statistical areas) or by dwelling structure (or type). Demand for dwellings in a spatial or structural sub-market is also influenced by buyer preferences, which are further influenced by budget, household composition and socio-economic characteristics.

Housing sub-markets exist but are hard to precisely define

The housing market broadly refers to the many market transactions that occur between buyers and sellers of housing. Defining the housing market as one singular market has conceptual limitations and housing researchers have long sought a more sophisticated approach to examining them, but disagree on the best method.[548]

While conceptually housing sub-markets offers a more sophisticated approach to examine housing markets, no single definition of a 'sub-market' exists in academic work, nor is there consensus on the significance and existence of housing sub-markets.[549] In practice, sub-markets are often defined by dwelling type, socio-economic characteristics of areas, local government areas and real-estate agents' definition of market areas.[550]

Watkins' definition of housing sub-markets is based on an extensive review of housing market literature: 'sub-markets are deemed to comprise properties (and locations) that are likely to represent relatively close substitutes to consumers searching for dwellings.'[551] This definition identifies the spatial and dwelling structure components that influence housing markets, and the behaviour and choices of people bidding for housing in the market. This acknowledges that sub-markets are the product of a complex array of supply and demand factors that further influence the amount of and types of housing products available (supply), and consumer preferences (demand). Dwelling types have different supply elasticities that affect how quickly they can be supplied to the market after a change in price. Denser housing types respond more slowly to price shocks than detached dwellings due to different regulatory requirements for each dwelling type, construction difficulty and the ability of developers to hold land ('land bank') for detached dwellings.[552]

Housing sub-market products should also be relatively substitutable, by location or dwelling type. For example, a detached dwelling is a better substitute for a detached dwelling in a different location but is not necessarily substitutable to an apartment. Large spatial areas (suburbs) might also not have substitutable detached or denser dwellings.[553] Spatial attributes can also be more important than structural characteristics, particularly if constraints on buying exist such as affordability or availability of mortgage finance.[554] A change in a substitute good's price can also produce changes in demand for a good. This can be measured by looking at how a change in the price of housing in one sub-market affects the demand for housing in another sub-market. As dwelling supplies increase, and particularly of more expensive housing, 'filtering' can occur:

'The people who move into newly constructed more expensive housing are either existing residents who move out of less expensive housing, or new residents who would otherwise have added to the demand... each additional dwelling adds to total supply… Initially expensive homes gradually become cheaper as they age, and are sold or rented to people with more modest incomes…'[555]

Sub-markets are dynamic and predicting household trade-offs are difficult.[556] Understanding the extent to which movements in supply or demand in one sub-market will influence demand, supply and prices in another is complex.[557]

Further definitions of housing sub-markets are based on specific attributes. For example, housing researchers classify sub-markets by patterns of shared dwelling characteristics, similar socio-economic groups and grouping statistical areas.[558] Real-estate professionals focus on understanding how household or investor preferences correlate to price, matching buyer types to price ranges.[559] Housing economists attempt to define the structure of housing sub-markets with empirical identification strategies with definitions based on statistical observations of a range of variables. Selecting the right variables to define a sub-market is a challenging.[560]

Types of homes can define housing sub-markets

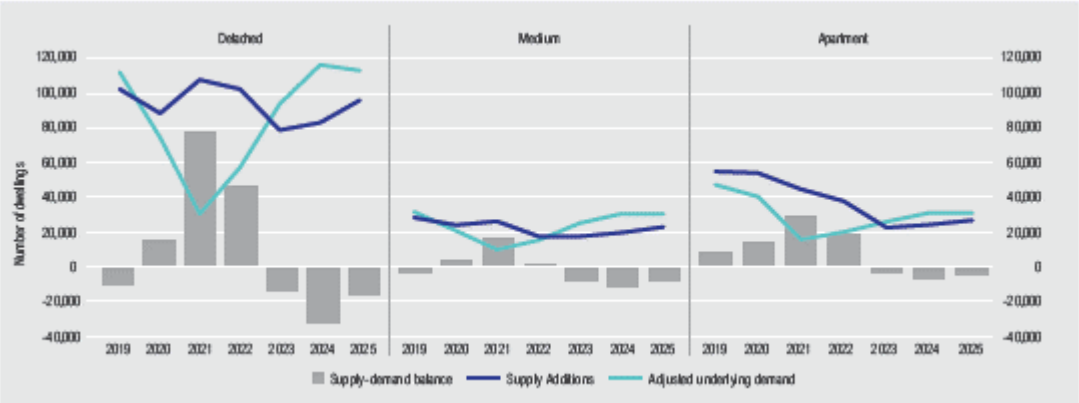
The ABS Census dwelling structure definition can also define housing sub-markets.[561] Spatially defined sub-markets can be further broken down into structural sub-markets for detached, medium density and apartment buildings (see Table 21). Structural sub-market analysis takes into account dwelling type heterogeneity inside spatial boundaries. For example, densifying suburbs can have a variety of dwelling types.[562] High density housing can be geographically concentrated inside large spatial areas in which detached dwellings are common.[563] The National Housing Finance and Investment corporation (NHFIC) forecasts the demand and supply of housing in Australia using these categories (see Figure 36).[564]

Table 21 Census definitions of housing type

Detached	Medium density	Apartment
ABS Structure Separate House	Semi-detached one storey Semi-detached 2 or more storeys Flat in a one or 2 storey block Flat attached to a house	Flat or apartment in a 3-storey block Flat or apartment in a 4-or-more-storey block.

Source: National Housing Finance and Investment corporation (NHFIC), 2020

Figure 36 Forecasted supply and demand of dwellings, Australia-wide



Source: National Housing Finance and Investment corporation (NHFIC), 2020

Types of households can define housing sub-markets

Classifying homebuyers into consumer groups can take account of life stage, household size and composition, and socioeconomic status. The housing choices of households in the same consumer group are similarly constrained by the same search and information costs.[565] Households will pay different prices for attributes in different consumer market segments. Excess demand for particular dwellings (and their close substitutes) drive prices up in that sub-market. Similarly excess supply reduces the sub-market's prices.[566]

Socio-economic factors can also define Melbourne's housing sub-markets where they have similar median household incomes, cars per households and number of bedrooms. Section 0 of this report discusses the literature on these variables and the following Section 0 presents data on these variables for Melbourne and a selection of regional Victorian areas.[567]

Victoria's housing sub-markets

Existing academic housing sub-market definition in Victoria is limited to Melbourne and focuses on spatial analysis of internal migration and dwelling prices. Housing sub-markets (defined by both spatial and structural characteristics) can change location over time but this research does not specifically address issues such as dwelling density increases in Melbourne's newest suburbs. It also does not look at how one neighbourhood or suburb can also have multiple sub-markets, based on common social and/or economic characteristics in addition to types of dwellings.[568] Taking these characteristics into account can better capture dwelling and demographic change in Australian suburbs, including shifts in residential densities.[569]

In cities such as Melbourne, common factors that influence spatial housing markets are:

- neighbourhood quality
- access to jobs and services

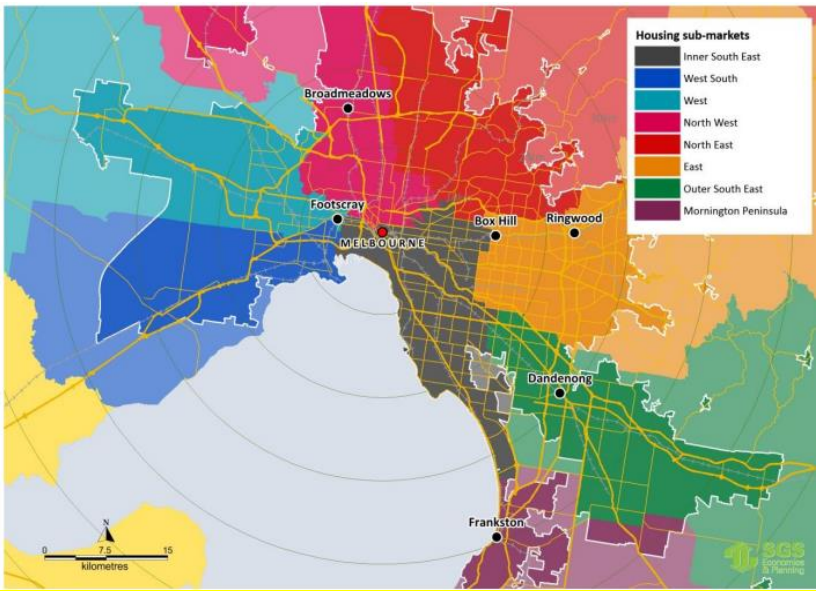
- school accessibility
- environmental and cultural amenity.[570]

These represent location characteristics that households typically look for when choosing to buy or rent a home. These factors are also relatively substitutable between dwellings in a similar area. While 2 dwellings can be a different type (structure) such as a town house and apartment, if they are located in close proximity, they will share location attributes such as neighbourhood quality and access to jobs. Sub-markets can exist in spatial areas to group dwellings that have similar location characteristics, such as local government areas (and an aggregation of those jurisdictions to define a sub-market).[571]

Analysing internal migration data to identify patterns of self-contained household moves is a common approach to mapping spatial sub-markets. This method classifies sub-markets by grouping together statistical areas, for example SA2s, or suburb boundaries. In Melbourne, previous studies found that spatial sub-markets conform to geographic regions (based on cardinal direction) or urban areas related to different time periods of development (such as inner, middle, outer, growth).[572]

ABS internal migration data from 2006 to 2011 illustrates Melbourne's spatially 'self-contained housing markets'.[573] As Figure 37 shows, Melbourne has 8 sub-markets: inner south-east, west-south, west, north-west, north-east, east, outer south-east and Mornington Peninsula. Melbourne's distinct housing sub-market boundaries are relatively stable over the time period, although parts of the eastern corridor did begin to share more similarities with the inner south-east market by 2011. Housing moves also tend to occur in geographic corridors. These corridors are reinforced by transport infrastructure that facilitates the movement of people from central Melbourne to the periphery using radial transport networks.

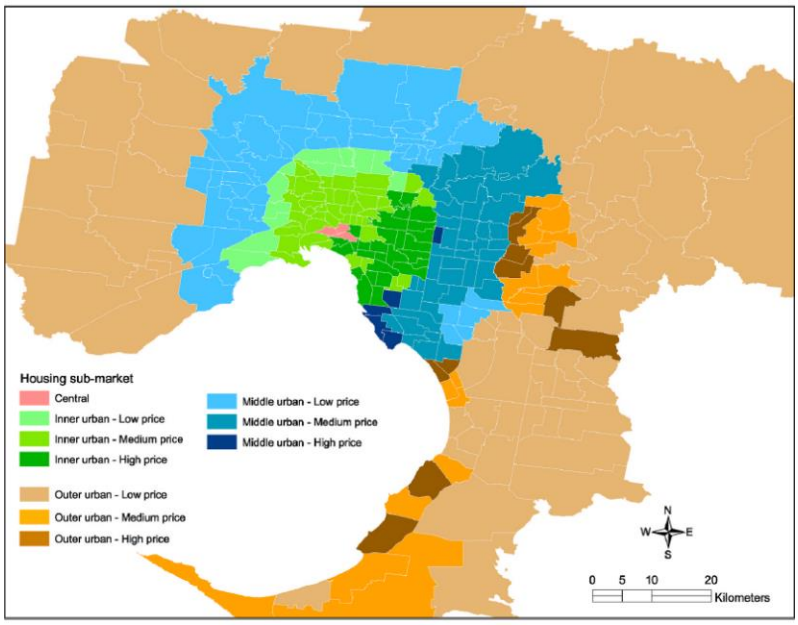
Figure 37 Melbourne's self-contained housing markets



Source: SGS Economics and Planning, 2016

Spatially defined differences in price can also define Melbourne's housing sub-markets. Spatial areas grouped by SA2s using house price ranges for 2011 and 2016 show that households who move into a new spatial sub-market typically relocate further from the central city to consume cheaper housing. This is consistent with earlier housing studies that find that movement to a different sub-market occurs when households trade-off accessibility for land or dwelling size.[574]

Figure 38 Spatial submarkets in Melbourne



Source: Li, Shiran and Dodson 2021

Regional Victoria's housing sub-markets can be influenced by other factors, such as:

- Patterns of international and domestic migration.
- Regional economic growth and change. For example, economic restructuring relating to agriculture, mining and manufacturing.
- Tourism, leisure, and demand for holiday homes.
- Other life stage factors like retiree mobility. [575]

Victoria's greenfield housing sub-market

Metropolitan planning strategies since Melbourne 2030 (2002) sought to encourage more compact and diverse urban form in greenfield suburbs. Residential densities in greenfield suburbs have increased since 2008, when average densities were 12.2 lots per hectare.[576] Previous PSP Guidelines (2009, revised 2013) seek to achieve densities of 15 lots per net developable hectare (NDHA) by providing a range of lot sizes, and focusing development around town centres and public transport.[577] This is consistent with Plan Melbourne which highlights the need to 'move away from uniform-sized housing lots towards providing both higher and lower densities within each precinct' by delivering of a 'variety of lot sizes and housing types' such as 'options for townhouses, low-rise apartments, and aged-care housing close to shopping centres and community facilities.'[578]

Lot sizes in metropolitan Melbourne currently average 383 square metres (m^2). As Table 22 shows, sizes differ between Melbourne's growth corridors, and regional greenfield markets. In Melbourne, the south-east growth corridor has the lowest median lot size, 375m^2, and highest median lot price, $363,000. On average, regional greenfield markets have larger lots than Melbourne, although sizes have become smaller in recent years. For example, Bendigo's lot sizes fell from 612m^2 to 446m^2 in the twelve months to September 2021.

Table 22 Median lot size Metropolitan Melbourne and regional markets

	West growth corridor	North growth corridor	South-east growth corridor	Geelong	Ballarat	Bendigo
Median Lot Size	376m^2	392m^2	375m^2	400m^2	448m^2	446m^2
Median Lot Price	$322,500	$309,000	$363,000	$314,000	$268,000	$164,200

Source: RPM Group, Greenfield Market Report, Q3 2021, Q3 2021: Market Continues to Defy Expectations - RPM Real Estate Group

More density occurs from smaller subdivisions and uniform housing forms rather than more diverse lot sizes and housing types:[579]

> In the 2006-07 period a third of new growth area lots released were below 500 m^2 but by 2018, the percentage below 500 m^2 had risen to 78 percent. This trend will continue in the near future with 83 percent of new lots expected to have an area of less than 500m^2. However 57 percent of these lots are between 300-500 m^2 in size and only about 20 percent of new lots are under 300m^2 suitable for townhouses or apartments, about the same number as lots between 500 m^2 and 650 m^2.[580]

At the same time as average lot size fell, site coverage increased. The most common greenfield housing typology is a large house covering up to 80% of a lot, with a very small backyard. Tarneit in Melbourne's west in Figure 39 shows houses that average 82% of site coverage, with private open space making up the remaining 18%.

Figure 39 Subdivision pattern in Tarneit

Plot Size – 416 sqm
Private Open Space – 78 sqm (18 percent)
Net Density – 17 Dwellings per Hectare

Source: Buxton et al., Growing Pains: The Crisis in Growth Area Planning, 2020

The recently updated Precinct Structure Planning Guidelines (2021) aim for higher residential densities in new PSPs.[581] In each new PSP area, the guidelines propose that average density densities should be 20 dwellings per NDHA. This increases to 30 dwellings per NDHA within 400 metres of an activity centre, and within 50 of open space, boulevards or public transport. More prescriptive guidelines address housing diversity, including a new requirement for 'at least 3 distinct housing typologies to be included in higher

density areas.' (see Figure 40) However, the new PSP guidelines will only apply to PSPs that are yet to start. The majority of PSPs for Melbourne's growth areas are already complete with plans prepared in accordance with the previous version of the guidelines.

Figure 40 Housing typologies, Updated Precinct Structure Planning Guidelines

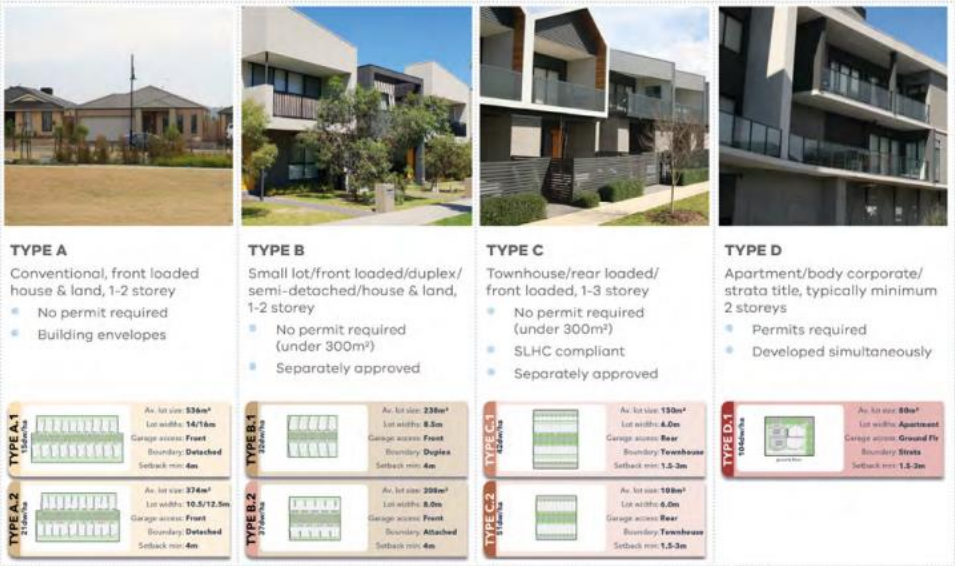


Figure 20. Housing typologies to support higher density development in high amenity areas (Source: images from L to R, Type A, C & D – MESH Planning, Type B – VPA)

Source: Victorian Planning Authority, (2021) Precinct Structure Planning Guidelines: New Communities in Victoria

Profiling greenfield suburbs

This section gives an overview of greenfield demographic characteristics. These findings are broadly consistent with the literature and help to build a more detailed picture of greenfield housing characteristics. Analysis by suburb of socio-economic characteristics illustrates that greenfield locations are distinct from established suburbs in outer Melbourne. It uses the Australian Bureau of Statistics' 2016 Census of Population and Housing and 2016-2021 metropolitan and regional greenfield estate buyer survey data bought from RPM.

RPM Real Estate surveys are conducted by real estate agents when customers buy either land, a house, or a house and land package in greenfield estates. We provide data for the period from August 2016 to August 2021, and includes a total of 12,216 survey responses in all regions.

Table 23 shows the common characteristics evident in the data. Other characteristics specific to regional growth corridor contexts are discussed below.

Table 23 Common characteristics from Census and buyer survey data

Characteristic	Metropolitan	Regional
Large homes	✓	✓
More households with children	✓	✓
Larger households	✓	✓
Majority first home buyers	✓	✓
Culturally diverse	✓	

Table 24 Common characteristics – More insights from 2016-2021 buyer survey data only

Characteristic	Metropolitan	Regional
Patterns of internal migration follow a geographic corridor	✓	
Movement is most likely to originate from outer Melbourne or a growth area	✓	
Movement is more likely to originate in a regional city, town, or peri-urban location		✓
More people born overseas than in Australia	✓	
Primary income earner works full-time	✓	✓
Majority commute long distances to work (> 15 kilometres)	✓	
More purchasers have 0 children at the time of relocation	✓	✓
Land value increased between 2016-2021	✓	✓
Lot sizes declined between 2016-2021	✓	✓

ABS Census insights about greenfield homes and households

Melbourne's greenfield suburbs have young, culturally diverse and large households buying relatively affordable houses

Metropolitan greenfield area have a high supply of 4-bedroom homes, and, in some cases, very little supply of 2-bedroom and 3-bedroom homes. Almost all greenfield suburbs reviewed are in the 90th or 95th percentile for the percentage of total dwelling stock with 4-bedrooms. Conversely, all greenfield suburbs reviewed have a much lower supply of 2-bedroom homes, with almost all in the lowest quintile for Melbourne. This is consistent in all corridors.

Very little supply of semi-detached and apartment type housing exists. Tarneit and Truganina in Wyndham's Western Growth Corridor are the only exceptions and have some semi-detached dwelling supply, but are few flats or apartments.

Almost all greenfield suburbs have a much younger population profile than Greater Melbourne or Victorian averages. Average in metropolitan Melbourne greenfield suburbs considered is 33 compared to an average of 36 in Greater Melbourne.

Consistent with the literature, greenfield suburbs have a larger percentage of households with children than the Greater Melbourne or Victorian average. Couple families with children are more than 40% of households in greenfield suburbs, compared to a metropolitan average of 33.9% in 2016.

Average household size tends to be larger than the metropolitan average. Craigieburn, Tarneit and Truganina have an average household size that is substantially greater than the metropolitan average (3.3-3.4 compared to 2.7). Although this is less than one person, this places these suburbs in the 95th percentile of Melbourne suburbs for household size.

Most metropolitan greenfield suburbs are very culturally diverse. Less than 50% of the population of Clyde North, Point Cook, Truganina, Tarneit and Wollert were born in Australia according to the 2016 Census.

No clear pattern exists between the greenfield suburbs reviewed regarding socio-economic status. Some greenfield suburbs, such as Clyde North, Doreen, Point Cook and Officer, are characterised by low levels of disadvantage and above average household incomes. Most other suburbs have incomes and SEIFA status closer to the Melbourne median. The exceptions are Craigieburn and Wyndham Vale which have a SEIFA IRSD classification (decile 4) which is more disadvantaged than the average (decile 6).

Metropolitan greenfield suburbs are much more affordable than the median. However, greenfield markets have also experienced price growth over the past decade.

Most greenfield suburbs have a smaller number of rented properties than the metropolitan average. However, Table 26 and Table 27 show more investor activity in the west and south-east corridor might cause more rental supply occurring after 2016.

Peri-urban and regional greenfield households are higher income and less culturally diverse

While peri-urban and regional greenfield suburbs share some common characteristics with metropolitan greenfield suburbs, such as large houses and a high number of households with children, there are also some differences:

All had higher household incomes when compared to the Victorian median. Armstrong Creek in Geelong, and Strathfieldsaye in Bendigo were both categorised as least disadvantaged according to SEIFA's index of relative socio-economic disadvantage (decile 10).

All are less culturally diverse than the metropolitan Melbourne greenfield locations with higher shares of the population born in Australia than the state average.

Households that moved to Melbourne's greenfield suburbs

The 7,823 buyer surveys collected between 2016-2021 shows that many people choosing to buy a greenfield house are doing so in the early stages of family formation with either none, 1 or 2 young children. A large number of lone person households (15%) also moved in. The majority of buyers in metropolitan growth corridors were born overseas.

For a more detailed overview of this dataset refer to the greenfield housing dashboard.

First home buyers buy large houses on small lots

Owner occupiers make up a larger share of buyers in the north (80%) than in the west (70%) or south-east (71%) where there is more investor activity. The share of new properties bought by investors in the west (30%) and south-east (29%) suggests there will be a higher share of properties in these 2 corridors that will be rented, compared to the 2016 Census. Table 25 aggregates Census tenure data for the selected greenfield suburbs included in the data review by corridor. Table 26 includes an expanded number of suburbs where buyer survey data has been collected. Although similar results are observed for the North growth corridor, the number of owner-occupier households according to 2016-2021 survey data fell in both the south-east and west.

Table 25 2016 select greenfield suburbs – tenure type

	North	South-east	West
Owned	80%	76%	74%
Rented	20%	23%	25%

Source: Census of population and housing 2016

Table 26 2016–2021 owner occupier versus investor

	North	South-east	West
Owner occupier	80%	71%	70%
Investor	20%	29%	30%

Source: RPM Group buyer survey data 2016-2021

Consistent with the literature, first home buyers are the largest owner occupier buyer group in metropolitan greenfield locations. However, a significant share of people are buying their second home in the north (27.12%) south-east (29.2%) and west (28.1%).

Table 27 2016–2021 first home buyers

	North	South-east	West
First home buyer	61.7%	61.6%	65.4%
Other (previous home owner or other)	38.3%	38.4%	34.6%

Source: RPM Group buyer survey data 2016-2021

The data supports the hypothesis that home buyers are likely to make residential relocation decisions in their existing geographical corridor and in close proximity to the location where they currently live. This means the majority of relocation decisions contained in growth corridors and fewer movements of people to growth areas from inner and middle suburbs.

Buyers in the south-east are more likely to consider constructing a double storey house (28%) than buyers in the west (20%) or north (20%).

More than 75% of buyers report they intend to build new homes larger than 195 m^2, and around 40% intend to build homes larger than 241 m^2. Over the previous 5 years average lot sizes have fallen in the 4 corridors to a metropolitan average of around 377.7 m^2. This is consistent with national trends showing Australians building bigger houses on smaller blocks over the past few decades. [582]

Table 28 2016-2021 proposed house size (floor area)

	North	South-east	West
Less than 15 sqs (139.4 m2)	2.5%	3.2%	3.6%
16 - 20 sqs (148.7-185.8 m2)	17.1%	20.1%	20.0%
21 - 25 sqs (195.1- 232.3 m2)	38.1%	28.8%	36.2%
26 - 30 sqs (241.5-278.7 m2)	27.7%	23.2%	25.3%
Greater than 30 sqs (>278.7 m2)	14.5%	24.7%	14.8%

Source: RPM Group buyer survey data 2016-2021

Table 29 2016–2021 median lot size, square metres

Median lot size	South-east	West	North
2016	431	427	414
2021	378	408	366

Source: RPM Group buyer survey data 2016-2021

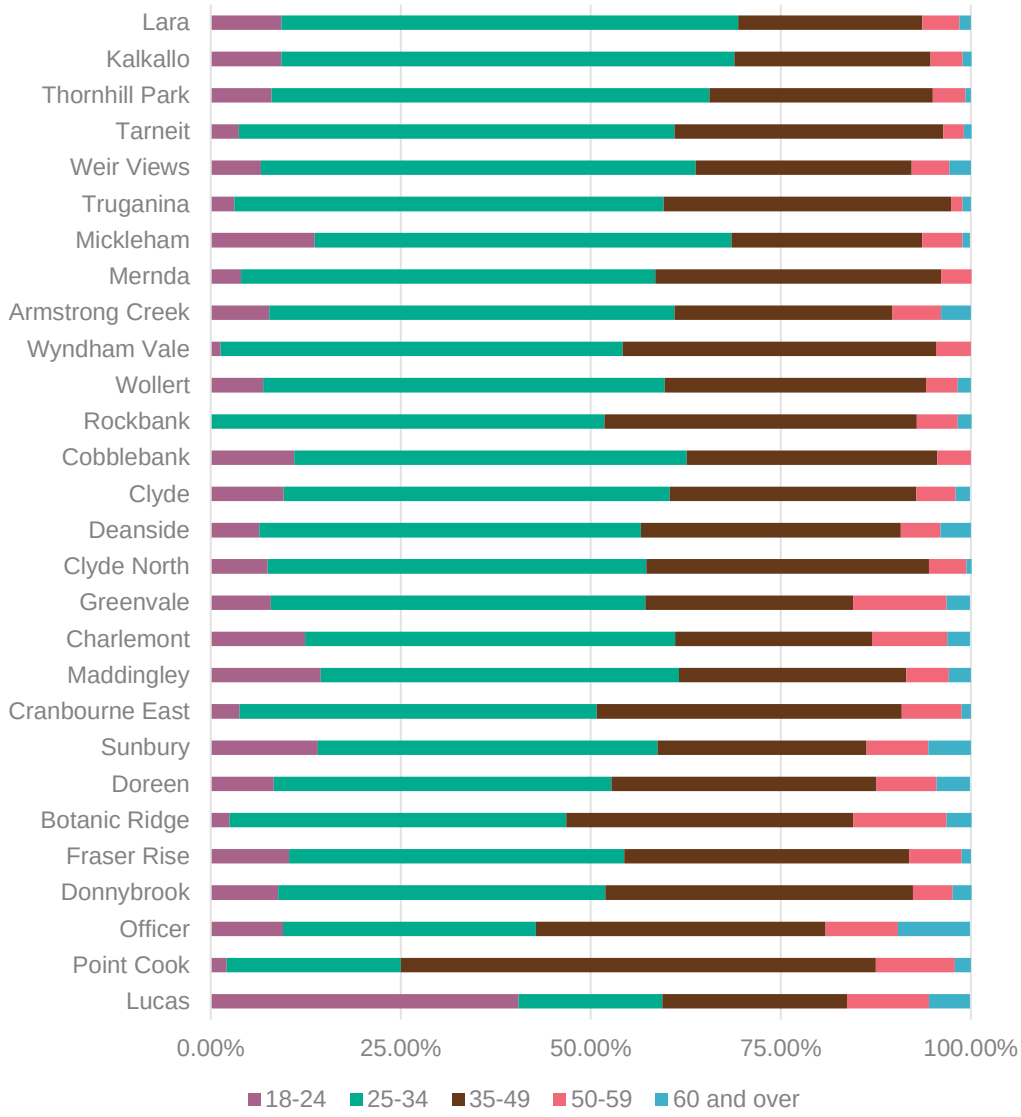
Figure 41 Budget on house and land

Source: RPM Group buyer survey data 2016-2021

Home buyers are young and are likely to have children now or in the future

People between 25-34 are the largest age group of buyers in all greenfield suburbs. More than 75% of buyers are under 50 years. Very few buyers are over 60 years (less than 4% of buyers in all suburbs) except in Sunbury and Officer.

Figure 42 2016–2021 age of buyers



Source: RPM Group buyer survey data 2016-2021

Just over half of metropolitan growth corridors buyers are buying property with no children and almost one third of couple households do not have children. However, the number of households with children in each corridor (between 42-50%) is high compared to the 2016 metropolitan average (33.9%). Of the households that do have children at the time they bought, they are most likely to have 1 or 2 children (35%) with much smaller numbers having 3 or more (see Table 30).

Table 30 2016–2021 number of children at time of buying

	North	South-east	West
0	57.6%	53.5%	57.3%
1	17.8%	18.8%	18.8%
2	18.7%	17.9%	17.7%
3	3.6%	7.2%	4.9%
4	1.7%	1.5%	0.8%

	North	South-east	West
5 or more	0.5%	1.0%	0.6%

Source: RPM Group buyer survey data 2016-2021

The proposed household make up responses (Table 31) give information about household types, including households without children. One in 5 owner-occupier buyers are single with no children. Almost one-third are couple households with no children. This suggests that some of these households are likely to have empty bedrooms, given that most new homes have 4-bedrooms. However, as Census data demonstrates, households living in greenfield locations are likely to grow overtime. This suggests that many couples are making the decision to move as they are either planning on having children, or already have one or 2 young children.

Table 31 2016–2021 proposed household make up

Household type	North	South-east	West
Single with no children	19.5%	15.1%	20.4%
Single with children	4.3%	3.8%	3.9%
Couple with no children	30.6%	29.0%	29.2%
Couple with children	42.4%	50.4%	45.2%
Couple/single that is empty nester	3.2%	1.6%	1.3%

Source: RPM Group buyer survey data 2016-2021

Greenfield buyers are often born overseas

People born in India are the largest cultural group buying in metropolitan Melbourne greenfield estates (more than 30% of buyers in north, south-east and west corridors surveyed). Table 32 and Table 33 compare the number of Australian and overseas born residents in 2016 and buyer survey data between 2016-2021. It is important to note the buyer survey data only reflects country of birth of persons 1 and 2 (the buyers). Other household members, like children, are not addressed in this survey question. Nevertheless, the data shows that a large share of households moving into growth areas between 2016-2021 are culturally diverse.

As Figure 43 shows, the top 5 countries of birth (other than Australia) are India (36%), Philippines (6%), Sri Lanka (4%), Iraq (2%) and Pakistan (2%). Some communities are attracted to specific corridors, and suburbs in those corridors. For example, most Iraqi born buyers choose to live in the north growth corridor, and specifically in Hume local government area suburbs such as Craigieburn, Greenvale and Mickleham. Similar patterns are evident with Afghan community in the south-east corridor.

Table 32 2016 select greenfield suburbs – born in Australia

	North	South-east	West
Born in Australia	72%	62%	53%
Not born in Australia	28%	38%	47%

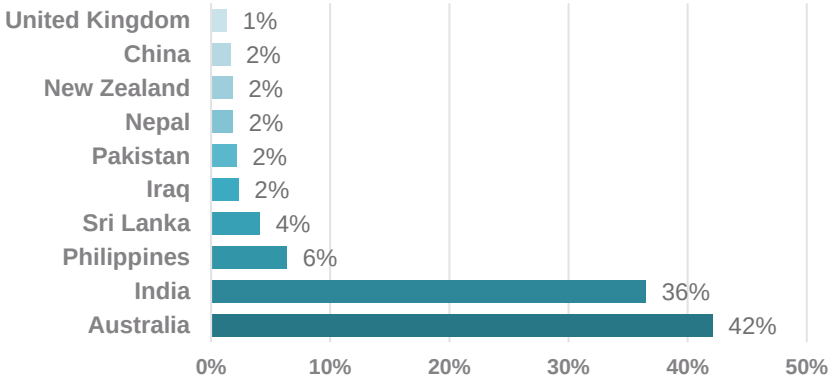
Source: Census of population and housing 2016

Table 33 2016–2021 born in Australia – person 1 and 2

	North	South-east	West
Born in Australia	50%	36%	33%
Not born in Australia	50%	64%	67%

Source: RPM Group buyer survey data 2016-2021

Figure 43 2016–2021 country of birth – person 1 and 2 – Melbourne greenfield suburbs



Source: RPM Group buyer survey data 2016-2021

Recent movers have similar incomes and usually drive to non-central city jobs

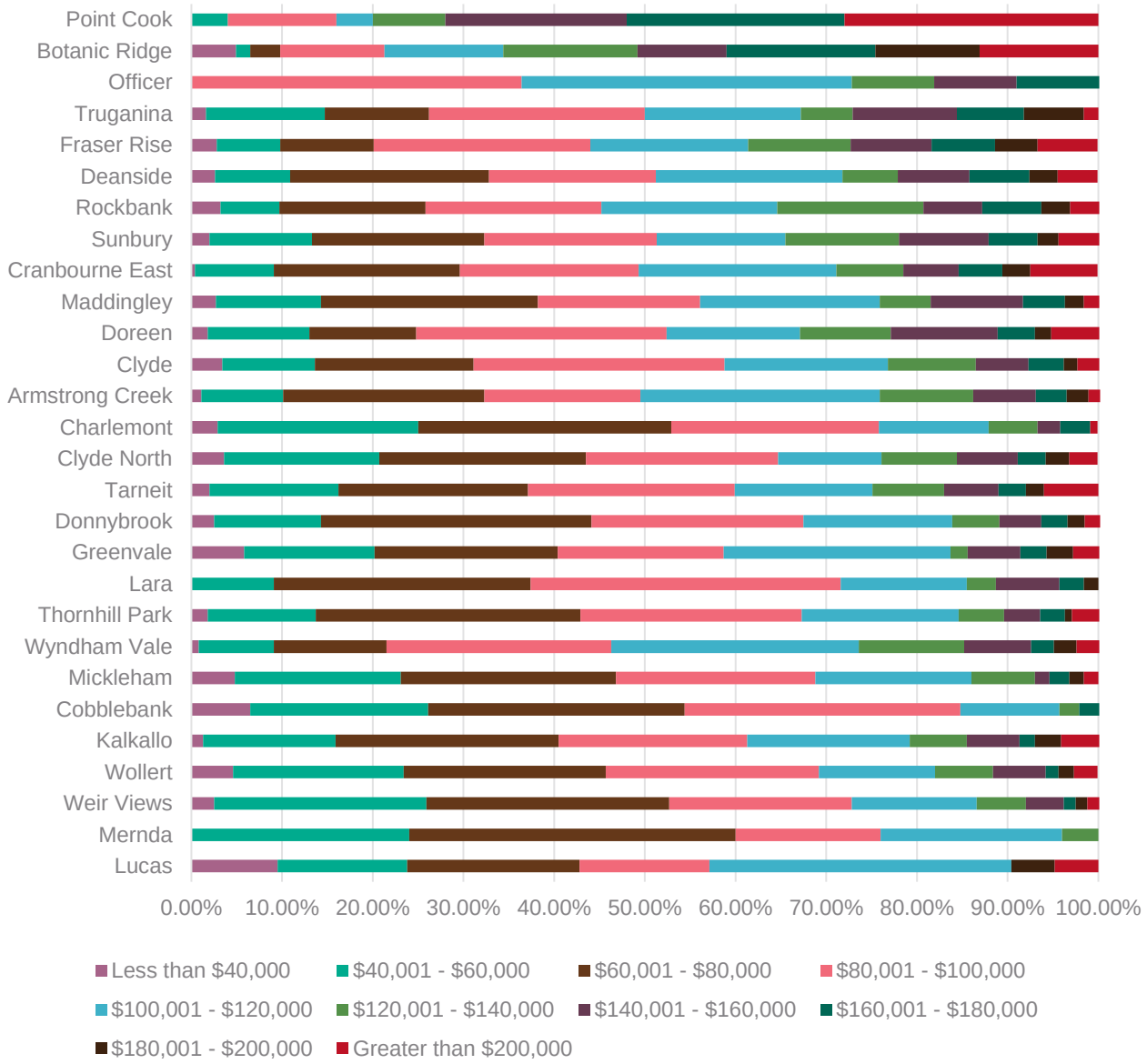
The buyer survey dataset includes survey results about household income for new buyers over the period 2016-2021. Table 34 shows some variation in income between the metropolitan growth corridors. Buyers in the south-east have the highest incomes, followed by the west growth corridor, while buyers in the north corridor have the lowest household incomes. The data also shows variation in household income between suburbs. The highest median income was in Point Cook ($3,109 a week) and the lowest was in Mernda ($1,431). However, it is important to note that these suburbs had a low number of survey results, meaning that it might not be an accurate sample of the broader population of these places.

Table 34 Median household income

Household income	North growth corridor	South-east growth corridor	West growth corridor	Melbourne (greenfield)	Victoria (greenfield)
Yearly	$88,768	$96,624	$91,445	$91,127	$90,977
Weekly	$1,707.07	$1,858.16	$1,758.56	$1,752.44	$1,749.56

Source: RPM Group buyer survey data 2016-2021

Figure 44 Household income



Source: RPM Group buyer survey data 2016-2021

Buyers in the south-east are the least likely to work in the Melbourne CBD (4%) compared to the west (12%) and north (10%).

People buying into the west growth corridor are more likely to travel to work by public transport (16%) and less likely to drive to work (81%) than workers in the south-east (6% travel to work by train) and north (9%).

Sunbury is more like regional Victoria than metropolitan Melbourne

Sunbury has geographic features that distinguish it from other suburbs in the north growth corridor. It is located between the north and west growth corridors and separated by green wedge land. Buyer survey data for Sunbury's growth areas shows that the characteristics of buyers are different to the other 3 growth corridors:

- The largest buyer group already lives in Sunbury (36.3%), followed by several suburbs in Melbourne's west, north and peri-urban towns. This geographical catchment pulls from both the northern and western suburbs and sets Sunbury apart from other suburbs in the north.

- Sunbury is much less culturally diverse than other suburbs in the north or west corridor, with 76.1% of buyers born in Australia, which is the highest percentage of any metropolitan greenfield location.

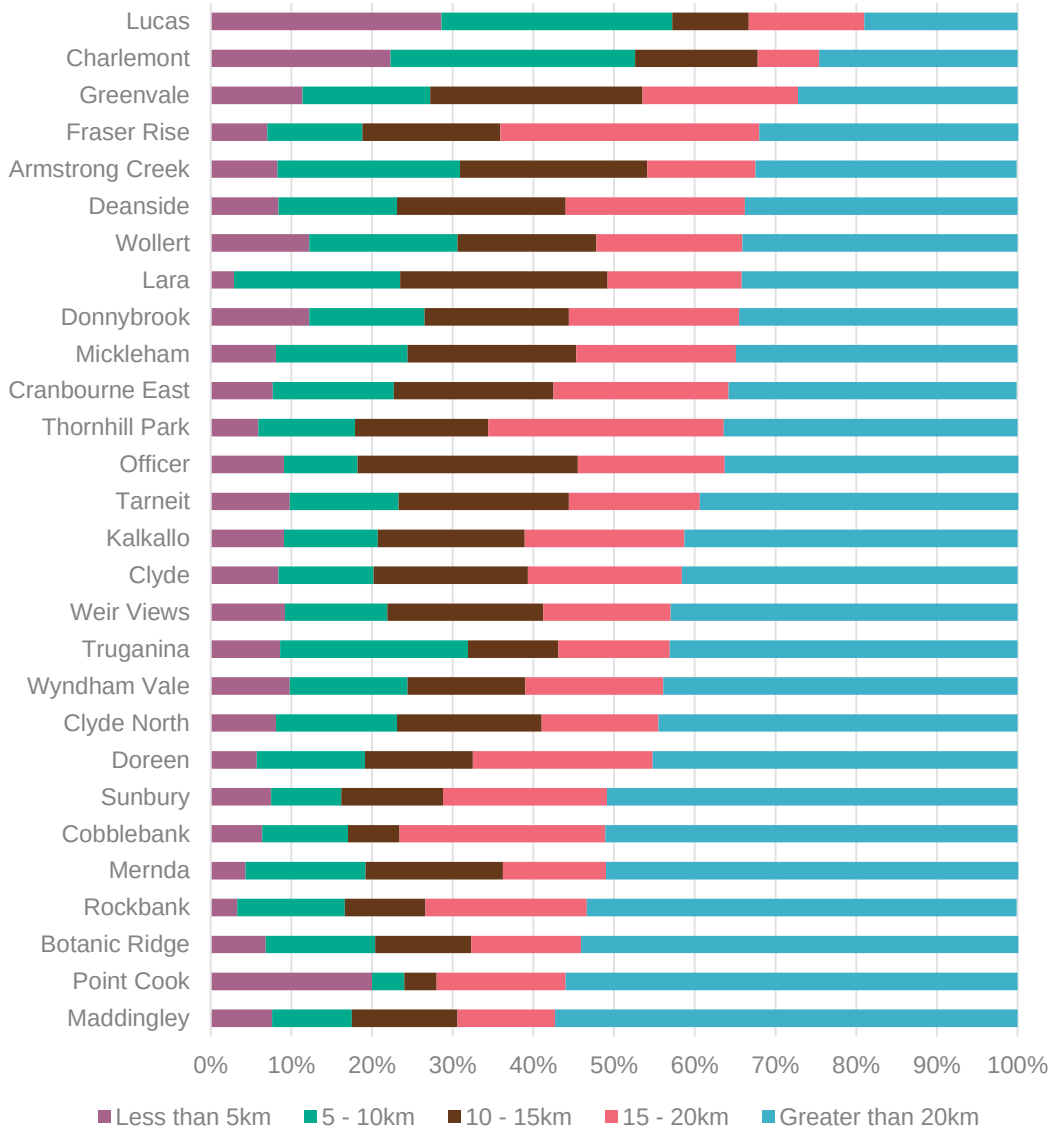
Households that moved to regional greenfield suburbs between 2016-2021

Buyer survey data for regional greenfield suburbs is generally consistent with the findings from the 2016 Census. However the buyer survey data gives some more insights.

Regional greenfield buyers have shorter commutes than in Melbourne

Distances to jobs in Geelong and Ballarat West are much shorter compared to metropolitan greenfield suburbs (see Figure 45). Bacchus Marsh is an exception with 57.3% of workers in Maddingley likely to travel more than 20 kilometres to work, including commuting to central Melbourne.

Figure 45 Travel to work



Source: RPM 2021

Homebuyers' incomes are similar to existing residents'

Household incomes in Ballarat West and Geelong were similar in the 2016 Census and buyer surveys (Table 35 and Table 36). Median income in Maddingley was higher in the new buyer survey results between 2016-

2021, compared to the average for the whole suburb in 2016. The median income in the Census captures all households for an area, including retired person households that sometimes have very small incomes. According to the buyer survey data for all Victorian greenfield suburbs, 85% of respondents work full time at the time they bought, 5% work part time and only 1% are retired.

Table 35 2016 – median household income (Census)

Household income	Bacchus Marsh (Maddingley)	Ballarat West	Geelong (Armstrong Creek)
Weekly	$1,407	$1,730	$1,898

Source: Census of population and housing 2016

Table 36 2016–2021 – median household income

Household income	Bacchus Marsh (Maddingley)	Ballarat West	Geelong (Armstrong Creek)
Yearly	$93,139	$90,000	$100,500
Weekly	$1,791	$1,731	$1,933

Source: RPM Group buyer survey data 2016-2021

Most buyers drive to work but more than average take the train to Melbourne from Bacchus Marsh

Nearly the same percentage of Bacchus Marsh residents who work in the Melbourne CBD also catch the train to work (16%). This results in higher than average public transport use in Bacchus Marsh than the average for both the north and south-east metropolitan growth corridors, and much higher than the other regional suburbs.

Most homebuyers in Geelong drive to work (more than 90% in Armstrong Creek, Charlemont and Lara). The train is the next common mode of travel, 4.3% in Armstrong Creek and Charlemont and 5% in Lara. In Armstrong Creek and Charlemont, 2% of people walk to work.

Regional homebuyers often move from adjacent growth corridors in Melbourne

Proximity to Melbourne's growth corridors influences the internal migration patterns of new buyers. Maddingley and Lara (Geelong) are both located in close proximity to Melbourne's urban growth boundary and growth area suburbs of Melton and Werribee. Both places have significant percentages of new residents who moved from west growth corridor suburbs.

Maddingley (Bacchus Marsh) and Lara (Geelong) are both close to the west growth corridor, sharing some similar population characteristics related to internal migration patterns. Both Maddingley and Lara are attracting people from other suburbs in the west corridor (Werribee, Point Cook, Hoppers Crossing, Tarneit). Consistent with the population profiles of these origin suburbs, new buyers are more culturally diverse than other regional greenfield suburbs, including Armstrong Creek and Charlemont in Geelong.

Moderate income households

The previous sections demonstrate that households with 2 or more related individuals living in the same dwelling are the most common household type in greenfield locations. These households include couples with children, couples without children and single parents which the ABS defines as family households.[583] This section looks in more detail at these family households using ABS Census data because:

- They are making housing decisions based on preferences linked to their life stage which are more likely to result in a move than for other household types.[584]

- Even though they are declining as a proportion of all household types, the projected number of these extra households is large.
- These households are unlikely to choose to live in 1-bedroom and 2-bedroom apartments, the most common type of dwellings added to established suburbs' housing stock in recent years.

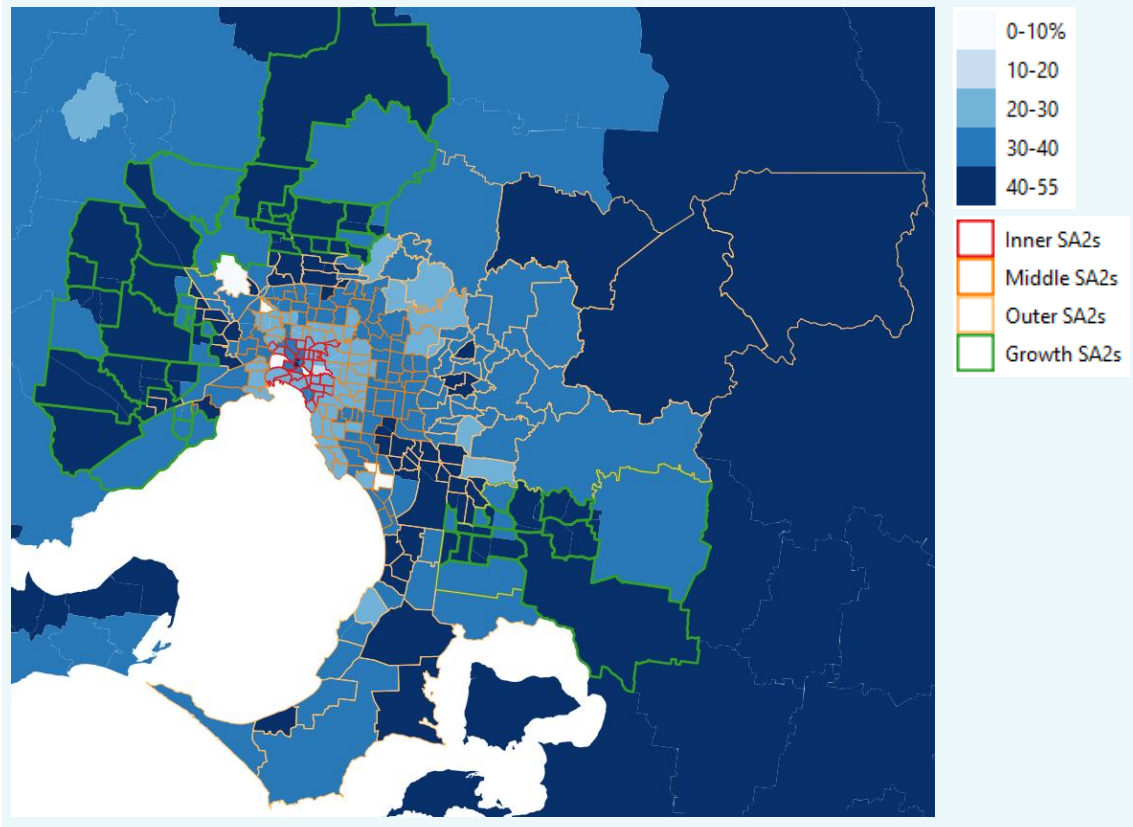
The term, family households, does not account for the diversity of relationships, living arrangements and intimacies that exist in Australian society.[585]

On average, greenfield households have moderate median incomes and:

- They are finding home ownership more difficult to access and if they cannot buy a home, they will not benefit from the favourable financial treatment of ownership.
- They live in Victoria's newest suburbs where large land supplies are relatively readily available, but where the costs of new infrastructure can be 2 to 4 times as expensive as residential development in existing suburbs.[586]

In Melbourne, moderate income family households are more likely to live in the city's newest suburbs where 3-bedroom and 4-bedroom homes are more common.[12] Figure 46 shows the spatial distribution of family households (defined by income as close to the Victorian Government's definitions as possible,[13] converting yearly to weekly income) as a proportion of all households in metropolitan Melbourne and surrounding SA2s. They are more concentrated in Melbourne's growth areas (indicated with green boundaries), and to the metropolitan area's east and north.

Figure 46 ABS Census 2021 Proportion of moderate-income family households by SA2



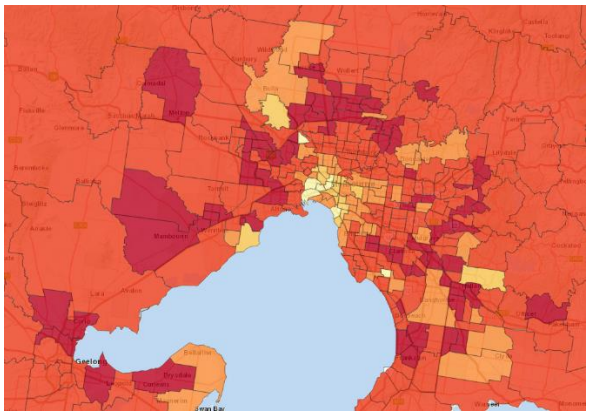
Source: Australian Bureau of Statistics (2021), 'Total personal income,' *2021 census places of enumeration* [URL], accessed December, 2022.

[12] Defined as single or couple family with dependent children with an annual income range as $88,021 to $132, 030. Clerk of the Executive Council, *Planning and Environment Act 1987 – Section 3AB – Specification of income ranges*. Order in Council. Victorian Government Gazette G25, 2877, June 2022.

[13] Clerk of the Executive Council, *Planning and Environment Act 1987 – Section 3AB – Specification of income ranges*. Order in Council. Victorian Government Gazette G25, 2877, June 2022.

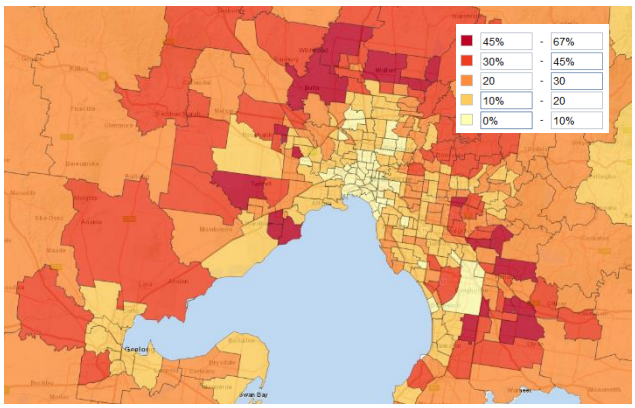
In 2016, Figure 47 and Figure 48 show that these parts of Melbourne had higher proportions of dwellings with 3 and 4-bedrooms which previous research shows households with children strongly prefer.[587] At least 75% of moderate income households in these areas lived in separate houses, of which at least 85% have 3 or more bedrooms.[588] At the end of 2020, Melbourne had over 350,000 lots available for new homes to be built in its greenfield growth areas, and another 40,000 proposed.[589]

Figure 47 Proportion of 3-bedroom dwellings



ABS 2016 Census

Figure 48 Proportion of 4-bedroom dwellings



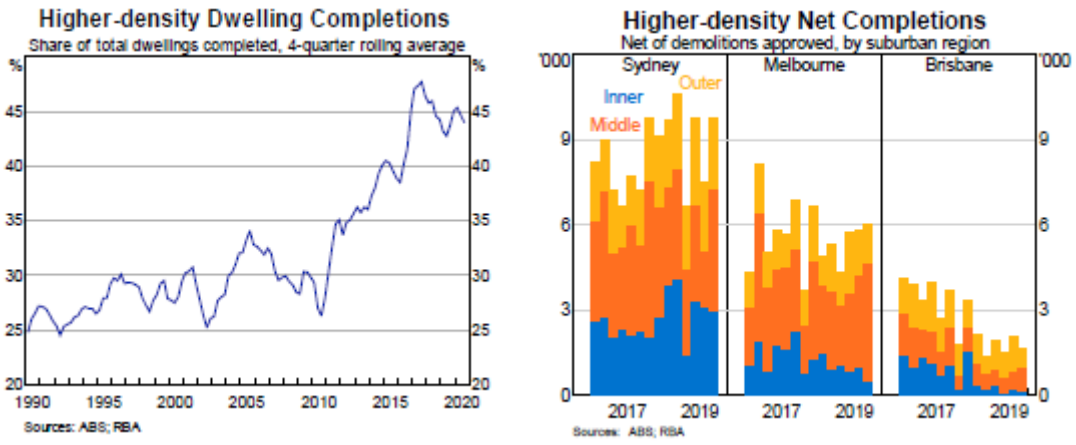
ABS 2016 Census

Over the next 25 years, households with children will create a large amount of demand for dwellings. Victoria in Future 2019 projects that Melbourne will have over 600,000 more households with children by 2036, over 70% of the increase in all household types.[590] They are likely to 'want family-friendly housing. Apartment living is unlikely to meet this need, especially if all that is available is small apartments.'[591]

New units/apartments made an unprecedented contribution to additional dwellings over the last 20 years in Australia, and in Melbourne (see Figure 49). Households with children are unlikely to live in the recently built apartments in Melbourne; analysis from 2015 of 110 new apartment projects with over 10,000 total dwelling units found that only 5% had 3 or more bedrooms. These apartments also sold at higher relative prices than 1-bedroom or 2-bedroom dwellings, and 'very few new apartments would appeal to households with children.'[592]

Over the next 25 years, households with children will also create a large amount of demand for dwellings. Victoria in Future 2019 projects that Melbourne will have over 600,000 more family households by 2036, which represents over 70% of the increase in all household types.[593] They are likely to 'want family-friendly housing. Apartment living is unlikely to meet this need, especially if all that is available is small apartments.'[594]

Figure 49 Higher density dwelling completions



Source: Reserve Bank of Australia (2021) Submission to the Inquiry into Housing Affordability and Supply in Australia. House of Representatives Standing Committee on Tax and Revenue. September. Submission 52, p.18

Analysis of data from the 1980s to 2000s shows that moderate income households are finding home ownership harder to achieve. Households with children are particularly affected compared to the 1980s when they represented the majority of low to moderate income home buyers.[595] Figure 38 shows the fall in the percentage and absolute numbers of first time low-moderate income buyers over a period in which the number of households rose overall by 60%. This is also in the context of an overall decline in home ownership (see Figure 50,Table 37).

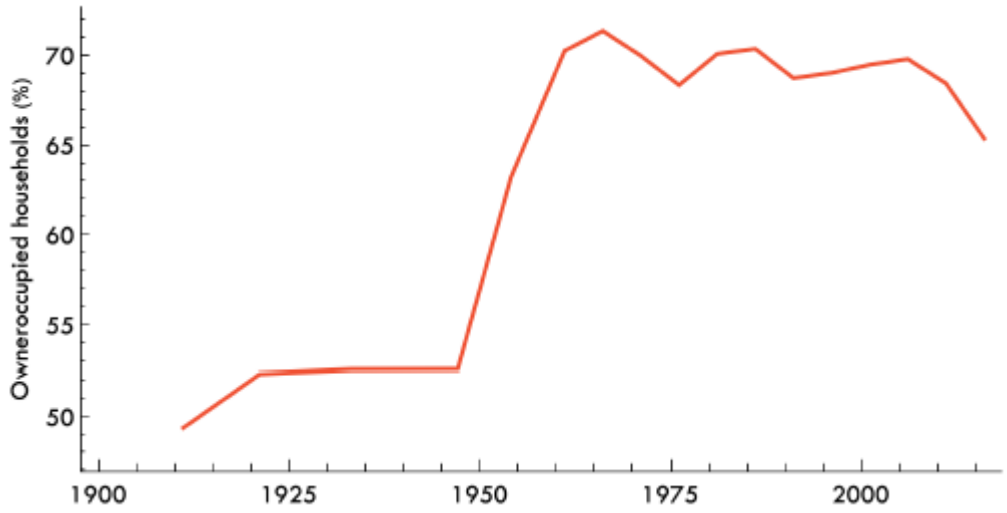
Table 37: Change in home ownership, Australia

Households	*1981–82*	*2007–08*
All households	(4 978 343)	(7 946 142)
Low-moderate income outright owners	20.0%	18.8%
	(997 837)	(1 493 096)
Low-moderate income purchasers	5.9%	6.0%
	(295 205)	(474 794)
Low-moderate income recent purchasers (last three years)	2.0%	1.5%
	(97 084)	(119 724)
Low-moderate income first-time recent purchasers (last three years)	1.0%	0.2%
	(48 990)	(16 185)

Source: CURF data, ABS SIH, 1881–82 and 2007–08.
Notes:
1. Low-moderate income refers to household income at and below the 40th percentile for all Australian households in 1981–82 and 2007–08 ($12,792 and $45,000 nominal respectively).
2. Household income is computed only from the household reference person and a spouse or partner if present.

Source: K Hulse, T Burke, L Ralston, W Stone, *The benefits and risks of home ownership for low-moderate income households*, Australian Housing and Urban Research Institute, 2010, p. 40

Figure 50 Long-term home ownership rate, Australia



Source: C Murray, Submission to the House of Representatives Standing Committee on Tax and Revenue's inquiry into Housing Affordability and Supply, The University of Sydney, The Henry Halloran Trust, 2021, p.6.

Key workers – one type of moderate-income household

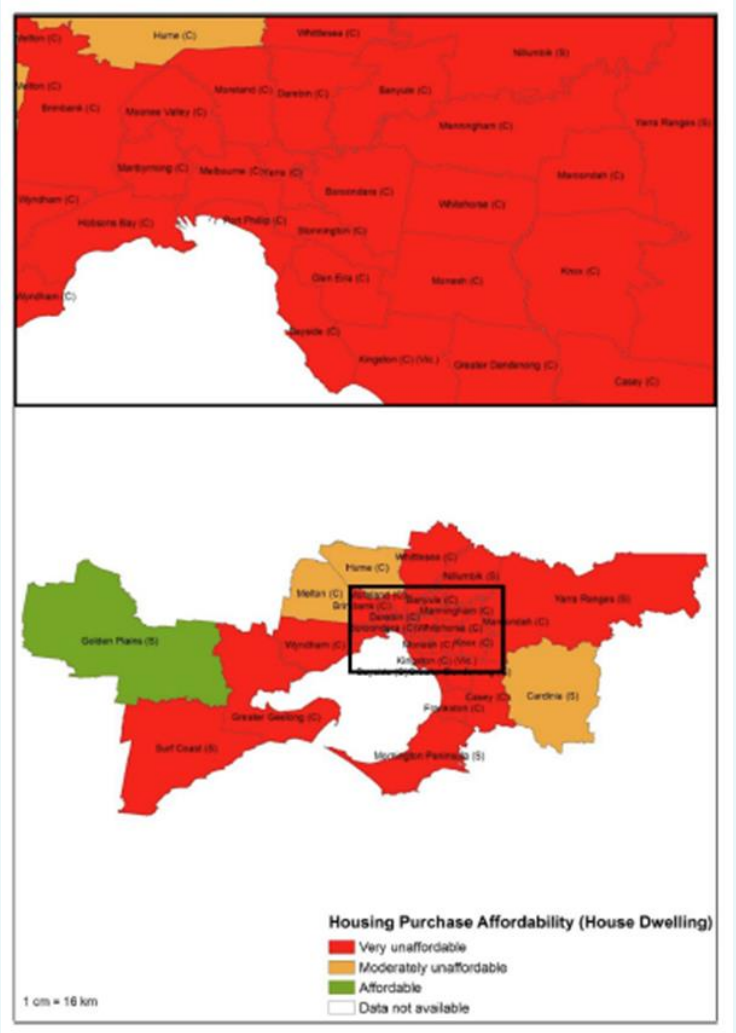
The term, key workers, is only loosely defined but is a type of household for which existing research demonstrates affordability constraints for a particular type of moderate income households in established suburbs. [596] This means they are more likely to live in new suburbs where dwellings are more affordable. Homes in those locations can also meet their dwelling-specific preferences.

However, these workers can particularly benefit from living closer to their job location: long commutes can add further stress to work that can require long shifts, be physically demanding, is on demand, and deals with emergency situations.[597]

People who work in service industries such as teaching, health care, emergency and community services with low to moderate incomes can be considered key workers. They need to be physically present for their work and in Melbourne and Sydney, are more likely to live over 30 kilometres from their workplace than the rest of the labour force. A larger proportion drive to work than the general labour force and most often live in couple household with children. In 2016, 4 of Melbourne's 7 growth area local governments (Whittlesea, Cardinia, Casey and Hume) were in the top 12 municipalities for the highest concentrations of residents working in 21 occupation groups identified as key worker industries in research published by the Australian Housing and Urban Research Institute.[598]

Key worker, moderate income households with children are unlikely to be able to afford to live in Melbourne's established suburbs. CoreLogic data shows that a median priced house for an individual full time key worker earning $1,450 a week in Melbourne is largely unaffordable in any local government aside from the 7 growth areas (see Figure 51). While the yearly income equivalent of $75,000 is below Victoria's $88,021 threshold for a moderate income household, this is only a single wage whereas most households with children in Melbourne's newest suburbs had 2 incomes in 2016.[599]

Figure 51 Affordability of median priced house to buy on income of $1,450 per week



Source: C Gilbert, Z Nasreen, and N Gurran, *Housing key workers: scoping challenges, aspirations, and policy responses for Australian cities*, Australian Housing and Urban Research Institute Limited, Melbourne, 2021, p.43

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