SUBURBAN RAIL LOOP EAST

SRL East Draft Structure Plan | Glen Waverley

Housing Needs Assessment

More Homes For Victorians

VICTORIA State Government

Suburban Rail Loop

PREPARED FOR SUBURBAN RAIL LOOP AUTHORITY

SRL EAST DRAFT STRUCTURE PLAN - HOUSING NEEDS ASSESSMENT - GLEN WAVERLEY

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Appendices

Executive summary

As part of the Suburban Rail Loop (SRL) East project, Draft Structure Plans (Structure Plans) are being prepared for the neighbourhoods surrounding the new underground stations at Cheltenham, Clayton, Monash, Glen Waverley, Burwood, and Box Hill

The Structure Plans will provide a framework to guide growth and change in each neighbourhood, while protecting and preserving the features that people love about them now.

This report will inform the development of the Structure Plan for Glen Waverley

HOUSING NEEDS

Understanding future demand for housing in Glen Waverley due to population growth generated by SRL East is crucial for structure planning.

The report describes the existing demographics of residents and the state of the housing market in each Structure Plan Area and the surrounding area. It also identifies the future housing and dwelling needs of the projected population, including number of dwellings, type (e.g. apartment, separate houses) and size, considering case study analysis and development trends. Recommendations to consider when developing the Structure Plan are made to ensure the right amount and type of housing is delivered in Glen Waverley in the right locations.

FINDINGS

Current Population and Demographics

The Glen Waverley Structure Plan Area is already supporting strong population and dwelling growth, with an estimated resident population of 7100 in the Structure Plan Area as of 2021.

One-third of new dwellings constructed in the Structure Plan Area over the last decade have been in high-density developments. Most dwellings were one to two-bedrooms, with developers targeting international buyers and the investor market.

Features of the Glen Waverley Structure Plan Area resident population include:

- Higher per capita incomes, but incomes on a household basis are lower on average, partly due to smaller household sizes.
- A large overseas-born population, particularly from China.
- Dwellings densities are predominantly low-density in-nature. However, the Structure Plan Area has a higher share of high-density dwellings, compared to South East Region and Greater Melbourne.
- Less home ownership with most households renting.
- A slightly higher share of white-collar workers live in the Structure Plan Area compared to Greater Melbourne.

Future Population

The population in the Glen Waverley Structure Plan Area is expected to increase to an estimated **11,700 people in 2041**. This growth translates to 2.5% growth per annum. An estimated 4,600 additional people in the Structure Plan Area from 2021 levels will create a strong demand for new housing.

Dwelling Growth

An estimated **1500 net additional dwellings** are required by 2041 to house the projected population in the Structure Plan Area, which would increase total dwellings to 4710. This translates to an annual growth rate of around 75 dwellings. Accounting for projected demolitions of around 420 existing stock, a total of 1920 new dwellings are required to be built to meet projected population growth.

High-density dwellings are likely required to accommodate a large amount of projected growth. Within the Structure Plan Area, high-density dwellings are projected to make up 1680 of the new dwellings projected. The most common product is projected to be two-bedroom high-density with substantial amount of new high-density three or more-bedroom dwellings to accommodate families.

Low-density dwellings are projected to decline due to some demolitions of older stock and the need to build medium-density and high-density dwellings to accommodate population growth efficiently.

Analysis of dwelling growth in comparable areas suggests the projected growth is well within what has been seen in comparable locations such as Epping, Burwood

and Auburn[1]. This analysis suggests the growth in high-density dwellings is slightly higher than the growth achieved between 2011-2021 in the Glen Waverley Structure Plan Area.

Diverse Housing

There is projected to be 600 households eligible for social and affordable housing by 2041. Considering the current supply (20 dwellings), the gap of 580 (eligible households minus current supply) amounts to 38.7% of the total net additional dwellings required by 2041 (1500). The large gap between eligibility and supply indicates a need for greater supply of social and affordable housing in the Structure Plan Area.

The projected need for new retirement dwellings and aged care beds are projected to be relatively minimal with a total of 50 Independent Living Units (ILUs) and 90 Residential Aged Care (RAC) beds projected by 2041.

It is estimated that 1970 key workers earning very low to moderate incomes will work in the Glen Waverley Structure Plan Area in 2041.

There is not projected to be significant demand for student accommodation within the Structure Plan as there is no nearby university campuses, with only the Glen Waverley campus of the Holmesglen Institute within the Structure Plan. However, the new SRLA east station will increase connectivity, creating some opportunity for student housing serving other locations. Glen Waverley's high retail and entertainment amenity is attractive to students. Consequently, the Glen Waverley Structure Plan Area could support some purpose-built student facilities.

HOUSING DEMAND BY TYPE, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021		2041		2021-2041 CHANGE	
	NO.	%	NO.	%	NO.	ANNUAL GROWTH RATE (%)
Population (no.)						
Low-density	4700	66.2%	4700	40.2%	0	0.0%
Medium-density	500	7.0%	1100	9.4%	600	4.0%
High-density	1900	26.8%	5900	50.4%	4000	5.8%
Total population	**7100**	**100.0%**	**11,700**	**100.0%**	**4600**	**2.5%**
Dwellings (no.)						
Low-density	1860	57.9%	1510	32.1%	-350	-1.0%
Medium-density	250	7.8%	430	9.1%	180	2.7%
High-density	1100	34.3%	2780	59.0%	1680	4.7%
Total dwellings	**3210**	**100.0%**	**4710**	**100.0%**	**1500**	**1.9%**
Floorspace (sq.m GBA)						
Low-density	784,800	83.7%	690,800	65.2%	-94,000	-0.6%
Medium-density	43,700	4.7%	76,300	7.2%	32,600	2.8%
High-density	109,500	11.7%	293,100	27.6%	183,600	5.0%
Total floorspace	**938,000**	**100.0%**	**1,060,100**	**100.0%**	**122,100**	**0.6%**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Dwellings and floorspace under the 2021-2041 CHANGE column refer to net dwelling change, not accounting for new dwelling required to be built because of demolitions of existing stock. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

[1] Comparable areas are chosen through a selection process detailed in section 7.

PROJECTED DWELLINGS REQUIREMENTS, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021		2041		2021-2041 CHANGE	
	NO.	%	NO.	%	NO.	ANNUAL GROWTH RATE (%)
Low-density						
Studio / 1-bedroom	0	0.0%	0	0.0%	0	0.0%
2-bedroom	210	6.7%	120	2.5%	-90	-3.0%
3+bedroom	1650	51.2%	1390	29.4%	-260	-0.8%
Total dwellings	**1860**	**57.9%**	**1510**	**31.9%**	**-350**	**-1.1%**
Medium-density						
Studio / 1-bedroom	10	0.3%	20	0.4%	10	2.7%
2-bedroom	90	2.8%	130	2.9%	40	2.1%
3+bedroom	150	4.7%	280	5.9%	130	3.1%
Total dwellings	**250**	**7.8%**	**430**	**9.2%**	**180**	**2.8%**
High-density						
Studio / 1-bedroom	270	8.4%	550	11.7%	280	3.7%
2-bedroom	750	23.2%	1790	38.0%	1040	4.5%
3+bedroom	90	2.7%	430	9.2%	340	8.3%
Total dwellings	**1100**	**34.3%**	**2780**	**58.9%**	**1680**	**4.7%**
Grand total dwellings	**3210**	**100.0 %**	**4710**	**100.0 %**	**1500**	**1.9%**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

CASE STUDIES VS DRAFT GLEN WAVERLEY STRUCTURE PLAN (GLEN WAVERLEY STRUCTURE PLAN), DWELLING GROWTH PER ANNUM, ACTUAL & PROJECTED

CASE STUDY	ADDITIONAL DWELLINGS PER ANNUM			
	LOW-DENSITY	MEDIUM-DENSITY	HIGH-DENSITY	TOTAL
Epping (2011-2021)	0	20	180	**200**
Burwood (2011-2021)	0	40	200	**240**
Auburn (2011-2021)	20	10	180	**220**
Glen Waverley Structure Historic Growth (2011-2021)	50	-40	110	**60**
Glen Waverley Structure Plan Projection (2021-2041)	**-20**	**10**	**80**	**70**

Source: ABS (2001 & 2021) STRD Dwelling Structure; AJM JV. Numbers rounded.

ADDITIONAL DIVERSE HOUSING REQUIRED, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	EXISTING SUPPLY	MODELLED REQUIREMENT - 2041	GAP (+UNDERSUPPLY, -OVERSUPPLY)	PROPORTION OF TOTAL ADDITIONAL DWELLINGS NEEDED
Total "in need" - affordable, social and homeless requirement	20	600	**580**	38.7%
Student accommodation	0	50	**50**	-
Retirement village (ILU)	80	130	**50**	3.3%
Residential aged care facility (RAC)	0	90	**90**	-

Note: Affordable and social housing supply is derived from the 2021 Census. RACs are measured in terms of beds and cannot be compared with dwellings required. Numbers rounded. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS ERP; AJM JV

RECOMMENDATIONS

The recommendations derived through this report are summarised below, and their locations are shown in the Figure at the end of this Executive Summary (ES1). The numbers on the Figure refer to the number of each recommendation below.

Housing number and density

1) Plan for around 1500 net new dwellings in the Glen Waverley Structure Plan Area to accommodate an additional projected population of 4600 people by 2041.
2) Facilitate the delivery of high-quality, predominantly high-density housing to meet the projected dwelling demand.
3) Encourage the delivery of the higher-density housing in preference to low- or medium-density forms.

Housing diversity

4) Encourage development that offers a diversity of medium and higher density housing typologies, including larger (family sized) apartments and affordable options.
5) Ensure adequate open space, facilities and amenity are provided on site or in proximity to apartments to attract diverse household types.
6) Facilitate opportunities for a variety of residential types and development locations to attract a diverse range of developers and builders.
7) Support the delivery of social and affordable housing in the Structure Plan Area. Mechanisms to feasibly secure social and affordable housing provision within private housing developments should be explored.
8) Support the delivery of other purpose-built housing types such as aged care and retirement living, and student accommodation.

Housing locations

9) Accommodate high-density apartment buildings of scale primarily within the core of the Structure Plan Area.
10) Ensure both residential and commercial / retail development are supported in the core of the Structure Plan Area.
11) Investigate the potential opportunity for further high-density residential development on The Glen site, while preserving the retail asset.
12) Support high-density apartment development along Springvale, Waverley and High Street Roads.
13) Support mid-rise apartments and some townhouses elsewhere in the Structure Plan Area beyond the core.
14) Encourage housing types to support a diverse population across the Structure Plan Area, but particularly close to the core area.

Other opportunities

Although potentially beyond the scope of the Structure Plan development and the planning scheme amendments, other opportunities to support housing development in Glen Waverley include:

- Consider facilitating housing on surplus State Government land, particularly social and affordable housing in line with the Victorian Government's Housing Statement.
- Identify suitable planning provisions and processes to support the faster approval of suitable and eligible priority housing development.

9 Accommodate high-density apartment buildings of scale primarily within the core of the Structure Plan Area.

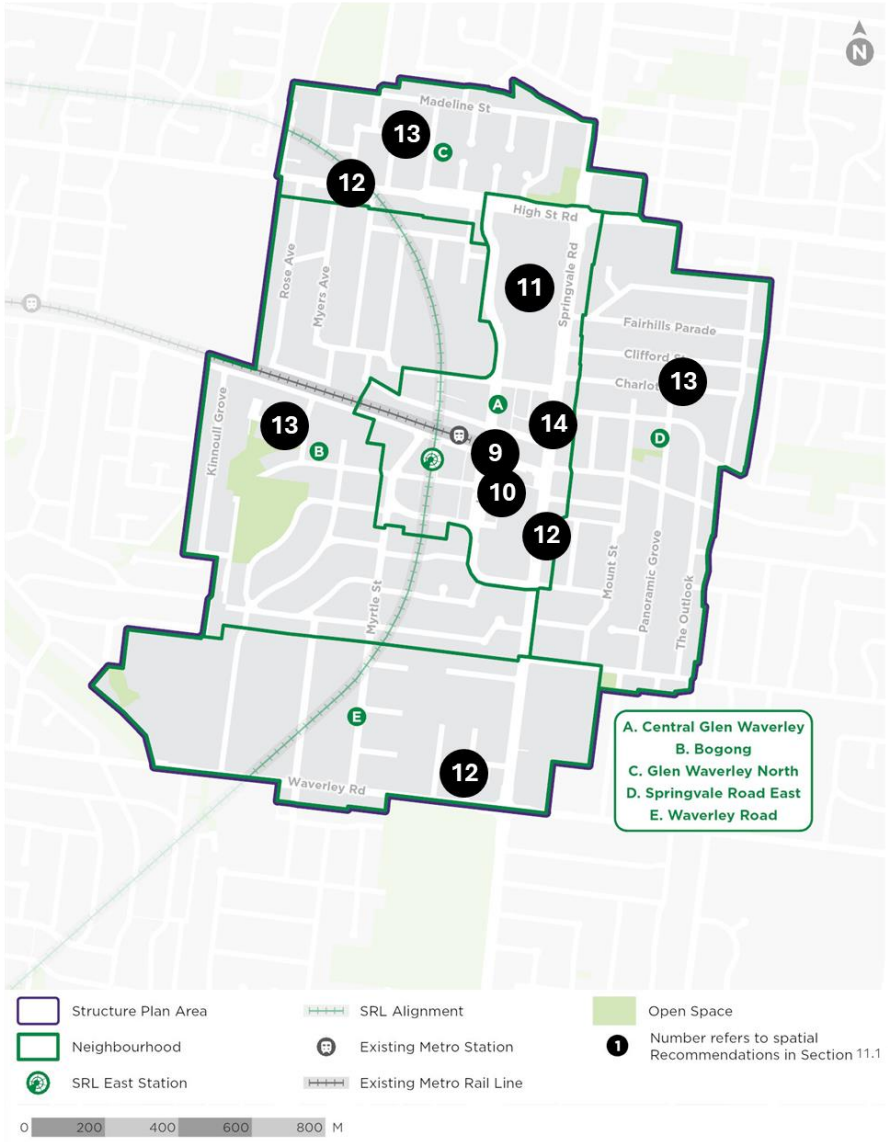
10 Ensure both residential and commercial / retail development are supported in the core of the Structure Plan Area.

11 Investigate the potential opportunity for further high-density residential development on The Glen site, while preserving the retail asset.

12 Support high-density apartment development along Springvale, Waverley and High Street Roads.

13 Support mid-rise apartments and some townhouses elsewhere in the Structure Plan Area beyond the central core.

14 Encourage housing types to support a diverse population across the Structure Plan Area, but particularly close to the core.



Only location-related recommendations are outlined on the map. Where a number does not reference a specific site, it indicates a general area rather than an exact location.

ES1 HOUSING DEVELOPMENT LOCATION CONSIDERATIONS, GLEN WAVERLEY STRUCTURE PLAN AREA

1. Introduction

Suburban Rail Loop (SRL) is a transformational project that will help shape Melbourne's growth in the decades ahead. It will better connect Victorians to jobs, retail, education, health services and each other – and help Melbourne evolve into a 'city of centres'.

SRL will deliver a 90-kilometre rail line linking every major train service from the Frankston Line to the Werribee Line via Melbourne Airport.

SRL East from Cheltenham to Box Hill will connect major employment, health, education and retail destinations in Melbourne's east and south east. Twin 26-kilometre tunnels will link priority growth suburbs in the municipalities of Bayside, Kingston, Monash and Whitehorse.

SRL East Structure Plan Areas will surround the six new underground stations at Cheltenham, Clayton, Monash, Glen Waverley, Burwood, and Box Hill.

1.1 Purpose of this report

This technical report will inform the development of the Draft Glen Waverley Structure Plan (Glen Waverley Structure Plan) and guide land use planning and development in the Structure Plan Area.

The report describes the existing demographics of residents and the state of the housing market in the Structure Plan Area and the surrounding area. It also identifies the future housing and dwelling needs of the projected population, including number of dwellings, type (e.g. apartment, separate houses) and size.

Issues and opportunities relating to housing that impact planning for the development of the Glen Waverley Structure Plan Area are identified.

Recommendations to consider when developing the Glen Waverley Structure Plan are made, with the objective to avoid, minimise or manage potential negative impacts of change, and to maximise potential for positive change. This includes recommendations to ensure the right amount and type of housing is developed in the right locations.

1.2 Project context

Construction of the SRL East underground stations is underway at Cheltenham, Clayton, Monash, Glen Waverley, Burwood, and Box Hill. This provides an opportunity to enhance the surrounding neighbourhoods. SRL East will support thriving and sustainable neighbourhoods and communities that offer diverse and affordable housing options, with easy access to jobs, transport networks, open space, and community facilities and services. Figure 1.1 shows SRL East in the context of the entire SRL project and Melbourne's rail network.

A Vision has been developed in consultation with the community and stakeholders for each SRL East Structure Plan Area and surrounds. The vision sets out the long-term aspirations for these areas, ensuring they are ready to meet the needs of our growing population.

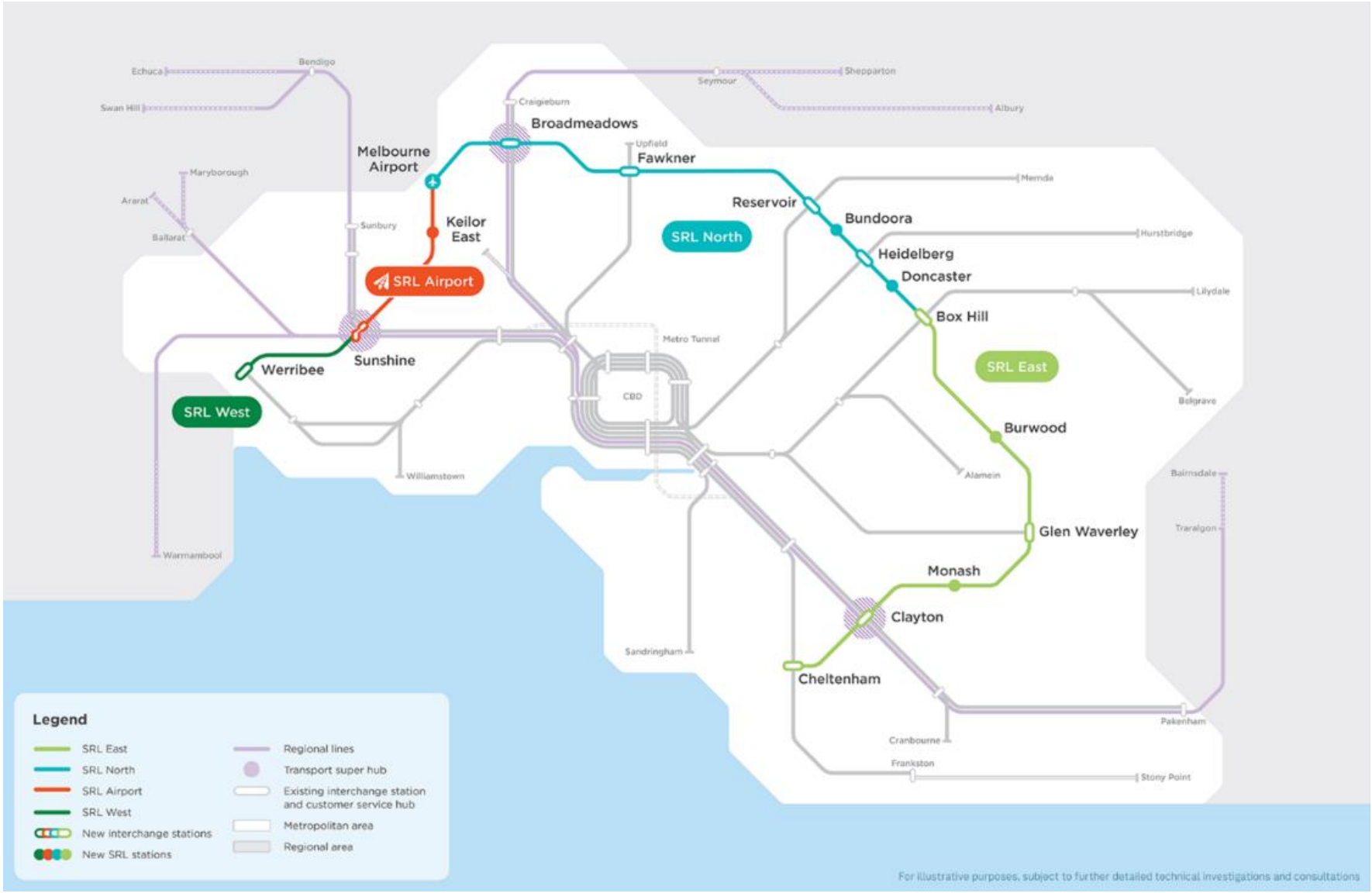


FIGURE 1.1 SUBURBAN RAIL LOOP

1.3 Structure planning for SRL East

Draft Structure Plans (Structure Plans) have been prepared for defined areas surrounding the new SRL East stations to help deliver the Vision developed for each SRL East neighbourhood.

The Structure Plans cover defined Structure Plan Areas that can support the most growth and change. These areas cover a walkable catchment that extends from the SRL station entrances. Additional places are included within each defined area as required to make planning guidance more robust and effective, and to align with each community's aspirations and current and future needs.

A Structure Plan is a blueprint to guide how an area develops and changes over a period of time. Structure Plans describe how future growth within the area will be managed in an appropriate and sustainable way to achieve social, economic and environmental objectives. The plans cover a wide range of matters, such as transport connections and car parking, housing and commercial development, community infrastructure, urban design, open space, water and energy management, climate resilience and sustainability.

By tailoring planning decisions to reflect the needs of a defined area, Structure Plans give effect to the policies and objectives set for these areas and cater for changing community needs. They also provide certainty for residents, businesses and developers by identifying the preferred locations and timing of future land uses, development and infrastructure provision.

Structure Plans take a flexible and responsive approach that enables places to evolve over time.

Planning scheme amendments will be required to implement the Structure Plans into the planning schemes of the cities of Bayside, Kingston, Monash and Whitehorse.

1.4 Structure of this report

Part A: Background

- Part A reviews Victorian and local government housing policies and strategies and considers how development in the Structure Plan Area can contribute to achieving their objectives. Trends contributing to high-density living as well as high-density development in Melbourne to date that will likely influence future housing in the Structure Plan Area are considered.

Part B: Current state

- Part B describes the existing resident characteristics and housing stock in the Structure Plan Area. Housing costs and affordability are considered as well as recent trends in housing supply, including recent and proposed developments.

Part C: Future housing need

- Part C forecasts population growth and housing demand in the Structure Plan Area including for social, affordable and key worker housing, as well as student accommodation, and aged care and retirement living.

Part D: Summary and recommendations

- Part D summarises the findings of the assessment and makes recommendations to consider when developing the Structure Plan.

1.5 Key data sources and definitions

The key data sources and definitions relevant to this assessment are outlined below. Additional abbreviations, references, data sources and definitions are provided in Appendix A.

- Future housing demand was assessed using population projections for the Structure Plan Area which were derived from the CityPlan population projections outlined in the Business and Investment Case (BIC) prepared for the Suburban Rail Loop (August 2021). The CityPlan projections used in the BIC projections account for the expected overall growth of Melbourne and the transport interventions and precinct initiatives of SRL influence the distribution of population. That is, population growth isn't solely driven by SRL, rather SRL influences the distribution of growth.
- **Total population** refers to all long-term residents of the Structure Plan Area. Long-term residents are those who have lived, or intend to live, within the Structure Plan Area for six months or longer. This means all residents are included, apart from those living in temporary forms of accommodation such as hotels, correctional institutions or hospitals. People living in student

accommodation, retirement villages and other non-standard forms of residential accommodation are included in the total population.

- **Structural private dwellings** referred to in this report are categorised into three types, consistent with Australian Bureau of Statistics (ABS) definitions[2]:
  1. **Low-density** refers to stand-alone dwellings, not connected to any other dwelling.
  2. **Medium-density** refers to attached dwellings like semi-detached houses, terraced houses, townhouses, detached units within a strata lot, and apartment buildings with one to two storeys.
  3. **High-density** refers to flats and apartment buildings with three or more storeys.
- The definitions of dwelling density were chosen to align with ABS definitions and ensure consistency in data analysis, though they may differ from those used in other technical reports.
- Note that other dwellings which include caravans and cabins, improvised dwellings (e.g. sheds, tents or humpies), houseboats and flats attached to shops were excluded for the purposes of the analysis as they comprise <1% of the total number of dwellings and are not expected to form a material part of planning for housing in the Structure Plan Area.
- Apartment buildings are divided into three categories by height: low-rise (1 to 3 storeys), mid-rise (4 to 8 storeys) and high-rise (9 or more storeys).
- **Dwelling typology** defines the type of housing based on its density structure (high, medium, low) and number of bedrooms. For example, a two-bedroom high-density dwelling. Dwellings unable to be categorised by density are included in total private dwellings with low-,med- and high-density rebased to this total.

A comprehensive compilation of abbreviations, data sources and definitions is provided in Appendix A.

1.6 Key assumptions and limitations

The following key assumptions and limitations apply to this assessment:

- The numbers presented in this report in tables are rounded to the nearest 10, 100 or 1000 depending on the size of the number. This is for ease of reading and recognising many of the figures are estimates. In some cases, summing the rounded numbers produces a different result to the rounded total. This is not an error.
- The analysis focuses on a single potential population outcome and evaluates the housing requirements necessary to achieve that specific outcome. The projected year for housing demand is 2041 as the emphasis for structure planning is 2041.
- CityPlan land use projections are based on modelling, which are always an approximation of what can be expected in the real environment. CityPlan is best at representing strategic level demands and patterns, rather than for small areas. Notwithstanding this, there will usually be differences between forecasts or projected and actual results because events and circumstances frequently do not occur as expected or predicted, and those differences may be material.
- The dwelling requirements, segmented by high/medium/low density and by number of bedrooms, are considered independently from the form of housing or ownership structures that may see those dwellings delivered (e.g. public vs private, for sale vs for rent).
- For example, the high-density housing need estimated in this report may be delivered through developers selling individual apartments to owner-occupiers or investors (Build-To-Sell), or through Build-To-Rent (BTR) arrangements. BTR is a term used to describe residential developments that are designed and built specifically for renting rather than for sale. These properties are typically owned by institutional investors and managed by professional property management companies. The concept is relatively new in Australia, but it has been successful in other countries like the UK and the US. It is

[2] ABS definitions for structural private dwellings are located on the ABS website https://www.abs.gov.au/census/guide-census-data/census-dictionary/2021/variables-topic/housing/dwelling-structure-strd

expected to be an increasingly important part of the future housing mix in Australia, subject to continuing efforts to make it a more attractive development option (e.g. tax reform). Benefits can include stability for renters, professional management and maintenance of properties, creation of vibrant and integrated mixed-use communities, and increasing the supply of housing with different financial hurdles compared to Build-To-Sell. BTR is assumed to represent a share of the dwelling growth identified in this report within the SRL East Structure Plan Areas, and that its delivery will be supported through government policy and the preparation of the Structure Plans.

- The diverse housing requirements identified in this report are also a subset of the total demand estimates. There is no additional requirement on top of the total dwelling need estimates for forms of diverse accommodation as often the choice of accommodation type is a matter of preference. For example, students can decide if they wish to live in student accommodation or standard residential apartments. Similarly, an elderly couple downsizing may choose to purchase a 1-bedroom apartment, or alternatively move to a retirement village.
- The diverse housing estimates provided are therefore based on the projected population and demographic profile in the Structure Plan Area, which for the purposes of this analysis, is a fixed estimate. For example, the share of over 65-year population seeking aged care or retirement living options, or the number of households eligible for social or affordable housing based on their income status. Workers and students working and studying in the Structure Plan Area are considered for key worker and student accommodation, respectively.

Further details regarding these assumptions and limitations are discussed throughout this report, while additional ones are outlined in Appendix B.

1.7 Interactions with other technical reports

This *SRL East Structure Plan - Housing Needs Assessment – Glen Waverley* report informs, or is informed by other reports prepared to guide the development of SRL East Structure Plans:

- *SRL East Structure Plan - Economic Profile Technical Report – Glen Waverley:* This report forecasts the long-term economic function of the Structure Plan Area, including employment growth and the amount and type of floorspace needed to support it. Employment uses and housing need to be delivered in an integrated way, resulting in a need to understand anticipated economic outcomes and the consequences for housing delivery.
- *SRL East Structure Plan - Retail Assessment – Glen Waverley:* This report forecasts long-term retail demand in the Structure Plan Area, and the amount and type of retail floorspace needed to meet the demand. Retail space needs to be directed to appropriate areas to support the future population and workforce.
- *SRL East Structure Plan - Land Use Scenario and Capacity Assessment (LUSCA):* This analysis tests the capacity of the Structure Plan Areas to accommodate projected population and employment floorspace at 2041. The housing floorspace demand derived from this report is an input to LUSCA.
- *SRL East Structure Plan - Community Infrastructure Needs Assessment - Glen Waverley:* This will provide an understanding of the community infrastructure needs associated with the growth and renewal of the Structure Plan Areas to 2041, recommendations for future community infrastructure provision priorities and potential sites to accommodate them. The scale, location and nature of housing development, informed by this report, influences the community infrastructure requirements.
- *SRL East Structure Plan – Transport Technical Report - Glen Waverley:* Outlines how the transport network, across all modes, will support the Structure Planning process. It also includes a Precinct Parking Plan which recommends parking management tools to support the development of the Structure Plan Areas and support implementing a schedule for the Parking Overlay. The scale, location and nature of housing development, informed by this report, influences transport and parking requirements.

1.8 Structure Plan Area

1.8.1 STRUCTURE PLAN AREA DEFINITION

This assessment is based on the Glen Waverley Structure Plan Area.

The Glen Waverley Structure Plan Area surrounds the SRL station at Glen Waverley in the City of Monash.

It is generally bordered by Madeline Street to the north, Danien Street and The Outlook to the east, Waverley Road to the south and Kinnoull Grove and Rose Avenue to the west.

Coleman Parade and the existing Glen Waverley Line intersect the centre of the Structure Plan Area in an east-west alignment.

Key arterial roads include Springvale Road which intersects the Structure Plan Area in a north-south alignment, and High Street Road and Waverley Road.

The Structure Plan Area spans approximately 207 hectares and is shown in Figure 1.2.

The Structure Plan Area is divided into a series of neighbourhoods. These neighbourhoods represent areas with similar land use mix and are referenced through the structure planning process. Neighbourhood A is referred to as the “core area” throughout this report.

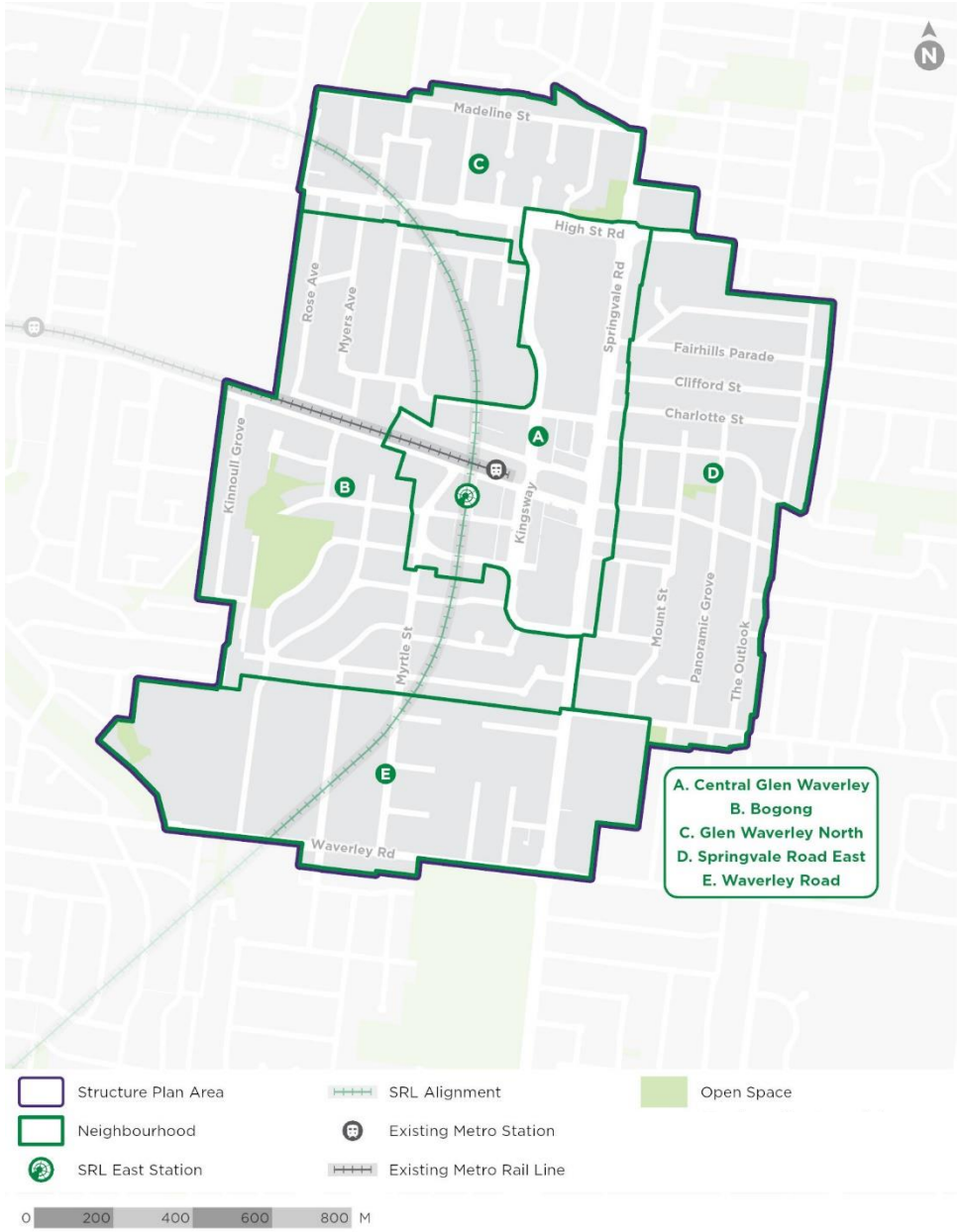


FIGURE 1.2 GLEN WAVERLEY STRUCTURE PLAN AREA

1.8.2 STRUCTURE PLAN AREA POPULATION PROJECTIONS

Table 1.1 shows the current and projected population for the Structure Plan Area.

The 2041 figure is used for assessing future housing demand in the Structure Plan Area and is derived from projections generated for the SRL Business and Investment Case (BIC). Note population growth in the area is not solely driven by SRL East.

TABLE 1.1 PROJECTED POPULATION GROWTH, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	PROJECTED POPULATION (NO.)	
	2021	2041
Glen Waverley Structure Plan Area	7100	11,700

Source: ABS ERP; Structure Plan Area population projections derived from CityPlan (published in SRL BIC)

1.8.3 BENCHMARK AREAS

For the purposes of benchmarking, data was also collected for the following areas:

- **Greater Melbourne:** as defined by the Australian Bureau of Statistics (ABS) Greater Capital City Statistical Areas boundary.
- **South East Region:** which comprises the following local government areas: Bayside, Glen Eira, Boroondara, Greater Dandenong, Kingston, Knox, Manningham, Maroondah, Monash, Whitehorse, and Stonnington.

The South East Region is shown in Figure 1.3.

Throughout the report data is presented for the Structure Plan Area alongside data for the South East Region and Greater Melbourne for context.

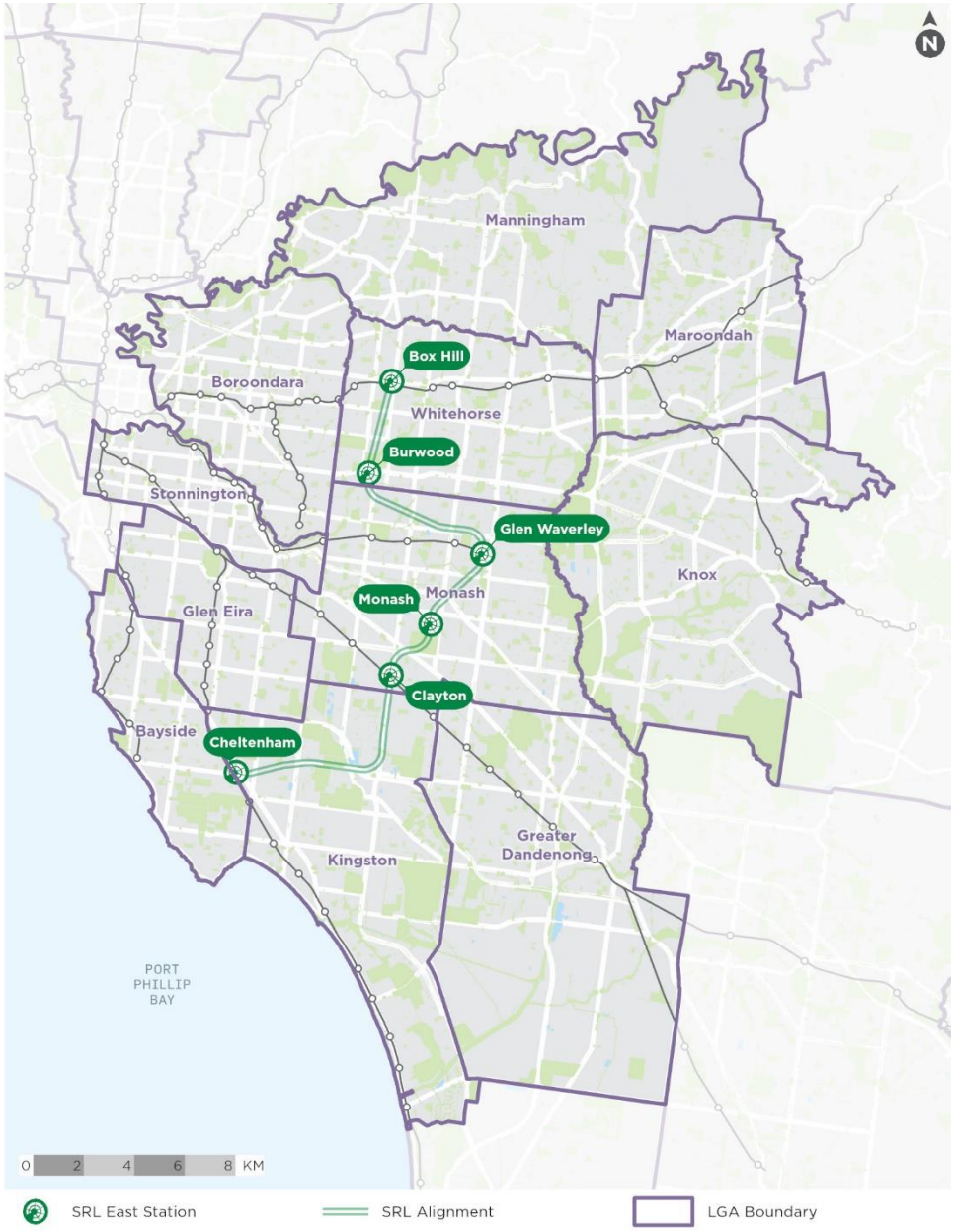


FIGURE 1.3 SOUTH EAST REGION

Part A: Background

Part A includes:

- **Section 2** reviews Victorian and local government housing policies and strategies and considers how development in the Structure Plan Area can contribute to achieving their objectives.
- **Section 3** considers trends contributing to high-density living as well as high-density development in Melbourne to date that will likely influence future housing in the Structure Plan Area.

2. Strategic context

This section summarises Victorian and local government housing policies and strategies and considers how development in the Structure Plan Area can help achieve their objectives.

2.1 Greater Melbourne population growth

Victoria is Australia's most urbanised state and Melbourne is the second-most populated city with just over 5 million residents in June 2023.

Over the decade to June 2023, Melbourne experienced strong population growth of 1.8% per annum. While the COVID-19 pandemic caused a short-term pause in population growth (annual rate of -0.2% from 2020 to 2022), over the past year from 2022 to 2023, population growth resumed with a high 3.3% per annum growth.

Figure 2.1 shows Melbourne's historical and projected population growth. Melbourne is expected to be home to 9.2 million residents by 2061. It is projected to surpass Sydney as Australia's largest capital city by around 2031–32. To accommodate this projected population growth, the city will need additional dwellings.

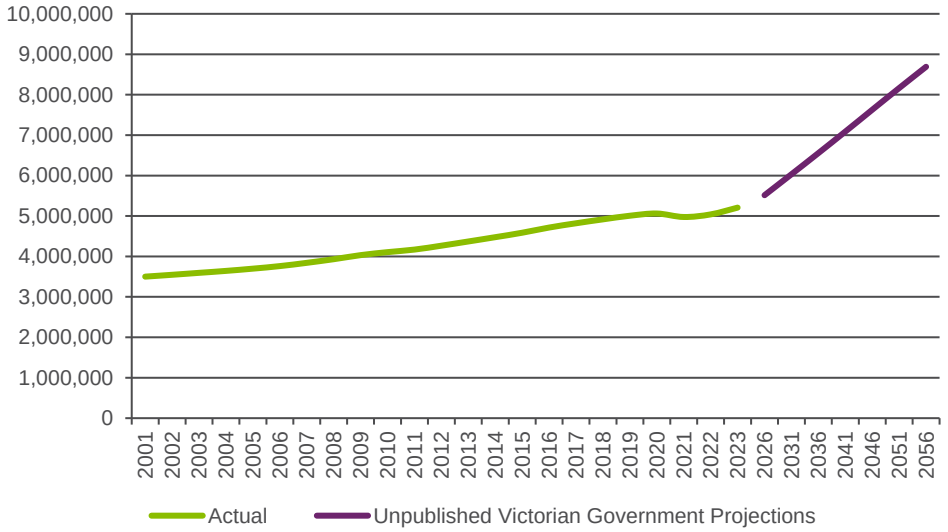


FIGURE 2.1 HISTORICAL AND PROJECTED POPULATION GROWTH, GREATER MELBOURNE, 2001–2041 (YEAR TO JUNE)

Source: ABS ERP; Unpublished Victorian Government Projections, 2023; AJM JV

2.2 Victorian Government Policy

2.2.1 PLAN MELBOURNE 2017–2050

Plan Melbourne 2017–2050 is the Victorian Government's long-term planning strategy, guiding the way the city will grow and change to 2050.

It provides an integrated land use, infrastructure and transport planning strategy to support population and jobs growth, while building on Melbourne's legacy of distinctiveness, liveability and sustainability.

Outcome 2 of Plan Melbourne is to ensure that '*Melbourne provides housing choice in locations close to jobs and services'* with the following directions also relevant:

- **Direction 2.1** – Manage the supply of new housing in the right locations to meet population growth and create a sustainable city.

- **Direction 2.2** – Deliver more housing closer to jobs and public transport.
- **Direction 2.5** – Provide greater choice and diversity of housing.

Plan Melbourne aims to facilitate an increased percentage of new housing in established areas to create a city of 20-minute neighbourhoods close to existing services, jobs and public transport. It includes an aspirational scenario for 70% of new homes to be built in Melbourne's established suburbs by 2051, and 30% in greenfield areas. Plan Melbourne states this approach will support greater housing diversity and offer better access to services and jobs.

Plan Melbourne recognises that to support increased housing supply in established areas, it will be necessary to define locations best able to support increased densities.

In middle suburbs, ideal locations for more medium- and higher-density development are identified as those near employment and transport such as:

> *… urban renewal precincts; areas identified for residential growth; areas identified for greyfield renewal; areas designated as national employment and innovation clusters; metropolitan activity centres and major activity centres; neighbourhood activity centres—especially if they have good public transport connections; areas near existing and proposed railway stations that can support transit-oriented development.*[3]

Glen Waverley is designated as 'major activity centre', and as such can play an important role in delivering higher-density housing.

Plan Melbourne recognises that to achieve medium and higher-density living '*the standards of higher-density housing need to be raised'.*[4]

Plan Melbourne aims to provide more diverse housing and increase the supply of social and affordable housing:

> *For Melbourne to remain liveable for all its citizens, the supply of social and affordable housing needs to be increased. A range of housing types need to be developed within suburbs across Melbourne—not just in outer areas—to improve local affordability for homeowners and renters.*[5]

The use of government land to deliver additional social housing is promoted in Plan Melbourne.

The 2019 Addendum to Plan Melbourne updates Melbourne's projected population, housing and employment growth and incorporates Stage 1 of the SRL (SRL East). The Addendum recognises SRL's role in connecting Melbourne's major employment, health, and innovation precincts and supporting the development of 20-minute neighbourhoods.

2.2.2 MELBOURNE'S FUTURE PLANNING FRAMEWORK

In 2021, six region-specific Draft Land Use Framework Plans were released to guide the application of Plan Melbourne at a regional level. The metropolitan region relevant to Glen Waverley is the Eastern Metro Region. Although these Framework Plans are in draft form, they indicate policy intentions for the region.

2.2.2.1 Draft Eastern Metro Land Use Framework Plan

The Eastern Metro Region comprises the municipalities of Knox, Manningham, Maroondah, Monash, Whitehorse and Yarra Ranges.

The Eastern Metro Region has an established network of activity centres, linear corridors based along key transport routes for residential and employment growth, and urban renewal areas that will provide opportunities to increase the supply of housing.

The framework supports significant land use change and higher-density development around SRL stations. SRL is emphasised for its potential to enhance inter-regional connectivity and create housing opportunities surrounding the SRL stations.

The precincts surrounding SRL stations are designated for medium- and higher-density housing development. Housing development in SRL precincts will be

[3] Department of Environment Land Water and Planning (2017) Metropolitan Planning Strategy Plan Melbourne 2017-2050. https://www.planning.vic.gov.au/__data/assets/pdf_file/0025/654550/Plan_Melbourne_2017-2050_Strategy_.pdf. p. 50

4 DELWP, Plan Melbourne 2017 p. 50

5 DELWP, Plan Melbourne 2017 p. 55

supported by other uses such as commercial, retail and services to maximise their potential as transit-oriented development sites.

The framework acknowledges that a key challenge for planning for housing around public transport is balancing the strong demand for housing with the need to provide land for employment and jobs in and around activity centres.

The framework also emphasises the need to provide housing diversity to reflect community needs, especially adaptable housing options for the ageing population to 'age in place', student accommodation close or well connected to university and higher education campuses, and low-cost rental, supported accommodation, and social housing to accommodate low-income groups.

The following strategies relate to housing in precincts around the SRL stations in the Eastern Metro Region:

- **Strategy 22** – Maximise housing development within the established areas of the Eastern Metro Region to achieve the aspirational housing distribution scenario for metropolitan Melbourne.
- **Strategy 23** – Increase the supply of medium- and higher-density housing around the Monash NEIC, in and around metropolitan and Major Activity Centres, urban renewal areas, SRL precincts, along activity corridors, and in and around neighbourhood activity centres serviced by good public transport.
- **Strategy 25** – Support substantial housing change in locations where transport upgrades and improvements such as SRL create opportunities to locate housing closer to jobs, services and infrastructure.
- **Strategy 27** – Encourage a genuine mix of dwelling types and sizes in the Eastern Metro Region, particularly in the western part of the region and along the SRL corridor, to accommodate the region's changing future needs.
- **Strategy 28** – Support alternative and sustainable residential development formats such as co-housing or build-to-rent in appropriate locations, and car-free residential development models in locations with good access to alternative transport modes.
- **Strategy 29** – Facilitate the development of housing that is adaptable and flexible to cater for changing demographics and to support 'ageing in place'.
- **Strategy 30** – Optimise the opportunities for student accommodation and key worker housing around health and/or education precincts in the Eastern Metro Region.
- **Strategy 32** – Facilitate more affordable housing across the region, particularly in locations with good access to jobs, services, and public transport.

The framework identifies the following strategic opportunities regarding the Glen Waverley Major Activity Centre:

- Future role as a regional business, retail, community services, civic and entertainment centre.
- Encourage further development of retail, entertainment, office, medical services and community facilities.
- Facilitate a wide range of arts, cultural and entertainment uses.
- Encourage medium- and higher-density housing and mixed-use in appropriate locations in and around the centre.
- Support active/sustainable transport improvements to existing transport infrastructure and new projects.

2.2.3 VICTORIA'S HOUSING STATEMENT

In September 2023, the Victorian Government released *Victoria's Housing Statement: The Decade Ahead 2024–2034*, setting an ambitious goal for addressing Victoria's housing needs. Draft housing targets have been developed following the Housing Statement release, including housing targets for all areas of the state.

The overall target is to increase housing delivery from 54,000 homes a year to 80,000 homes a year (equivalent to 800,000 homes over the next decade), with 70% constructed in established areas and 30% in growth areas.

By 2051, the draft targets indicate the Monash LGA will accommodate 72,000 new homes.

The Housing Statement aims to support a significant share of the work agreed under the National Housing Accord and National Cabinet – across areas such as planning reform, expedited approvals, social and affordable housing and renters

rights. This will build on previous rental reforms and projects like the 'Big Housing Build'.

The Housing Statement focuses on five key areas to accommodate future population growth and other housing aspirations:

- **Good decisions, made faster** – reforming Victoria's planning system, clearing the backlog of planning permits, giving builders, buyers and renovators certainty about how long approvals will take – and a clear pathway to resolve issues quickly if those timeframes aren't met. The reforms make the Minister for Planning the decision-maker and streamline the planning process for medium and high-density residential developments, with a construction cost of over $50 million in Melbourne and delivering at least 10% affordable housing.
- **Cheaper housing, closer to where people work** – unlocking new spaces to increase supply and stop urban sprawl, building more homes closer to where people have the transport, roads, hospitals and schools they need and delivering vital, basic community infrastructure faster. The need to create more housing with the best design standards where people want to live is key to this section of the housing statement.
- **Protecting renters' rights** – closing loopholes that drive up the cost of living for renters, giving tenants more certainty over their leases, living standards and finances, and resolving tenancy disputes faster to keep them out of VCAT. It has been identified in the last five years; typical rents have gone up by 21% in Melbourne. Increasing supply is seen as the solution to increasing affordability and the measures in the housing statement facilitate an additional 70,000 rental properties over the next 10 years.
- **More social housing** – rapidly accelerating the rollout of social and affordable homes across Victoria and launching Australia's biggest urban renewal project across Melbourne's 44 high-rise social housing towers. Redevelopment of ageing high-rise towers to provide more modern, comfortable and efficient homes is suggested. The building of 769 homes through the Commonwealth Government's Social Housing Accelerator and more than 4,000 social housing homes through other programs are planned.
- **A long-term housing plan** – delivering a long-term plan to guide how our state grows in the decades ahead and reviewing the *Planning and Environment Act 1987* to build a planning system that works with Victorians – not against them. This section forms the first steps in creating a plan to help deliver Victoria's share of the nation's housing accord, which nationally includes one million new well-located homes by 2029 and 10,000 affordable homes.

2.2.4 VICTORIA PLANNING PROVISIONS

The Victoria Planning Provisions (VPP) are the standard provisions that form the framework for all of Victoria's planning schemes.

Clause 16 of the VPP outlines a number of strategies in relation to housing.

The objectives of the Clause include:

- To facilitate well-located, integrated and diverse housing that meets community needs.
- To deliver more affordable housing closer to jobs, transport and services.

There are a series of strategies that seek to achieve these objectives, including the likes of:

- Ensure that an appropriate quantity, quality and type of housing is provided, including aged care facilities and other housing suitable for older people, supported accommodation for people with disability, rooming houses, student accommodation and social housing.
- Increase the proportion of housing in designated locations in established urban areas (including under-utilised urban land) and reduce the share of new dwellings in greenfield, fringe and dispersed development areas.
- Encourage higher density housing development on sites that are well located in relation to jobs, services and public transport.
- Facilitate diverse housing that offers choice and meets changing household needs by widening housing diversity through a mix of housing types.
- Improve housing affordability by increasing choice in housing type, tenure and cost to meet the needs of households as they move through life cycle changes and to support diverse communities.

- Increase the supply of well-located affordable housing by facilitating a mix of private, affordable and social housing in suburbs, activity centres and urban renewal precincts.
- Facilitate the delivery of social housing by identifying surplus government land suitable for housing.

2.3 Local government policy

Local government planning policies relating to housing are summarised below.

2.3.1 MONASH HOUSING STRATEGY

The *Monash Housing Strategy 2014* identifies initiatives and actions to be implemented by Council to facilitate a wider range of housing types, and to balance the need to provide for current and future demand while maintaining key elements of valued neighbourhood character across the municipality and enhancing sustainability.

Relevant objectives of the strategy include:

- To provide accommodation for a diverse and growing population that caters for different family, cultural and lifestyle preferences and a variety of residential environments and urban experiences.
- To encourage the provision of a variety of housing styles and sizes that will accommodate the future housing needs and preferences of the Monash community.
- To recognise and provide for housing needs of an ageing population.
- To ensure that development is appropriate with regards to the residential environment of the area, in particular neighbourhood character and amenity.
- To ensure that heritage dwellings and precincts are identified and conserved.
- To revitalise Monash's activity centres by supporting higher density residential and mixed use development.
- To ensure appropriate and affordable housing is available to suit the social and economic needs of the community.[6]

The Strategy identifies that *'the need for the City of Monash to adopt a proactive role to address housing issues is imperative, as opportunities for residential growth are limited within established areas'*.[7]

While the Strategy aims to maintain the predominately single-detached dwelling style in suburban residential areas, it seeks to maximise development potential around activity centres, the employment cluster and transport nodes.

Relevant strategies to driving housing growth in the Glen Waverley Structure Plan Area include:

- Direct higher rise residential developments towards the Glen Waverley and Oakleigh Activity Centres, consistent with any structure plans and the directions of Plan Melbourne. These centres are well serviced by public transport, commercial, recreational, community and educational uses.[8]
- Explore opportunities for the development of Council owned and controlled land for strategic commercial and residential development for community benefit with particular emphasis on the Clayton, Oakleigh and Glen Waverley Activity Centres.[9]

2.3.2 MONASH AFFORDABLE HOUSING STRATEGY

In response to rising house prices and rents, along with limited investment in social and affordable housing leading to a dramatic increase in the number of households experiencing housing stress, the Monash City Council adopted the *Monash Affordable Housing Strategy* in 2023.

The Strategy and actions outlined are targeted to increase the amount of affordable housing available, and over the longer term, reduce demand for affordable housing by increasing housing affordability within Monash.

[6] Planisphere (2014), Monash Housing Strategy 2014 for the Monash City Council, https://www.monash.vic.gov.au/files/assets/public/v/1/edms/planning-development/strategic-planning/monash-housing-strategy-2014.pdf. p. ix

[7] Planisphere (2014), p. 2

[8] Planisphere (2014), p. 62

[9] Planisphere (2014), p. 63

The Strategy seeks to:

- *Prioritise, facilitate and increase the availability of affordable housing.*
- *Advocate for improved housing affordability and increase supply of affordable housing in Monash.*[10]

It is noted that activity centres are a prime location for affordable housing:

> *Activity centres in Monash have significant scope for increased density and development uplift. They are suitable for the provision of a more diverse and affordability range of housing types, particularly because they provide the ability for affordable housing to be located in close proximity to employment, services and shops.*[11]

The Strategy also identifies precinct planning for the SRL precincts should ensure the inclusion of affordable housing:

> *Action 5.1 – Advocate for the provision of substantial amounts of affordable housing in the Suburban Rail Loop Station Precincts at a level that reflects the future residential and workforce aspirations and subsequent forecast needs in the precincts.*[12]

2.3.3 GLEN WAVERLEY ACTIVITY CENTRE STRUCTURE PLAN

The *Glen Waverley Activity Centre Structure Plan* (2014) outlines a 20-year plan for the growth and improvement of the Glen Waverley Activity Centre (GWAC). The plan envisions the GWAC as a vibrant, accessible, and sustainable urban centre.

In relation to housing, the objective of the plan is to 'provide a range of housing types within the GWAC to cater to all ages and circumstances and meet expected population growth'.[13]

The Plan outlines initiatives to encourage 'more housing within the GWAC commercial area and in the adjoining residential streets. More people living in and around the centre will contribute to active and vibrant streets, and provide greater demand for additional shops, cafés, restaurants and services'.[14]

The Plan details desired locations for both apartment and medium-density developments, asserting that:

> *Additional apartments within the GWAC should be centrally located where there is excellent access to shops, public transport and services, a high level of amenity and large sites with minimal residential interfaces.*
>
> *In addition to apartments, medium-density housing such as townhouses and units should be provided in the peripheral residential areas within the GWAC boundary, to provide a diversity of housing choices for existing and future residents.'*[15]

[10] City of Monash (2023), "Monash Affordable Housing Strategy. https://hdp-au-prod-app-mon-shape-files.s3.ap-southeast-2.amazonaws.com/8516/9579/1805/Adopted_Monash_Affordable_Housing_Strategy-_September_2023_D23-279390.PDF. p. 6

[11] City of Monash (2023), p. 20

[12] City of Monash (2023), p. 23

[13] Tract Consultants and Charter Keck Cramer prepared for the City of Monash (2014), Glen Waverley Activity Centre Structure Plan, glen-waverley-principal-activity-centre-structure-plan.pdf (monash.vic.gov.au) p. 27

[14] Tract Consultants and Charter Keck Cramer prepared for the City of Monash (2014), p. 27

[15] Tract Consultants and Charter Keck Cramer prepared for the City of Monash (2014), p. 27

Strategies outlined to achieve a diverse housing offering include:

- Cater to the needs of the changing population in Glen Waverley by providing broader housing choices for families, singles, older people and multi-generational families.
- Focus high-density residential development in key redevelopment sites within the GWAC commercial area.
- Promote residential uses above retail and office premises to provide for additional people living within the GWAC commercial area and provide greater surveillance of streets.
- Provide for a greater diversity of housing types in the residential areas within the GWAC boundary.
- Support the development of adaptable housing that can meet the needs of all users.
- Encourage opportunities for affordable housing across the GWAC.
- Encourage the consolidation of allotments throughout the GWAC to provide for greater efficiency and in housing developments.[16]

2.4 Implications for Glen Waverley Structure Plan

SRL East will contribute to achieving the objectives of Victorian Government and local government policies and strategies relating to housing, particularly increasing quickly the supply of more affordable housing options to meet demand due to population growth.

Specific implications of the policy landscape for development of the Glen Waverley Structure Plan include:

- As a major activity centre, Glen Waverley is strategically well positioned to accommodate medium and higher-density housing, particularly around the station and centre core where residents can live in close proximity to a regionally significant hospitality, lifestyle and retail offering.
- Victorian Government and local government policies point to the following themes for housing delivery in Glen Waverley:
  - » Provide housing opportunities close to where people work and key public transport nodes.
  - » Support for higher-density housing in the core of Glen Waverley and apartments and medium-density housing such as townhouses and units in the peripheral residential areas, to provide a diversity of housing choices.
  - » Increasing housing density in the core of Glen Waverley is also, in part, a way to revitalise the centre. As a mixed-use environment, housing delivery needs to be integrated with necessary growth in retail, hospitality and commercial activity.
  - » Increasing the supply of and accessibility to social and affordable homes is a priority. These homes should be strategically located close to jobs, transport, services and amenity, such as areas like Glen Waverley, given its existing strength particularly in retail and hospitality.

[16] Tract Consultants and Charter Keck Cramer prepared for the City of Monash (2014), p. 27

3. Trends towards high-density development

This section provides an overview of trends in high-density living world-wide as well as the location and type of high-density development in Melbourne to date.

3.1 Shift to high-density living

The share of the global population living in cities has accelerated rapidly. From 1950 to 2018, the proportion of the world's population living in urban areas increased from 30% to 55%, and projections indicate it will increase to 68% by 2050.[17]

As more people migrate to cities, high-density living has become more common. However, Australian cities have been relatively slow in embracing higher densities, despite being one of the world's most urbanised countries with around 92% of people living in urban areas.[18] Australia has one of the lowest rates of high-density housing among OECD countries, about 65% lower than the OECD average[19], as shown in Figure 3.1.

Australia's growth model has seen cities spread outwards and new homes developed in greenfield areas (e.g. former rural and agricultural areas). However, as cities continue to grow, urban sprawl is increasingly untenable.

As outlined by the OECD:

> *Urban sprawl creates negative impacts, such as higher infrastructure costs and diminished energy and resource efficiency. It can also result in encroachment on agricultural land, forests, open space or wetlands, with a corresponding loss of the economic, recreational and ecological values provided by those ecosystems. Longer commuting times without affordable public transport systems also diminishes access to jobs and services for many urban residents.*
>
> *Compact urban form, characterised by dense and proximate development patterns linked by public transport systems and with accessibility to local services and jobs, can counteract such negative impacts and maximise the economic, social and environmental potential of cities. It is associated with a wide range of urban benefits, including increased productivity due to agglomeration economies, improved accessibility to urban services, reduced travel times, and a smaller ecological footprint due to lower energy and land consumption.*[20]

Denser living generates urban advantages and also improves affordability.

Australian cities face significant housing affordability challenges. As of 2023, Sydney's housing market ranked as the second-least affordable globally, with Melbourne in 9th place, Adelaide in 14th, and Brisbane in 15th.[21]

Housing prices have significantly increased compared to income levels, leading to a decline in home ownership. From 1995 to 2020, the proportion of renter households across Australia increased from 26% to 31%, and the proportion of homeowners who own their home outright has also decreased.[22]

Apartments offer a more affordable option, with median prices 55% lower than houses in Melbourne.[23] Expanding the housing stock to include more townhouses and apartments is crucial to maintain a sustainable balance between growth and liveability and ensure residents can find homes that meet their needs and preferences.

[17] United Nations (2018), "World Urbanization Prospects 2018." https://population.un.org/wup/Publications/Files/WUP2018-Highlights.pdf.

[18] Australian Bureau of Statistics (2021), TableBuilder, counting persons, place of enumeration, ABS Website, accessed March 2024.

[19] Data on residential dwelling stock refer to 2020, except for Costa Rica (2021), the United States (2019), Canada, Colombia, Iceland, Japan, New Zealand, Chile (2017) and Australia (2021).

[20] OECD, [online] Available at https://www.oecd.org/regional/cities/compact-urban-development.htm, accessed March 2024

[21] Cox, W, 2024, Demographia International Housing Affordability 2024 Edition, Chapman Universityhttp://www.demographia.com/dhi.pdf

[22] Australian Bureau of Statistics (2019-20), Housing Occupancy and Costs, ABS Website, accessed March 2024.

[23] CoreLogic (2024) Hedonic Home Value Index, April 2024.

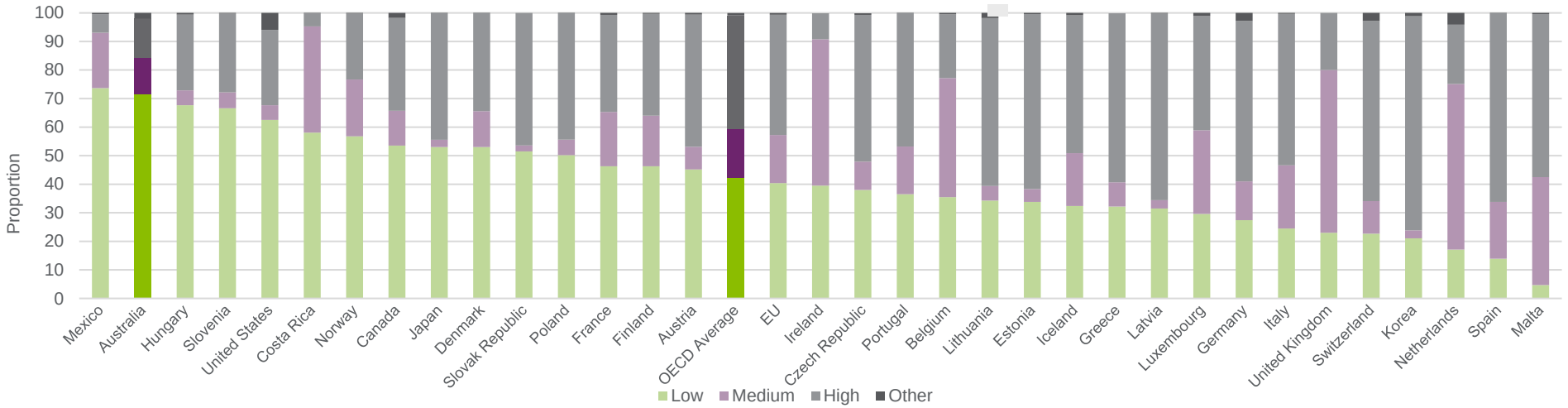


FIGURE 3.1 HOUSING MIX (% OF TOTAL OCCUPIED RESIDENTIAL DWELLING STOCK), OECD COUNTRIES, 2020

Source: OECD Housing Material Hm15:2023); AJM JV

3.2 Trends in household size

As household sizes decrease, housing demand and preferences are shifting, creating a need for various types of dwellings. Higher-density development can cater to a diverse range of household types, particularly smaller households.

In Australia, the average number of people living in each household has declined from around 4.5 in 1910[24], to 2.9 in the mid-1980s to around 2.5 more recently.[25]

Similar trends are observed worldwide, with a global shift towards an average household size of just over two people, as shown in Figure 3.2.

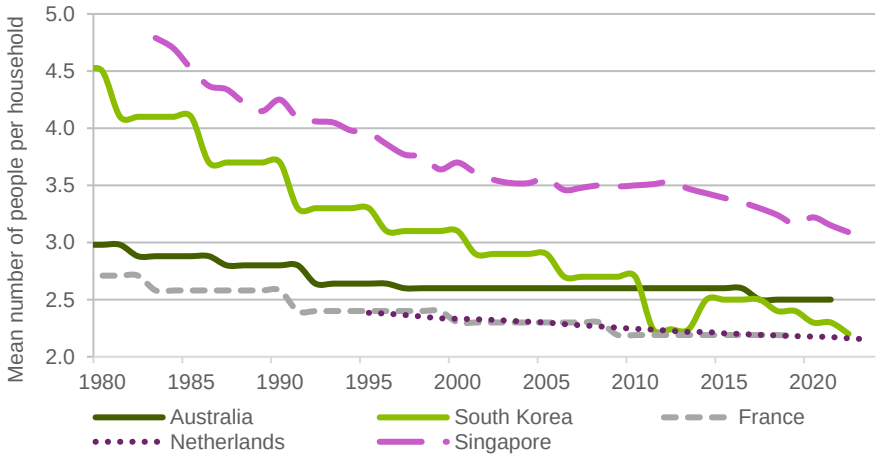


FIGURE 3.2 HISTORICAL HOUSEHOLD SIZE, SELECT COUNTRIES, 1980–2023
Source: Statista, ABS; AJM JV

Major factors driving the decrease in household sizes include declining fertility rates, later marriages, higher divorce and separation rates, more solo living, and an ageing population.

Australia's fertility rate has steadily declined from 2.06 in 1975 to 1.63 in 2022 as shown in Figure 3.3.

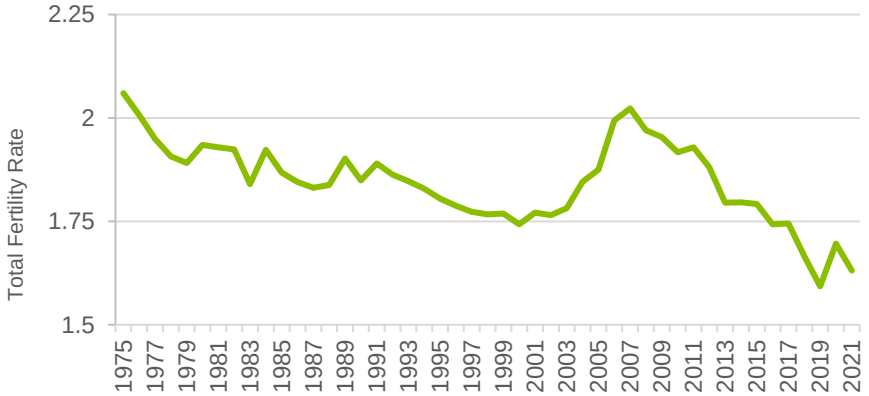


FIGURE 3.3 HISTORICAL FERTILITY RATE, AUSTRALIA, 1975–2021
Source: AIHW, 2024

[24] Qu L, Baxter J and Gorniak M (2023) Population, households and families https://aifs.gov.au/research/facts-and-figures/population-households-and-families, Australian Institute of Family Studies

[25] Agarwal N, Bishop J and Day I, (2023) A New Measure of Average Household Size, RBA, https://www.rba.gov.au/publications/bulletin/2023/mar/a-new-measure-of-average-household-size.html

Lone person households have increased from 18% of all households in 1981 to 26% in 2021[26], as shown in Figure 3.4. Family households, including couples with and without children, have declined as a share of the total.

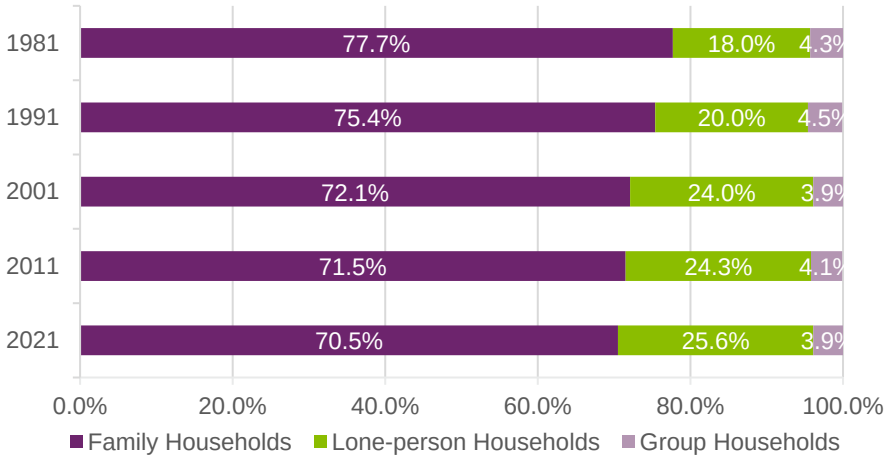


FIGURE 3.4 HOUSEHOLD TYPE, AUSTRALIA, 1981–2021
Source: ABS, AJM JV

While households have become smaller, the consumption levels of land have remained unchanged to date, as those living in smaller numbers, retain their demand for larger block sizes.[27]

3.3 High-density development in Melbourne

Changes in the types and locations of apartment development in Melbourne in recent years are discussed below.

3.3.1 TYPE OF APARTMENTS DELIVERED

In the year to October 2015, apartment approvals in Melbourne peaked, with approximately 26,500 approved apartments across Greater Melbourne. This represented 44% of total dwelling approvals over that period.

Much of Melbourne's recent apartment stock has been small one and two-bedroom apartments catering to investors.

Since 2015, 36% of the off-the-plan apartments built in Melbourne have been one-bedroom units, 56% have been two-bedroom units, and only 8% have been three-bedroom units.[28]

From 2015 to 2017, the average size of a one-bedroom apartment was approximately 52 sq.m.[29]

Better Apartment Design Standards (BADS) were introduced into the Victorian Planning Scheme in 2017. These standards aim to improve apartment design and amenity outcomes.

Over the year leading up to Q1 2017, the average size of off-the-plan one-bedroom apartments was 52.3 sq.m. By Q1 2024 (following the introduction of BADS), the average size had increased to 56.5 sq.m.[30]

[26] Qu L, Baxter J and Gorniak M, (2023)
[27] Qu L, Baxter J and Gorniak M, (2023)
[28] Urbis (2024) Apartment Essentials, accessed March 2024
[29] Urbis (2024)
[30] Urbis (2024)

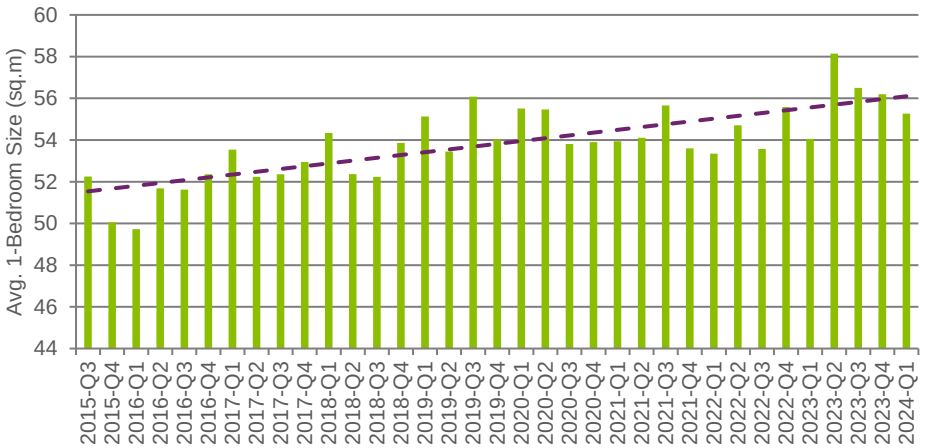


FIGURE 3.5 WEIGHTED AVERAGE MID-POINT 1-BEDROOM APARTMENT SIZE, GREATER MELBOURNE, Q3 2015 – Q1 2024

Source: Urbis Apartment Essentials

3.3.2 TYPE OF APARTMENTS NEEDED

Over the past few decades, Australian households have undergone significant changes, leading to a mismatch between the existing housing stock and current demand.

The decrease in household sizes (as outlined in section 4.1.1), combined with affordability concerns, have led to a shift in the demand for larger apartments (two and three-bedroom) and an increasing misalignment between the market's supply and growing demand for larger apartments.

This demand mismatch has been illustrated by a lack of property listings for both units and houses. As of March 2024, 40% of searches on realestate.com.au were for three-bedroom units, with three-bedroom listings only making up 25% of house listings.[31]

It is also important to note that this increased demand for larger apartments is likely driven by young working professionals seeking lifestyle and amenity, and also families seeking an affordable alternative to a detached dwelling.

As such there is a need to increase the development of larger units to meet the changing needs of Australians.

Apartment options for families are improving but still limited. Between 2015 and 2019 only 6% of apartments constructed had three or more bedrooms, since 2019, however, 10% of apartments constructed have three or more bedrooms. [32]

[31] Realestate.com.au (2024) The great housing mismatch: Why Aussie homes are no longer meeting our needs, https://www.realestate.com.au/insights/the-great-housing-mismatch-why-aussie-homes-are-no-longer-meeting-our-needs/

[32] Urbis (2024)

3.3.3 KEY CLUSTERS OF HIGH-DENSITY DEVELOPMENT IN MELBOURNE

Figure 3.6 shows locations across Melbourne where higher density has been approved in the past 10 years, relative to the locations of the six SRL station locations. Most apartment development has occurred in the inner city and a few middle-ring hotspots.

Figure 3.7 highlights the trends in townhouse and unit development proposals across Greater Melbourne:

- There is a general expansion of density starting in the CBD and radiating out.
- Beyond the CBD and city fringe, there are pockets of density at an evenly spaced distance from the CBD at the likes of Footscray, Sunshine, Essendon, Coburg, Preston, Doncaster and Box Hill. All these areas support large activity and shopping centres or are designated Metropolitan Activity Centres.
- Higher-density development follows major roads and train lines, and where there are inner to middle-ring suburbs with low-density, there is often a lack of transport linkages servicing them.
- The disparity in prices between houses and apartments is also a contributing factor to the emergence of clusters of high-density development. Areas where houses are significantly more expensive than apartments are seeing more demand for apartments (Figure 3.7).

As illustrated in Figure 3.6, apartment development has not yet significantly commenced in the middle ring and SRL East Structure Plan areas, with the exception of Box Hill and, to a lesser extent, Glen Waverley. Several factors contribute to this, including inadequate transport options (Burwood, Monash), the slightly greater distance from the CBD placing some areas just on the fringe of where higher density development is occurring, underdeveloped activity centres (Burwood, Monash), extensive areas of established low-density housing where change is gradual, and relative affordability (see Figure 3.7).

While proximity to the CBD is one driver of high-density development, as travel times increase with density and in line with the concept of providing jobs close to where people live, proximity to suburban employment centres will be a driver too.

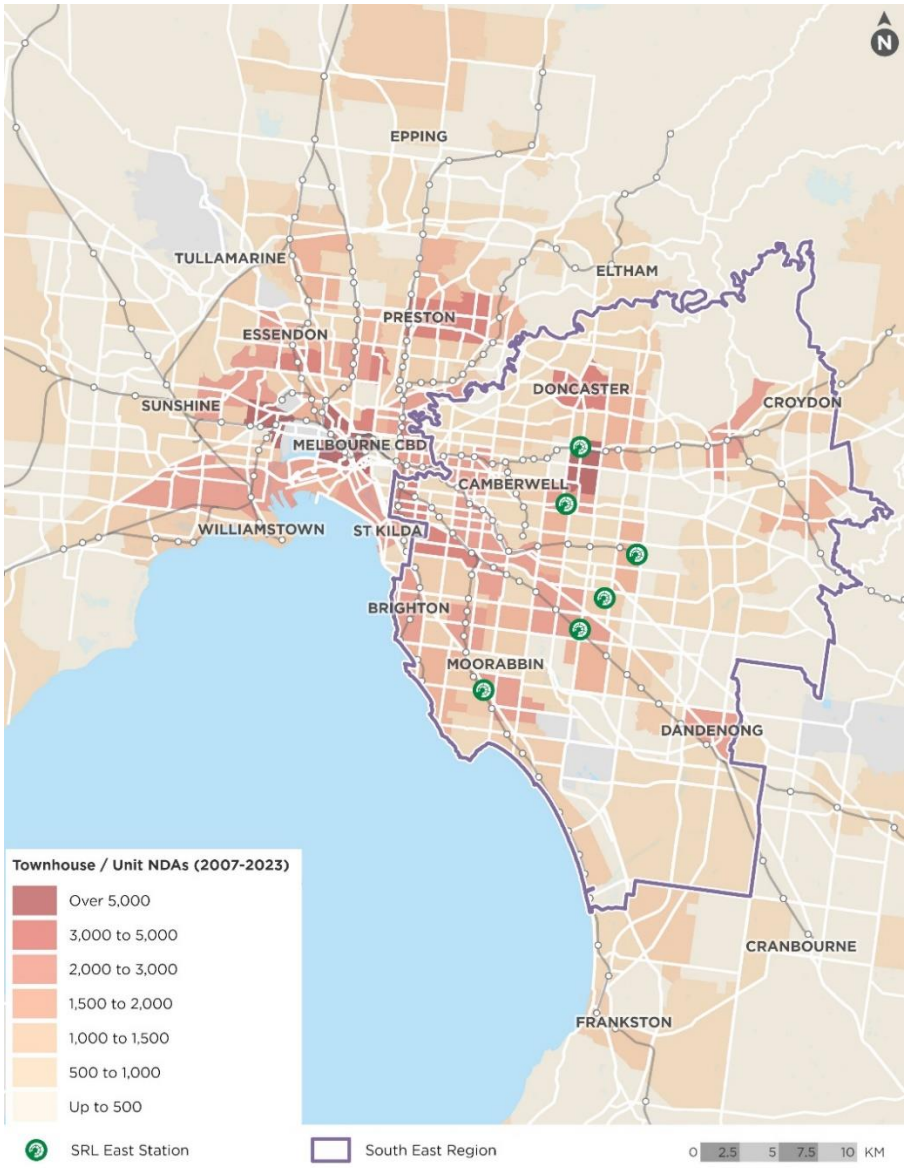


FIGURE 3.6 TOWNHOUSE AND UNIT NEW DWELLING APPROVALS, 2014–2023

Source: ABS; AJM JV

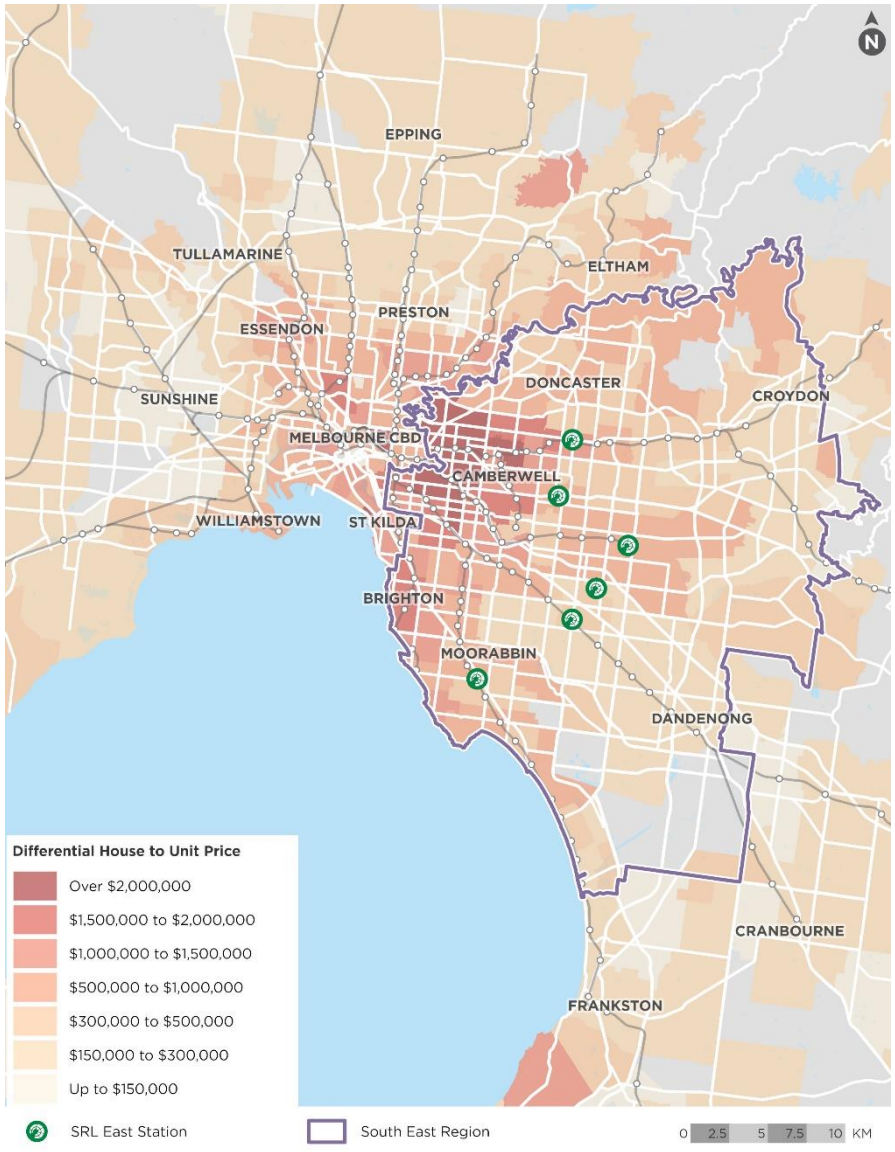


FIGURE 3.7 PRICE DIFFERENTIAL BETWEEN HOUSE AND UNITS, YEAR TO JUNE 2023

Source: ABS; AJM JV

3.3.4 DRIVERS OF HIGH-DENSITY DEVELOPMENT

To understand the conditions that have facilitated significant high-density development (particularly apartments) in Melbourne in more detail, five case study precincts were analysed.

The precincts studied are areas of Melbourne that have seen a significant level of apartment development in recent years and include:

- Footscray
- Brunswick
- Collingwood
- Richmond – North
- Caulfield – North.

These case study locations have not been selected to suggest conditions in the SRL East station areas are directly comparable, but rather to understand the influence factors such as planning zones, developable lot sizes, and number of residential developers have played in facilitating high-density development.

As shown in Figure 3.8, these precincts saw a significant increase in the number of apartments between 2011 and 2021, ranging from +32% in Caulfield-North to +165% in Collingwood.

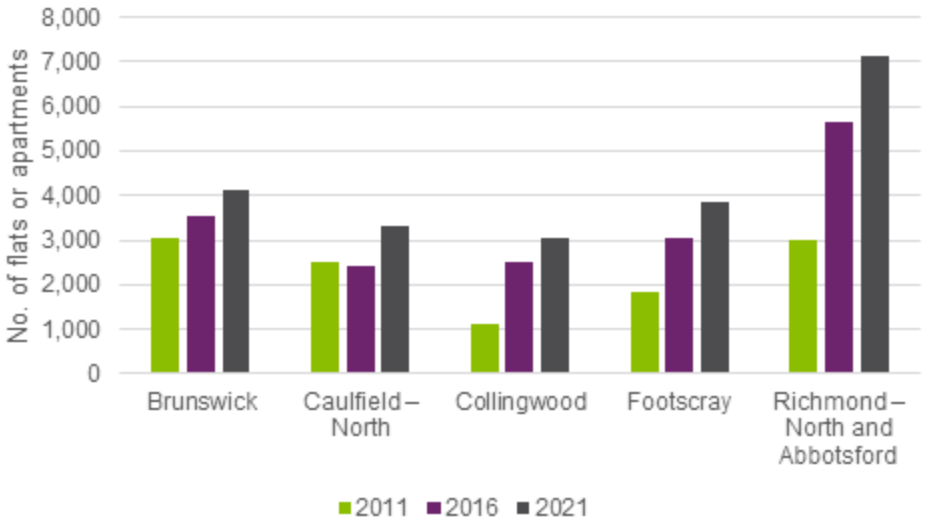


FIGURE 3.8 DWELLING STRUCTURE – FLAT OR APARTMENT (NO.), 2011-2021

Note: Data is based on occupied private dwelling structure. Source: ABS Data by region 2011-2023, by ASGS main structure (ASGS Edition 3 (2021 – 2026))

Analysis of data from Urbis Apartment Essentials, including projects built since 2014 and those currently under construction, identified common factors driving significant increases in density, such as zoning and amenities. Additionally, the relationship between yield (i.e., the number of apartments) and lot size, as well as the number of developers involved, was examined.

All precincts benefit from significant retail facilities (convenience and discretionary based retail), entertainment and lifestyle options, and are easily accessible by multiple modes of public transport, including trains and trams. When sacrificing living space, it is essential residents have access to a high-level of external amenity in return.

In terms of zoning, Table 3.1 highlights the land zones where development has occurred, showing the number and percentage of the total dwellings delivered in that suburb in each zone.

Across all precincts, most dwellings have been constructed in mixed-use environments where there is a combination of residential and employment activity. The number of apartments delivered is fairly evenly distributed among C1Z, ACZ1, and MUZ zoned land, with 26%, 24%, and 30% respectively. A further 13% of apartments were delivered in Priority Development Zones applicable to development in Caulfield – North and Richmond – North / Abbotsford.

Residential growth zones have contributed relatively little to the overall development, despite being predominantly residential zones intended to drive more growth. This indicates that it is challenging to achieve significant growth in standard residential zones when applied over existing low-density residential areas.

TABLE 3.1 PLANNING ZONES OF PROJECTS (TOTAL NUMBER AND PROPORTION OF DWELLINGS), 2014-2024 YEAR TO DATE

	ACTIVITY CENTRE ZONE 1 (ACZ1)	COMMERCIAL ZONE 1 (C1Z)	GENERAL RESIDENTIAL ZONES (GRZ1, GR2, GRZ3, GRZ4)	MIXED USE ZONES (MUZ, MUZ1)	NEIGHBOURHOOD RESIDENTIAL ZONE 1 (NRZ1)	PRIORITY DEVELOPMENT ZONES (PDZ1, PDZ2)	RESIDENTIAL GROWTH ZONE 1 (RGZ1)	TOTAL
Brunswick	-	1862	44	1237	-	-	-	**3143**
	-	59%	1%	39%	0%	0%	0%	**100%**
Caulfield – North	-	-	152	-	-	900	61	**1113**
	-	-	14%	-	-	81%	5%	**100%**
Collingwood	-	775	-	1589	-	-	-	**2364**
	-	33%	-	67%	-	-	-	**100%**
Footscray	4036	-	137	1400	-	-	-	**5573**
	72%	-	2%	25%	-	-	-	**100%**
Richmond - North and Abbotsford	-	1623	561	755	38	1325	-	**4302**
	-	38%	13%	18%	1%	31%	-	**100%**

Source: Urbis Apartment Essentials

Figure 3.9 shows the spread of development size (number of units) and lot size (sq.m) across the different case study precincts.

Across all precincts, the median development size in terms of the number of apartments is approximately 70. These developments are typically situated on lots around 1500 sq.m in size. It is important to note that there are a few outliers, which are large mixed-use sites that include additional facilities on the same lot, such as retail spaces (e.g., Caulfield Village).

The relationship between the number of apartments and lot size is influenced by typology, as shown in Table 3.2. For instance, the lot size required for developments with 450-500 apartments can vary significantly based on their typology: Caulfield Heath, with 463 dwellings across five buildings with a maximum of five stories, occupies 14,500 sq.m, allowing for considerable space between buildings. In contrast, Green Square in Richmond has 500 apartments within a single nine-storey structure, occupying around 6,500 sq.m.

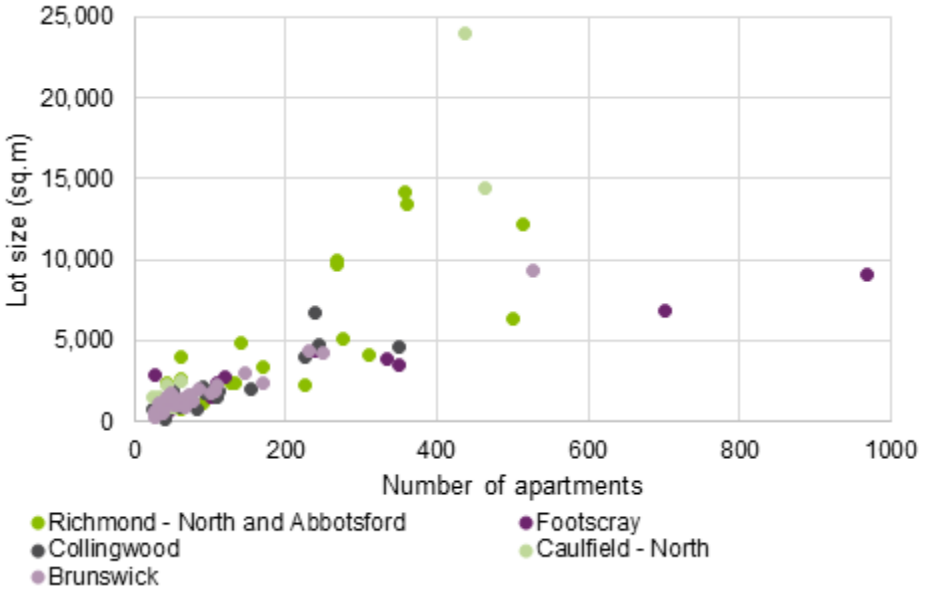


FIGURE 3.9 DEVELOPMENT SIZE (NO. OF APARTMENTS) VS. LOT SIZE (SQ.M), 2014-2024 YEAR TO DATE

Source: Urbis Apartment Essentials

TABLE 3.2 MEDIAN DEVELOPMENT AND LOT SIZE, 2014-2024 YEAR TO DATE

	BRUNSWICK	CAULFIELD – NORTH	COLLING-WOOD	FOOTSCRAY	RICHMOND – NORTH AND ABBOTSFORD	TOTAL
Median dev. size (no. apts.)	62	51	77	121	129	**68**
Median lot size (sq.m)	1200	2306	1282	2911	2414	**1559**

Source: Urbis Apartment Essentials

Table 3.3 displays the top five developers in each precinct, including their share of the total precinct apartments delivered. Some insights from this data include:

- In general, there is a mix of developers across the precincts.
- Richmond-North and Abbotsford and Caulfield-North, however, have been master-planned or overseen by one or a few large developers. The market share of Salta and Beck is anticipated to grow even further as they have more apartments in the pipeline in Richmond – North and Abbotsford and Caulfield – North.
- Generally, when a single developer is responsible for a large number of apartments, they also provide additional facilities, such as retail spaces, alongside the residential units.

This last point is important to note in relation to the delivery of growth around the SRL stations. It highlights that significant growth in dwelling numbers can be more easily achieved when one or few developers are responsible for a large share of the new development, with residential development supported by complementary delivery of retail and other amenity. Less coordinated development across a greater number of parties can result in slower change and delayed delivery of important community facilities.

TABLE 3.3 TOP 5 DEVELOPERS IN EACH PRECINCT BY NUMBER OF APARTMENTS CONSTRUCTED OR UNDER CONSTRUCTION, 2014-2024 YEAR TO DATE

	BRUNSWICK	CAULFIELD – NORTH	COLLINGWOOD	FOOTSCRAY	RICHMOND – NORTH & ABBOTSFORD
1	Mirvac (527, 17%)	Beck Property Group (463, 42%)	Gurner (471, 20%)	R&F Properties (1400, 25%)	Salta Properties (1137, 26%)
2	Hines (250, 8%)	Realm (437, 39%)	SMA Projects (350, 15%)	Growland Group (1068, 19%)	Blue Earth Group (587, 14%)
3	CBD Development Group (232, 7%)	BNG Group (61, 5%)	Banco Group (238, 10%)	AZX Group (968, 17%)	Home (GFM) (360, 8%)
4	Neometro Developments (212, 7%)	Chocolate Towers Pty Ltd (51, 5%)	Urban Inc (227, 10%)	Investa (702,13%)	Hamton (359, 8%)
5	Assemble (171, 5%)	Platinum Investments Pty Ltd 43, 4%)	Cbus Property (154, 7%)	Bensons Property Group (350, 6%)	Marne Properties (269, 6%)

Source: Urbis Apartment Essentials

In summary, the analysis suggests key drivers of density can include mixed-use zoning or equivalent; transport links, especially rail and trams; and retail and lifestyle amenity. For a standard development of around 70 apartments, a lot size of around 1500 sq.m is required. A mix of developers is typical, however, generally a single developer with a larger market share is able to provide more amenities within the residential developments.

3.4 Implications for Glen Waverley Structure Plan

The analysis in this section highlights the following considerations for the Glen Waverley Structure Plan:

- Although a large share of Australia's population lives in urban areas, the country has been slow to adopt high-density housing, favouring low-density detached homes instead.
- Household sizes in Australia have significantly decreased over the past 20 years, reflecting global trends. However, the housing stock has not evolved to meet changing demands.
- There is currently a mismatch between the existing housing stock and current demand, highlighting the need for more development of larger units with three bedrooms or more.
- High-density development in Melbourne has primarily occurred in the inner city and a few middle-ring hotspots (with Glen Waverley now starting to emerge), driven by good transport links, access to amenity, and an increasing gap between prices of houses and apartments. These conditions are present in Glen Waverley and will be enhanced with the introduction of the SRL East station.
- Case study analysis indicates high-density infill development has generally been delivered through zones that allow a mix of uses (e.g. MUZ, ACZ, C1Z, PDZ). Standard residential zones have not supported large increases in apartment numbers. This has been witnessed in Glen Waverley context, where high-density development has been delivered in the core which is zoned C1Z. However, growth in the surrounding low-density residential areas has been moderate with development often replacing a single house with two or three new dwellings only. As the typical lot size in the case study precincts was over 1500 sq.m, encouragement of site amalgamation may also be necessary to ensure sufficient access to large development sites.

Part B: Current state

Part B includes:

- **Section 4** describes the existing resident characteristics and housing stock in the Structure Plan Area.
- **Section 5** considers housing costs and affordability in the Structure Plan Area.
- **Section 6** outlines trends in housing supply in the Structure Plan Area, including recent and proposed developments.

4. Population and housing characteristics

This section provides an overview of the current resident characteristics and type of housing in the Glen Waverley Structure Plan Area based on the 2021 Census.

Data is provided for the Structure Plan Area and benchmarked against the South East Region and Greater Melbourne.

4.1 Historical population growth

Figure 4.1 shows the population growth in the Structure Plan Area from 2011 to 2023.

Between 2016 and 2021, the population in the Structure Plan Area grew by an average of 3.4% per annum. This growth rate is significantly higher than that of the South East Region, which experienced a slight population decline, and Greater Melbourne, which saw a growth rate of 1.1% per annum.

Since 2021, the population in the Structure Plan Area has increased by a further 2.8% per annum, which is just above the growth witnessed across Greater Melbourne overall.

Table 4.1 shows that density in the Glen Waverley Structure Plan Area increased from 26 people per hectare in 2011 to 36 people per hectare in 2023. Apartment developments in the Glen Waverley core area, including Sky Garden, have driven this increase in density.

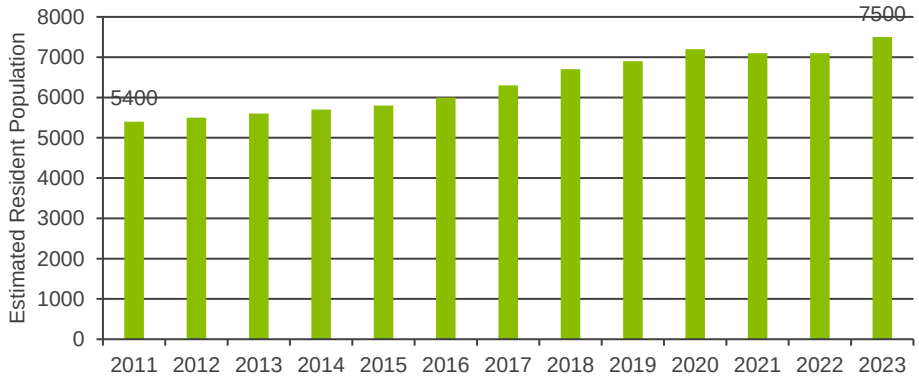


FIGURE 4.1 HISTORICAL POPULATION GROWTH, GLEN WAVERLEY STRUCTURE PLAN AREA, 2011–2023 (YEAR TO JUNE)

TABLE 4.1 HISTORICAL POPULATION AND DENSITY, 2011-2023

POPULATION (NO.)				
	2011	**2016**	**2021**	**2023**
Glen Waverley Structure Plan Area	5400	6000	7100	7500
South East Region	1,503,200	1,618,900	1,614,900	1,665,400
Greater Melbourne	4,169,400	4,714,400	4,975,300	5,207,100
ANNUAL POPULATION GROWTH (%)				
		2011-2016	**2016-2021**	**2021-2023**
Glen Waverley Structure Plan Area		2.1%	3.4%	2.8%
South East Region		1.5%	0.0%	1.6%
Greater Melbourne		2.5%	1.1%	2.3%
DENSITY (PERSONS PER HECTARE)				
	2011	**2016**	**2021**	**2023**
Glen Waverley Structure Plan Area	26.1	29.0	34.3	36.2
South East Region	18.4	19.8	19.8	20.4
Greater Melbourne	4.2	4.7	5.0	5.2

Source: ABS ERP; AJM JV

4.2 Resident characteristics

4.2.1 CURRENT DEMOGRAPHICS

Table 4.2 shows the demographic profile of existing residents in the Glen Waverley Structure Plan Area compared to the South East Region and Greater Melbourne. Detailed sociodemographic data can be found in Appendix C.

Characteristics to note are:

- Residents in the Structure Plan Area generally have slightly higher incomes on a per capita basis compared to the Greater Melbourne benchmark. The average household income is lower on average due to a slightly smaller household size.
- Compared to Greater Melbourne, there is a higher proportion of overseas born residents in the Glen Waverley Structure Plan Area at 70%, particularly from Chinese Asia (includes Mongolia).
- Glen Waverley Structure Plan Area is predominantly low-density dwellings at 58%. However, the Structure Plan Area has a higher share of high-density dwellings at 34% of dwellings, compared to 11% for the South East Region and 13% for Greater Melbourne.
- Owing in part to the higher density development the Glen Waverley Structure Plan Area has a higher share of rented dwellings (44%).
- A slightly higher share of white-collar workers live in the Structure Plan Area compared to Greater Melbourne.

TABLE 4.2 DEMOGRAPHIC PROFILE, GLEN WAVERLEY STRUCTURE PLAN AREA COMPARED TO BENCHMARKS, 2021

	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE
Income			
Per capita Income	$48,835	$48,471	$46,017
Var. from Melbourne average	6%	5%	-
Average household income	$106,996	$127,711	$119,232
Var. from Melbourne average	-11%	7%	-
Age profile			
% 0-14 years	16%	16%	18%
% 15-24 years	15%	13%	12%
% 25-39 years	22%	21%	24%
% 40-54 years	20%	20%	20%
% 55-65 years	9%	12%	11%
% 65+ years	18%	18%	15%
Household type*			
Couple family no children	20%	24%	23%
Couple family with children	31%	33%	32%
One parent family	12%	9%	10%
Other family households	3%	2%	2%
Lone person household	23%	25%	24%
Group household	5%	4%	4%
Other	6%	3%	4%
Dwelling density*			
Low-density	58%	61%	66%
Medium-density	8%	27%	22%
High-density	34%	11%	13%

	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE
Housing tenure*			
Owned outright	33%	36%	30%
Owned with a mortgage	20%	34%	38%
Rented	44%	29%	30%
Other metrics			
Household size*	2.2	2.4	2.4
% Overseas-born	70%	39%	37%
% White collar workers	78%	79%	74%
% Blue collar workers	22%	21%	26%

** Excludes non-private dwellings and other private dwellings. Source: ABS Census of Population and Housing 2021; AJM JV*

4.2.2 DEMOGRAPHIC CHANGE

Table 4.2 summarises key demographic trends in the Glen Waverley Structure Plan Area based on changes observed between the 2011 and 2021 Census. Table 4.3 compares the magnitude of change in Glen Waverley to the change experienced across Greater Melbourne:

- The Glen Waverley Structure Plan Area has recorded a significant increase in the level of affluence on a per capita and household basis. From 2011 to 2021, per capita income increased by 48%, which was 13% points (% pts) higher than the Greater Melbourne Census change (35%).
- The Glen Waverley Structure Plan Area has grown its share of residents in the 25-39-year age group by 7% points which is stronger growth compared to Greater Melbourne (1% pts). Despite this, the Structure Plan Area still has a lower concentration of residents aged 25-39 years when compared to Greater Melbourne (as detailed in Table 4.2).
- In contrast, the proportion of residents aged 65 years and over recorded a decrease of 2% between 2011 and 2021 in the Glen Waverley Structure Plan Area.
- The focus on apartment developments in the Structure Plan Area has resulted in the proportion of high-density dwellings increasing 33% pts over the 10 years to 2021 to be 34% of dwellings. The proportion of medium and low-density dwellings has therefore decreased, with medium-density decreasing in both proportion and quantum of dwellings.
- In the Glen Waverley Structure Plan Area, higher density influenced the change in housing tenure over the 10 years to 2021. Rented dwellings (+12% pts) have increased as a portion of total tenure types over the 10 years to 2021 at a faster rate than Greater Melbourne. Homeownership (outright or with a mortgage) decreased as a proportion of the total.
- The Glen Waverley Structure Plan Area saw a significant increase compared to Greater Melbourne in the proportion of residents born overseas (+11% pts).

TABLE 4.3 VARIATION IN THE PERCENTAGE POINT CHANGE FROM 2011–2021 IN GLEN WAVERLEY VS GREATER MELBOURNE

	CHANGE	GLEN WAVERLEY STRUCTURE PLAN AREA	GREATER MELBOURNE	VARIATION FROM GR. MELBOURNE CHANGE (%PT)
Per capita income	%	48%	35%	13%
Average household income	%	44%	40%	5%
% 25-39 years	% point	7%	1%	5%
% 65+ years	% point	-2%	2%	-1%
Low-density dwellings	% point	-10%	-7%	-3%
Medium-density dwellings	% point	-22%	10%	-2%
High-density dwellings	% point	32%	-2%	-3%
Owned outright	% point	-13%	4%	-32%
Dwellings rented	% point	12%	9%	34%
% Overseas-born	% point	11%	0%	3%

Note: Numbers rounded. Source: ABS Census of Population and Housing 2021; AJM JV

4.2.3 MOVERS ANALYSIS

The analysis here considers the profile of residents who have moved into or within the Structure Plan Area between 2016 and 2021. These 'movers' are distinct from residents living in the same location within the area since pre-2016, but include those moving residence within the area[33].

4.2.3.1 Origin Of movers

Figure 4.2 Migration analysis – Overseas vs domestic, Share of Total Households outlines the percentage of movers as a proportion of the total Structure Plan Area population.

According to 2021 Census data, 58% of the Structure Plan Area population has moved to or within the Structure Plan Area since 2016 (excluding not stated and not applicable responses).

Table 4.4 shows the top ten LGAs that contributed to the movement into the Glen Waverley Structure Plan Area between 2016 and 2021.

Of the 58% of people classified as movers within the Structure Plan Area, more than a quarter moved locally from within the City of Monash. Movers from overseas locations accounted for a significant 22.5% of the total movers.

Other surrounding LGAs, such as Knox and Whitehorse, were the source for around 4% of movers respectively, indicating a preference for people to stay within their local area.

SRL will open the opportunity for people to live in Glen Waverley who might work or study in other parts of the rail corridor. Outward migration from inner Melbourne is also anticipated to increase as property prices remain high. Due to the anticipated new housing offered in the area, there is also likely to be greater demand from outer areas.

Overseas demand is expected to remain strong due to the expanding employment in the area and the growing housing market, noting the growth in the overseas-born population from 2011 to 2021 shown earlier.

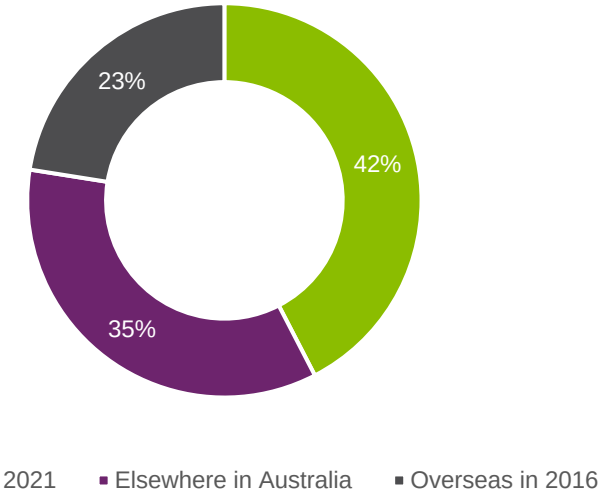


FIGURE 4.2 MIGRATION ANALYSIS – OVERSEAS VS DOMESTIC, SHARE OF TOTAL HOUSEHOLDS

Note: Locations that Glen Waverley Structure Plan Area residents migrated from in the last 5 years and those who remained in the same place of residence compared to 2016. Source: ABS (2021) UAI5P Usual Address Five Years Ago Indicator; AJM JV

[33] It is noted that 0.7% of households were counted as not applicable or did not respond and these households have been excluded from the analysis.

TABLE 4.4 MIGRATION ANALYSIS – TOP 10 LOCATIONS WHERE GLEN WAVERLEY 2021 STRUCTURE PLAN AREA RESIDENTS LIVED IN 2016

PLACE OF RESIDENCE 2016		SHARE OF PEOPLE WHO MOVED FROM 2016 TO 2021
1	City of Monash	27.6%
2	Overseas	22.5%
3	City of Knox	4.4%
4	City of Whitehorse	4.2%
5	City of Greater Dandenong	3.2%
6	City of Casey	2.2%
7	City of Glen Eira	1.5%
8	City of Melbourne	1.5%
9	City of Boroondara	1.3%
10	City of Wyndham	1.0%

Note: Data excludes not stated and not applicable responses. Includes only the people who moved into the Glen Waverley Structure Plan Area from 2016 to 2021. The table shows their previous place of residence as of the 2016 Census. Source: ABS (2021) UAI5P Usual Address Five Years Ago Indicator Elsewhere in Australia, Local Government Areas of Usual Residence Five Years Ago; AJM JV

4.2.3.2 Characteristics of movers

Figure 4.3 to Figure 4.6 show the age cohorts, dwelling density, tenure types and incomes of people living in the Glen Waverley Structure Plan Area as of the 2021 Census by mover status. The key insights from this analysis are below:

Movers (people who moved into or within the Glen Waverley Structure Plan Area) were spread across age groups. Those moving from overseas or moved within Australia were most likely to be in the 20-39 age cohort. This is a reflection of the greater mobility younger people have and Australia's skilled migration program which brings in predominantly young professionals. Older age cohorts are much less likely to be movers.

Movers (new residents) are more likely to go into high-density dwellings relative to the established residents who predominantly occupy the areas' low-density dwellings. Considering the proportion of high-density dwellings within the Structure Plan is 34%, movers are relatively overrepresented in high-density dwellings. Still, more than half of the movers relocated to low-density housing.

Movers, particularly from within Australia are generally more affluent, as measured by their household incomes. Figure 4.6 shows that 43% of movers from within Australia earn more than $52,000, compared to 33% of residents who didn't move, and 26% of those moving from overseas. A large share of overseas movers recorded no income. This is related to the younger age profile of overseas movers, many of whom are students.

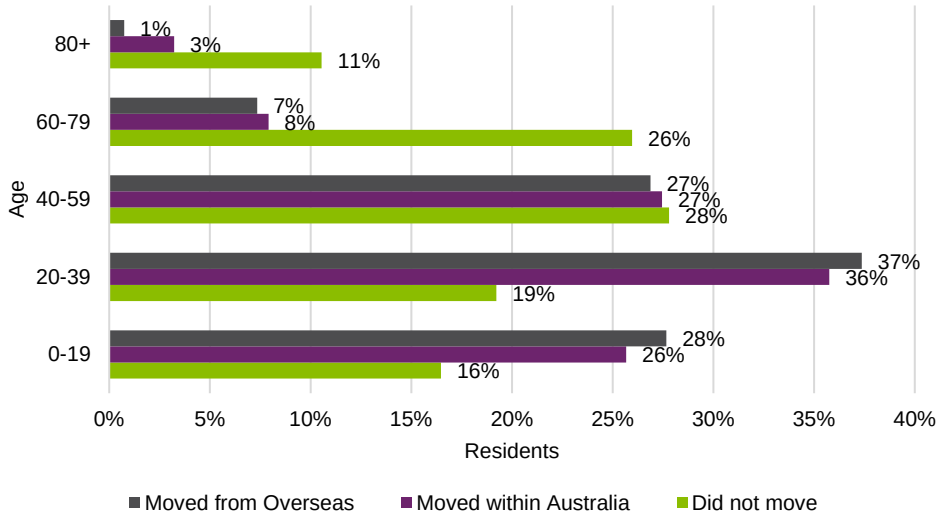


FIGURE 4.3 AGE COHORTS, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Percentages excluded not applicable and not stated Source: ABS (2021) AGE10P Age in Ten Year Groups; AJM JV

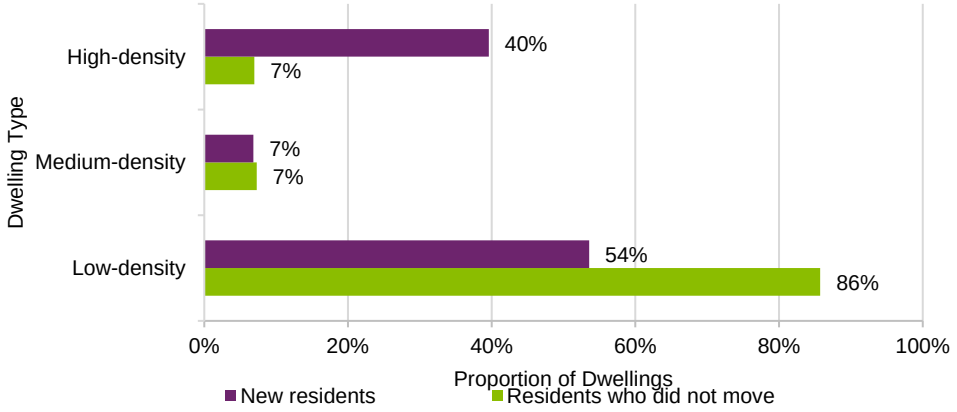


FIGURE 4.4 DWELLING DENSITY, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Percentages are the percentage of the total new residents or residents who did not move. Excludes not applicable or not stated. Source: ABS (2021) STRD Dwelling Structure MV5D Household Five Year Mobility Indicator; AJM JV

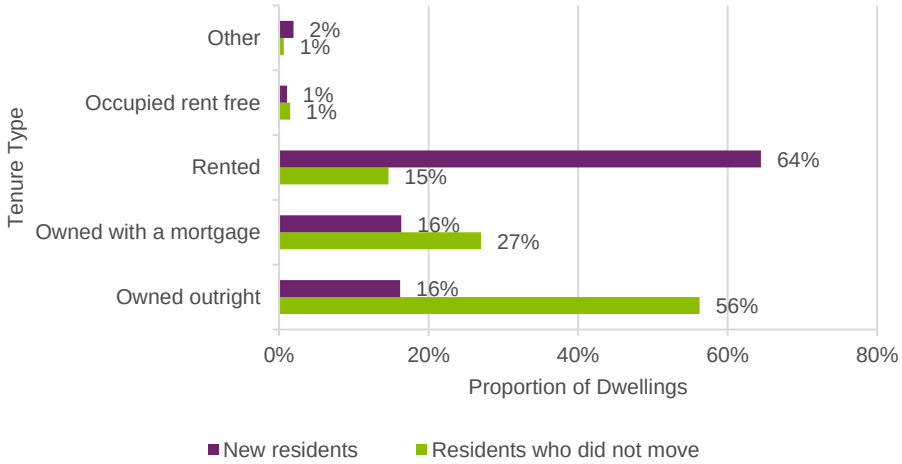


FIGURE 4.5 TENURE TYPE, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Percentages are the percentage of the total new residents or residents who did not move. Excludes not applicable or not stated. Source: ABS (2021) TEND Tenure Type, MV5D Household Five Year Mobility Indicator; AJM JV

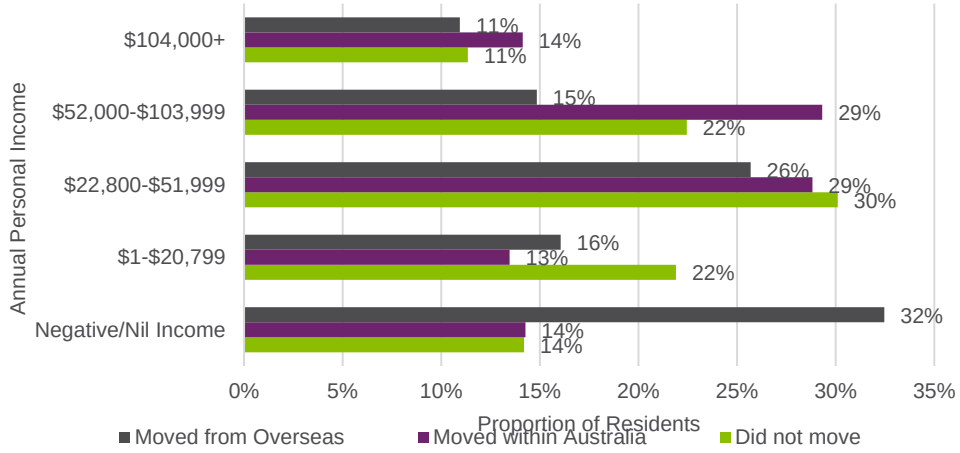


FIGURE 4.6 PERSONAL INCOME, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Percentages are the percentage of the total new residents from overseas or elsewhere in Australia or residents who did not move. Source: ABS (2021) INCP Total Personal income (weekly); AJM

4.3 Dwelling stock

This sub-section considers dwelling growth as well as the nature of dwellings, including dwelling density, tenure, and size (in terms of the number of bedrooms) in the Structure Plan Area compared to the wider South East Region and Greater Melbourne.

Dwelling suitability is examined to determine if there is a mismatch between the dwelling stock and the requirements of residents in the Glen Waverley Structure Plan Area.

The current supply of diverse accommodation, which is tailored to specific housing needs is identified (e.g. social and affordable, student housing, retirement and aged care) in the Structure Plan Area. When referring to renters, it includes all renters, including social housing renters.

4.3.1 HISTORICAL DWELLING GROWTH

Table 4.5 summarises the changes in dwellings in the Glen Waverley Structure Plan Area from 2011 to 2021 for private dwellings. At the 2021 Census, there were around 673,000 private dwellings in the South East region, of which 0.5% (just over 3200 dwellings) were located in the Structure Plan Area.

The number of dwellings in the Structure Plan Area increased at an average annual rate of 2.7% from 2011-2016 and 7.0% from 2016-2021. This indicates that dwelling completions picked up post-2016 with the apartment development primarily around The Glen. Comparatively, Greater Melbourne recorded a lower level of dwelling growth at around 2.3% to 2.4% annually 2011-2016 and 2016-2021 respectively.

TABLE 4.5 HISTORICAL PRIVATE DWELLING GROWTH, GLEN WAVERLEY STRUCTURE PLAN AREA, 2011–2021

	DWELLINGS (NO.)		
	2011	**2016**	**2021**
Glen Waverley Structure Plan Area	2000	2290	3210
South East Region	580,600	625,100	672,900
Greater Melbourne	1,627,700	1,822,100	2,051,300
	ANNUAL CHANGE IN DWELLINGS (NO.)		
		2011-2016	**2016-2021**
Glen Waverley Structure Plan Area		60	180
South East Region		8900	9560
Greater Melbourne		38,880	45,840
	ANNUAL GROWTH RATE IN DWELLINGS (%)		
		2011-2016	**2016-2021**
Glen Waverley Structure Plan Area		2.7%	7.0%
South East Region		1.5%	1.5%
Greater Melbourne		2.3%	2.4%

Note: Excludes non-private dwellings and other private dwellings. Historical numbers rounded. Source: ABS Census of Population and Housing 2011, 2016 & 2021; AJM JV

4.3.2 DWELLING DENSITY

4.3.2.1 Comparison of dwelling density to benchmarks

At the 2021 Census, the Glen Waverley Structure Plan Area had a significantly higher proportion of high-density dwellings at 34%. Comparatively, only 13% of dwellings in Greater Melbourne are high-density.

Conversely, the Structure Plan Area has a slightly lower proportion of low-density dwellings (58%) than Greater Melbourne (66%).

The share of medium-density dwellings, including townhouses and villas in the Structure Plan area, is below the Greater Melbourne share at 8%.

This indicates the Structure Plan Area already provides attractors for high-density living, such as employment opportunities, amenities and transport links, although there is perhaps a lack of diversity across the spectrum of low to high-density. Dwellings are primarily either low-density houses, or apartments in the core area.

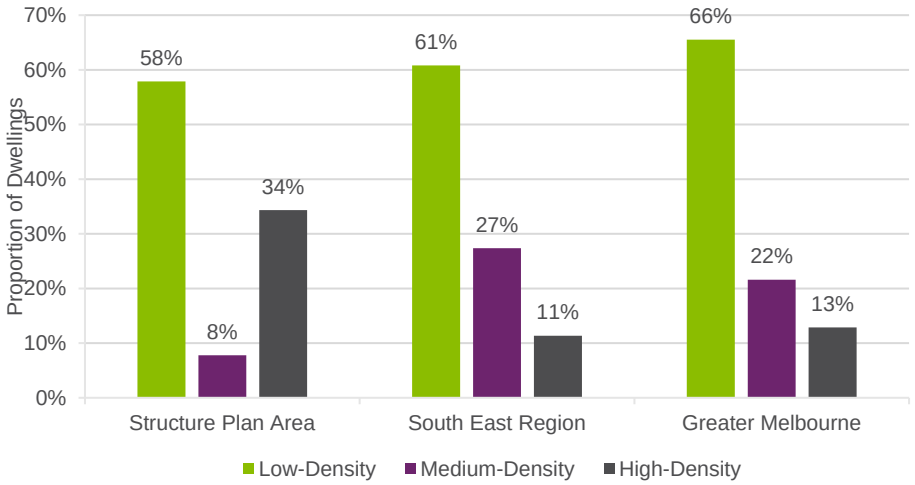


FIGURE 4.7 DWELLING DENSITY, GLEN WAVERLEY STRUCTURE PLAN AREA COMPARED TO BENCHMARKS, 2021

Note: Excludes non-private dwellings and other private dwellings. Source: ABS (2021) STRD Dwelling Structure; AJM JV

4.3.2.2 Change In dwelling density in the Structure Plan Area

Between 2011 and 2021, the total number of dwellings in the Structure Plan Area increased by just over 60%, reaching just over 3200 in 2021. This was driven by a large increase in the number of high-density dwellings, especially between 2016 and 2021. Over the five years to 2021, an average of almost 180 new high-density dwellings were added to the Structure Plan Area per annum.

Meanwhile, medium-density dwellings declined over the period (-350) and low-density dwellings increased (500).

The increase in high-density shown in Table 4.6 shows how quickly areas with strong access to amenity can densify to accommodate population growth.

The increase in high-density relative to the change in medium- and low-density dwellings indicates that it is not necessary to demolish large amounts of low- and medium-density homes to achieve a significant increase in density. It indicates that high-density development is occurring on commercially or activity-zoned land, and/or that low-rise or single-level unit blocks are being redeveloped.

TABLE 4.6 CHANGE IN DWELLING DENSITY, GLEN WAVERLEY STRUCTURE PLAN AREA, 2011–2021

	HISTORIC (NO.)			HISTORIC GROWTH PER ANNUM	
	2011	2016	2021	2011-2016	2016-2021
Low-density	1360	1800	1860	90	10
Medium-density	600	270	250	-70	0
High-density	40	220	1100	40	180
Total	**2000**	**2290**	**3210**	**60**	**180**

Note: Excludes non-private dwellings and other private dwellings. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: ABS Census 2011, 2016, 2021; AJM JV

4.3.2.3 Household type by dwelling density

Figure 4.8 shows household composition by dwelling density in the Glen Waverley Structure Plan Area at the 2021 Census.

Most households in low- and medium-density areas were couple families, either with or without children, comprising 57% and 60% of households, respectively. However, lone-person households also represented a substantial share, making up 18% and 22% of households in these dwelling types.

High-density dwellings were predominantly occupied by lone-person households at 33%, followed by couple families without children. However, some families with children also lived in these dwellings. The notable proportion of lone-person households in low- and medium-density housing indicates a potential opportunity for 'right-sizing' if suitable options are available.

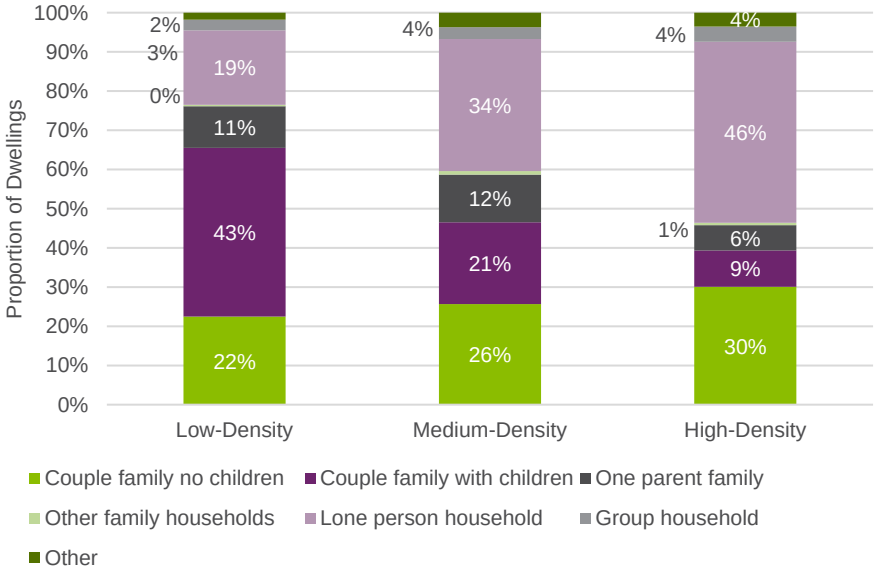


FIGURE 4.8 HOUSEHOLD COMPOSITION BY DWELLING DENSITY, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Excludes non-private dwellings and other private dwellings. Source: ABS (2021) STRD Dwelling Structure & HCFMD Family Household Composition (Dwelling); AJM JV

4.3.3 TENURE TYPE

4.3.3.1 Comparison of tenure type to benchmark

Figure 4.9 shows the tenure type in the Structure Plan Area, the South East Region, and Greater Melbourne. The Structure Plan Area has a high proportion of rented dwellings, accounting for 44% of total occupied dwellings (excluding other tenure), this is greater than the Greater Melbourne benchmark at 30%.

Increasing the density in the area will likely result in the continued dominance of renters unless the housing stock shifts away from the investor-targeted apartments that have dominated recent construction in Glen Waverley.

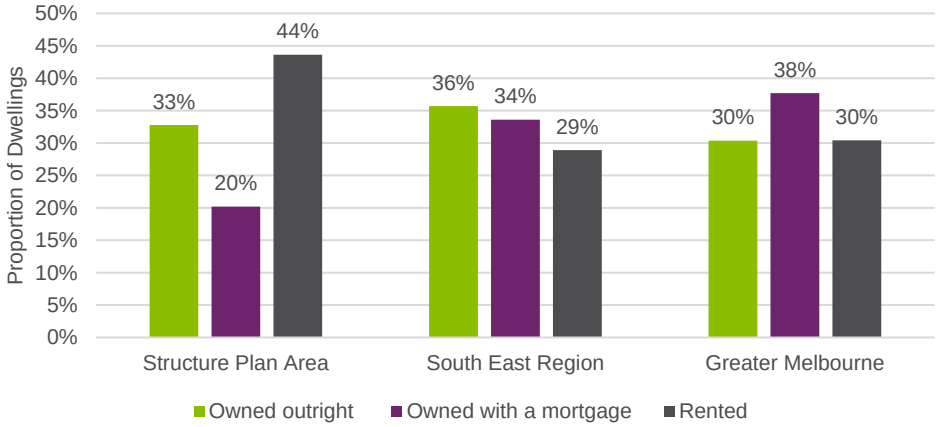


FIGURE 4.9 TENURE TYPE BY GEOGRAPHY, 2021

Note: Excludes non-private dwellings and other private dwellings. Source: ABS (2021) TEND Tenure Type; AJM JV

4.3.3.2 Number of bedrooms per dwelling by density

Figure 4.10 shows the dwelling structures in the Structure Plan Area. Low-density dwellings are largely three bedrooms or more (89% of all low-density).

Medium-density dwellings in the Structure Plan Area are also quite large with almost two-thirds having three bedrooms or more. However, only 8% of high-density dwellings have three or more bedrooms.

The majority (68%) of high-density dwellings have two bedrooms while 24% have one bedroom or are a studio.

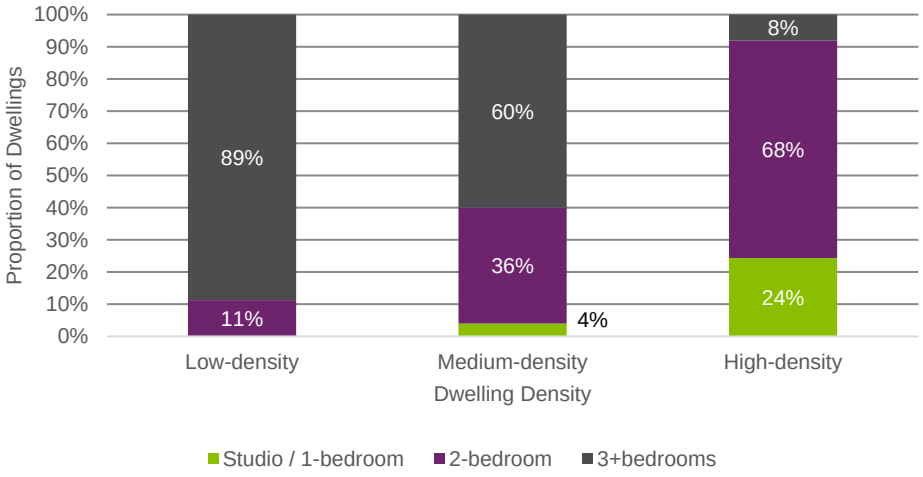


FIGURE 4.10 DWELLING STRUCTURE, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

Note: Excludes non-private dwellings and other private dwellings. Source: ABS (2021) STRD Dwelling Structure & BEDRD Number of Bedrooms in Private Dwelling (ranges); AJM JV

4.3.3.3 Change by dwelling structure

Table 4.7 summarises dwellings by dwelling structure in the Structure Plan Area from 2011 to 2021. Two-bedroom high-density dwellings saw strong growth over the 10 years, equating to an increase of approximately 140 dwellings per year. Alongside this shift to higher-density, there has been a decline in medium-density dwellings and a reduction in low-density two-bedroom dwellings over the five years to 2021.

The low growth in high-density three or more-bedroom dwellings is not aligned with the current family-oriented profile of the Structure Plan Area. Structure planning should seek to encourage more larger dwelling types across each density.

TABLE 4.7 DWELLINGS BY DWELLING STRUCTURE, GLEN WAVERLEY STRUCTURE PLAN, 2011-2021

	HISTORIC (NO.)			HISTORIC GROWTH (PER ANNUM)	
	2011	2016	2021	2011-2016	2016-2021
Low-density					
Studio / 1-bedroom	0	0	0	0	0
2-bedroom	130	240	210	20	-10
3+bedrooms	1230	1560	1650	70	20
Total	**1360**	**1800**	**1860**	**90**	**10**
Medium-density					
Studio / 1-bedroom	10	0	10	0	0
2-bedroom	180	80	90	-30	0
3+bedrooms	400	190	150	-40	-10
Total	**600**	**270**	**250**	**-70**	**-10**
High-density					
Studio / 1-bedroom	0	120	260	30	30
2-bedroom	40	100	750	10	130
3+bedrooms	10	0	90	0	20
Total	**40**	**220**	**1100**	**40**	**180**
Grand total	**2000**	**2290**	**3210**	**60**	**180**

Note: Excludes non-private dwellings and other private dwellings. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: ABS (2021) STRD Dwelling Structure & BEDRD Number of Bedrooms in Private Dwelling (ranges); AJM JV

4.3.4 HOUSING SUITABILITY

4.3.4.1 Housing suitability in the Structure Plan Area

Figure 4.11 shows housing suitability in the Structure Plan Area. It shows the distribution for high, medium and low-density dwellings based on the number of bedrooms identified in the 2021 Census as being surplus to the people living in the house, not enough, or the right amount. The Figure shows a line for each density, while the distance from the centre represents the proportion for that density recorded at each point of the radar.

A reasonable share of dwellings in the Glen Waverley Structure Plan Area were the 'right size' for the occupants – in other words, there were no spare or needed bedrooms.

However, a greater number of dwellings were indicated to have one bedroom more than what was necessary. High-density dwellings were largely right-sized or had one spare bedroom. Medium-density dwellings fell in the middle, and low-density dwellings were less right-sized.

Approximately 30% of low-density dwellings had two spare bedrooms, with more than 16% having at least three spare bedrooms. This suggests an opportunity for some households to downsize from large houses into smaller dwelling formats or for those large houses to be replaced by several more 'right-sized' dwellings to house the future population more efficiently.

Only a small number of households were considered too small for the people living there. However, that does not imply there is no need to increase the number of dwellings with more bedrooms to attract larger households that currently have more limited options, particularly in high-density dwellings.

FIGURE 4.11 HOUSING SUITABILITY, GLEN WAVERLEY STRUCTURE PLAN AREA. 2021

Note: Excludes not applicable responses. Source: ABS (2021) HOSD Housing Suitability; AJM JV

4.3.5 DIVERSE HOUSING TO ADDRESS THE VARIED NEEDS OF THE COMMUNITY

The current supply of diverse housing types providing tailored housing for specific cohorts is discussed below.

4.3.5.1 Social and affordable housing

Table 4.8 shows the change in social and affordable housing in the Glen Waverley Structure Plan Area from 2011 to 2021. Social and affordable housing includes dwellings rented from a state or territory housing authority or a community housing provider.

Only 12 additional social or affordable housing dwellings were constructed in the Structure Plan Area from 2011 to 2021. This is in the context of the wider South East Region and Greater Melbourne, where there was a decrease in social and affordable housing.

TABLE 4.8 SOCIAL AND AFFORDABLE HOUSING*, GLEN WAVERLEY STRUCTURE PLAN AREA, 2011–2021

	HISTORICAL (NO. OF DWELLINGS)			HISTORICAL GROWTH (PER ANNUM)	
	2011	2016	2021	2011-2016	2016-2021
Structure Plan Area	5	9	17	1	2
South East Region	12,000	12,000	12,000	-0.4	-0.6
Greater Melbourne	42,700	42,600	42,300	-24	-66

Note: Only includes dwellings that are rented from State or Territory Housing Authority and community housing providers. Source: ABS (2021, 2016, 2011) Census of Population and Housing; AJM JV

4.3.5.2 Student accommodation

There is no purpose-built student accommodation recorded within the Glen Waverley Structure Plan Area as of May 2024.

4.3.5.3 Retirement living and residential aged care

Table 4.9 shows the retirement and aged care supply in the Glen Waverley Structure Plan Area as of May 2024. A total of 78 retirement units and residential aged care beds were located in the Structure Plan Area, entirely consisting of self-care retirement units.

Australian Unity's Campbell Place Retirement Community is the largest retirement facility in the Structure Plan Area and is located on Carramar Avenue just one minute walk west of the Glen Waverley Railway Station. Campbell Place has a total of 54 independent living units.

TABLE 4.9 RETIREMENT AND AGED CARE SUPPLY, GLEN WAVERLEY STRUCTURE PLAN AREA, MAY 2024

TYPE OF ACCOMMODATION	STRUCTURE PLAN AREA	SOUTH EAST REGION
Independent living retirement units (ILU)	78	13,300
Residential aged care (RAC) beds	0	10,100
Total	**78**	**23,400**

Source: Urbis Retirement and Aged Care database.

4.3.5.4 Diverse housing provision rates

Compared to national or regional benchmarks, the current provision of diverse housing does not appear to align with the current population profile in the Glen Waverley Structure Plan Area.

The analysis of provision rates for the examined diverse housing shown in Table 4.10 highlights that:

- There is a marginally above benchmark supply of retirement living for the 1290 people identified as aged over 65 years in the Glen Waverley Structure Plan Area in 2021 (ABS 2021). There is one retirement unit available for every 16.5 people aged 65 years plus. The comparable Australian provision rate of retirement and aged care facilities is 1 bed for every 19.6 people aged 65

years plus. This is lower than the provision rate in the Glen Waverley Structure Plan Area.

- However, it should be noted that central Glen Waverley is a high amenity area where aged care and retirement living would serve the wider region, particularly given the presence of the existing Glen Waverley Station, the SRL station, nearby hospital facilities and major shopping centres. Because of these reasons, it is reasonable to expect the Structure Plan Area will continue to have a higher provision rate of retirement facilities in future. Aged Care facilities are currently not provided in the Structure Plan Area.
- The amount of affordable housing in the Glen Waverley Structure Plan Area is low, with a provision rate of 1 affordable dwelling per 413 people in the area. The provision rate in Greater Melbourne is 1 dwelling per 116 people. At a high level, this indicates a significant under-provision, although it is important to consider the relative incomes of residents in the area as well. More analysis of the need for affordable housing is provided in Section 9.

TABLE 4.10 DIVERSE HOUSING PROVISION RATES

UNITS	LOCATION	DIVERSE HOUSING UNITS	POPULATION		PROVISION 1 UNIT PER:
Retirement and aged care beds and units		Glen Waverley Structure Plan	78	1290**	16.5 people aged 65+
		Australia	233,400	4,566,200**	19.6 people aged 65+
Affordable housing dwellings		Glen Waverley Structure Plan	17	7110	413 people
		South East Region	12,000	1,600,100	133 people
		Greater Melbourne	42,300	4,917,600	116 people

** Full-time student provision only Urbis Benchmarks ** Population aged over 65 years, *** Student population. N/A Not available*

4.4 Implications for Glen Waverley Structure Plan

The current and changing profile of the population and housing in the Glen Waverley Structure Plan Area highlights the following areas the Structure Plan will need to consider:

- Historical population growth for the Glen Waverley Structure Plan Area has been strong, equating to a 3.4% annual growth rate from 2016 to 2021.
- Key distinguishing features of the Glen Waverley Structure Plan Area population include the following:
  - » High per capita incomes; although, household incomes are lower partly due to smaller household sizes.
  - » A significant share of residents live in high-density dwellings, with relatively few in medium density.
  - » Most households rent their dwelling in line with an increase in high-density dwellings, although relatively few have a mortgage.
  - » A large overseas born population, particularly from China.
- Around 58% of residents moved house from 2016 to 2021, with a significant 23% of all households in 2021 having moved from overseas since 2016. Most domestic movers shifted from nearby areas and were more likely than established residents to be young, renting and living in high-density dwellings. This shows there is an established trend of new residents to the area opting to live in high-density dwellings.
- There has been a large increase in high-density dwellings (around 1060) between 2011 and 2021 in the Glen Waverley Structure Plan Area, demonstrating growing market demand. Most of these high-density dwellings have one to two bedrooms, influenced by the development of high-rise apartment buildings often targeting international buyers and other investors.
- The current housing offer is considered broadly ‘right sized’ for the households living in them, although the low and medium-density housing typically has more bedrooms than needed. This presents opportunities for

downsizers (e.g. older couples with no children left at home) to move to smaller properties. The Structure Plan could look to encourage downsizing by encouraging more housing diversity in the area.

- The current higher-density housing type is skewed towards one-bedroom and two-bedroom dwellings. Going forward, it is important to ensure high-density dwellings are suitable for all parts of the community. This means ensuring there are larger three or more-bedroom homes that meet the needs of families alongside studio / one-bedrooms and two-bedroom apartments that meet the needs of couples and singles.
- There appears to be a relative under-provision of affordable and social housing within the Structure Plan Area. Therefore, more affordable and social housing should be encouraged in the Structure Plan Area.
- The provision of diverse housing options such as retirement living/aged care and accommodation to suit tertiary students is moderate. The amenity offered in Glen Waverley is supportive of larger than average provision of these housing types. The Structure Plan should seek to create opportunities for market delivery of these diverse housing options.

5. Housing costs and affordability

This section considers housing affordability, in terms of the relationship between expenditure on housing (prices, mortgage payments or rents) and household incomes.

5.1 The cost of housing

Safe and affordable housing is essential to wellbeing. Affordability is important for people wanting to purchase housing or rent. This section considers the cost of renting or buying housing and compares it to the incomes of households paying the expected rents and mortgages.

Data relating to sales activity is presented for the suburbs within and surrounding the Structure Plan Area. This includes Glen Waverley, Mount Waverley, Wheelers Hill, Mulgrave, Notting Hill, Burwood East and Vermont South. Although Glen Waverley is the focus, a wider area beyond the Structure Plan Area is considered for this analysis as investors, owner-occupiers and renters will consider areas surrounding their ideal location when deciding where to live. These suburbs, therefore, represent direct competition for dwellings, and their prices will influence prices in the Glen Waverley Structure Plan Area.

Meanwhile, rental and vacancy data is provided for a more specific area that aligns to the Structure Plan area. The rental data primarily relies on the Department of Families, Fairness and Housing (DFFH) Rental Report, which typically aggregates multiple suburbs, making it difficult to separate them individually. The suburb of Glen Waverley is included in the Glen Waverley-Mulgrave DFFH Rental Report area, which also encompasses the suburb of Wheelers Hill. Rental vacancy data is provided for postcode 3150.

For the purposes of this analysis, information is provided for ‘houses’ and ‘units’, with ‘units’ encompassing a mix of semi-detached dwellings, townhouses, and apartments.

5.1.1 PURCHASING A HOME

Figure 5.1 shows the median house and unit prices in Glen Waverley from 2014 to 2023. House prices grew by around 6.5% per annum to reach roughly $1.72 million by 2023. This is almost double the Greater Melbourne median house price. House prices in Greater Melbourne grew by a similar per annum rate of 5.4% per annum over the same period.

The median price for units in Glen Waverley increased by 3.1% per annum between 2014 and 2023 – this is slightly above the growth witnessed across Greater Melbourne over the same period (2.8% per annum). A price premium was also achieved for units in Glen Waverley compared to Greater Melbourne.

Figure 5.2 shows the median house price compared to unit price in Glen Waverley and surrounding suburbs over the year in 2023 compared to Greater Melbourne.

In Glen Waverley, house prices were significantly higher than unit prices, with the median house price of $1.72 million, which is being slightly more than double the median price of units in the suburb ($843,000). Surrounding suburbs that also had significant house price premiums were Notting Hill, Burwood, Vermont South.

Mount Waverley was the only surrounding suburb that has achieved a median price of over $1 million for a unit. This reflects the different nature of units typically in Mount Waverley with more low-rise townhouses and other units, rather than the high-rise apartment buildings in parts of Glen Waverley which can be more affordable.

While house prices are likely out of reach, units offer a more affordable option in Glen Waverley and surrounding suburbs, any new residents coming to the area are anticipated to need to consider higher-density living. The absolute supply needs to increase as the population grows to limit pressure on property prices.

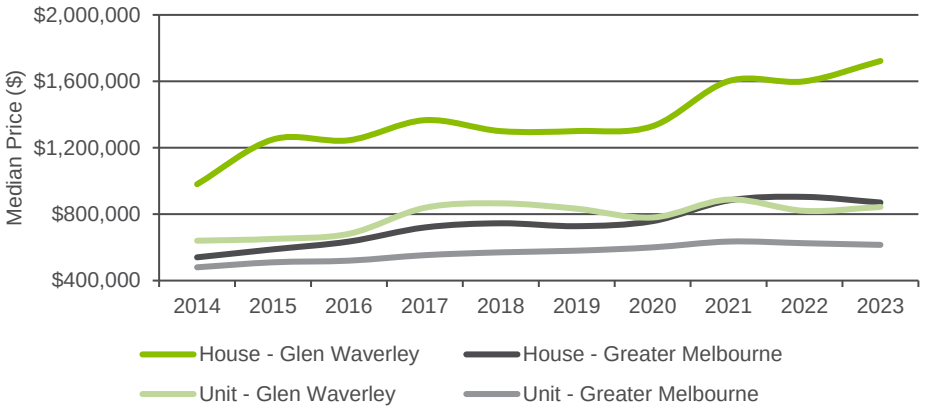


FIGURE 5.1 MEDIAN PRICE – GLEN WAVERLEY COMPARED TO GREATER MELBOURNE, FEBRUARY 2016-DECEMBER 2023

Note: Only includes settled sales. Source: Pricefinder

FIGURE 5.2 MEDIAN PRICE – GLEN WAVERLEY AND SURROUNDING SUBURBS COMPARED TO GREATER MELBOURNE, YEAR TO DECEMBER 2023

Note: Only includes settled sales. Source: Pricefinder

TABLE 5.1 HOUSE MEDIAN PRICE AND GROWTH – GLEN WAVERLEY AND SURROUNDING SUBURBS COMPARED TO GREATER MELBOURNE, YEAR TO DECEMBER 2023

SUBURB	HOUSE PRICE GROWTH			
	MEDIAN HOUSE PRICE	1 YEAR	3 YEAR P.A	10 YEAR P.A
Glen Waverley	$1,723,000	7.7%	5.8%	6.5%
Mount Waverley	$1,648,000	7.7%	4.5%	6.3%
Wheelers Hill	$1,509,000	4.1%	6.1%	7.3%
Vermont South	$1,500,000	5.7%	5.5%	7.0%
Burwood East	$1,281,000	1.9%	5.0%	5.7%
Notting Hill	$1,095,000	1.4%	4.0%	6.0%
Mulgrave	$1,040,000	4.0%	3.9%	5.9%
Greater Melbourne	*$870,000*	*-3.8%*	*3.2%*	*5.4%*

Note: Only includes settled sales. Source: Pricefinder

TABLE 5.2 UNIT MEDIAN PRICE AND GROWTH – GLEN WAVERLEY AND SURROUNDING SUBURBS COMPARED TO GREATER MELBOURNE, YEAR TO DECEMBER 2023

SUBURB	HOUSE PRICE GROWTH			
	MEDIAN UNIT PRICE	1 YEAR	3 YEAR P.A	10 YEAR P.A
Glen Waverley	$843,000	2.8%	-0.5%	3.1%
Mount Waverley	$1,085,000	2.4%	4.4%	5.3%
Wheelers Hill	$973,000	12.8%	2.8%	6.5%
Vermont South	$723,000	-22.7%	-1.5%	2.1%
Burwood East	$625,000	-1.7%	2.2%	2.1%
Notting Hill	$390,000	-6.0%	3.4%	-0.5%
Mulgrave	$766,000	-3.3%	0.4%	5.2%
Greater Melbourne	*$615,000*	*-1.6%*	*1.5%*	*2.8%*

Note: Only includes settled sales. Source: Pricefinder

5.1.2 COST OF RENTAL ACCOMMODATION

Figure 5.3 shows the median weekly rents for houses and units in Glen Waverley-Mulgrave compared with Greater Melbourne from 2011 to 2023.Table 5.3 shows the median rental growth in Glen Waverley-Mulgrave over the year to December 2023.

The cost of house and unit rental has increased significantly following the COVID-19 pandemic. House rentals in Glen Waverley-Mulgrave grew 15.4% over the year to December 2023 to $614 per week. Unit rents increased by 15.3 % to reach $557 per week.

For Greater Melbourne, there has been a similar trend in strong rental growth for houses and units. Over the year to December 2023, house rental growth was 10.9%, and unit rental growth was 19.8%.

Interestingly, unit rental growth was significantly higher in Greater Melbourne, while house rental growth was less pronounced compared to Glen Waverley-Mulgrave. This suggests stronger overall demand for units, primarily because they are concentrated in the inner city and high-amenity, high-demand areas. Whereas, houses remain the preferred dwelling type in the suburbs, demonstrated by the stronger per annum growth at 4% points higher and the median weekly rent premium for houses in Glen Waverley-Mulgrave of $55 per week.

Longer-term growth in units and houses in Glen Waverley-Mulgrave has been relatively in line with Greater Melbourne, with growth from December 2013 to December 2023 of 3.8% per annum for houses and 3.5% for units.

With house prices and rents having risen faster than wages, affordability has decreased in many areas. This will likely drive demand for higher-density where rental and mortgages are at a discount to lower-density dwellings.

The supply of a large number and diversity of housing stock in the Structure Plan Area will be required to ensure sustainable rental growth that maintains affordability.

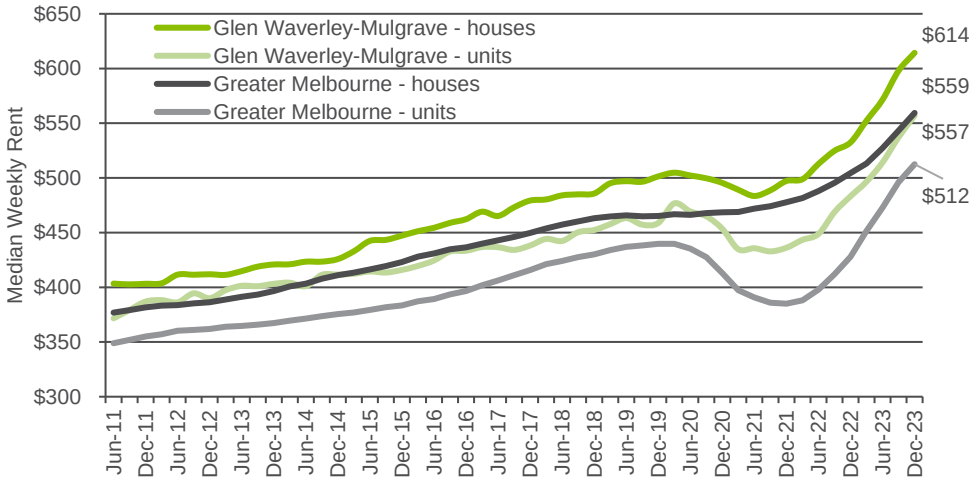


FIGURE 5.3 MEDIAN WEEKLY RENTS – HOUSES AND UNITS, GLEN WAVERLEY-MULGRAVE AND GREATER MELBOURNE, 2011–2023

Note: Glen Waverley-Mulgrave data includes the suburbs of Glen Waverley, Mulgrave and Wheelers Hill.
Source: Department of Health and Human Services

TABLE 5.3 MEDIAN RENTAL GROWTH, GLEN WAVERLEY-MULGRAVE COMPARED TO GREATER MELBOURNE, TO DECEMBER 2023

	HOUSE		UNIT	
	GLEN WAVERLEY-MULGRAVE	GREATER MELBOURNE	GLEN WAVERLEY-MULGRAVE	GREATER MELBOURNE
Median weekly rent	$614	$559	$557	$512
1 year	15.4%	10.9%	15.3%	19.8%
3 year p.a	4.8%	3.8%	4.2%	3.6%
10 year p.a	4.1%	3.8%	3.6%	3.5%

Note: Glen Waverley-Mulgrave data includes the suburbs of Glen Waverley, Mulgrave and Wheelers Hill.
Source: Department of Health and Human Services

5.1.3 VACANCY RATE

Figure 5.4 shows the average annual rental dwellings vacancy rate in Glen Waverley (postcode 3150) compared with Greater Melbourne from 2005 to 2024.

Glen Waverley has generally followed a trend similar to Greater Melbourne, albeit vacancy rates have generally sat below those of Greater Melbourne.

Vacancy rates remained around 2% between 2005 and 2017, hitting a low of 1.7% in 2017. They then trended upwards during the COVID period, reaching 3.6% in 2021. Since 2021, vacancy rates have dropped to around 1%, indicating a very tight market.

A vacancy rate of 3% is generally considered equilibrium (where supply equals demand). When vacancy is below this equilibrium, supply is limited and does not meet demand. This leads to increasing pressure on rents, as seen in the last year.

Looking forward, the extended low vacancy rates in Glen Waverley postcode highlights the lack of available supply relative to demand. With strong population growth expected in the Glen Waverley Structure Plan Area, there will be a need for it to support the delivery of a significant increase in the number of dwellings so that supply keeps pace with demand. The scale of dwelling increase needed is discussed in later sections of this report.

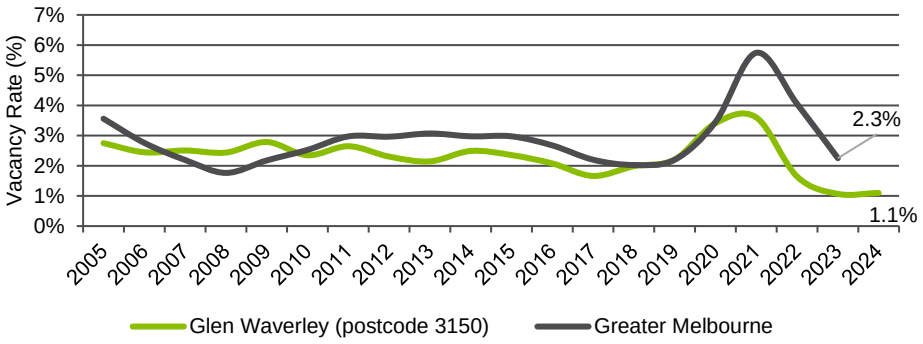


FIGURE 5.4 AVERAGE ANNUAL RENTAL DWELLING VACANCY RATE, GLEN WAVERLEY (POSTCODE 3150), GREATER MELBOURNE, 2005–2024

Note: Glen Waverley includes the postcodes of 3150. Annual except 2024, which represents the March quarter.
Source: SQM Research; REIA

5.2 Housing affordability

Assessing housing affordability is not straightforward. Various factors influence affordability such as a household's financial status, the overall market demand for housing, and housing tenure (whether one is seeking to rent, is renting, is looking to buy, or is already a homeowner with or without a mortgage), as noted by the Senate Standing Committees on Economics in 2015.[34]

The simplest measure of housing affordability compares housing costs to gross household income, where housing stress is defined as households spending over 30% of their income on housing costs.

However, this overlooks the possibility that high-income households may choose to spend more than 30% of their household income on housing, and their higher income means they have sufficient income after housing costs to avoid financial stress.

In contrast, low-income households (within the bottom 40% of the household income distribution) are more susceptible to financial hardships resulting from significant life events or shifts in the housing market.

Housing stress among low-income households is therefore examined here. Table 5.4 compares housing affordability for households in the Structure Plan Area to the Greater Melbourne average.

In the Glen Waverley Structure Plan Area, households under rental and mortgage stress (i.e. low-income households paying more than 30% of income on rent or mortgage payments) are a higher proportion of all households compared to Greater Melbourne. The total level of housing stress at 18% of households in the relevant suburbs is above the Melbourne average of 13%. This variance if primarily due to the higher share of renters, more of whom are in rental stress.

While interest rates have likely stabilised and rental and house price growth slowing, income growth is also slowing. This will likely mean the continuation of a degree of mortgage and rental stress in many locations in the South East Region, including the Glen Waverley area, over the short- to medium-term.

If the Structure Plan Area can provide for a large number of new dwellings this would help curtail dwelling price growth and reduce the share of households in housing stress.

TABLE 5.4 PROPORTION OF ALL HOUSEHOLDS IN MORTGAGE AND RENTAL STRESS, GLEN WAVERLEY AND GREATER MELBOURNE, 2021

	STRUCTURE PLAN AREA	GREATER MELBOURNE
Low-income households as a share of all households	46%	40%
Share of all households in rental stress (low income and rent >30% of income)	14%	9%
Share of all households in mortgage stress (low income and mortgage payments >30% of income)	5%	4%
Share of all households in housing stress	**18%**	**13%**

Note: Percentages are calculated as a portion of total households in the locations. Source: ABS; AJM JV

Figure 5.5 *Proportion of households in Mortgage stress By Suburb,* ***2021***

Source: *ABS (2021) MAID Mortgage Affordability Indicator; AJM JV*

Figure 5.5 on the next page show how housing stress differs by location and among housing tenure types (e.g. homeowners with a mortgage and renters) at suburb level across Melbourne. The maps show the share of total households in housing stress.

[34] Senate Standing Committees on Economics (2015), Out of reach? The Australian housing affordability challenge (aph.gov.au), May 2015

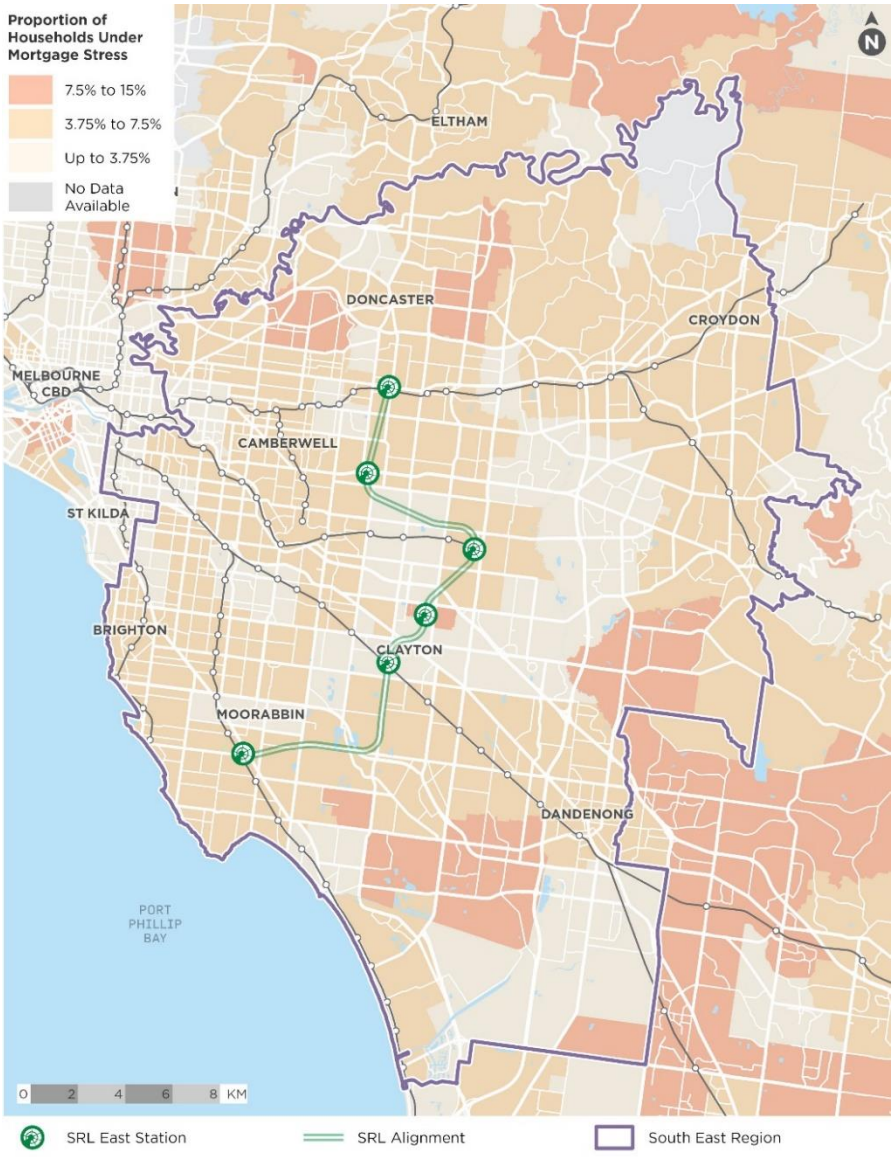


FIGURE 5.5 PROPORTION OF HOUSEHOLDS IN MORTGAGE STRESS BY SUBURB, 2021

Source: ABS (2021) MAID Mortgage Affordability Indicator; AJM JV

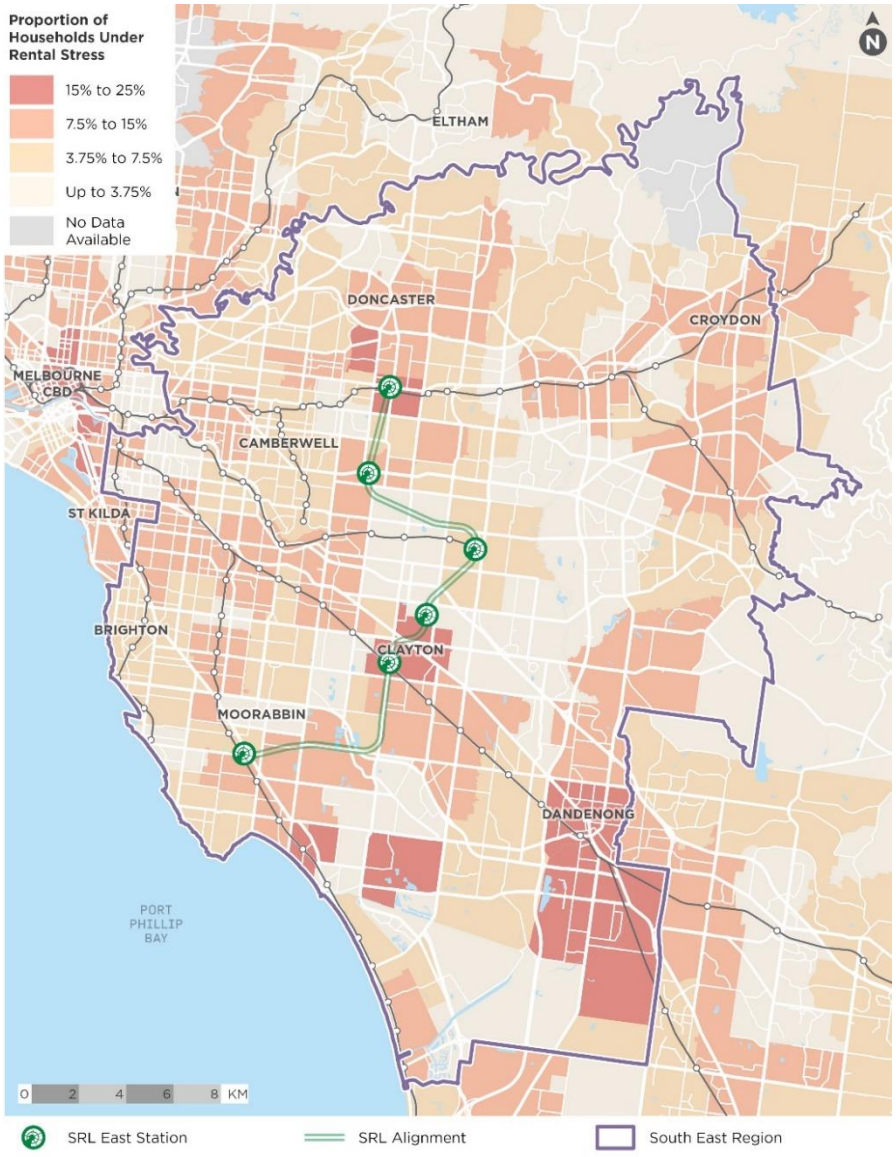


FIGURE 5.6 PROPORTION OF HOUSEHOLDS IN RENTAL STRESS BY SUBURB, 2021

Source: ABS (2021) RAID Rent Affordability Indicator; AJM JV

5.3 Implications for Glen Waverley Structure Plan Area

The analysis of housing costs and affordability in the Glen Waverley Structure Plan Area highlights the following affordability challenges and opportunities:

- Houses in Glen Waverley and the surrounding areas are generally priced well above the Greater Melbourne median, making them unaffordable for many residents. Units (including apartments and townhouses) are a more affordable option which can be a factor in supporting a continued shift to higher-density living.
- Housing stress, and particularly rental stress, is greater than across the whole of Greater Melbourne. If prices keep rising, affordability and, therefore, housing stress could worsen.
- Dedicated affordable housing supply should be considered to support those on very low and low incomes to manage housing stress. The delivery of more affordable purchaser products for moderate income residents is also important to manage upward pressure on prices and rentals. Apartments are likely important in achieving this.
- The delivery of more diverse housing product will provide increased opportunities for low to moderate incomes to purchase or rent more affordable dwellings, as well as for a broad range of demographic groups (e.g. renters and buyers, lower and higher income, different family types).
- Facilitating greater housing density in the Structure Plan Area could support growth in supply and provide greater diversity of product. This has already occurred with new apartment developments concentrated within the central core, although greater housing density is also likely needed elsewhere in the Glen Waverley Structure Plan Area.

6. Housing delivery trends in the Structure Plan Area

The section considers housing development trends in the Glen Waverley Structure Plan Area, including new dwelling approvals and recent completions.

6.1 New dwelling approvals

Figure 6.1 shows new dwelling approvals by type for the Glen Waverley Structure Plan Area from FY2017 to FY2023. Since FY2017, a total of 950 other residential dwellings (apartments, units and townhouses) were approved in the Glen Waverley Structure Plan Area. Activity in new dwellings varied significantly from a high of 572 approvals in FY2019 to a low of only 31 in the following year. Dwelling approvals have stayed low since FY 2020, with FY2023 recording only 44 new dwelling approvals.

Looking at the breakdown of new dwellings by type, other residential dwellings dominated activity from FY2018 to FY2029, accounting for 96% of all approvals over the period.

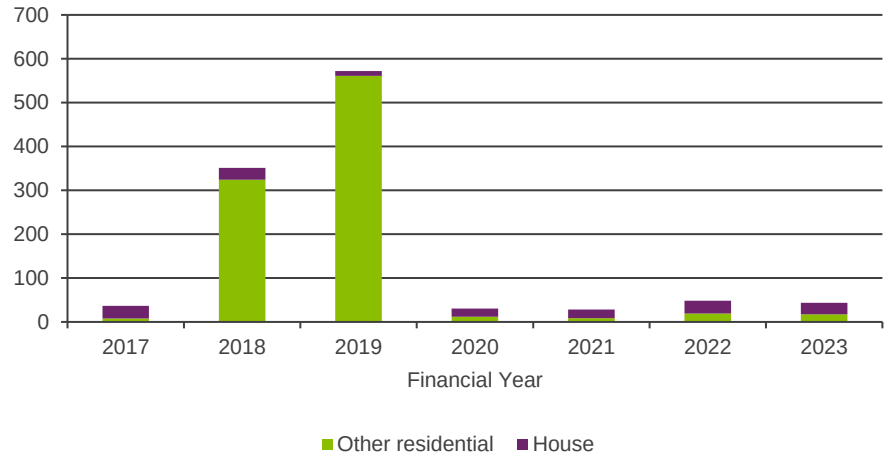


FIGURE 6.1 NEW DWELLING APPROVALS BY TYPE, GLEN WAVERLEY STRUCTURE PLAN AREA, 2016/17–2022/23

Note: Other Residential includes apartments, semi-detached dwellings, and townhouses. Source: AJM JV; ABS

6.2 Private dwelling future supply

Figure 6.2 and Figure 6.3 show the supply pipeline of new dwellings in the Glen Waverley Structure Plan Area by approval stage and estimated completion date.

The breakdown of new apartments and townhouses in the proposed pipeline is sourced from Cordell Connect which records all multi-dwelling proposals including those in early planning, in applications with councils, approved permits and under construction. This data shows units / apartments dominate the development pipeline in the Glen Waverley Structure Plan Area over the short to medium term, accounting for 310 dwellings or 90% of the development pipeline. There is relatively small number of townhouses in the pipeline too (35 dwellings) as well as two other residential dwellings.

It is noted that data from Cordell Connect does not include single dwelling proposals, so there will likely be a small amount of single dwellings that will be a minor share of housing development. Single dwellings are likely to only replace

existing houses, and so the net change, as has been seen over the last decade in the Structure Plan Area, will be minimal.

The vast majority of apartments in the pipeline are in the approval stage. However, due to impending changes to planning controls and other market conditions, these developments might not proceed in their current form. Nonetheless, this indicates that the market is already open to high-density housing in the Structure Plan Area.

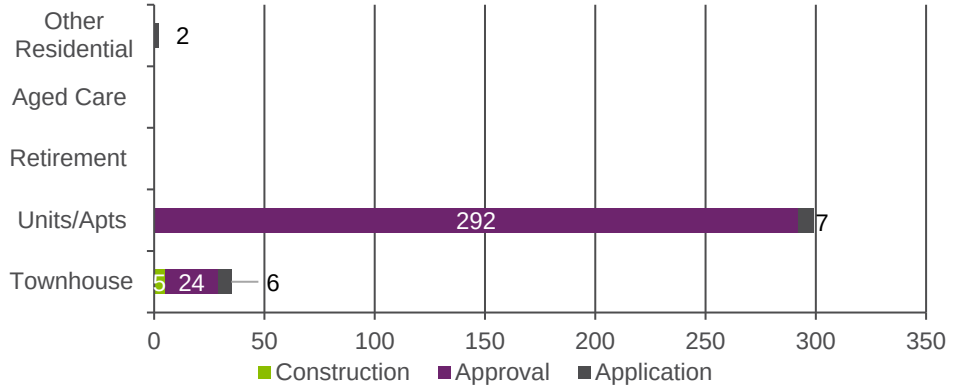


FIGURE 6.2 NEW DWELLINGS SUPPLY BY STATUS, GLEN WAVERLEY STRUCTURE PLAN AREA 2024–2028

Note: Student Accommodation is included in Other Residential. This data represents development projects currently in the planning application, planning approval or construction stage Source: Cordell Connect (May 2024)

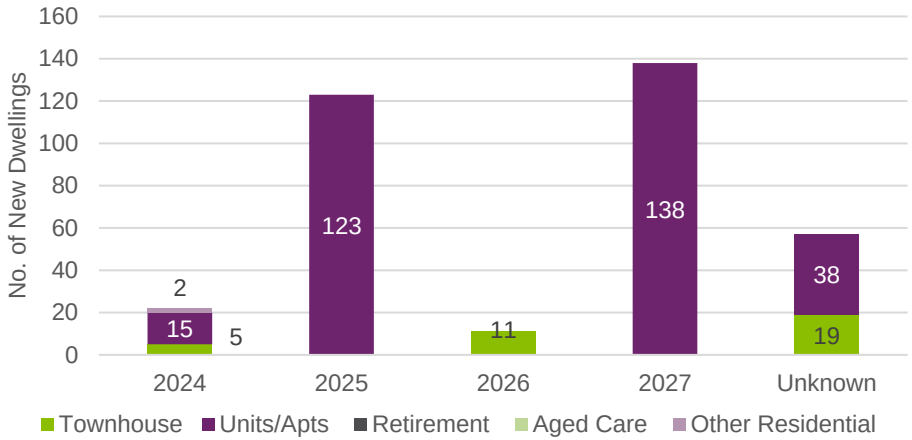


FIGURE 6.3 NEW DWELLINGS SUPPLY BY COMPLETION DATE, GLEN WAVERLEY STRUCTURE PLAN AREA 2024–2028

Note: Student Accommodation is included in Other Residential. Source: Cordell Connect (May 2024)

6.3 Recent and proposed development

Recent and proposed housing development in the Glen Waverley Precinct includes Sky Garden by Golden Age Group as well as mixed-use buildings (residential with retail in the podium). Sky Garden is Australia's largest air-rights development (agreement for another party to develop the vertical space above the property) and is located at the southern end of The Glen Shopping Centre.

Table 6.1 summarises key projects delivered and proposed in the Structure Plan Area.

Although just outside the Structure Plan Area, the social housing project currently under construction on High Street Road, Mount Waverley is included as it demonstrates the possible kinds of social housing projects that could be developed in the Structure Plan Area.

TABLE 6.1 RECENT AND PROPOSED RESIDENTIAL DEVELOPMENTS, GLEN WAVERLEY STRUCTURE PLAN AREA

SKY GARDEN **227-235 SPRINGVALE RD, GLEN WAVERLEY** 	• The project comprises 555 apartments across three buildings, including 127 x 1-bedroom, 371 x 2-bedroom and 57 x 3-bedroom. • The development includes a range of amenities appealing to various household types including families, offering a 4,000 sq.m outdoor podium garden (including vegetable gardens, a designated children's playground and outdoor fitness areas) as well a gym, an indoor pool, steam room, mah-jong room, library and private function rooms. • Development stage: Complete (2020).
HIGH STREET MUSE **718-724 HIGH STREET ROAD, GLEN WAVERLEY** 	• 5-storey development including ~66 apartments located on the southern side of High Street Road. • Apartment mix: 45 x 2-bed, 17 x 3-bed and 4 x 4-bed. • Development stage: Development approval • Expected Completion: Late 2025.
SPRINGVALE ROAD MIXED USE DEVELOPMENT **251-261 SPRINGVALE ROAD, GLEN WAVERLEY** 	• Mixed-use development just south of The Glen including 138 apartments and a three-level retail podium with 1,800 sq.m GFA of retail space. • Apartment mix: 1 x 1-bed, 120 x 2-bed and 17 x 3-bed. • Development stage: Development approval • Expected completion: Mid 2027.
554-558 HIGH STREET ROAD, MOUNT WAVERLEY 	• Dedicated social housing project at old Syndal Swim Centre site comprising 96 apartments over 7-storeys. • For seniors, particularly women, aged 55 years or over on the social housing waitlist. • Development stage: Under construction • Expected completion: 2024.

Source: Cordell Connect; AJM JV

Figure 6.4 maps the location and scale of apartment development projects completed since 2014, or now under construction or approved. This shows the clustering of recent development in the Glen Waverley core. There are a small number of apartment projects currently approved.

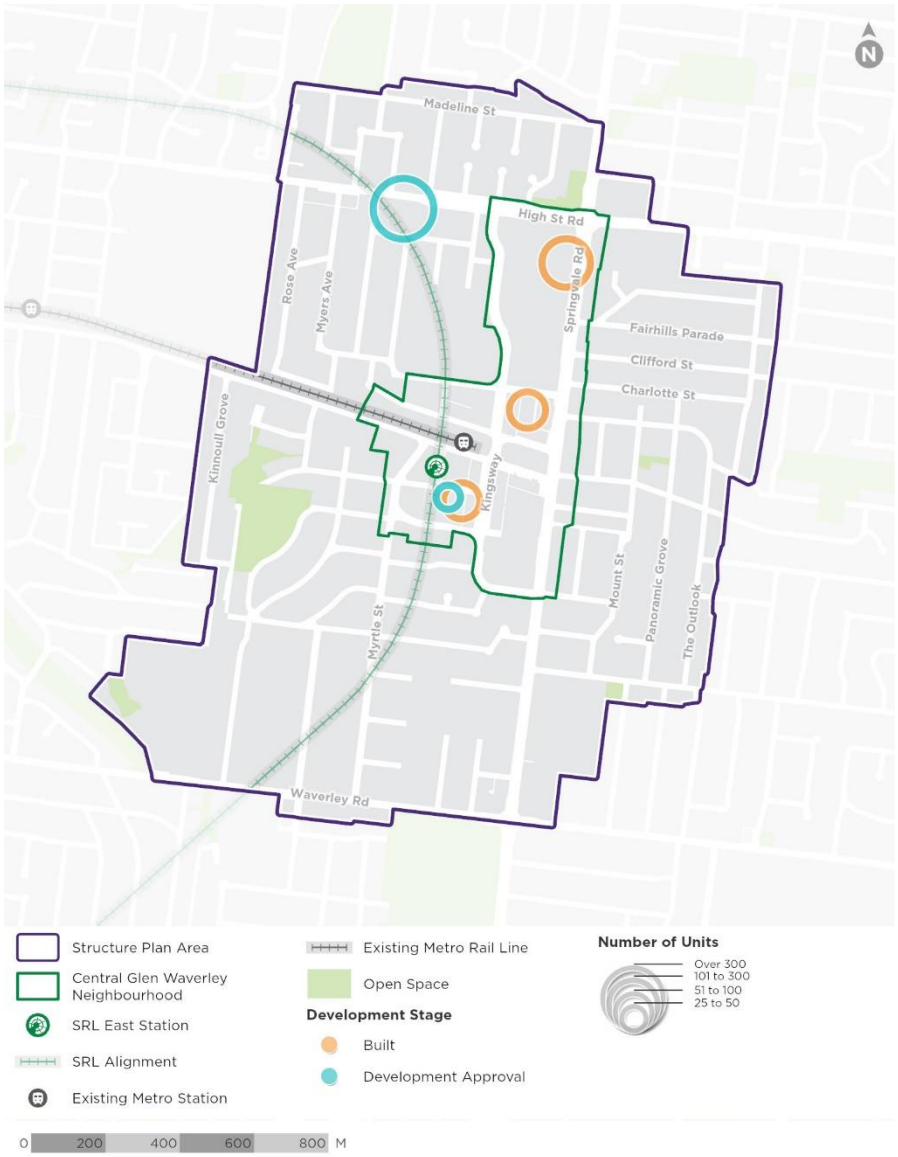


FIGURE 6.4 STATUS OF PROJECTS RECEIVING APPROVAL 2014-2024, GLEN WAVERLEY STRUCTURE PLAN AREA

Note: Includes apartment developments with 25 apartments or more. Source: Urbis Apartment Essentials

6.4 Apartment stock

In addition to the quantum and density of housing being delivered in the Structure Plan Area, it is important to understand the typical size and nature of the dwellings.

Table 6.2 shows data analysed from Urbis Apartment Essentials, which records details of off-the-plan apartment projects. In the Glen Waverley Structure Plan Area, the data shows that recently two-bed, two-bath apartments are the dominant typology in the Glen Waverley Structure Plan Area, with an average size of just over 70 sq.m.

TABLE 6.2 APARTMENTS AVERAGE SIZE BY BEDROOMS, GLEN WAVERLEY STRUCTURE PLAN AREA

	APARTMENTS	AVERAGE SIZE (SQ.M)
Galleria	**267**	**67**
1Bed + 1Bath + 1Car	39	50
2Bed + 1Bath	52	62
2Bed + 2Bath	176	73
Sky Garden	**555**	
1Bed + 1Bath + 1Car	127	-
2Bed + 1Bath	51	-
2Bed + 2Bath	320	-
3Bed + 2Bath	57	-
The Kingsley	**41**	**79**
2Bed + 1Bath	10	67
2Bed + 2Bath	25	72
Penthouse	6	133

Note: The housing requirements modelling presented in section 8 uses internal area benchmarks to estimate total residential floorspace. Benchmarks used in section 8 are not the same as those in Table 6.2 and are based on internal area benchmarks for all of suburban Melbourne. Source: Urbis Apartment Essentials

6.5 Future supply of housing to meet diverse community needs

6.5.1 AFFORDABLE, SOCIAL AND KEY WORKER HOUSING

In terms of future supply, it is difficult to accurately predict who the future tenants are likely to be, even when the developers are focusing on particular community needs.

In terms of planned affordable, social, disability, and key worker housing, there are no projects within the Glen Waverley Structure Plan Area.

However, just outside of the Structure Plan Area, there is a dedicated social housing project for people aged over 55 years currently under construction at 554-558 High Street Road, Mount Waverley.

It is difficult to determine the future supply pipeline for key worker housing as there is significant overlap between social and affordable housing (as key workers can be accommodated in these housing types).

6.5.2 STUDENT ACCOMMODATION

There are no student accommodation units currently in the supply pipeline for the Glen Waverley Structure Plan Area according to Cordell Connect.

6.5.3 RETIREMENT LIVING AND RESIDENTIAL AGED CARE

There are no retirement and aged care facilities in the pipeline within the Structure Plan Area. Across the South East Region, there is proposed supply of a further 2400 retirement units and over 3400 residential aged care beds.

TABLE 6.3 RETIREMENT AND AGED CARE FUTURE SUPPLY PIPELINE

TYPE OF ACCOMMODATION	STRUCTURE PLAN AREA	SOUTH EAST REGION
Retirement units	0	2400
Residential aged care beds	0	3400
Total yield	**0**	**5800**

Source: Urbis Retirement and Aged Care Database (May 2024)

6.6 Implications for Glen Waverley Structure Plan Area

The analysis in this section highlights the following considerations for the Glen Waverley Structure Plan:

- The housing delivery trends in the Glen Waverley Structure Plan Area indicate market sentiment and momentum are tracking in the right direction to meet future needs of the projected population.
- The future supply pipeline is dominated by apartments. However, most of these developments are currently in the approval stage. Impending changes to planning controls and a slower market may mean they do not proceed in their proposed form. Nonetheless, this demonstrates clear market interest in high-density development.
- Large projects recently delivered and proposed in and around the core of the Structure Plan Area indicate the market already exits to deliver continued growth in dwellings in the Structure Plan Area. Some of the proposed residential towers (e.g. Springvale Road Mixed-use development) are set to deliver over 100 dwellings.
- Development to date has been concentrated in the core of the Structure Plan Area. Structure planning could support and encourage further development across a wider area to reduce the reliance on the core (noting employment growth will also need to be concentrated here) and to improve the diversity of housing options. Aside from main road frontages, existing low-density residential areas are not seeing material levels of new dwelling development.
- Recent developments largely comprise one- and two-bedroom apartments. However, the provision of three or more-bedroom apartments will need to support a diverse resident profile in Glen Waverley.
- There is a limited pipeline of diverse accommodation for specific groups such as social and affordable housing, key worker housing, student accommodation or aged care/retirement living. While developers will respond to the demand for some of those housing needs, intervention is likely to be necessary in others, particularly the provision of social and affordable housing.

Part C: Future housing need

Part C includes:

- **Section 7** summarises the methodology used for modelling future housing requirements in the Structure Plan Area.
- **Section 8** forecasts population growth housing demand in the Structure Plan Area.
- **Section 9** assesses future demand for diverse housing which is tailored to specific community needs including social, affordable and key worker housing, as well as student accommodation and aged care and retirement living.

7. Housing requirement methodology

This section summarises the methodology and modelling used to assess the amount and structure of housing required to support the projected population growth in the Structure Plan Area. Structure refers to the density (high, medium, low) and bedroom number of a dwelling.

7.1 Methodology

The housing requirements methodology uses modelling of population projections for the Structure Plan Area to estimate the residential dwellings and residential floorspace required to accommodate that population.

The modelling uses 2021 Census data to determine the existing number of dwellings in 2021 and population projections derived from the SRL Business and Investment Case to forecast out to 2041. These projections are described in Appendix E.

It is important to note that since the population projections include all long-term residents, the housing requirements assessment allocates all long-term residents to a dwelling structure (i.e., high / medium / low-density by bedroom number).

Note the dwellings and floorspace modelled are general and do not imply that a specific form of accommodation is required. For example, the amount of high-density two-bedroom units required could be provided as standard residential apartments or a type of diverse accommodation such as student accommodation. Similarly, the number of low-density units could be satisfied by standard low-density housing or partially through retirement villages. While the specific form of accommodation (i.e., standard residential, retirement, key worker housing etc) depends upon many factors, the dwelling structure numbers modelled (i.e., proportion of 1 bedroom high-density required) will be similar across specific accommodation types.

The dwellings (and floor space) are also ‘sector blind’ which means they could represent private or government-provided accommodation.

Lastly the 2021 dwelling numbers include all private dwellings, including those occupied and unoccupied. The 2041 dwelling estimates are calculated to accommodate the projected population, with a factor added to account for vacant stock making them directly comparable to the 2021 dwelling estimates. The 2041 dwelling estimates are calculated from population estimates and do not initially include vacant stock. Therefore, a vacancy factor is incorporated to account for vacant stock that is important to a functioning residential market.

Figure 7.1 details the methodology for assessing housing requirements, which is explained more below and in Appendix E. The lettering corresponds with the full explanation provided in the Appendix.

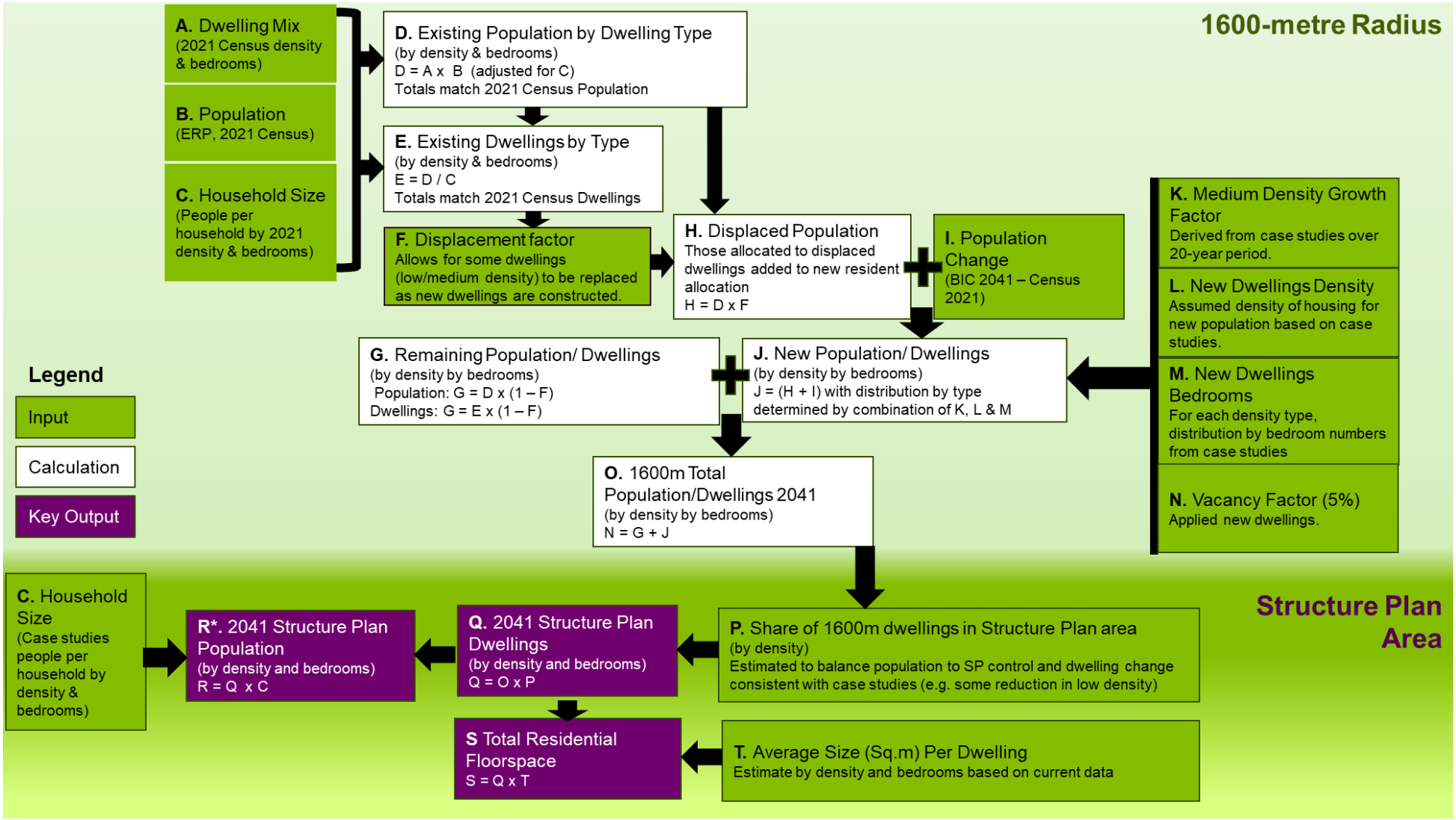


FIGURE 7.1 HIGH-LEVEL METHODOLOGY FOR ASSESSING HOUSING REQUIREMENTS

Source: AJM JV

7.1.1 DRAWING ON HOUSING DEVELOPMENT TRENDS IN CASE STUDY AREAS

The evolution of prominent transportation hubs in Australia over the past two decades offers valuable insights into the SRL East Structure Plan Areas and serves as a basis for understanding the housing requirements of transit-oriented precincts (TOPs). Areas with both new and established train stations have typically seen an increase in housing density, with medium- and high-density residences becoming more prevalent in numerous precincts.

The dynamics of these precincts was explored for this assessment, with in-depth analyses of several case study precincts, with the results used as an evidence base for the housing requirements modelling for the Structure Plan Area. The case studies are primarily used to inform the likely mix of housing that will emerge.

At a high level, the model is balancing between the old (the existing dwelling mix) and the new (evidence from chosen TOPs) to deliver a realistic outcome for the Structure Plan Area. This accounts for the fact that while some existing dwellings will be replaced by new construction, a large share of the existing housing will still be in place in 2041 (the period of assessment).

Rather than relying on arbitrary estimations of equivalent 'structure plan' boundaries in the case study areas, a radius of 1600 metres from each case study train station (or equivalent) was used. This method maintains consistency in benchmarking across all precincts.

For each Structure Plan Area, the three most comparable case studies were chosen, considering factors such as population density, demographics of residents, proximity to hospitals or universities where relevant, and distance from the CBD. The case studies are selected using a ‘similarity search score’ that ranks the locations relative to the subject SRL location for each of the factors.

Case studies were selected from Sydney, Brisbane and Canberra. Melbourne examples were considered but ultimately not included for a few reasons.

Firstly, the case study approach requires consideration of a period of 20 years of housing growth from 2001 to 2021, to compare to the 20 years for assessment of the SRL East Structure Plan Areas from 2021 to 2041. In Melbourne, there are few examples of suburban locations that experienced significant high density residential development in the 20 years prior to 2021 comparable to what may be experienced around the SRL stations to 2041. With the possible exception of Box Hill, the suburbs in Melbourne where growth has been observed are largely inner suburbs such as Richmond, South Yarra or Footscray. Distance from the CBD is a factor in the case study selection process which reduced the relevance of inner city locations.

Due to a combination of different levels of amenity, context market activity and demographics among other reasons, these locations are seen as not being appropriate to draw conclusions for the middle suburban SRL locations. Consequently, most of the case studies which rate as most similar to the SRL situation are middle suburban locations in Sydney. Sydney is more advanced in its delivery of density beyond the central areas, with more evidence of change over the last 20 years.

Secondly, each urban precinct is unique, fulfilling a specific role within a city. For example, the unique characteristics that Parramatta brings to Sydney (secondary CBD and office market, providing a hub for the outer western suburbs) mean that few if any other precinct within Sydney can fulfill this role. Case studies in Melbourne were not selected as they would be serving distinct roles to the subject SRL precinct.

Considering the housing requirement projections are somewhat sensitive to the case studies selected, a weighted average approach was utilised to minimise this sensitivity and to ensure the Structure Plan Area is being compared to a wider variety of urban precincts.

It should also be noted that the selection of case studies, although providing important data points to consider the likely change in the areas around the SRL stations (e.g. share of dwellings by density and bedroom numbers, change in growth of low/medium density dwellings, average household size), are not entirely determinative of the results. Other case studies could reasonably be selected in each situation, but with the weightings applied and the data being used as a reference only, the final results would not differ greatly. The key determinant of the housing need is the population forecast in each Structure Plan (which in turn broadly determines the number of dwellings), with the case studies helping to inform the housing mix required for that given population.

The case study analysis offers insights into the potential housing landscape within the 1600-metre radius of the SRL station. However, it is important to note that the

Structure Plan Area is smaller, so to derive estimates for it the estimated 1600-metre housing mix (by dwelling density and bedroom number) needed to be allocated to the Structure Plan Area. This considers the current distribution and likely change in low-, medium-, and high-density dwellings in the Structure Plan Area.

The results of the case study selection process for the Structure Plan Area are shown below in Section 7.2, with more detail on the methodology provided in Appendix D.

7.1.2 DERIVING ESTIMATES FOR THE STRUCTURE PLAN AREA

Once case studies were selected, the methodology for determining the number and structure of dwellings and associated residential floor space needed to support the projected population in the Structure Plan Area was modelled using insights from the case studies.

The methodology is outlined briefly below, with a more comprehensive description provided in Appendices C and D. Note that steps 1 to 4 are completed for a 1600-metre radius from the SRL station at Glen Waverley, whereas steps 5 and 6 are for the Structure Plan Area. Also note the methodology below explains how estimates of the 2041 housing requirements are attained. Estimates for existing dwellings in 2021 are based on 2021 census data.

1) For the **population residing in existing dwellings**, all key housing estimates are sourced from the 2021 Census for a 1600-metre radius from the SRL station at Glen Waverley. This data is used to allocate the 2021 population into dwelling types based on density (high / medium / low) and by number of bedrooms for each density.
2) Recognising that some of the future (2041) dwellings will be those that exist now, **the future population living in existing and new dwellings is analysed. This requires using a 'displacement factor'**, which reflects the share of existing dwellings that will be removed to allow the construction of new dwellings. The number of displaced dwellings is outlined in Appendix E.
3) The displaced population is added to the change in projected population to produce the **total population needing to be accommodated in new dwellings**. The dwelling requirements for this population are derived from a series of inputs derived from the case studies, including the proportion of residents by the density and bedroom number of their dwelling.
4) The population in new dwellings is added to the population in remaining existing dwellings **to calculate the total population in the 1600-metre radius from the SRL station and dwelling (by type) estimates for 2041**. The dwelling estimates include a vacancy allowance (+5%), noting there will be additional dwellings on top of those accommodating the projected population that are vacant at a point in time. These results are cross-checked against the growth in dwelling structure in the case studies.
5) **Dwellings in the 1600-metre radius area are distributed to the Structure Plan Area.** This distribution is achieved by applying proportions of each typology that is within the Structure Plan Area. These proportions are based on a qualitative assessment which includes consideration of existing housing, available developable land in the Structure Plan Area and growth trends in the selected case studies. The distribution also considers what is feasible given the existing dwelling stock, as there is a limit on how much housing can be displaced before 2041. It is ensured that the derived result from the above matches the forecast population for the Structure Plan Area by adjusting these proportions (and the household sizes).
6) By applying household size to dwellings (people per household derived from the case study estimates), average internal area (sq.m) and Gross Building Area (GBA) **the total dwelling numbers by dwelling structure can be estimated, as well as population by dwelling structure, and total residential floorspace needed in the Structure Plan Area.**

7.1.3 PEER REVIEW

This technical report has been independently peer reviewed by Julian Szfraniec of SGS. The peer review report is attached as Appendix G of this report, which sets out the peer reviewer's opinion on the Housing Needs Assessment.

7.2 Selected case studies for Glen Waverley

This sub-section discusses the case studies referenced above. Based on a similarity search and ranking exercise of urban precincts outside inner-city areas in Australia, the case studies were used to derive key housing parameters for a 1600-metre radius from the SRL East station at Glen Waverley:

- Epping (NSW) – weight of 0.5
- Burwood (NSW) – weight of 0.3
- Auburn – weight of 0.2.

The case studies have some of the most similar population densities among the candidate precincts, smaller scale office markets, a similar demographic profile (including Asian-born population). Lidcombe station was not chosen as a case study because its 1600-metre radius overlaps with Auburn. Burwood (NSW) was chosen due to the above-mentioned similarities, as well as the nature of the activity centre based around a major retail asset. Although its ranking score was lower, it was not much different to other higher ranked locations. The locations was seen as a good representation of the situation in Glen Waverley and therefore included.

A weighted approach was used to ensure a diversity of relevant urban precincts were incorporated into the modelling, and to allow for the most relevant case studies to have a higher influence on modelled results. A weighting of 0.5 was assigned to the most comparable precinct with weightings of 0.3 and 0.2 assigned to the 2nd and 3rd most comparable precincts selected.

Due to the similarity between the 1600m area around the SRL station and the selected case studies, the growth rates achieved within the selected case studies are compared with the modelled projections for the 1600m area. Therefore, the case studies also serve as a benchmark for our modelling, providing insight into whether the magnitude of growth has occurred in comparable locations elsewhere.

As mentioned previously, the choice of case study is not entirely determinative of the final results. There may be other case studies considered appropriate for comparison, however, with the use of weighting and the data points informing primarily the mix of housing rather than the quantum of housing, the results would not differ dramatically. The case studies provide reference points as to where change of the scale projected has occurred, and how that change occurred on the ground (e.g. dwelling density, typology, nature of redevelopment sites).

Table 7.1 provides more details on the scoring and ranking across all 11 indicators. Appendix D provides more information about the case studies, including a profile of affordability, age structure, demographics, and planning considerations.

TABLE 7.1 SIMILARITY SCORE RELATIVE TO GLEN WAVERLEY AND RANKING, SELECTED CASE STUDIES, 2021

PRECINCT	CITY	RANK	SCORE	TRAIN STATION	DENSITY INDEX (PAST)	DENSITY INDEX (CURRENT)	N'HOOD DENSITY INDEX (PAST)	PUBLIC TRANSPORT JOURNEY TO CBD (MINS)	SEIFA (IRSAD)	OVERSEAS BORN (PAST)	OFFICE EMP. (CURRENT)	INDUSTRIAL (EX)
Epping	Sydney	1	0.30	YES	27.29	48.25	40 Mins	40 Mins	1116	41.7%	1,266	NO
Lidcombe	Sydney	2	0.36	YES	30.15	58.75	38 Mins	38 Mins	991	63.0%	1012	NO
Auburn	Sydney	3	0.64	YES	29.25	53.99	41 Mins	41 Mins	943	65.1%	2572	NO
Coorparoo	Brisbane	4	0.65	YES	26.32	38.57	25 Mins	25 Mins	1101	26.4%	3,447	NO
Kogarah	Sydney	5	0.70	YES	44.44	60.21	33 Mins	33 Mins	1025	54.5%	4510	NO
Strathfield	Sydney	6	0.70	YES	38.79	63.63	22 Mins	22 Mins	1077	56.8%	4698	NO
Flemington	Sydney	7	0.73	YES	17.84	55.73	30 Mins	30 Mins	1072	56.8%	2695	YES
Rockdale	Sydney	8	0.78	YES	42.34	64.07	28 Mins	28 Mins	1021	52.7%	4314	NO
Chatswood	Sydney	9	0.78	YES	38.09	64.35	18 Mins	18 Mins	1132	48.9%	8839	NO
Mascot	Sydney	10	0.81	YES	17.71	53.07	18 Mins	18 Mins	1119	50.2%	7320	YES
Burwood (NSW)	Sydney	11	0.82	YES	39.32	64.65	45.32	20 Mins	1,065	54.1%	3,850	YES
Glen Waverley 1600m Radius Area	**Melbourne**	**-**	**-**	**YES**	**28.42**	**49.10**	**23.01**	**35 Mins**	**1078**	**65.4%**	**6247**	**NO**

Source: ABS (2021) Census of Population and Housing various; Google Maps; AJM JV

To reach higher population densities, all case study areas experienced a significant shift to higher density dwelling types, as shown in Table 7.2.

In Epping, Burwood (NSW) and Auburn, the proportion of high-density dwellings increased by a weighted average of around +23.6 percentage points. In total, high-density dwellings accounted for 87% of all new dwellings, reflecting the need to accommodate population growth in established areas. It is notable that most additional dwellings selected case studies with a university (Macquarie University and Belconnen) have been high-density. This implies that many students are residing in high-density dwellings.

However, the absolute number of low to medium-density types remained similar or even slightly higher, which might seem counter-intuitive at first. This pattern probably indicates the majority of (re)development occurred in non-residential zones (commercial zones / mixed-use zones supporting residential development) or that the amount of low-medium-density subdivision on the periphery, compensated for demolitions around key transit points (train stations and arterial roads).

While this pattern was common in the case studies, the housing requirement assessments assume no net increase in low-density dwellings in the Structure Plan Area. This assumption takes into consideration the increasing acceptance of high-density living in urban areas and the nature of the Structure Plan Area as an established residential area.

TABLE 7.2 PRE AND POST-DEVELOPMENT DWELLINGS, SELECTED CASE STUDIES, NUMBER AND SHARE, 2001 AND 2021

CASE STUDY	PRE-DEVELOPMENT 2001					POST-DEVELOPMENT 2021				
	LOW-DENSITY	MEDIUM-DENSITY	HIGH-DENSITY	OTHER	TOTAL	LOW-DENSITY	MEDIUM-DENSITY	HIGH-DENSITY	OTHER	TOTAL
Epping (NSW)	4923	1031	2130	17	**8101**	4945	1420	5817	0	**12,182**
Burwood (NSW)	4077	1641	1773	88	**7579**	4037	2449	5832	117	**12,435**
Auburn	3596	2248	842	14	**6700**	4006	2459	4534	38	**11,037**
Weighted average	**10,877**	**5504**	**3281**	**63**	**19,724**	**11,696**	**6363**	**13,726**	**111**	**31,896**
Epping (NSW)	60.8%	12.7%	26.3%	0.2%	**100%**	40.6%	11.7%	47.8%	0.0%	**100%**
Burwood (NSW)	53.8%	21.7%	23.4%	1.2%	**100%**	32.5%	19.7%	46.9%	0.9%	**100%**
Auburn	53.7%	33.6%	12.6%	0.2%	**100%**	36.3%	22.3%	41.1%	0.3%	**100%**
Weighted average	**55.1%**	**27.9%**	**16.6%**	**0.3%**	**100%**	**36.7%**	**19.9%**	**43.0%**	**0.3%**	**100%**

Source: ABS (2021) STRD Dwelling Structure; AJM JV

Table 7.3 outlines the change in household types witnessed in the selected case studies from 2011-2021.

The household types with the strongest increases across the case studies are Couple family without children and Lone Person households. Increases across these household type will lead to demand for a variety of accommodation including studio / one-bedroom (for lone person households) and two-bedroom (for couple families without children). The pattern in couple family with children is mixed with Epping (1100) and Burwood (200) seeing increase and Auburn seeing a small decrease (-200).

TABLE 7.3 CHANGE IN HOUSEHOLD TYPE, CASE STUDY PRECINCTS, 2011–2021

	EPPING (NSW) 1600-M RADIUS				BURWOOD (NSW) 1600-M RADIUS				AUBURN 1600-M RADIUS			
	2011	2021	CHANGE (2011-2021)	ANNUAL GROWTH RATE (%)	2011	2021	CHANGE (2011-2021)	ANNUAL GROWTH RATE (%)	2011	2021	CHANGE (2011-2021)	ANNUAL GROWTH RATE (%)
Couple family without children	1800	2700	900	4.1%	1700	2700	1000	4.7%	1400	2000	600	3.6%
Couple family with children	3100	4200	1100	3.1%	2700	2900	200	0.7%	3200	3000	-200	-0.6%
Other family	800	1100	300	3.2%	1000	1300	300	2.7%	1100	1100	0	0.0%
Multi family	200	300	100	4.1%	200	300	100	4.1%	400	500	100	2.3%
Lone person household	1600	2000	400	2.3%	1700	2600	900	4.3%	1200	1600	400	2.9%
Group household	400	500	100	2.3%	600	1100	500	6.2%	500	1200	700	9.1%
Other	200	300	100	4.1%	400	500	100	2.3%	600	600	0	0.0%
Total	**8100**	**11,300**	**3200**	**3.4%**	**8400**	**11500**	**3100**	**3.2%**	**8400**	**10,000**	**1600**	**1.8%**

Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: ABS (2011 & 2021) Census of Population and Housing; AJM JV

Table 7.4 outlines the key evidence taken from the case study analysis and applied in the modelling for this assessment. The key evidence is the dwelling structure proportions used to allocate population growth. The extent of population growth drives the need for new dwellings, and the dwelling structure proportions are how the model allocates this need.

TABLE 7.4 KEY EVIDENCE DERIVED FROM CASE STUDIES

EVIDENCE	CASE STUDIES	APPLICATION IN MODEL
Household sizes	All case studies	An average household size across dense urban precincts is estimated by looking at all case studies investigated in the scoring and ranking exercise. This estimate is applied to the population in each dwelling structure to estimate the number of dwellings.
Dwelling structure	Selected case studies	Dwelling structure refers to the density and the number of bedrooms a person's dwelling has. These proportions for medium-density and high-density dwellings are referenced from the selected case studies to apportion the new population growth in the Structure Plan Area.
Growth in low-density and medium-density dwellings	Selected case studies	The growth in low-density and medium-density dwellings in the case studies provides a guide to how much these dwellings would be expected to grow in the Structure Plan Area. This growth is used as a sense check for the modelled estimates.

Source: AJM JV

8. Structure Plan Area housing requirement projections

This section provides the housing requirement estimates for the Glen Waverley Structure Plan Area, including projected population, housing need and housing diversity. Population projections are the key driver of additional housing needs and so are outlined to further understand likely housing needs.

8.1 Population projections

8.1.1 TOTAL POPULATION

Table 8.1 shows the population projections for relevant geographies:

- The population in the Glen Waverley Structure Plan Area is expected to grow from approximately 7100 in 2021 to 11,700 in 2041. This growth translates to an increase of 2.5% per annum. The additional ~4600 people in the Structure Plan Area will create a solid need for additional housing.
- The Glen Waverley Structure Plan Area population is anticipated to grow at a faster rate (2.5% per annum) than the South East Region (1.1% per annum) and Greater Melbourne (1.8% per annum). However, considering that concentrated areas with public transport and other amenity are expected to grow faster, projected growth rates for the Structure Plan Area are still relatively conservative.

TABLE 8.1 PROJECTED POPULATION GROWTH, KEY GEOGRAPHIES, 2021–2041

	PROJECTED POPULATION (NO.)		CHANGE (NO.)	ANNUAL GROWTH RATE (%)
	2021	2041	2021-2041	2021-2041
Glen Waverley Structure Plan Area	7100	11,700	4600	2.5%
Glen Waverley 1600m Radius Area	23,000	33,500	10,500	1.9%
South East Region	1,614,900	1,991,900	377,000	1.1%
Greater Melbourne	4,975,300	7,087,100	2,111,800	1.8%

Source: ABS ERP; CityPlan (1600m radius area published in SRL BIC, Structure Plan Area derived from SRL BIC); VIF2023 (South East Region, Greater Melbourne)

8.1.2 AGE STRUCTURE

Figure 8.1 shows the projected age breakdown of residents in the Structure Plan Area. This information is used to model demand for student accommodation and aged care and retirement living (in Section 9).

The largest changes in age structure in the Structure Plan Area from 2021 to 2041 are anticipated to be in the 0 to 4 years, 18-25 years and 28-64 years cohorts. All these cohorts are expected to grow 2.8% per annum or more. All age cohorts are expecting positive growth by 2041.

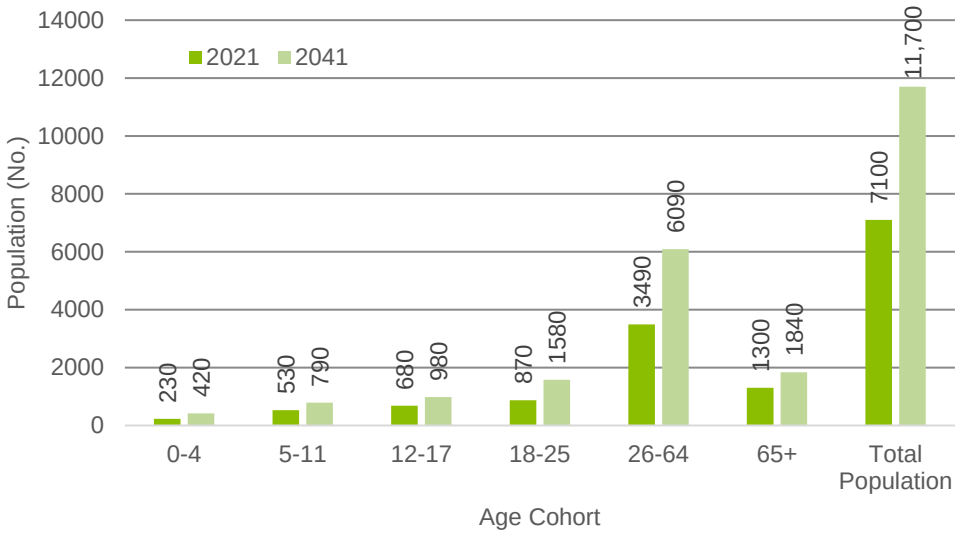


FIGURE 8.1 PROJECTED POPULATION BY AGE GROUP, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021 & 2041

Source: ABS ERP; Structure Plan Area population projections derived from CityPlan (published in SRL BIC); VIF2023 (South East Region, Greater Melbourne)

8.2 Projected housing requirements

The dwelling requirement numbers provided in this sub-section represent the estimate of the number of dwellings, by dwelling structure (including number of bedrooms per dwelling), likely to be required in the Glen Waverley Structure Plan Area, to realise the population forecasts derived from the SRL Business and Investment Case (BIC).

Appendix E provides a detailed methodology to explain how the projected housing requirements were calculated.

8.2.1 TOTAL DWELLINGS

Table 8.2 outlines the total number of dwellings required in the Structure Plan Area by 2041. **A total of 4710 are estimated to be required by 2041 which reflects a net increase of 1500 over the 20-year period.**

TABLE 8.2 HOUSING REQUIREMENT, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021	2041	2021-2041 CHANGE	ANNUAL GROWTH RATE (%)
Dwellings	3210	4710	1500	1.9%

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

8.2.2 DWELLINGS BY TYPE

Table 8.3[35] provides the key housing projections (population, dwelling number, floorspace) by density type for the Glen Waverley Structure Plan Area. Based on case study analysis, dwellings are projected to be predominantly high-density by 2041, representing 59% of all dwellings. This is the result of a projected 1680 net increase in the number of high-density dwellings. Accounting for demolitions across all dwelling types, around 1920 new dwellings are projected to be required to be built.

Modest growth in medium-density housing is anticipated, with a slight decline in low-density housing as some existing dwellings are replaced with higher-density forms. The Glen Waverley Structure Plan Area will be able to retain a relatively large share of low-density dwellings (32% of all dwellings) in 2041.

TABLE 8.3 HOUSING REQUIREMENT BY DENSITY, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021		2041		2021-2041 CHANGE	
	NO.	%	NO.	%	NO.	ANNUAL GROWTH RATE (%)
Population (no.)						
Low-density	4700	66.2%	4700	40.2%	0	0.0%
Medium-density	500	7.0%	1100	9.4%	600	4.0%
High-density	1900	26.8%	5,900	50.4%	4,000	5.8%
Total	**7100**	**100.0%**	**11,700**	**100.0%**	**4,600**	**2.5%**
Dwellings (no.)						
Low-density	1860	57.9%	1510	32.1%	-350	-1.0%
Medium-density	250	7.8%	430	9.1%	180	2.7%
High-density	1100	34.3%	2780	59.0%	1680	4.7%
Total	**3210**	**100.0%**	**4710**	**100.0%**	**1500**	**1.9%**
Floorspace (sq.m GBA)						
Low-density	784,800	83.7%	690,800	65.2%	-94,000	-0.6%
Medium-density	43,700	4.7%	76,300	7.2%	32,600	2.8%
High-density	109,500	11.7%	293,100	27.6%	183,600	5.0%
Total	**938,000**	**100.0%**	**1,060,100**	**100.0%**	**122,100**	**0.6%**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

[35] Note that household sizes implied from Table 8.3 differ between 2021 and 2041. This is because 2041 household sizes applied are based upon an average of the case studies which represents the 'need' for new dwellings. 2021 household sizes are representative of the 2021 Census which because of a low sample size (the Structure Plan Area only) and an unusually high number of dwellings being registered as vacant, is not a strong guide for household sizes going forward. There will also be a change in household size for a given density as the typology within each density is likely to change (e.g. larger medium- and high-density dwellings). Therefore, it is not valid to directly compare household sizes between time periods.

Table 8.4 shows the dwelling projections by density and bedrooms for the Structure Plan Area. High-density, two-bedroom dwellings are projected to be the most common dwelling type by 2041, with 1790 projected. High-density three or more-bedroom dwellings are predicted to need to increase significantly, accounting for around 9.1% of all dwellings in 2041 compared to just 0.1% in 2021. The net increase in these high-density three or more-bedroom dwellings (340) will outweigh the decrease in low-density three or more-bedroom dwellings (-260).

TABLE 8.4 HOUSING REQUIREMENT BY STRUCTURE (DWELLINGS), GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021		2041		2021-2041 CHANGE	
	NO.	%	NO.	%	NO.	ANNUAL GROWTH RATE (%)
Low-density						
Studio / 1-bedroom	0	0.0%	0	0.0%	0	-
2-bedroom	210	0.2%	120	2.5%	-90	-2.8%
3+bedroom	1650	1.5%	1390	29.5%	-260	-0.9%
Total dwellings	**1860**	**57.9%**	**1510**	**32.1%**	**-350**	**-1.0%**
Medium-density						
Studio / 1-bedroom	10	0.3%	20	0.4%	10	3.5%
2-bedroom	90	0.1%	130	2.8%	40	1.9%
3+bedroom	150	0.1%	280	5.9%	130	3.2%
Total dwellings	**250**	**7.8%**	**430**	**9.1%**	**180**	**2.7%**
High-density						
Studio / 1-bedroom	270	8.4%	550	11.7%	280	3.6%
2-bedroom	750	0.7%	1790	38.0%	1040	4.4%
3+bedroom	90	0.1%	430	9.1%	340	8.1%
Total dwellings	**1100**	**34.3%**	**2780**	**59.0%**	**1680**	**4.7%**
Grand total dwellings	**3210**	**100%**	**4710**	**100%**	**1500**	**1.9%**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

8.3 Testing housing requirements

This sub-section evaluates if the market has the potential to meet housing requirements by assessing the following:

- Does historical growth suggest the requirements can be fulfilled?
- Does the current pipeline indicate the market is already responding to the needs?
- Is there evidence the diversity of housing implied by the future dwelling mix will be delivered by the market?

This assessment aims to determine if a substantial change in the current housing delivery is needed to effectively meet the projected housing requirements in the Glen Waverley Structure Planning Area.

Table 8.5 compares historical dwelling growth to that required to accommodate future population projections, while Table 8.6 presents the dwelling growth achieved annually in the case study areas.

Does historical growth indicate required growth can be achieved?

An appetite for high-density living in Glen Waverley already exists, given the demographics of the area, amenity, employment opportunities and recent surge in high-density dwelling completions.

In recent years, there has been significant high-density development in the Glen Waverley Structure Plan Area. From 2011 to 2021, ABS data shows the number of high-density dwellings increased from 40 to 1100, representing growth of around 106 per annum. The rate of growth was highest in the 2016-21 period with approximately 176 apartments completed each year on average. We note this was largely delivered through a small number of larger projects and therefore was not delivered consistently over the 5 years, as discussed in Section 6.

The need for around 1680 additional high-density dwellings by 2041 growth reflects an average increase of around 85 additional apartments each year over the 20-year period. This is below historical growth in high-density dwellings from 2016 to 2021 (176 per annum). Therefore, historical growth clearly indicates the projected growth in high-density is achievable.

The case studies provide further evidence that growth required is achievable as outlined in Table 8.6. It shows the selected case studies added from 180 to 200 dwellings per annum from 2001 to 2021. These growth rates are well above projected growth in the Structure Plan.

However, development in Glen Waverley to date has appealed to the international investor market, and the majority of the high-density residences completed have consisted of one and two-bedroom apartments. Of the total high-density stock of 1100 in 2021, around 1010 are studio, one or two-bedroom dwellings, showing the predominance of these dwelling types. Going forward, achieving growth in three-bedroom apartments is critical to accommodating all groups in the community. The required growth in three-bedroom apartments is greater than the recent growth seen in this product type, as historically, apartments haven't been built to cater for families.

It is recommended that structure planning and policy consider options to stimulate growth in high-density apartments. Although mandating delivery of larger apartments (three or more-bedroom) is unlikely to be feasible, consideration could be given to incentivising diversity of high-density product. Without change from the status-quo, there will be less population diversity in the Structure Plan Area, and potentially a need for more (albeit smaller) dwellings for the given population growth.

Overall, historical growth indicates projected growth are achievable although the mix of dwelling structures will need to shift to accommodate larger household groups in higher-density housing.

Does the current pipeline indicate meeting required growth is likely?

There are approximately 300 apartments in the development pipeline to be delivered out to 2026 according to Cordell Connect. The majority of apartments in the pipeline have got planning approval and are expected to be complete by 2026. This equates to expected annual completions of 100 apartments. This completion date is not set and is subject to when construction starts. With around 84 apartments required to be constructed annually until 2041 (to meet the modelled requirements of 1680 extra high-density dwellings), the current supply pipeline is enough to meet projected growth. This growth rate will need to be sustained over a long period to meet projected requirements.

The market will move in cycles, with current conditions more subdued than previous peaks. Activity in new dwellings varied significantly from a high of 572 approvals in FY2019 to a low of only 31 in the following year. Dwelling approvals have stayed low since FY 2020 with FY2023 recording only 44 new dwelling approvals (based on ABS New Dwelling Approvals, NDA, data).

The relatively low number of apartments being completed annually in the last couple of years (compared to 2016-21) is influenced by prevailing market conditions, predominantly high construction costs and labour shortages in the construction sector, rather than a lack of demand from potential residents. Despite the headwinds being faced by the construction sector, apartment completions are still high enough to meet projected requirements.

Considering the magnitude of the housing crisis in jurisdictions in Australia and globally, short-term incentives may be needed to increase the construction of housing in the Structure Plan Area.

The current pipeline indicates the market is capable of meeting projected requirements in the Structure Plan Area.

Will the diversity of housing identified in the future mix be delivered?

The analysis presented below indicates a need for a significant increase in the delivery of three or more-bedroom high-density dwellings relative to what the market has delivered to date.

The case studies upon which the projected dwelling mix has been derived have indicated that markets can respond without specific initiatives introduced, supporting growth in family households despite larger high-density dwellings being the predominant form of new housing. In 2021, three or more-bedroom high-density dwellings in the case studies represented between 5.5% and 8.5% of total dwellings.

Within the Structure Plan Area, it is reasonable to expect that as low-density housing becomes more unaffordable in relative terms, there will also be stronger demand to drive the market to respond with greater diversity of product, including larger apartments.

Nonetheless, it is prudent to understand the implications if an increase in three or more-bedroom high-density dwellings is not achieved. In general terms, if more one- or two-bedroom apartments are delivered instead of the larger apartments, more total dwellings will be required to house the population. However, the total floorspace increase required to support this will not be as proportionately great, due to the lower average dwelling sizes of studio / one-bedroom and two-bedroom apartments.

To provide an indication of the impact of the growth in three or more-bedroom apartments not being achieved, a simple calculation of the effect of limited growth in this dwelling type is presented here. If the share of three or more-bedroom dwellings as a share of total high-density dwellings is kept constant from 2021 and the growth not achieved is reallocated to studio / one-bed and two-bed apartments, the number of dwellings required to house the projected population would increase slightly (less than 5%). Due to the smaller sizes of the apartments, the total floorspace would likely decrease slightly.

The magnitude of changes to total dwellings and floorspace are not substantial enough to materially change structure planning. The main effect of less growth in three or more-bedroom apartments is on the future demographics of the Structure Plan Area. Less three or more-bedroom apartments would result in fewer families but more couple without children and lone person households residing in the Structure Plan Area.

It should be kept in mind that the number of three or more-bedroom apartments projected in 2041 represents only 9.1% of all dwellings, not far beyond the level achieved in the case studies.

Measures to encourage the delivery of larger apartments could be considered, but there is some evidence from the case studies that the market can respond to some extent to demand from families and other larger households by providing 3+ bedroom apartments. The consequences of not delivering what in volume terms is a modest increase in three or more-bedroom high-density dwellings are not significant to meeting population growth. However, there could be an influence on the demographic of the population supported in the Structure Plan Area.

TABLE 8.5 COMPARING PROJECTED DWELLING REQUIREMENTS TO HISTORICAL SUPPLY, BY STRUCTURE AND BEDROOMS, GLEN WAVERLEY STRUCTURE PLAN AREA

	HISTORIC (NO.)			PROJECTIONS (NO.)	HISTORIC GROWTH (PER ANNUM)		REQUIRED GROWTH TO MEET PROJECTIONS (PER ANNUM)	GAP (PER ANNUM)
	2011	2016	2021	2041	2011-2016	2016-2021 (A)	2021-2041 (B)	(C) = (B) - (A)
Low-density								
Studio / 1-bedroom	0	0	0	0	0	0	0	0
2-bedroom	130	240	210	120	22	-6	-5	2
3+bedrooms	1230	1560	1650	1390	66	18	-13	-31
Total	**1360**	**1800**	**1860**	**1510**	**88**	**12**	**-18**	**-30**
Medium-density								
Studio / 1-bedroom	10	0	10	20	-2	2	1	-2
2-bedroom	180	80	90	130	-20	2	2	0
3+bedrooms	400	190	150	280	-42	-8	7	15
Total	**600**	**270**	**250**	**430**	**-66**	**-4**	**9**	**13**
High-density								
Studio / 1-bedroom	0	130	270	550	26	28	14	-14
2-bedroom	40	100	750	1790	12	130	52	-78
3+bedrooms	10	0	90	430	-2	18	17	-1
Total	**40**	**220**	**1100**	**2780**	**36**	**176**	**84**	**-92**
Grand total	**2000**	**2290**	**3210**	**4710**	**58**	**184**	**67**	**-118**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2011-2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

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TABLE 8.6 DWELLING GROWTH PER ANNUM, SELECTED CASE STUDIES, 2011–2021

CASE STUDY	ADDITIONAL DWELLINGS PER ANNUM (2001-2021)			
	LOW-DENSITY	MEDIUM-DENSITY	HIGH-DENSITY	TOTAL
Epping Metro Station	0	20	180	**200**
Burwood Station	0	40	200	**240**
Auburn Station	20	10	180	**220**
Weighted average	**10**	**30**	**210**	**240**

Source: ABS (2001 & 2021) STRD Dwelling Structure; AJM JV

8.4 Implications for Glen Waverley Structure Plan

The analysis in this section highlights the following considerations for the Glen Waverley Structure Plan:

- The Structure Plan Area is projected to need to support a net increase of 1500 dwellings from 2021, or 67 new dwellings per annum.
- With a slight reduction in low-density houses, the increase in high-density apartments will be even higher (1680 new dwellings in total, or 84 per annum).
- This is a modest rate of growth, below what has been seen historically in the Structure Plan Area and below the 200-240 apartments per annum achieved in the selected case study locations. This appears to be the result of a modest population growth projection for the Glen Waverley Structure Plan Area relative to recent growth. However, it should be noted that growth 2016-2021 was inflated by the delivery of a large number of apartments at the one time around The Glen.
- Although this growth of housing can likely be supported through continued development in the central core of the Structure Plan Area, greater levels of growth and diversity could be achieved should structure planning support higher-density housing throughout the Structure Plan Area, particularly in the currently lower-density areas.
- What has been delivered in apartment buildings to date has been focused on one and two-bedroom apartments, attracting mainly lone person and couple households. It should be noted the case study precincts indicate this type of change is not unusual.
- An increase from the currently low level of three or more-bedroom high-density dwellings, although not critical to achieving population growth is needed to accommodate a broader range of groups. It is therefore important that the Structure Plan promote a broader range of apartment types, especially emphasising the construction of larger apartments (living space and bedroom numbers) to accommodate projected population growth across a range of demographic cohorts.
- Townhouses and other medium-density product could be a greater, albeit still minor part of the mix of housing, particularly away from the core of the Structure Plan Area. The period between 2011-2021 witnessed a significant decrease in medium-density housing. Townhouses often cater to families and older couples, providing an option that is more space efficient than low-density housing.

9. Housing for diverse community needs

This section estimates the demand[36] for various housing types designed to address specific community requirements or accommodate particular demographic groups in the Structure Plan Area. These include social and affordable housing, key worker housing, student accommodation, and aged care and retirement living.

Note the housing requirements estimates provided are a subset of the total demand estimates in the previous Section 8. There is no additional requirement for forms of diverse accommodation as often the choice of accommodation type is a matter of preference (e.g. students can decide if they wish to live in student accommodation or standard residential apartments).

The diverse housing estimates provided are based on the projected population and demographic profile in the Structure Plan Area, which for the purposes of this analysis, is a fixed estimate. Workers and students working and studying in the Structure Plan Area are considered for key worker and student accommodation, respectively.

It should be noted there may be opportunity for the Structure Plan Area to play an elevated role in meeting the diverse housing needs of a wider population area. The attributes of the Structure Plan Area, particularly with excellent future access to public transport and other amenity, mean it will be a location suited to supporting diverse housing types, including affordable and social housing, student accommodation, key worker housing and so on. A wider population base may, therefore, desire diverse accommodation beyond the projected population living in the Structure Plan Area. For this reason, the estimates below potentially represent a minimum estimate of the potential opportunity for accommodation located in the Structure Plan Area.

These estimates are not targets and do not represent the number of each housing type that must be provided in the Structure Plan Area. They should rather be thought of as an indication of the potential demand that may exist for a wide range of community needs. In many cases, the housing will be delivered by private developers in response to future market demand (e.g. student accommodation, aged care and retirement living).

9.1 Social and affordable housing

Social and affordable housing are an important component of the housing mix providing accommodation to groups that cannot afford accommodation on the private market. Demand for social and affordable housing has been modelled for this assessment to indicate the potential scale of social and affordable housing, based on the share of households who may meet eligibility criteria.

9.1.1 SOCIAL AND AFFORDABLE HOUSING DEFINITION

Affordable housing refers to housing options that are available at a rent or price lower than the local market rate. Affordable housing may be owned by private developers, local governments, charitable organisations or community housing providers. It is usually managed by community housing providers. Affordable housing is considered to be accessible for those on moderate incomes or below.

For the purposes of the modelling the income ranges that are eligible for affordable housing are outlined in Table 9.1.

Social housing refers to government-subsidised short and long-term rentals. There are two types of social housing: public housing, which is owned by the government, and community housing, which is managed (and sometimes owned) by not-for-profit organisations. Social housing rents are calculated based on income, typically 25 to 30% of household income, and target people on very low incomes and who often have experienced homelessness, family violence or have other complex needs.

[36] Housing projections in section 7 and 8 are described as requirements while in section 9 they are described as estimated demand since diverse housing is only a potential subset and is not technically required.

For the purposes of this assessment, the eligibility for social housing is defined by the income ranges provided by Housing Victoria, outlined in Table 9.2. As defined, social housing is a subset of affordable housing that falls within the very-low- and low-income brackets.

Appendix F provides a further explanation of the methodology behind the social and affordable housing estimates.

TABLE 9.1 SOCIAL AND AFFORDABLE HOUSING INCOME RANGE CLASSIFICATION, GREATER MELBOURNE, 2023

HOUSEHOLD TYPES	VERY LOW INCOME RANGE (ANNUAL)	LOW INCOME RANGE (ANNUAL)	MODERATE INCOME RANGE (ANNUAL)	SOCIAL HOUSING INCOME RANGE (ANNUAL)
Single adult	Up to $26,200	$26,201 - $41,920	$41,921 - $62,860	<$32,552
Couple, no dependants	Up to $39,290	$39,291 - $62,870	$62,871 - $94,300	<$56,264
Family (with one or two parents) and dependent children	Up to $55,000	$55,001 - $88,020	$88,021 - $132,030	<$58,292

Note: The annual income limit for social housing increases by $2028 for each additional dependent. Source: Victoria Government Gazette No. G 25, 23 June 2023; Housing Victoria

The eligibility for social housing and criteria for affordable housing overlap, meaning that some households that are eligible for social housing will also be eligible for affordable housing and vice versa. Furthermore, the income ranges for social housing can fall within very low or low affordable income brackets depending on the household type. This means that projections for social and affordable housing must be considered together.

Finally, it is important to note the social and affordable estimates provided here represent the number of households potentially eligible for such housing. The number of households potentially eligible for affordable housing can be reduced if the cost of housing decreases, potentially through greater amounts of affordable supply built or an increase in the total amount of supply relative to demand, which would put downward pressure on housing costs.

9.1.2 SOCIAL AND AFFORDABLE AND HOMELESSNESS METHODOLOGY

The methodology for estimating demand for social and affordable housing involves calculating the proportion of households with very low, low, and moderate incomes at the 2021 Census (using the 2021 income ranges). These estimates are then refined to only include households falling within these income brackets that are renters and in rental stress, defined as those with 30% or more of their household incomes going towards rent.

It is important to note this methodology does not consider forecasts or assumptions for changes in relative housing costs (rents) faced by households. It is not possible to accurately predict relative change in incomes versus rents over 15 to 20 years.

An estimate of individuals experiencing homelessness[37] in the Structure Plan Area is also incorporated into the assessment of the demand for social and affordable housing. It is vital to ensure those who are currently homeless (and so not counted in current rental data) are provided access to social or affordable housing.

The detailed methodology for assessing social and affordable housing demand and homelessness is detailed more in Appendix F.

9.1.3 SOCIAL AND AFFORDABLE HOUSING DEMAND RESULTS

Table 9.2 provides estimates of the number of people in need of social housing and affordable housing in the Glen Waverley Structure Plan Area from 2021 to 2041.

There is projected to be a growing need for more affordable housing, with **600 households (including homeless individuals) across the Structure Plan Area projected to be eligible for social and affordable housing by 2041.**

The number of households eligible for social housing, which includes those on very low and low incomes, is projected to be 240 by 2041.

The number of people experiencing homelessness is estimated at around 60 in 2021, which assuming continuation of the current proportion, would increase to approximately 100 by 2041. These individuals are most in need and are least likely to be able to afford to rent or purchase their own home.

TABLE 9.2 SOCIAL AND AFFORDABLE HOUSING REQUIREMENTS, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

GROUP ELIGIBLE FOR SOCIAL / AFFORDABLE HOUSING	STEPS	NO.		CHANGE (NO.)	ANNUAL GROWTH RATE (%)
		2021	2041	2021-2041	
Very low income (households)	(A)	170	250	+80	1.9%
Low income (households)	(B)	100	150	+50	1.9%
Social housing (households)	**(C) = Subset of (A) and (B)**	**160**	**240**	**+80**	**1.9%**
Moderate income (households)	(D)	60	100	+40	1.9%
Homelessness estimate (individuals)	(E)	60	100	+40	2.5%
Total "in need"	**(F) = (A) + (B) + (D) + (E)**	**400**	**600**	**+200**	**2.0%**

Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV

[37] Groups defined as homeless are defined in Appendix F

9.2 Key worker housing

9.2.1 KEY WORKER HOUSING DEFINITION

The term ‘key worker’ lacks a consistent or universally accepted definition in Australia. Key workers are generally described as employees engaged in essential services crucial to a city's operation. They must be physically present at their workplaces and often operate beyond regular business hours.

The designation of key worker encompasses individuals traditionally linked to the concept, such as teachers, doctors, nurses, police, and emergency service personnel. Additionally, it is often extended to roles like laundry workers, cleaners, public transport operators, aged care and childcare workers, and community services and support staff.

Ensuring that key workers can reside near their workplaces is vital. This proximity is especially critical in fields like healthcare and emergency services, where workers must cover shifts, quickly respond to increases in service demand, and attend emergency situations. Given that SRL East Structure Plan Areas serve as key employment hubs, it is advisable to promote key worker housing[38] within walking distance of SRL East stations and major employers such as universities and hospitals.

Due to their generally modest incomes, key workers are particularly vulnerable to high housing costs. As housing costs continue to rise, securing suitable and affordable housing near work becomes a significant challenge for key workers, often resulting in lengthy commutes.

The objective of this analysis is to identify the residential locations of key workers with very low to moderate incomes. This understanding will shed light on the potential for providing suitable housing options, aiming to reduce the share of workers commuting from outside the region.

It is important to note that key low-income workers who live in the Structure Plan Area will be a subset of the affordable housing needs estimated in Section 9.1. Key workers who live outside the Structure Plan Area represent demand that could potentially be accommodated depending on SRLA's strategic direction or providers' response (i.e. key workers who live outside the Structure Plan Area could move into the area, closer to their place of work).

9.2.2 KEY WORKER HOUSING DEMAND METHODOLOGY

The methodology for assessing key worker housing demand involves determining the number of key workers with very low, low and moderate incomes and understanding their place of residence. The share of key workers by the broad industry sector in 2021 is applied to the job projections (by the broad industry sector) to estimate the potential number of key workers in 2041.

Key workers living outside the South East Region are considered the target for key worker housing, as they have long commutes and could benefit from housing close to their place of work. However, going forward, it cannot necessarily be assumed that key workers will be able to live in the South East Region in the same proportion as they do now. Therefore, the total estimated number of low-income key workers could create demand for the delivery of dedicated key worker housing.

Note the share of key workers in different industries and the share of those key workers on very low to moderate incomes and their place of residence has been derived in a 1600-metre radius from the SRL station (as opposed to the Structure Plan Area) due to data reliability issues at a small area when multiple criteria are used for segmentation (e.g. by industry, by occupation, by income, by residential location). The proportion of key workers in different industries and places of residence in the 1600-metre radius has been applied to workers in the Structure Plan Area to calculate estimates for the Structure Plan Area.

[38] There is no universal definition for key worker housing. Some define it as rental housing for key workers with very low, low, or moderate household incomes, which must be owned, managed, allocated, and monitored by a Registered Housing Agency or registered charity. This report focuses on the number of key workers with low to moderate incomes, regardless of housing tenure. If more key workers can live closer to their place of work, either renting or purchasing, it would be considered a good outcome.

9.2.3 KEY WORKER HOUSING DEMAND RESULTS

Table 9.3 shows there were an estimated 2300 key workers in the Glen Waverley Structure Plan Area in 2021. Of those workers, just over 50% were earning very low to moderate incomes.

TABLE 9.3 ESTIMATED NUMBER OF KEY WORKERS (TOTAL AND EARNING VERY LOW TO MODERATE INCOMES), GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

INDUSTRY	TOTAL JOBS (WORKERS)	TOTAL KEY WORKERS	PROPORTION OF TOTAL KEY WORKERS EARNING VERY LOW TO MODERATE INCOMES	TOTAL VERY LOW TO MODERATE KEY WORKERS
Education	1100	785	43%	340
Health	900	780	62%	485
Other	5800	735	47%	345
Total	**7800**	**2300**	**51%**	**1170**

Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: ABS (2021) INDP Industry of Employment; AJM JV

Table 9.4 shows that 32% of key workers on very low to moderate incomes live in the Monash municipality. A further 34% live in Knox, Whitehorse, Greater Dandenong, Maroondah, Kingston and Glen Eira combined – all of which are part of the South East Region. In total, 73% of key workers on very low to moderate incomes live in the South East Region.

TABLE 9.4 KEY WORKERS (EARNING VERY LOW TO MODERATE INCOMES) PLACE OF RESIDENCE BY LGA, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021

PLACE OF RESIDENCE (LOCAL GOVERNMENT AREA)	PROPORTION OF TOTAL VERY LOW TO MODERATE KEY WORKERS
Monash	32%
Knox	11%
Casey	9%
Whitehorse	8%
Greater Dandenong	6%
Yarra Ranges	3%
Maroondah	3%
Kingston (Vic.)	3%
Glen Eira	3%
Cardinia	3%
Elsewhere	18%
Total	**100%**

Within the South East Region
Source: ABS (2021) INDP Industry of Employment; AJM JV

Table 9.5 shows that an estimated 1970 key workers earning very low to moderate incomes will work in the Glen Waverley Structure Plan Area in 2041. Without more affordable housing for these key workers, the proportion working and living in the Structure Plan Area will likely decline.

If affordability remains unchanged and commuter and residential patterns among workers stay the same as they were in 2021 (i.e. key workers who could afford to live in the South East Region in 2021 still can in 2041), by 2041, 630 Glen Waverley Structure Plan Area key workers on very low to moderate incomes would live in the City of Monash.

Again, assuming the share of those living outside the South East Region remains constant at 27%, by 2041 there will be around 540 key workers (earning very low to moderate incomes) living outside the South East Region.

If the objective is to offer appropriate housing to reduce the need for workers to travel from outside the South East Region to work in Glen Waverley, efforts should be directed towards providing suitable housing options. However, given the possibility that affordability across the South East Region may worsen, the potential demand could come from the entire lower income key worker cohort (1970 in 2041).

TABLE 9.5 PROJECTED KEY WORKERS (EARNING VERY LOW TO MODERATE INCOMES), GLEN WAVERLEY STRUCTURE PLAN AREA, 2041

INDUSTRY	TOTAL JOBS (WORKERS)	TOTAL KEY WORKERS	TOTAL VERY LOW TO MODERATE KEY WORKERS
Education	2100	1500	655
Health	1300	1130	700
Other	10,400	1320	615
Total	**13,800**	**3950**	**1970**
Total living outside the South East Region (@ 27%)			*540*

Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: ABS (2021) INDP Industry of Employment & INCP Total Personal Income (weekly); Structure Plan Area population and employment projections derived from CityPlan (published in SRL BIC); AJM JV

Given there are no major institutions or other employing groups that would generate significant key worker demand (e.g. hospitals), there is not considered to a be a significant need to address key worker housing in the Structure Plan Area. However, given improved connectivity, key worker housing in this Structure Plan Area could serve a role meeting demand generated around other SRL East stations.

9.3 Student accommodation

9.3.1 STUDENT ACCOMMODATION DEFINITION

Student accommodation is defined as accommodation specifically built for and catering to students enrolled at an institution of tertiary education. This is otherwise known as Purpose-Built Student Accommodation (PBSA).

The Glen Waverley Structure Plan Area contains the Holmesglen Institute Glen Waverley campus in the South West corner of the Structure Plan Area. The Holmesglen Institute is a recognised provider of Vocational Education and Training (VET) courses to domestic and international students. While domestic VET students less frequently reside in PBSA, international VET students do reside in PBSA to some extent. Considering the tight rental market in recent years, providing student accommodation may enable more individuals, in particular prospective international students, to receive a tertiary education in Australia.

There is currently only the one PBSA facility within the Structure Plan Area which services the Holmesglen Institute and has an estimated 47 beds[39]. It is likely that the estimated 728 current international vocational students residing within the Structure Plan Area live within this facility or standard residential accommodation.

The likely requirement for PBSA in the Glen Waverley Structure Plan Area has been modelled by estimates VET student enrolments at the Holmesglen Institute Glen Waverley campus and applies propensities to live in dedicated student accommodation to estimate the demand for PBSA. This represents the demand generated from education institutions in the Structure Plan Area (i.e. the Holmesglen Institute Glen Waverley campus).

Considering there is no strict requirement for VET students to live in PBSA during their studies, the requirements for PBSA is not additional to the required dwelling estimates provided in Section 8, but could potentially be a form of housing that supports that demand (e.g. studio /one-bedroom high-density).

[39] This accommodation is open only to international students at the Holmesglen Institute but is available to international students at all campuses not just the Glen Waverley campus. 47 beds is an estimate based on Ireland Browns Constructions website https://www.ibconstructions.com.au/portfolio/holmesglen-student-accommodation/

9.3.2 STUDENT ACCOMMODATION DEMAND

Table 9.6 provides estimates for international VET student enrolments at the Holmesglen Institute and the potential requirements for PBSA beds to house these students. A further explanation is provided in Appendix F. Applying a propensity rate to estimate PBSA demand among VET students of 5% (based on Urbis Student Accommodation Benchmarks), projected enrolments lead to minimal demand for PBSA in the Structure Plan Area of 52 beds in 2041.

PBSA facilities are usually 25 beds or more, numbers which means that no additional facilities are supportable.

It is important to note this is the estimated demand generated specifically by students at the Holmesglen Institute Glen Waverley Campus. Given the amenity offering (including transport, retail, entertainment) in Glen Waverley, it is possible that some demand may be created for PBSA in the Structure Plan Area from students of institutions in nearby areas, such as Deakin University or Monash University. While it is not critical to provide PBSA within the Structure Plan Area since students can rent in the private residential market, extra PBSA beds may enable international students study in Australia if the market is tight and there are no available rentals.

TABLE 9.6 PROJECTED PBSA DEMAND, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	2021	2041
International VET student enrolments (Holmesglen Institute, Glen Waverley Campus)	760	1030
PBSA propensity	5.0%	5.0%
PBSA demand (beds)	**38**	**52**
PBSA supply (beds)*	47	47
Gap - (-oversupply, +undersupply)	**-9**	**+5**

*Source: CityPlan projections for South East Region; Department of Education; Vet Institutions Annual Reports; AJM JV. *Note the PBSA facility is open to international students enrolled at any of the Holmesglen Institutes campuses across Melbourne. Based on conversations with the operator AJM JV expects a majority but not all of the students are enrolled at the Glen Waverley Institute.*

9.4 Aged care and retirement living

9.4.1 AGED CARE AND RETIREMENT LIVING DEFINITION

Diverse housing for older persons encompasses two distinct types of specialised accommodation:

1. Independent Living Units (ILUs) are targeted at those aged over 65 years and offer a communal living environment for seniors. There is no day-to-day care or medical support provided as part of this accommodation.
2. Aged Care, also referred to as Residential Aged Care (RAC), refers to facilities that offer 24/7 medical support for elderly residents who require this assistance.

ILUs and RACs provide living conditions tailored to the needs of the elderly and so are an important component of the Structure Plan Area housing mix. As the population continues to age, there is expected to be a notable surge in demand for retirement living accommodation.

9.4.2 AGED CARE AND RETIREMENT LIVING DEMAND METHODOLOGY

The method used to evaluate the demand for RACs and ILUs involves applying propensity rates of the over-65 population in the Structure Plan Area to live in RACs or ILUs.

The propensity rates are estimated by considering the current supply of units or beds against the over-65 years population in the Structure Plan Area. These propensities, therefore, consider the currently relative supply available and may differ from average propensity rates seen across the Greater Melbourne Greater Capital City Statistical Area (GCCSA), sourced from the 2021 Census.

Appendix F explains the methodology for assessing demand for residential aged care beds and retirement living units.

9.4.3 AGED CARE AND RETIREMENT LIVING DEMAND RESULTS

By 2041, based on population projections in the, there will be 1840 over 65 years old residents in the Structure Plan Area aged over 65 years. This represents an increase of 540 residents aged over 65 years.

ILU and RAC propensity rates are estimated by considering the current supply of units or beds against the over-65 years population in the Structure Plan Area. These propensities therefore consider the current relative supply available and may differ from average propensity rates seen across the Greater Melbourne Greater Capital City Statistical Area (GCCSA), sourced from the 2021 Census.

There are currently around 80 ILUs within the Structure Plan Area. Allowing for an estimated 1.25 residents per unit, the number of people living in ILUs were around 100 in 2021. Relative to the over-65 years population, this represents a propensity rate of 7.7% living in ILU, which is higher than the Melbourne propensity of 4.3%. This reflects the provision of aged care close to transport hubs with amenity. Propensity rates have been increased to 9% in 2041 which reflects increasing demand stimulated by better amenity within the Structure Plan.

The Greater Melbourne propensity rates (4.7%) is used for RAC beds. This is because there is currently no existing or future supply of RAC beds within the Structure Plan Area.

Table 9.7 shows the projected requirements for ILUs and RAC beds in the Structure Plan Area from 2021 to 2041. There is an estimated demand for 130 ILUs by 2041 which reflects an increase in demand of 50 ILUs from 2021 levels.

Keeping the propensity rate constant at 4.7% results in demand for 90 RACs beds by 2041, a small increase of 30 beds from 2021.

With ILU facilities having around 50 to 100 units and RAC facilities usually providing around 25 to 75 beds, these forecasts support one to two new ILU facilities and up to one new RAC facility. Demand could potentially be higher as the attributes of Glen Waverley are attractive to an older population (with access to retail amenity), which may result in higher propensity to live in dedicated retirement or aged care facilities.

TABLE 9.7 ILU AND RAC DEMAND, GLEN WAVERLEY STRUCTURE PLAN, 2021–2041

	2021	2041	2021-2041 CHANGE	2021-2041 ANNUAL GROWTH RATE (%)
Population	7100	11,700	4600	2.5%
Population (65+)	1300	1840	540	1.8%
ILUs				
ILU propensity rates	7.7%	9.0%	-	-
Demand - potential ILU residents	100	170	70	2.7%
Average household size	1.25	1.25	-	-
Demand - potential ILU	**80**	**130**	**50**	2.5%
RACs				
RAC propensity rates	4.7%	4.7%	-	-
Demand - potential RAC beds	**60**	**90**	**30**	**2.0%**

Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS ERP; AJM JV

9.5 Additional need

The amenities in the Structure Plan Area (e.g. train station, hospital, education) enables accommodation in the Structure Plan Area to draw demand from a wide geographic base. The consequence is that using the Structure Plan Area population as the basis for modelling has the potential to understate the demand for diverse housing in the Structure Plan Area. The modelled requirements for all forms of diverse housing should serve as a starting point, with additional amounts of supply likely supportable when including demand from outside the Structure Plan Area.

Furthermore, because of the relatively small amounts of supply of some diverse accommodation types in the Structure Plan Area market, it is difficult to gauge how the market is tracking to meet demand. To help understand the magnitude of extra supply that would be needed to satisfy potential requirements, Table 9.8 shows the supply in 2021 compared to the modelled requirements in 2041.

There is a large discrepancy between the existing supply and projected eligibility of social and affordable housing. An extra 580 dwellings are estimated to be required by 2041, representing 38.7% of the total additional dwellings required identified in the previous section. With no upward trend in social and affordable housing seen in the last 10 years, it is likely that policy settings will be required to shift in the Structure Plan Area to stimulate supply. Additional social and affordable housing could also be used to house the expected number of key workers in the Structure Plan Area.

The projected requirement for student accommodation to serve Holmesglen Institute Glen Waverley campus is minimal and does not warrant an extra facility. However, further demand may be generated if providers identify Glen Waverley as a potential location to serve other higher education campuses such as Deakin or Monash Universities.

The projected requirement for ILUs and RACs by 2041 will support the provision of new ILU and RAC facilities across the Structure Plan Area. The amenity offering in Glen Waverley is strong, although without the direct access to hospitals other areas enjoy.

TABLE 9.8 DIVERSE HOUSING NEEDS, GLEN WAVERLEY STRUCTURE PLAN AREA, 2021–2041

	EXISTING SUPPLY	MODELLED REQUIREMENT - 2041	GAP (+ UNDERSUPPLY, - OVERSUPPLY)	PROPORTION OF TOTAL ADDITIONAL DWELLINGS NEEDED
Total "in need" - affordable, social and homeless requirement	20	600	**+580**	**38.7%**
Student Accommodation	0	50	**50**	**-**
Retirement village (ILU)	80	130	**+50**	**3.3%**
Residential aged care facility (RAC)	0	90	**+90**	**-**

Note: Affordable and social housing supply is derived from the 2021 Census. RACs are measured in terms of beds and cannot be compared with dwellings required. Numbers rounded. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS ERP; AJM JV

Given there are no major institutions such as hospitals or other employing groups that would generate significant key worker demand, there is not considered to a be a significant need to address key worker housing in the Structure Plan Area. However, given improved connectivity, key worker and student housing in this Structure Plan Area could serve a role meeting demand generated around other SRL East stations.

9.6 Implications for Glen Waverley Structure Plan

The analysis in this section highlights the following considerations for the Glen Waverley Structure Plan:

- In 2041, 600 households are estimated to be eligible for social and affordable housing. Accounting for the existing supply (20 social and affordable dwellings), the gap of 580 households represents 38.7% of the required additional dwellings (600 dwellings by 2041).
- The lack of new supply of social and affordable housing indicates that the Glen Waverley Structure Plan requires a range of housing initiatives to stimulate more affordable and social housing within the Structure Plan Area.
- Aged care and retirement living should see some market growth within Glen Waverley in line with growth in the 65+ age group, with modelled demand for over 50 ILUs and 130 RAC beds by 2041. However, more could be supported given the amenity available in Glen Waverley. Aged care and retirement is largely delivered by the private sector. The Structure Plan should support the private sector delivery of purpose-built housing for aged care and retirement living.
- Just under 2000 key workers earning very low to moderate incomes are estimated to work in the Glen Waverley Structure Plan Area in 2041. Of this cohort, just over 500 workers (based on current travel to work patterns) are estimated to live outside the South East Region. Efforts should be directed towards providing suitable housing options. However, given the absence of employers that typically generate key worker housing, this is a lower priority compared to the social and affordable housing and aged care and retirement living needs.
- The demand for student accommodation generated from the Holmesglen Institute is minimal. However, the high amenity environment in Glen Waverley, with improved transport connections could make it an attractive location for students studying elsewhere to live.

Part D: Summary and recommendations

Part D includes:

- **Section 10** summarises the findings of the assessment provided in the previous sections.
- **Section 11** makes recommendations for housing planning and development to consider when developing the Structure Plan.

10. Overview of housing demand

This section summarises policy expectations for housing in Glen Waverley, and the housing requirements in the Structure Plan Area, in total and for diverse housing for the community.

10.1 Housing policy expectations and goals

Various policies express the need greater housing supply to support projected population growth, address housing shortages, and to improve affordability. This includes specific reference to unlocking potential around major transport projects in Melbourne's inner and middle suburbs is a key focus. The Structure Plan Areas surrounding SRL stations are an important opportunity to deliver new homes in established suburbs.

Specific implications of the policy landscape for development of the Glen Waverley Structure Plan include:

- As a major activity centre, Glen Waverley is strategically well positioned to accommodate medium and higher-density housing, particularly around the station and centre core where residents can live in close proximity to a regionally significant hospitality, lifestyle and retail offering.
- Victorian Government and local government policies point to the following themes for housing delivery in Glen Waverley:
  - » Provide housing opportunities close to where people work and key public transport nodes.
  - » Support for higher-density housing in the core of Glen Waverley and apartments and medium-density housing such as townhouses and units in the peripheral residential areas, to provide a diversity of housing choices.
  - » Increasing housing density in the core of Glen Waverley is also, in part, seen as a way to revitalise the centre. As a mixed-use environment, housing delivery needs to be integrated with necessary growth in retail, hospitality and commercial activity.
  - » Increasing the supply of and accessibility to social and affordable homes is a priority. These homes should be strategically located close to jobs, transport, services and amenity, such as areas like Glen Waverley, given its existing strength particularly in retail and hospitality.
  - » The roll out of SRL East in connecting activity centres will have implications for Glen Waverley in housing key workers for nearby health and education precincts, and the Monash NEIC.

10.2 Total housing need in the Structure Plan Area

Table 10.1 and Table 10.2 summarise dwelling growth by structure that is expected to be achieved and needed to support the projected population growth. Key points to note from these projections are:

- The population of the Glen Waverley Structure Plan Area will increase from around 7100 in 2021 to almost 11,700 by 2041. This represents a per annum growth of 2.5%.
- This is in line with historical growth from 2011 to 2021 when the average annual population growth of the Structure Plan Area was 2.8%.
- The housing requirements model estimates almost 1500 net additional dwellings will be required by 2041 to accommodate population growth. This equates to around 122,000 sq.m of residential floor space.
- Accommodating the projected population growth will require a further shift to high-density living, with most new dwellings being high-density. This will also necessarily result in some replacement of older stock, which are predominantly low-density dwellings.
- The proportion of three or more-bedroom high-density dwellings required is projected to rise from the current nominal level to 9.1% of all dwellings in

2041. The increase will allow diverse family types to be accommodated in the Structure Plan Area. The increase in high-density three or more-bedroom dwellings will more than offset the projected reduction in larger, low-density dwellings.

- The case studies applicable to Glen Waverley (Epping, Burwood and Auburn) show these precincts experienced growth in a wide variety of household types. This means the Structure Plan will require diverse accommodation types to meet the needs of the community.
- The growth in dwellings is well within manageable rates, as evidenced by previous growth in the Structure Plan (2011-2021) and in the selected case studies.

TABLE 10.1 KEY HOUSING PROJECTIONS, GLEN WAVERLEY STRUCTURE PLAN, 2021–2041

	2021	2041	2021-2041 CHANGE	ANNUAL GROWTH RATE (%)
Population	7100	11,700	4600	2.5%
Dwellings	3210	4710	1500	1.9%
Floorspace sq.m	938,000	1,060,100	122,100	0.6%

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

TABLE 10.2 DWELLING STRUCTURE PROJECTIONS, GLEN WAVERLEY STRUCTURE PLAN, 2021–2041

	2021		2041		2021-2041 CHANGE	
	NO.	%	NO.	%	NO.	ANNUAL GROWTH RATE (%)
Low-density						
Studio / 1-bedroom	0	0.0%	0	0.0%	0	-
2-bedroom	210	0.2%	120	2.5%	-90	-2.8%
3+bedroom	1650	1.5%	1390	29.5%	-260	-0.9%
Total dwellings	**1860**	**57.9%**	**1510**	**32.1%**	**-350**	**-1.0%**
Medium-density						
Studio / 1-bedroom	10	0.3%	20	0.4%	10	3.5%
2-bedroom	90	0.1%	130	2.8%	40	1.9%
3+bedroom	150	0.1%	280	5.9%	130	3.2%
Total dwellings	**250**	**7.8%**	**430**	**9.1%**	**180**	**2.7%**
High-density						
Studio / 1-bedroom	270	8.4%	550	11.7%	280	3.6%
2-bedroom	750	0.7%	1790	38.0%	1040	4.4%
3+bedroom	90	0.1%	430	9.1%	340	8.1%
Total dwellings	**1100**	**34.3%**	**2780**	**59.0%**	**1680**	**4.7%**
Grand total dwellings	**3210**	**100%**	**4710**	**100%**	**1500**	**1.9%**

Note: 2041 numbers are inclusive of a 5% applied vacancy rate. 2021 dwelling numbers refer to all private dwellings are therefore inclusive of vacancies. Numbers rounded – sum of the rounded numbers may not equal the rounded totals. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; AJM JV; Urbis Apartment Essentials

10.3 Housing to meet diverse community needs in the Structure Plan Area

Table 10.3 summarises the projected housing requirements for identified diverse accommodation forms to meet the needs of a diverse community. Main points to note include:

- The demand for diverse housing in the Structure Plan Area, as outlined in Section 9, is a subset of the overall requirement for housing in the Structure Plan Area.
- Modelling shows that around 600 households within the Structure Plan would be eligible for social and affordable housing. Policy settings will need to be in place to ensure this need is met within the Structure Plan area.
- Estimates in this report are potentially conservative and the need for affordable and social housing could prove greater. The eligibility for social and affordable housing depends predominantly on real incomes of Structure Plan Area residents and the magnitude of housing costs, both of which could shift significantly by 2041.
- There is also projected to be an estimated 1970 key workers (individuals on very low to moderate incomes) working in the Structure Plan Area by 2041.
- Student accommodation to service Box Hill Institute represents a small share of future modelled dwellings requirements. Considering there is no university nearby Glen Waverley and most VET student do not reside in student accommodation it is unlikely that student accommodation will be an important part of Glen Waverley's housing mix. Nonetheless, Glen Waverley could be a high amenity residential location for students studying in nearby SRL East locations such as Monash and Burwood.
- Aged care and retirement living options are estimated to comprise a combined 4.5% of the projected dwelling requirement by 2041. Glen Waverley's high amenity and growing health offer may result in a higher propensity for Structure Plan Area residents to live in specialised accommodation for the elderly. It is important that future demand is met to ensure the most appropriate accommodation is provided for elderly residents. An adequate provision of retirement accommodation also enables elderly residents to age in place and remain part of the community they are a part of. The private market operators are expected to respond to the demand, provided the development of aged care and retirement living is supported in appropriate locations.

TABLE 10.3 PROJECTED DIVERSE HOUSING ACCOMMODATION REQUIREMENTS, GLEN WAVERLEY STRUCTURE PLAN, 2041

	EXISTING SUPPLY	MODELLED REQUIREMENT-2041	GAP (+ UNDERSUPPLY, - OVERSUPPLY)
Total 'In Need' - affordable, social and homeless requirement	20	600	**+580**
Student accommodation	47	52	**+5**
Retirement village (ILU)	80	130	**+50**
Residential aged care facility (RAC)	0	90	**+90**

Note: Affordable and social housing supply is derived from the 2021 Census. Source: Structure Plan Area population projections derived from CityPlan (published in SRL BIC); ABS (2021) Census of Population and Housing; Urbis Retirement & Aged Care Database; AJM JV

11. Recommendations and opportunities

This section makes recommendations to ensure the right amount and type of housing is delivered in the right locations in the Structure Plan Area.

The recommendations below are summarised, and their locations are shown in Figure 11.1 at the end of this section. The numbers on the Figure refer to the number of each recommendation below.

11.1 Recommendations

11.1.1 HOUSING QUANTUM AND DENSITY

Recommendation 1 - Plan for around 1500 net new dwellings in the Glen Waverley Structure Plan Area to accommodate an additional population of 4600 people by 2041.

The analysis in this report has identified that to meet the projected population growth estimates, the Structure Plan Area will need to accommodate:

- A population increase of around 4600, reaching 11,700 people by 2041.
- 1500 additional dwellings, around an 47% increase on the current dwelling stock. This will require delivery of around 75 net new dwellings annually on average.
- 122,100 sq.m of additional residential floorspace.

The level of development required to meet the population and dwelling projections is similar to historical rates and is therefore considered achievable.

Recommendation 2 - Facilitate the delivery of high-quality, predominantly high-density housing to meet the projected dwelling increase.

Close to 59% of all dwellings are expected to need to be high-density by 2041 to support population growth, with an increase of around 1680 high-density dwellings over the 20-year period.

The slower development pipeline at the moment appears to be a function of the broader market rather than issues in Glen Waverley. This does not necessarily require specific intervention to change market sentiment.

The future appeal of Glen Waverley with an SRL connection should see the level of interest in higher-density residential development return to the area. The activity centre provides a high level of amenity and will increasingly support access to jobs locally and along the SRL East corridor. The location can offer appealing views from residential towers, while the strong reputation of the schools in the area will underpin it as an attractive residential location.

With the opportunity for greater residential density provided, it is expected the market will respond to deliver the necessary growth. As highlighted in this report, the growth projected for Glen Waverley is considered to be moderate given it is lower than what has been achieved in the recent past.

Location considerations are discussed further below, however, it is important to acknowledge that in the key growth area – the core area – residential growth should be balanced with employment growth.

Recommendation 3 – Encourage the delivery of the higher density housing in preference to low- or medium-density forms.

As existing residential areas attract redevelopment, our analysis projects there will be a reduction of around 350 low-density dwellings. But achievement of forecast population requires low-density housing to be replaced with higher density forms. Low-density housing is, and will remain, the predominant form in large parts of Glen Waverley Structure Plan Area. However, if existing separate houses are too frequently replaced by say a new single house or even a duplex development, the net increase in dwellings will be limited.

In the large residential areas of the Glen Waverley Structure Plan Area away from main roads and the core area, knockdown rebuilds have been common. Existing houses are replaced by a single (typically larger) new home. In some cases, duplex development adds a net increase of one dwelling. However, with apartment developments such as the Sky Garden (completed in 2020) have led to high-density housing driving growth over the last ten years.

This existing trend ultimately may restrict residential development capacity. By developing new homes that are unlikely to be redeveloped over the next 30-40 years, it has the potential to reduce the opportunity for site consolidation that might support greater density in time. This development outcome may need to be curtailed through structure planning, particularly in the low-density residential areas closest to the core.

Noting the challenges of restricting the type of lower density development above, potentially a more feasible approach is to encourage the necessary housing delivery. This requires ensuring development of the desired form is appealing to the market. This could include:

- Encouraging site amalgamation so a greater dwelling yield can be achieved which is sensitive to the existing context; and
- Reducing planning hurdles that add time and cost to development.

11.1.2 HOUSING DIVERSITY

Recommendation 4 - Encourage development of a diversity of medium and higher density housing typologies, including larger (family sized) apartments and affordable options.

The existing residents of the Glen Waverley Structure Plan Area and surrounding suburbs are diverse, reflecting the appeal of the location historically to families in particular with well-regarded schools, but also a younger adult population through the introduction of apartment development more recently. This diversity should be supported by facilitating future higher density housing that enables current and future residents to have access to suitable 'right sized' and affordable accommodation.

Over time, it is expected the housing market will respond to this diverse demand as observed in the case study precincts in Sydney identified in this report. Nonetheless, incentives could be considered.

This report has found an increasing misalignment between the market's supply and growing demand for larger apartments. An increase in three or more-bedroom high-density dwellings is needed to accommodate a broader range of groups. Providing a greater number of three or more-bedroom high-density homes could tap into a previously underexplored section of the market that is not currently catered for, which will help in increasing the growth rate of high-density apartments and accommodate population growth.

While noting the value of encouraging dwelling diversity that could support larger household types, it should be recognised that low-density housing will remain through large parts of the Structure Plan Area, albeit at higher costs than apartments.

Recommendation 5 - Ensure adequate open space, facilities and amenity are provided on site or in proximity to apartments to attract diverse household types.

To create attractive residential places, consideration should be given to matters beyond dwelling size and configuration. The Structure Plan should consider how more diversity of housing can be encouraged, without impacting flexibility for the private sector to develop in line with market demand at the time. This should include:

- Facilitating the provision of open space and other amenity or services within the Structure Plan Area to ensure living centrally in a high-density environment appeals to families (open space and community infrastructure needs are considered in other technical reports).
- Promoting development that supports family-friendly apartments through on-site amenity.

Recommendation 6 – Facilitate opportunities for a variety of residential types and development locations to attract a diverse range of developers and builders.

The construction capacity and appetite for development of residential developers through economic cycles is an important consideration. Housing growth is delivered across a spectrum from large developers (e.g. those delivering large residential towers) through to smaller builders or construction companies (e.g. townhouse and smaller apartment complex developers). Larger and smaller developers/builders tend to operate with separate workforces, and scale activity around market peaks and troughs.

If the Structure Plan is overly reliant on one residential type (e.g. apartment towers in the core), and that market segment is impacted either by a market downturn that halts development, or a lack of capacity when the market is strong, then the necessary housing increase may be curtailed.

Recommendation 7 - Support the delivery of social and affordable housing in the Structure Plan Area.

This report has identified there is a sizeable need for affordable housing for those on very low, low, and moderate incomes. An estimated 600 households in 2041 will be technically eligible for affordable housing based on these income ranges and associated household composition criteria.

Given the high amenity in the Activity Centre with retail and entertainment options, and accessibility to public transport, the Structure Plan Area offers a highly suitable location to deliver affordable housing needs. This could include supporting the regional needs generated along the SRL East corridor.

Mechanisms to secure social and affordable housing provision within private housing developments should be explored. Intervention of some form is expected to be required to achieve growth in affordable housing provision. The market is unlikely to address the need. This will need to be done in such a way as to not undermine the viability of residential development in the area, as the delivery of more housing stock is also critical in addressing the housing crisis and affordability concerns.

Recommendation 8 - Support the delivery of other purpose-built housing types such as aged care and retirement living, and student accommodation.

Given the attributes of Glen Waverley, including high levels of amenity and transport connections, it is an attractive location to support higher than average rates of provision of various diverse housing types.

The Glen Waverley Structure Plan Area already provides some retirement accommodation, generally in lower rise facilities. As the population grows and ages, market providers will seek to provide further facilities for the local population, potentially in higher-density typologies.

The Holmesglen TAFE campus generates only a modest need for student accommodation in Glen Waverley Structure Plan Area. However, the location can play a role as a residential location supporting nearby SRL precincts such as Burwood (Deakin University) or Monash. Opportunities for some purpose-built student accommodation could therefore be created, although delivery of student housing will be driven by market demand by private market operators. Consequently, intervention is unlikely required, but the Structure Plan should allow for student housing typologies (typically mid-rise apartment complexes) in central locations or possibly close to Holmesglen.

Glen Waverley is not a major employment destination for key workers relative to other SRL East locations such as Box Hill or Clayton. Similar to student accommodation though, the opportunity for key worker housing should still be allowed for, particularly in areas around the station to support those commuting to other areas nearby.

11.1.3 HOUSING LOCATIONS

Recommendation 9 – Accommodate high-density apartment buildings of scale primarily within the core of the Structure Plan Area.

The core Glen Waverley area presents the primary opportunity for significant housing density with limited redevelopment opportunities outside the central area.

Several large, centrally located sites within the core area are suitable for redevelopment and create the opportunity for high-rise residential outcomes as part of mixed-use developments.

Recommendation 10 – Ensure both residential and commercial / retail development are supported in the core of the Structure Plan Area.

The need for housing in the core of the Structure Plan Area will have to be weighed against the requirement to also deliver employment-related floorspace. Unrestricted, housing would likely be the preferred market use in the short term. This has the potential to "crowd out" employment uses. Achieving a balance in the right areas will be necessary.

However, we do not recommend removing the option for a mix of uses on sites or in a sub-precinct. This requires a nuanced encouragement of uses delivered side-by-side, rather than prohibition of a use. Supporting a mix of residential and employment floorspace will ultimately be to the benefit of the Glen Waverley Activity Centre as a vibrant retail, dining, and entertainment destination.

To ensure a mix is delivered, incentives for commercial development could be considered. For example, uplifts for residential development if commercial space is part of the mix (subject to ensuring commercial space is not delivered in excess of market need).

The Structure Plan will need to provide for large, mixed-use developments in the core, with suitable management of the ground plane interfaces to protect the vibrancy of the activity centre. The frontage to Kingsway is particularly important in this regard.

Recommendation 11 – Investigate the potential opportunity for further high-density residential development on The Glen site, while preserving the retail asset.

The Glen is a key site where the future opportunity to build on existing apartment development needs to be ascertained, potentially through further consultation with Vicinity as the property owner. While The Glen is a large and strategic site that has supported recent residential tower development, it should not be assumed this scale or residential development can occur across the entire site. Further air-rights development may undermine the shopping centre expansion potential and asset value. Impacts on view lines of existing towers is also a consideration.

Recommendation 12 – Support high-density apartment development along Springvale, Waverley and High Street Roads.

The corridor along Springvale Road is an important location for greater height in residential development, along with Waverley and High Street Roads to a lesser extent. As there is anticipated to be only modest need and demand for sizeable employment buildings outside of the core (e.g. office towers), the main road corridors can help deliver housing requirements, with lower levels potentially providing commercial floorspace opportunities (e.g. small-scale office space, showrooms, limited retail facilities).

Some key sites that present as major development opportunities which could include high-density residential outcomes exist at the intersections of these main roads, including the Springvale-High Street Road intersection in the north with potential for views towards the Dandenong Ranges, and to the south near Waverley Road.

Recommendation 13 – Support mid-rise apartments and some townhouses elsewhere in the Structure Plan Area beyond the core.

As discussed in Recommendation 3, there is a need to minimise sub-division producing a small number of net new dwellings. There may need to be encouragement provided to shift this trend to support more density in established residential areas, particularly east of Springvale Road, but also west of the station.

The site amalgamation to achieve this could take time, but if the opportunity is great enough, private developers will deliver greater scale.

With a limited increase in medium-density housing anticipated, appropriate higher density (e.g. mid-rise apartments) should be facilitated. Existing low-density areas will need to accommodate a material share of the growth. Appropriate higher density product should be supported, such as mid-rise apartments or, potentially a modest provision of townhouses. Development outside of the core is necessary to ensure a greater diversity of housing options that support the needs of those not who would not typically consider residential towers. This includes families and owner-occupiers who typically require larger dwellings (including apartments) which might be more likely in a mid-rise building in largely residential areas.

Recommendation 14 – Encourage housing types to support a diverse population across the Structure Plan Area, but particularly close to the core area.

As previously identified, social and affordable housing, along with other forms of diverse housing, will be required to support a diverse demographic. This should be provided for throughout the Structure Plan Area. However, like other housing, there will be a weighting towards the core area, due to the retail and entertainment amenity, employment opportunities and transport connections.

Student accommodation may also be suited close to the Holmesglen TAFE campus, although proximity close to the station and retail/entertainment offer will be a more significant driver.

9 Accommodate high-density apartment buildings of scale primarily within the core of the Structure Plan Area.

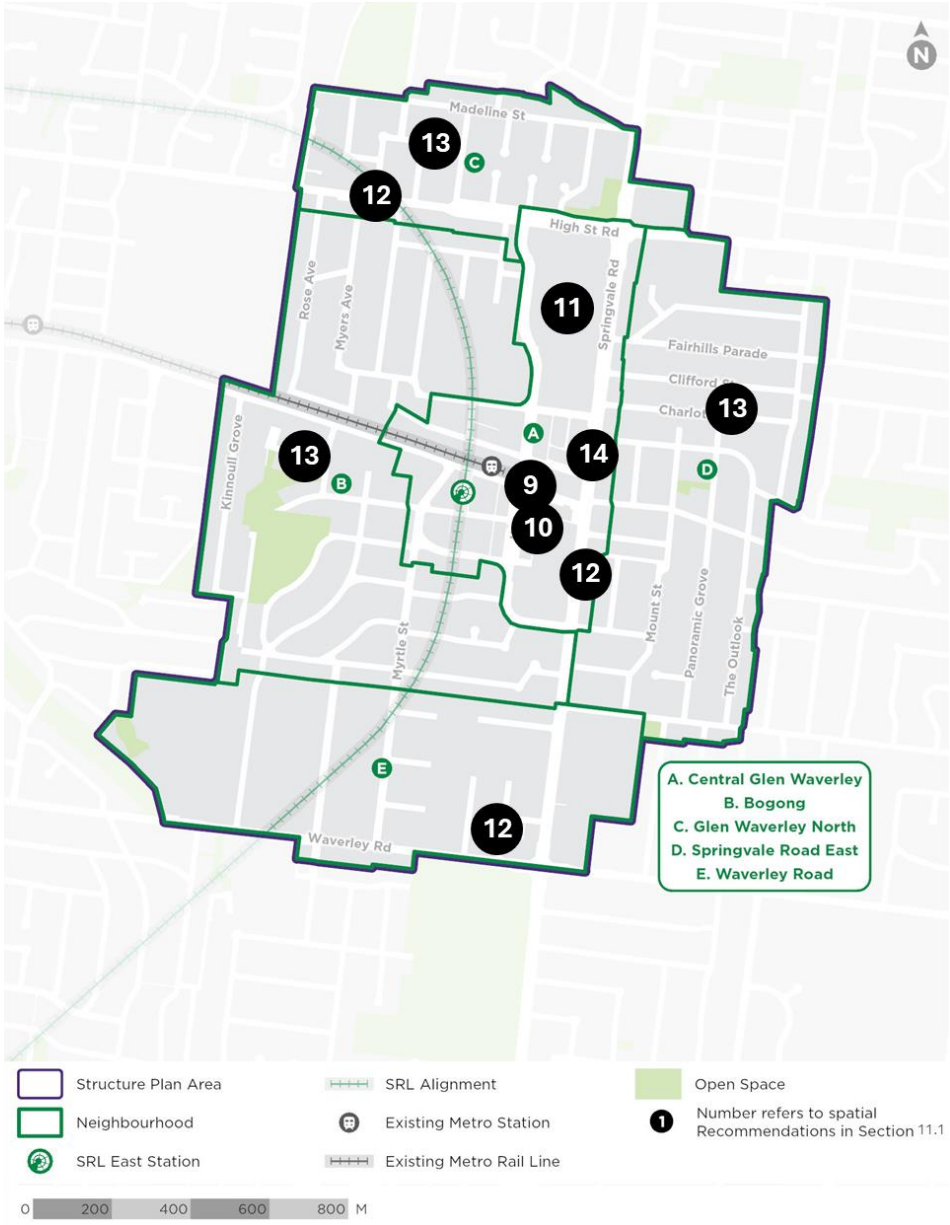
10 Ensure both residential and commercial / retail development are supported in the core of the Structure Plan Area.

11 Investigate the potential opportunity for further high-density residential development on The Glen site, while preserving the retail asset.

12 Support high-density apartment development along Springvale, Waverley and High Street Roads.

13 Support mid-rise apartments and some townhouses elsewhere in the Structure Plan Area beyond the central core.

14 Encourage housing types to support a diverse population across the Structure Plan Area, but particularly close to the core.



Only location-related recommendations are outlined on the map. Where a number does not reference a specific site, it indicates a general area rather than an exact location.

FIGURE 11.1 HOUSING DEVELOPMENT LOCATION CONSIDERATIONS, GLEN WAVERLEY STRUCTURE PLAN AREA

11.2 Other opportunities

Although potentially beyond the scope of the Structure Plan development and the planning scheme amendments, other opportunities to support housing development in Glen Waverley are:

- **Opportunity 1 –** Consider facilitating housing on surplus State Government land, particularly social and affordable housing in line with the Victorian Government's Housing Statement.
- **Opportunity 2 –** Identify suitable planning provisions and potential priority project processes to support the faster approval of suitable and eligible priority housing development.

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Appendix A

Abbreviations, data sources and definitions

Abbreviations

TABLE A.1 ABBREVIATIONS

ABS	Australian Bureau of Statistics
AHURI	Australian Housing and Urban Research Institute Limited
AIHW	Australian Institute of Health and Welfare
ASD	Adjacent-to station development
BIC	Business and Investment Case (BIC) for SRL
BTR	Build-to-Rent
CBD	Central Business District
DEECA	Department of Energy, Environment and Climate Action
DJSIR	Department of Jobs, Skills, Industry and Regions
DTP	Department of Transport and Planning
ERP	Estimated Resident Population
FAR	Floor area ratio
FES	Floorspace Employment Survey
GBA	Gross Building Area
GFA	Gross Floor Area
GLA	Gross lettable Area
HA	Hectare
ILU	Independent Living Units
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
LGA	Local Government Area
MAC	Metropolitan Activity Centre
NEIC	National Employment and Innovation Clusters
NLA	Net lettable area
OSD	Over-station development
PBSA	Purpose-Built Student Accommodation
RAC	Residential Aged Care
SEIFA	Socio-Economic Indexes for Areas
SP	Structure Plan
sq.m	Square metres
SRL	Suburban Rail Loop
SRLA	Suburban Rail Loop Authority
TOD	Transit-orientated Development
TOP	Transit-orientated Precinct
VCAT	Victorian Civil and Administrative Tribunal
VIF	Victoria in Future
VITM	Victorian Integrated Transport Mode
VPP	Victoria Planning Provisions

Additional data sources

Along with the key data sources, the analysis also incorporated the following additional data sources:

- **Census of Population and Housing**, 2006, 2011, 2016 and 2021, Australian Bureau of Statistics (ABS).
  - » Census data is available for standard ABS geographies such as Statistical Areas (1/2/3/4) and Local Government Areas (LGAs).
- Land use projections generated as part of the **Business and Investment Case (BIC) for SRL**, 2021, KPMG (on behalf of the Victorian Government)
  - » Land use projections (including demographic, employment and enrolment estimates) included in the SRL BIC are derived from the CityPlan model.
  - » CityPlan is a strategic scale Land Use Transport Interaction (LUTI) model that is used to estimate the broad land use impacts of major

transport and precinct initiatives. It was developed by KPMG on behalf of the Victorian Government Department of Transport and Planning (DTP).

» CityPlan's geographic scope is confined to Victoria, with a focus on metropolitan Melbourne and surrounding settlements. In this instance, CityPlan has been used to redistribute the base population and employment distribution based on the SRL transport and other related SRL precinct initiatives. These redistribution effects have been contained within the total Victorian population projects, with the majority of movements contained within metropolitan Melbourne.

» The CityPlan model uses a range of data. Some of the data is publicly available and some is internal to the Victorian Government.

» The version of CityPlan used for the SRL BIC was Version 1.1.1. Key inputs into CityPlan Version 1.1.1 include:

  – SALUP19 based on Department of Environment, Land, Water and Planning (DELWP) Projections 2018 (Unpublished)

  – ABS Census 2016

  – Victorian Planning Authority (VPA) potential development capacities

  – Data is reported at the Travel Zone, SA2, SA3 and LGA level.

  – For an introduction to CityPlan, in the context of the SRL, see the SRL Business and Investment Case available from: https://bigbuild.vic.gov.au/library/suburban-rail-loop/business-and-investment-case

- **Urbis Apartment Essentials** tracks all off-the-plan apartment developments (25 units or more) across capital city markets in Australia. It tracks key metrics such as the number of dwellings, sale price, internal areas etc.

- **Urbis Student Accommodation Benchmarks** refers to Urbis' in-house compilation of student accommodation data, including supply and propensity to access purpose-built student accommodation.

- **Pricefinder** is a provider of up-to-date property transaction data. It provides comprehensive data on every property in Australia. AJM JV utilise Pricefinder data for residential pricing trends.

- **RP Data** is a product maintained by Core Logic that provides detailed property data for all of Australia.

- A **floorspace audit** was caried out to identify and categorise employment land in the Structure Plan Area. This process included review of a number of data sources (such as DEECA, PSMA and Space Syntax) to understand, for each building, the existing land use and estimate the amount of floorspace. This data set provided a baseline for internal area estimates and internal area to GBA conversion factors.

Additional definitions

Further to the key definitions, the following additional definitions are used in this report:

Population

Total population is defined as the Estimated Resident Population (ERP).

CityPlan projections segment the total population into broad age ranges - 0 to 4, 5 to 11, 12 to 17, 18 to 25, 26 to 64, and 65 and over. Note for modelling purposes these CityPlan segments are used. For other demographic analysis, standard age brackets with a five year interval are used.

Private and non-private dwellings

People typically resident in two broad dwelling forms which are defined based on ABS definitions:

- Structural private dwellings in which individual households occupy self-contained dwellings that do not share bathrooms, kitchens or similar.
- Non-private dwellings as defined by the ABS include student accommodation, aged care facilities and various other dormitory style or not self-contained housing forms.

Due to data collection limitations of the ABS around 99% of dwellings are classified as private dwellings. This means that for Monash most of the student accommodation are considered private dwellings. Therefore, throughout the report we consider all forms of diverse accommodation to be a subset of the private dwelling requirement.

This distinction refers to the living arrangements in dwellings rather than their ownership, and so social housing, while mostly owned by the government, would be defined as a private dwelling.

Dwelling requirements in this report refer to private dwellings, unless otherwise stated.

Household types (within private dwellings)

The ABS definition of household types is used in this report:

- **Couple family with children** means a family with two adults and one or more children.
- **Couple family without children** means a couple in a relationship without children. This includes both young couples and older couples whose children may have moved out.
- **One parent family** means one parent living with one or more children.
- **Other family** include other kinds of households containing related people living together, such as siblings living together.
- **Multi-family household** means two or more families (from the categories above) living together in the same dwelling.
- **Lone person household** means a single person living by themselves.
- **Group household** means two or more unrelated people living together, for example, a shared house.
- **Other non-classifiable household** means a household which does not fall into the above categories, or for which insufficient information was available in the ABS census to accurately categorise the household.

Build-To-Rent (BTR)

BTR is a term used to describe residential developments that are designed and built specifically for renting rather than for sale. These properties are typically owned by institutional investors and managed by professional property management companies.

Diverse housing

Affordable housing

- The Victorian State Government has introduced a definition of affordable housing to the Planning and Environment Act 1987 being 'housing that is appropriate to the needs of very low, low, and moderate-income households'.[40]
- A Governor in Council Order forms part of the definition of affordable housing under the Act. The Order specifies the income ranges for very low, low and moderate-income households for affordable housing. The Order is published in the Government Gazette and updated annually to specify affordable housing income ranges.

40 Planning and Environment Act (1987) SECT3AA Meaning of affordable housing (austlii.edu.au)

- This analysis only includes renters in rental distress, defined as 30% or more of their income going towards rental payments.

Social housing

- Social housing is a subset of affordable housing. Social housing includes both public housing and community housing and generally involves some degree of subsidy. Public housing refers to properties owned and administered by the government (Homes Victoria), while community housing pertains to properties owned or managed by community housing providers.

Homelessness

- ABS categorises homeless individuals across operational groups. For the purpose of this report, homeless persons encompass those within the following operational groups: persons living in improvised dwellings, tents or sleeping out; persons in supported accommodation; persons temporarily staying with other households; persons living in boarding houses; persons in other temporary lodgings; and persons living in severely crowded dwellings.

Student accommodation

- Student accommodation is defined as accommodation specifically built for and to cater towards students enrolled at an institution of tertiary education. This is otherwise known as Purpose-Built Student Accommodation (PBSA).
- Urbis Student Accommodation Benchmarks refers to Urbis' in-house compilation of student accommodation data. This report provides data on the supply of student accommodation facilities and student propensities to reside in PBSA.

Key worker housing

- Key workers are generally defined as people who provide essential services to the community. They are unable to work from home and often work outside of traditional business hours. The analysis in this report focuses on key workers earning very low to moderate incomes. Key workers living in the Structure Plan Area are a subset of the social and affordable housing eligibility calculations, allow those living outside that area are a separate cohort.

Retirement living and aged care

- Retirement included two types of diverse housing accommodation. Independent Living Units (ILUs) are those targeted at over 65's which offer a more communal form of living for elderly people. There is no medical support provided as part of this accommodation.
- Aged Care, otherwise known as Residential Aged Care (RAC), refers to accommodation that provides round-the-clock medical support for elderly residents. Residents of these facilities require medical support.

Methods of floor area measurement

- **Gross Building Area** (GBA) refers to the total floorspace of a building including stairs, hallways, plant etc.
- Note that the figures are Gross Building Area (GBA) as the floorspace audit was undertaken using external building information, no common spaces or otherwise unleasable spaces have been removed from the building extents.
- **Gross Floor Area** (GFA) is the total area of all floors in a building, measured from the exterior walls. It generally excludes stairs and plant area.
- **Gross Leasable Area** (GLA) focuses on the portion of space available for lease to tenants, typically excluding common areas and utility spaces.

Industry classification

- The following Australian and New Zealand Standard Industrial Classification (ANZSIC) Divisions make up the combined industry classifications used in key worker analysis:
    - **Health:** Health Care and Social Assistance.
    - **Education:** Education and Training.
    - **Other:** Information Media and Telecommunications; Financial and Insurance Services; Rental, Hiring and Real Estate Services; Professional, Scientific and Technical Services; Administrative and Support Services; Public Administration and Safety; Construction; Retail Trade; Accommodation and Food Services, Arts and Recreation Services; Other Services; Agriculture, Forestry and Fishing; Mining; Manufacturing; Electricity, Gas, Water and Waste; Wholesale Trade; Transport, Postal and Warehousing.

Occupation classification

- **White collar occupations:** Managers; Professionals; Community and Personal Service Workers; Clerical and Administrative Workers; Sales Workers.
- **Blue collar occupations:** Technicians and Trades Workers; Machinery Operators and Drivers; Labourers

Appendix B

Assumptions and limitations

Assumptions

Additional assumptions related to this analysis or the data sources are:

- The modelling anticipates there are no constraints on the construction industry, and all necessary dwellings required are realised.
- Average internal floor areas for residential dwellings (by type and number of bedrooms) to remain constant over the time period. This is assumed because there are no clear trends when assessing internal floor areas so they have been kept constant.
- The modelling assumes that internal areas low-density housing in the Glen Waverley Structure Plan are 60% higher than other SRL East Precincts for a given bedroom number. This is based on analysis of the GBA of low-density dwellings in Glen Waverley versus all other SRL East Precincts. Houses in the Structure Plan Area are, on average, larger here.
- Internal floor areas to Gross Building Area (GBA) conversion factors are assumed to remain constant over the time period.
- Household sizes for residential dwellings (by type and number of bedrooms) to remain constant over the time period. While projections predict a small decline in household sizes across Greater Melbourne, this decrease is expected to be witnessed in the SRL East Structure Plan Areas with a shift from low-density to high-density dwellings.
- Overall, it is assumed there will be no net increase in low-density dwellings in the Structure Plan Area from 2022. This does not preclude old low-density dwellings from being demolished and replaced with new low-density dwellings or potentially being sub-divided.
- Social and Affordable Housing are based on data collected at the 2021 Census. While the underlying determinants of Social and Affordable housing may change (e.g. increasing rents leading to more households in rental distress), these changes are not factored into our modelling.
- The proportion of people experiencing homelessness remains constant over time, sustaining the levels observed in the year 2021.
- The proportion of key workers within each industry remains consistent over time, maintaining the same levels observed in the year 2021.
- All demand for PBSA generated from the Holmesglen Institute will be captured within the Structure Plan Area.
- The modelling includes a vacancy factor of 5% for the 2041 modelled estimates. After addition of the vacancy factor, the 2041 modelled estimates are equivalent to the 2021 dwellings which already includes vacant dwellings.

Limitations

Additional limitations associated with this analysis or data sources are:

- **Census data:** The 2021 Census was conducted at an unusual time with much of Australia's eastern seaboard subject to COVID-19 restrictions, prompting caution when interpreting certain results, especially regarding data on place of employment. Census data is also subject to random perturbation to protect the confidentiality of individuals. These adjustments result in small introduced random errors when analysing more finely classified data. Changes to data management and collection methods across Census periods can also impact the use of a few datasets especially when used at a small geographic level or over time.
- **Spatial misalignment:** Numerous situations arise where the geographic units of one type intersect with the boundaries of another type in inconsistent ways. For example, the Structure Plan Areas do not perfectly align with SA1s (the principal geography from that Census data is extracted from). AJM JV and SRLA have agreed on specific methods for apportioning geographic data. However, apportioning can result in some inaccuracy in the allocation of data for the area sought to approximate.
- **Use of benchmark data:** SRL East will deliver a step change in housing demand preferences. Recent trends within local areas will not prevail in the future as population growth and density are vastly different to what these precincts would look like without SRL. To account for this, the current profile of select case study precincts has been used to determine housing preferences in the Structure Plan Area in the future. While benchmarks provide valuable insights, they are not perfect indicators of the future due to variations across different areas including local planning policy.
- **CityPlan projections included in the SRL Business and Investment Case**: The projections are strategic and should be considered indicative, particularly at the small area level. Since the projections were prepared, some material events have occurred, impacting population and employment growth and to some extent, typical behaviours of households and businesses. These include COVID-19, lower population growth, a shift in user preference to working from home, and updates to staging of competing and complementary projects.

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Appendix C

Demographic data

TABLE C.1 DEMOGRAPHICS, GLEN WAVERLEY, 2011 & 2021

	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE
	2011	2011	2011	2021	2021	2021
Income						
Per capita Income	$33,005	$40,607	$34,200	$48,835	$48,471	$46,017
Average household income	$74,069	$88,874	$85,326	$106,996	$127,711	$119,232
Age profile						
% 0-14 years	15%	17%	18%	16%	16%	18%
% 15-24 years	19%	14%	14%	15%	13%	12%
% 25-39 years	15%	21%	23%	22%	21%	24%
% 40-54 years	22%	21%	21%	20%	20%	20%
% 55-65 years	10%	11%	11%	9%	12%	11%
% 65+ years	21%	16%	13%	18%	18%	15%
Household type*						
Couple family no children	21%	24%	23%	20%	24%	23%
Couple family with children	35%	34%	33%	31%	33%	32%
One parent family	11%	9%	10%	12%	9%	10%
Other family households	3%	3%	3%	3%	2%	2%
Lone person household	23%	23%	22%	23%	25%	24%
Group household	4%	4%	4%	5%	4%	4%
Other	3%	3%	4%	6%	3%	4%
Dwelling density*						
Low-density	68%	69%	73%	58%	61%	66%
Medium-density	30%	29%	12%	8%	27%	22%
High-density	2%	2%	15%	34%	11%	13%
Housing tenure*						
Owned outright	46%	31%	26%	33%	36%	30%
Owned with a mortgage	22%	27%	29%	20%	34%	38%
Total Rented	32%	21%	21%	44%	29%	30%

	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE	STRUCTURE PLAN AREA	SOUTH EAST REGION	GREATER MELBOURNE
	2011	2011	2011	2021	2021	2021
Rented: Real estate agent	23%	14%	14%	34%	22%	23%
Rented: Person not in same household	7%	4%	4%	8%	4%	4%
Rented: State or territory housing authority	0%	2%	2%	0%	1%	2%
Rented: Community housing provider	0%	0%	0%	0%	0%	0%
Rented: Landlord type not stated	1%	0%	0%	0%	0%	0%
Rented: Other landlord type	1%	0%	1%	1%	0%	0%
Other tenure type	0%	0%	1%	3%	2%	2%
Other metrics:						
Household size	2.5	2.5	2.6	2.2	2.4	2.4
% Overseas-born	59%	36%	37%	70%	39%	37%
% White collar workers	78%	77%	72%	78%	79%	74%
% Blue collar workers	22%	23%	28%	22%	21%	26%

**Excludes non-private dwellings and other private dwellings. Source: ABS Census of Population and Housing 2021; AJM JV*

TABLE C.2 DEMOGRAPHIC CHANGE, GLEN WAVERLEY, 2011 & 2021

	CHANGE	STRUCTURE PLAN AREA	STRUCTURE PLAN AREA	GREATER MELBOURNE	GREATER MELBOURNE	STRUCTURE PLAN AREA	GREATER MELBOURNE	VARIATION FROM GREATER MELBOURNE
		2011	2021	2011	2021	2011-2021	2011-2021	2011-2021
Income								
Per capita Income	%	$33,005	$48,835	$34,200	$46,017	48%	35%	13%
Average household income	%	$74,069	$106,996	$85,326	$119,232	44%	40%	5%
Age profile								
% 0-14 years	% point	15%	16%	18%	18%	1%	0%	1%
% 15-24 years	% point	19%	15%	14%	12%	-3%	-2%	-2%
% 25-39 years	% point	15%	22%	23%	24%	7%	1%	5%
% 40-54 years	% point	22%	20%	21%	20%	-1%	-1%	0%
% 55-65 years	% point	10%	9%	11%	11%	0%	0%	0%
% 65+ years	% point	21%	18%	13%	15%	-2%	2%	-4%
Household type								
Couple family no children	% point	21%	20%	23%	23%	-1%	0%	-1%
Couple family with children	% point	35%	31%	33%	32%	-4%	-1%	-3%
One parent family	% point	11%	12%	10%	10%	1%	0%	1%
Other family	% point	3%	3%	3%	3%	0%	0%	0%
Lone person	% point	23%	23%	22%	24%	0%	1%	-1%
Group household	% point	4%	5%	4%	4%	0%	0%	1%
Other	% point	3%	6%	4%	4%	3%	0%	3%
Dwelling density*								
Low-density	% point	68%	58%	73%	66%	-10%	-7%	-3%
Medium-density	% point	30%	8%	12%	22%	-22%	10%	-32%
High-density	% point	2%	34%	15%	13%	32%	-3%	35%
Housing tenure*								
Owned outright	% point	46%	33%	34%	30%	-13%	-3%	-10%
Owned with a mortgage	% point	22%	20%	38%	38%	-2%	0%	-1%

	CHANGE	STRUCTURE PLAN AREA	STRUCTURE PLAN AREA	GREATER MELBOURNE	GREATER MELBOURNE	STRUCTURE PLAN AREA	GREATER MELBOURNE	VARIATION FROM GREATER MELBOURNE
		2011	2021	2011	2021	2011-2021	2011-2021	2011-2021
Rented	% point	32%	44%	28%	30%	12%	2%	10%
Other metrics								
Household size	People per dwelling	2.5	2.2	2.6	2.4	-0.3	-0.2	-0.1
% Overseas-born	% point	59%	70%	37%	37%	11%	0%	11%
% White collar workers	% point	78%	78%	72%	79%	0%	6%	-6%
% Blue collar workers	% point	22%	22%	28%	21%	0%	-6%	6%

**Excludes non-private dwellings and other private dwellings. Source: ABS Census of Population and Housing 2021; AJM JV*

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Appendix D

Case studies

Case study candidates and indicators

Case studies were used to derive key housing parameters. A total 34 case study precincts were selected based on a mapping analysis (of population densities / train station proximity) and professional knowledge. Table D.1 provides a list of the precincts reviewed. Table D.2 provides the list of factors and their weightings that were used for the similarity search and ranking exercise in Section 7.

TABLE D.1 CANDIDATE CASE STUDY PRECINCTS

PRECINCT	CITY
St Leonards Station	Sydney
Chatswood Station	Sydney
Epping Metro Station	Sydney
Rhodes Station	Sydney
Liverpool Station	Sydney
Bankstown Station	Sydney
Wolli Creek Station	Sydney
Rockdale Station	Sydney
Kogarah Station	Sydney
Hurstville Station	Sydney
Green Square Station	Sydney
Mascot Station	Sydney
Bondi Junction Station	Sydney
Burwood Station	Sydney
Strathfield Station	Sydney
Flemington Station	Sydney
Wentworthville Station	Sydney

PRECINCT	CITY
Lidcombe Station	Sydney
Auburn Station	Sydney
Parramatta Station	Sydney
Macquarie Uni. Metro Station	Sydney
North Ryde Metro Station	Sydney
Dulwich Grove Light Rail	Sydney
Indooroopilly Station	Brisbane
Toowong Station	Brisbane
Westend	Brisbane
Newstead	Brisbane
Kelvin Grove	Brisbane
Chermside	Brisbane
Nundah Station	Brisbane
Lutwyche	Brisbane
Coorparoo	Brisbane
Belconnen	Canberra
Canberra South Station	Canberra

Source: AJM JV

TABLE D.2 BUILT-FORM AND HOUSING INDICATORS USED IN SIMILARITY SEARCH

INDICATOR	DESCRIPTION	WEIGHTING (%)	RATIONALE
Train station	Is there a local train/metro or light rail station?	5%	Prioritises case studies with similar modes of infill development (TOD).
Density (prior to development)	The past ('starting point') precinct population density – prior to development.	10%	Prioritises case studies with similar past population densities.
Density (post development)	The future ('end point') precinct population density – post development.	20%	Prioritises case studies with similar future population densities.
Neighbourhood density (prior)	The past ('starting point') neighbourhood population density (local government area)	10%	Prioritises case studies with similar surrounding urban tissue – for example, inner city or suburban.
CBD distance	The CBD distance, measured through public transport travel time.	15%	Prioritises case studies with similar distances to CBD.
SEIFA (IRSAD) (prior)	The past socioeconomic levels of the precinct population – prior to development.	10%	Prioritises case studies with similar affluence and living arrangements.
Overseas born (prior)	The past proportion of overseas born population.	5%	Prioritises case studies with similar share of population more likely to live in and support high-density living arrangements.
Office employment (post)	The future quantum of office jobs.	10%	Prioritises case studies with similar quantum of office jobs.
University	Is there is a university within a 1600-m radius?	10%	Prioritises case studies in proximity to university (and likely higher proportion of student accommodation).
Hospital	Is there a hospital within a 1600-m radius?	0%	Prioritises case studies in proximity to hospital (and likely higher proportion of key worker housing).
Industrial (prior)	Was the case study precinct previously an industrial area?	5%	Prioritises case studies with similar past urban morphology. Rezoned industrial areas provide more flexibility in terms of future residential.

Source: AJM JV

Case study summaries

The demographics for the three selected case studies are summarised below. It provides insight into the urban trends experienced that influenced the modelling of the Glen Waverley Structure Plan Area.

EPPING METRO STATION 1600-M RADIUS AREA

Epping Metro Station is accompanied by a small retail strip and a variety of education centres, including early learning, K-12 schools and vocational education providers. It is linked to the main train network and the M1 Metro line. Growth in employment has largely been in health, education and knowledge-intensive industries over the past 5-10 years.

Table D.3 outlines key changes within the case study area from 2011–2021. Table D.4, Figure D.1 and Table D.5 outline key demographic and housing trends in the area.

TABLE D.3 KEY CHANGES IN EPPING METRO STATION 1600-M RADIUS AREA

	KEY CHANGES	IMPLICATIONS
Changes in age structure	Significant drop in both 15-29 year olds and 45-64 year olds. Increase in 30-44 year olds and the youngest age bracket, implying more families.	Greater demand for dwellings that cater for families
Change in household structure	Slight drop in lone households. Couples with families remains the largest cohort.	Steady demand for family housing.
Change in house and unit prices	Houses and unit prices growing slower than Greater Sydney median. Limited growth in prices over the last decade in units.	Units in the area are comparatively affordable

Source: AJM; ABS (2011 & 2021) Census of Population and Housing; Pricefinder

TABLE D.4 HOUSEHOLD STRUCTURE, EPPING METRO STATION 1600-M RADIUS AREA, 2011-2021

	EPPING - 2011	EPPING - 2021	% PT CHANGE (2011-2021)
Couple family without children	21.7%	23.4%	1.7%
Couple family with children	42.0%	40.5%	-1.4%
Other family	9.7%	9.8%	0.0%
Multi family	2.4%	3.1%	0.7%
Lone person household	18.4%	16.8%	-1.6%
Group household	3.5%	4.0%	0.5%
Other	2.3%	2.5%	0.2%
Total	**100.0%**	**100.0%**	

Source: ABS (2011 & 2021) Census of Population and Housing

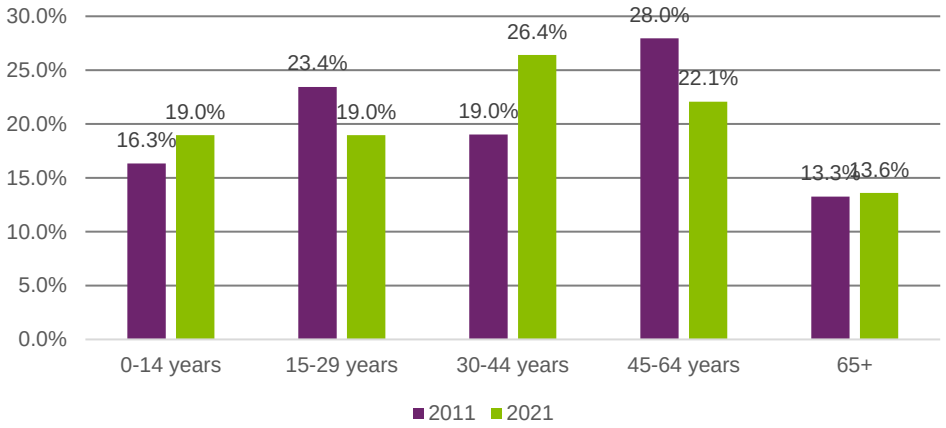

FIGURE D.1 AGE STRUCTURE, EPPING METRO STATION 1600-M RADIUS AREA, 2011 & 2021

Source: ABS (2011 & 2021) Census of Population and Housing

TABLE D.5 MEDIAN UNITS AND HOUSE PRICES, EPPING (SUBURB), 2014-2023

	2014	2023	PRICE CHANGE (NO.)	TOTAL GROWTH (%)	ANNUAL GROWTH RATE (2014-2023)
Median Unit Prices ($)					
Epping	$738,000	$770,000	$32,000	4.3%	0.5%
Greater Sydney	$622,000	$777,500	$155,500	25.0%	2.8%
Median House Price ($)					
Epping	$1,373,885	$2,400,000	$1,026,115	74.7%	8.3%
Greater Sydney	$739,000	$1,340,000	$601,000	81.3%	9.0%

Source: Pricefinder

Epping Planning Review

The City of Parramatta has identified community concern in relation to traffic congestion, heritage conservation, loss of commercial floor space and provision of open space and community facilities. These points are being addressed through planning proposals which aim to reduce impact on heritage sites and the development of a new library. It should also be noted that an attempt to increase commercial floorspace was not supported by NSW Department of Planning and Environment in 2021, the Council is reviewing its options in this regard.

BURWOOD (NSW) 1600-M RADIUS AREA

Burwood is in Sydney's Inner West. It contains a Railway Station and is the future location of a Metro station on the M4 line. Two small hospitals are located within 1 kilometre of the town centre. Most of the area consists of low- and mid-rise apartments or separate dwellings, with high-rises largely within proximity of the rail station. Employment growth has largely been in health, education, and knowledge-intensive industries.

Table D.6 outlines key changes within the case study area from 2011–2021. Tables D.7, Figure D.2 and Table D.8 outline key demographic and housing trends in the area.

TABLE D.6 KEY CHANGES IN BURWOOD 1600-M RADIUS AREA

	KEY CHANGES	IMPLICATIONS
Changes in age Structure	Strong increase in age brackets from 30 to 44 years, increase in 15 to 29 years.	Greater demand for 1- & 2-bedroom units that cater towards younger demographics.
Change in household structure	Less couple family with children. Growth in couples (no kids). Increase in lone person and group households	Greater demand for studio/1/2 bedroom catering towards lone person and couple households.
Change in house and unit prices	Unit price growth lower than Greater Sydney whilst house price lower than city median.	Burwood becoming a relatively more affordable location, compared to the Greater Sydney region, although units grew more strongly.

Source: AJM; ABS (2011 & 2021) Census of Population and Housing; Pricefinder

TABLE D.7 HOUSEHOLD STRUCTURE, BURWOOD 1600-M RADIUS AREA, 2011-2021

	BURWOOD (NSW) - 2011	BURWOOD (NSW) - 2021	% PT CHANGE (2011-2021)
Couple family without children	20.4%	24.6%	4.2%
Couple family with children	32.8%	23.2%	-9.5%
Other family	11.7%	10.6%	-1.1%
Multi family	3.3%	2.6%	-0.7%
Lone person household	18.9%	21.8%	2.9%
Group household	7.4%	12.6%	5.3%
Other	5.6%	4.6%	-1.0%
Total	**100.0%**	**100.0%**	

Source: ABS (2011 & 2021) Census of Population and Housing

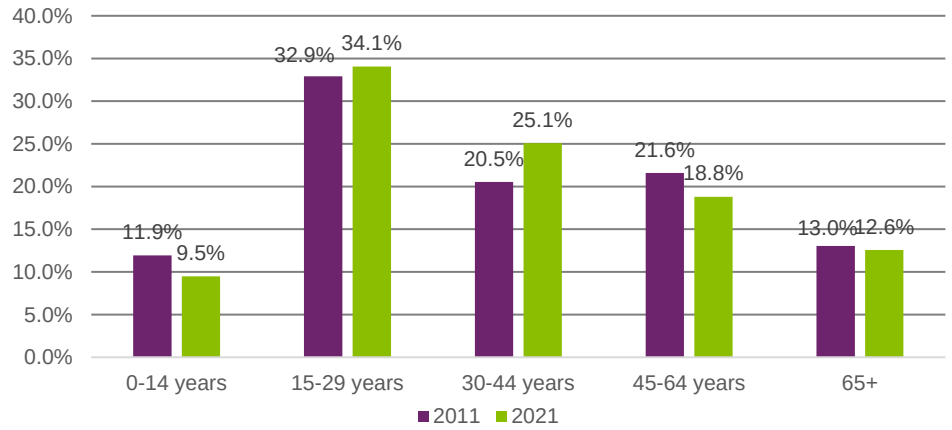

FIGURE D.2 AGE STRUCTURE, BURWOOD 1600-M RADIUS AREA, 2011 & 2021

Source: ABS (2011 & 2021) Census of Population and Housing

TABLE D.8 MEDIAN UNITS AND HOUSE PRICES, BURWOOD (SUBURB), 2014–2023

	2014	2023	PRICE CHANGE (NO.)	TOTAL GROWTH (%)	ANNUAL GROWTH RATE (2014-2023)
Median unit prices ($)					
Burwood (NSW)	$686,500	$920,000	$233,500	34.0%	3.8%
Greater Sydney	$622,000	$777,500	$155,500	25.0%	2.8%
Median house price ($)					
Burwood (NSW)	$1,727,500	$2,851,000	$1,123,500	65.0%	7.2%
Greater Sydney	$739,000	$1,340,000	$601,000	81.3%	9.0%

Source: Pricefinder

Burwood Local Strategic Planning Statement (LSPS) 2020 and Burwood Housing Strategy 2020

The LSPS sets out Council's 20-year vision for land use planning in Burwood, along with a suite of planning priorities and actions relating to housing, local centres, infrastructure and the environment. This Strategy is expressed in Burwood LEP 2012 – in the objectives, land use zones and development standards. Higher rise development increased under this plan. In 2019, Council prepared the Burwood Housing Strategy to set out a plan for housing in Burwood over the next 20 years to meet expected demand. The Low-Rise Housing Diversity Code allows certain higher-density residential development to be carried out under a fast track complying development approval.

AUBURN 1600-M RADIUS AREA

Auburn is located in western Sydney, between Parramatta and Burwood. South of the station is a small commercial district featuring a variety of health, retail and government offices. Further beyond, the station is largely surrounded by low-medium-density housing. Particularly to the north and south-west of the station. To the north-east, within the 1600-metre boundary, is an industrial precinct.

Table D.9 outlines key changes within the case study area from 2011–2021. Tables D.10, Figure D.3 and Table D.11 outline key demographic and housing trends in the area.

TABLE D.9 KEY CHANGES IN AUBURN 1600-M RADIUS AREA

	KEY CHANGES	IMPLICATIONS
Changes in age structure	Youngest age bracket shrinking whilst 30-44 year olds and 60+ year old increasing.	Less demand for family homes. More demand for retirement accommodation.
Change in household structure	Large drop in families. Gains in group houses and couples without children.	Greater demand for 1 & 2 Bedroom dwellings.
Change in house and unit prices	Higher growth in median unit and house prices than Greater Sydney	Higher demand for affordable dwellings.

Source: AJM; ABS (2011 & 2021) Census of Population and Housing; Pricefinder

TABLE D.10 HOUSEHOLD STRUCTURE, AUBURN 1600-M RADIUS AREA, 2011-2021

	AUBURN - 2011	AUBURN - 2021	% PT CHANGE (2011-2021)
Couple family without children	15.8%	20.3%	4.5%
Couple family with children	40.1%	29.4%	-10.7%
Other family	12.7%	10.8%	-1.9%
Multi family	5.3%	4.8%	-0.5%
Lone person household	14.5%	15.9%	1.4%
Group household	5.4%	12.5%	7.1%
Other	6.2%	6.4%	0.2%
Total	**100.0%**	**100.0%**	

Source: ABS (2011 & 2021) Census of Population and Housing

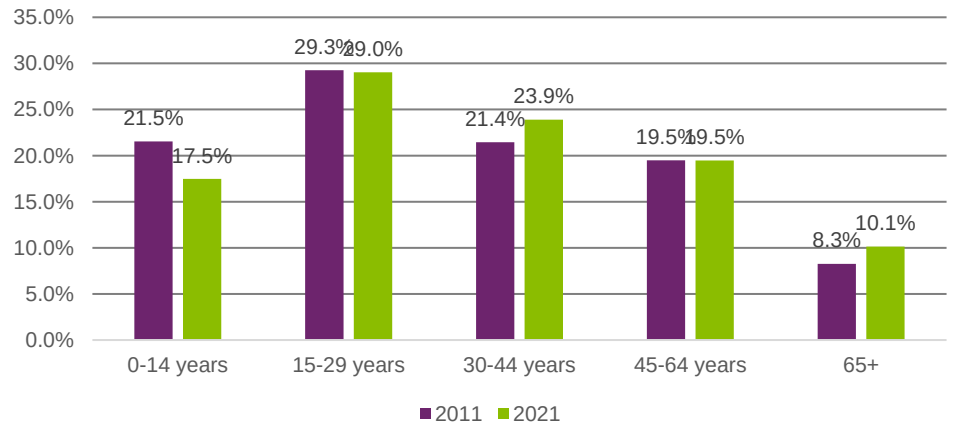

FIGURE D.3 AGE STRUCTURE, AUBURN 1600-M RADIUS AREA, 2011 & 2021

Source: ABS (2011 & 2021) Census of Population and Housing

TABLE D.11 MEDIAN UNITS AND HOUSE PRICES, AUBURN (SUBURB), 2014-2023

	2014	2023	PRICE CHANGE (NO.)	TOTAL GROWTH (%)	ANNUAL GROWTH RATE (2014-2023)
Median unit prices ($)					
Hurstville	$425,000	$570,000	$145,000	**34.1%**	**3.8%**
Greater Sydney	$622,000	$777,500	$155,500	**25.0%**	**2.8%**
Median house price ($)					
Hurstville	$745,000	$1,175,000	$430,000	**57.7%**	**6.4%**
Greater Sydney	$739,000	$1,340,000	$601,000	**81.3%**	**9.0%**

Source: Pricefinder

Cumberland 2030: Our Local Strategic Planning Statement

In their vision for Auburn's future as a principal local centre, Cumberland City Council state the need for diversity in housing, providing jobs for the young workforce, and managing the interface of employment lands with adjoining uses. In achieving this, the Council highlights the industrial precincts and employment lands surrounding the station, development along Parramatta Road, as well as improvement is walkability, open space and community assets throughout the centre.

Appendix E

Housing requirements methodology

Housing requirements – detailed methodology

1600-METRE RADIUS AREA

A key component of modelling housing requirements for the Structure Plan Area is understanding and comparing the growth and development of comparable Transit Oriented Precincts (TOPs) as referenced by the case studies.

As part of the case study analyses, a radius of 1600-metre from each case study train station (or equivalent) and each SRL station was defined. The modelling uses the 1600-metre radius area as an intermediary step to model the Structure Plan Area.

A 1600-metre radius was used for the following reasons:

- **Data availability:** Many important datasets for analysis are unavailable when look at the Structure Plan Area as this required extracting data at the Mesh Block area (the smallest geography used by the ABS).
- **Lack of comparability:** Structure Plan Areas are drawn specifically around each SRL East station as the area to be specifically planned for. Each Structure Plan Area has a different extent depending on specific local circumstances. Rather than relying on arbitrary estimations of equivalent 'structure plan' boundaries within the case study areas, adopting a consistent study area based on distance enables more meaningful comparisons.

MODELLING HOUSING REQUIREMENTS FOR THE STRUCTURE PLAN AREA

The following provides a detailed breakdown of the two components of modelling housing requirements for the Structure Plan Area.

Case Study assessment:

1) Scoring and comparison of 34 case study locations around Australia was undertaken. The case studies assessed are in Table D.1. The case studies were assessed on a range of factors related to population densification, infrastructure, and other factors. Each factor was given a different weighting when applied to the respective Structure Plan Area, based on the unique characteristics of each area and a view as to which case study was most comparable. The relevant factors and weightings applied are shown in Table D.2.
2) Based on the results of the scoring, that is, which case studies were most comparable to the Structure Plan Area, and professional knowledge, three comparable case studies were chosen for the Structure Plan Area modelling. Each case study is then assigned a different weighting, based on the degree of comparability, with the most comparable being given a weighting of 0.5, the second most a weighting of 0.3 and the third most 0.2. The weightings are applied to the dwelling structure data for each case study which is in turn applied to the population projections.

Structure Plan Area modelling:

The lettered steps in Figure E.1 below outline a detailed step by step methodology for the Structure Plan Housing Requirements. Note steps and inputs A to N relate to the 1600-metre radius area, with steps beyond that deriving Structure Plan estimates:

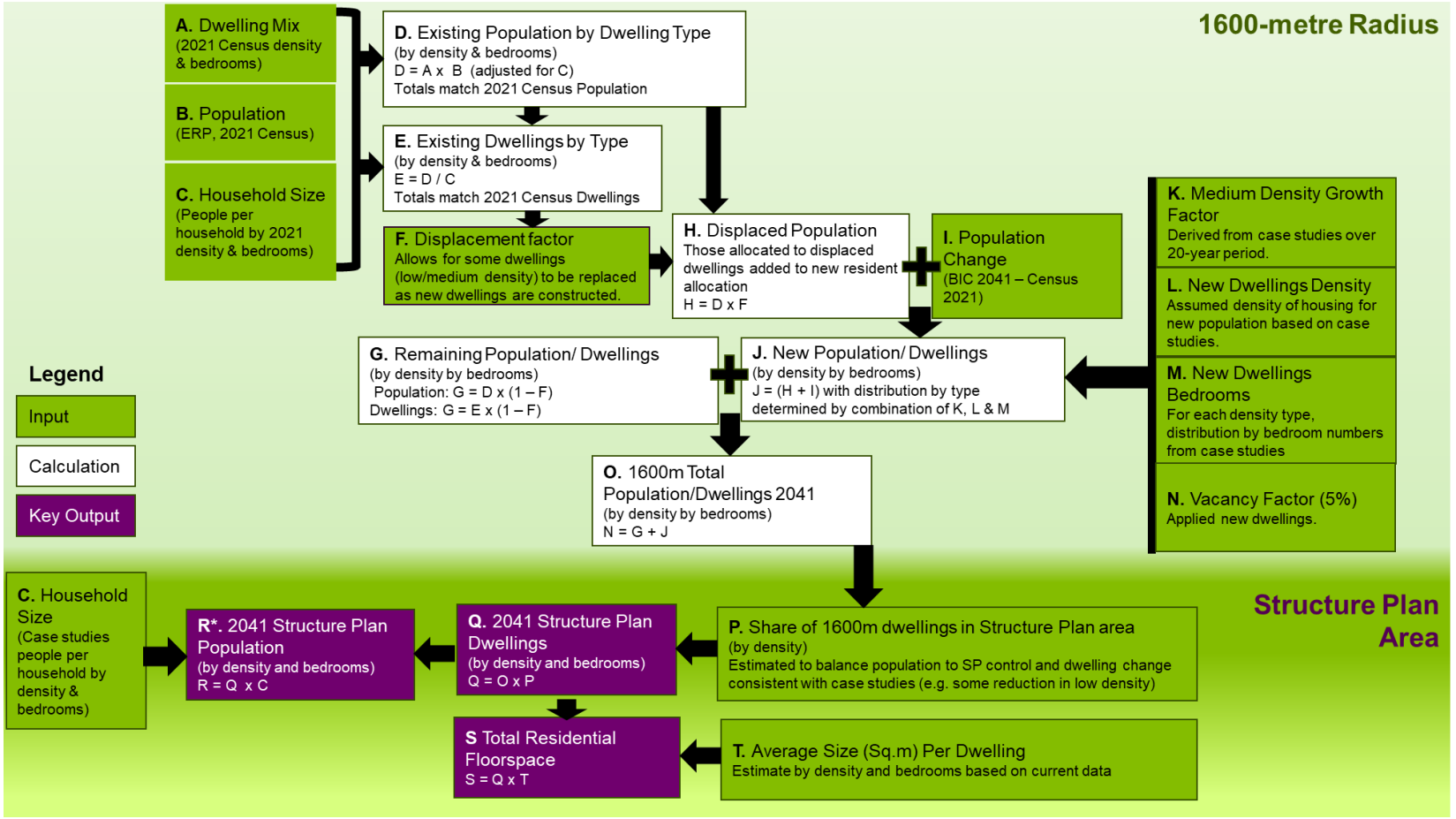

FIGURE E.1 HOUSING REQUIREMENTS METHODOLOGY DIAGRAM

Source: AJM JV

(A) The current dwelling mix (share rather than absolute number) within the 1600-metre radius area is extracted from the 2021 Census data with all dwellings split by density (high/medium/low) and bedroom numbers (studio/1/2/3/4+).

(B) The 2021 population and dwellings by structure within the 1600-metre area and Structure Plan Area are extracted from the 2021 Census.

(C) The household size (people per household) for 2021 in the 1600-metre radius is derived based on case study evidence.

(D) Population is allocated to a dwelling structure by apply household sizes to dwelling structure estimates then calibrating the resulting population to the estimated population for the Structure Plan Area.

(E) Multiplying dwellings by GLA estimates and then a GLA to GBA conversion factor provides an estimate of residential GBA.

Steps A to E are repeated at the Structure Plan Area level. These determine the 2021 estimates for population, dwellings and floorspace.

(F) A 'displacement factor' is applied to the existing dwellings within the 1600-metre radius area and the population within the respective dwelling types. This is to reflect that some of the new dwellings will come from the replacement of existing dwellings. Displacement factors have been applied so that low-density dwellings are more likely to be replaced, with some medium-density housing also being replaced by higher-density housing over time. The number of displaced dwellings differs for each 1600-metre area depending on whether there are currently non-residential sites (e.g. a brownfield site) or commercial zones (e.g. activity centres) that can be developed for housing without the need for existing housing to be replaced. The total dwellings displaced are outlined in Table E.2.

(G) When the displaced dwellings are excluded, it leaves the remaining dwellings (i.e. existing dwellings that will remain) and the population within them. This is calculated by multiplying the total existing dwellings and population by dwelling type by one minus the displacement factor. This is done for each dwelling type.

(H) The population in the dwellings assumed to be displaced (i.e. not specific of which households are displaced) will be accommodated in future new housing within the 1600-metre area. This population is, therefore, added to the net additional population forecast for the area (step I).

(I) The net population change in the 1600-metre area is calculated as the BIC 2041 forecast minus the 2021 Census population. This additional population needs to be housed in the 1600-metre area, along with the displaced population.

(J) The new dwellings and the population within those new dwellings are calculated for each dwelling type (density and bedroom numbers). This is done by adding the total displaced population calculated at H to the total population change at I and then applying a series of inputs derived from the case studies to convert this total new population to new population and dwellings in each dwelling type. These inputs are described at K to N.

(K) To convert the population in need of additional housing (displaced population + new population) to dwelling estimates, a growth factor to existing medium-density dwellings is applied to calculate the estimated new medium dwellings over the forecast period. The growth factor is based on the growth in medium-density dwellings in relevant case studies.

(L) The relative density split for new dwellings is calculated. With the medium-density growth calculated at L, the remainder of the new growth is channelled into high-density dwellings. It is assumed that the new population will not be accommodated through a net increase in low-density housing (the case studies showed that there was either a constant number of low-density dwellings or a decline). Therefore, the new population will only be accommodated in high- or medium-density dwellings.

(M) To segment the population into dwellings by bedroom number for each density, the case studies were again used to derive the share of dwellings split by bedroom number.

(N) A vacancy factor of 5% is applied to the dwellings required for new dwellings within the 1600m radius area. This is to account for unoccupied stock that is necessary for a functioning residential market. Dwellings, including vacant stock, are carried through the model. Vacant stock is already implicit in the existing stock that is not displaced, so the vacancy factor is only applied to new dwellings.

(O) The 1600-metre area total population and dwellings by density and bedroom number for 2041 is calculated by adding the remaining population/dwellings (G) to the new population/dwellings (J).

Having used the case study analysis to derive population and dwelling estimates by dwelling type at the 1600-metre area, the share of dwellings that will be delivered in the Structure Plan Area as a subset of the 1600-metre area needs to be determined. This is done for each density type (see Table E.1 for the applied shares). This is an iterative process as the calculated population in the Structure Plan Area for 2041 (see step P) needs to match the population projection. The starting point is the proportion, as at the 2021 Census, of each density type in the Structure Plan Area compared to the 1600-metre radius area. As the density types have different household sizes attached to them, even though the dwelling number is fixed, a different density mix will support a different population.

(P) The other check to ensure the validity of this split is the change in the absolute number of dwellings by density in the Structure Plan Area, with reference to the findings of the case studies. For example, the absolute number of low-density dwellings would not be expected to increase dramatically, as new development will be higher density. Equally, the number of low- or medium-density dwellings wouldn't be expected to decline dramatically. This is an iterative process to produce a result that 'makes sense' when the available evidence of how density will shift as the projected scale of new development occurs is considered.

(Q) The total Structure Plan Area dwellings in 2041 (by density and bedrooms) are derived by multiplying the total dwellings for the 1600-metre area (O) by the share by density derived in (P). The bedroom mix is assumed to be consistent for each density type with the 1600-metre numbers derived from the case studies.

(R) The total Structure Plan Area population in 2041 (by density and bedrooms) is calculated by multiplying the number of dwellings, for each dwelling type (P), by the household size for that dwelling type which is derived from the 2021 Census (E)[41]. Note the sum of the population by dwelling type needs to match the projections for the Structure Plan Area in total (derived from CityPlan (published in SRL BIC)). This acts as an inbuilt check of the other inputs. Note the household sizes applied before adjusting population are the those from step (C).

(S) Total residential floorspace requirements is calculated for the Structure Plan Area by multiplying the estimated number of dwellings by type (Q), by the respective average square metres per dwelling and a GLA to GBA conversion factor (T).

(T) The average square metre per dwelling figure is derived using data from the Urbis Apartment Essentials for Medium and High-density and RP data for Low-density dwellings. The GLA to GBA conversion factor is determined using professional knowledge[42] and is outlined in Table E.5.

TABLE E.1 GLEN WAVERLEY STRUCTURE PLAN AREA SHARE OF 1600-M RADIUS DWELLINGS

	LOW-DENSITY	MEDIUM-DENSITY	HIGH-DENSITY
	PROPORTION 'WITHIN' STRUCTURE PLAN AREA		
Glen Waverley Structure Plan	24.0%	28.0%	56.5%

Source: ABS; AJM JV

TABLE E.2 GLEN WAVERLEY 1600-M RADIUS AREA AND STRUCTURE PLAN AREA DISPLACEMENT FACTOR

		LOW-DENSITY	MEDIUM-DENSITY	TOTAL
Geography	**Unit**	**Displaced dwellings 2021-2041**		
Glen Waverley 1600m Radius Area (explicit)	No.	380	40	420
	Proportion of 2021 Dwellings	6.1%	3.6%	4.9%

Note the table refers to displaced dwellings attributable to the displacement factor. The net changes in dwellings will be different as net changes incorporate projected growth in dwellings by 2041. It is assumed no high-density dwellings will be replaced. Source: ABS; AJM JV.

KEY HOUSING ASSUMPTIONS

As described through the process above, to translate the overall requirements for dwellings into residential floorspace, several assumptions are applied. Key among those are household size (number of people per household for each dwelling type) and internal area (sq.m) assumptions by dwelling structure. Household size estimates are applied for each household structure as shown in Table E.3. In the

[41] Note distributing the population into a dwelling structure relies on applying household sizes at the dwelling structure level and then adjusting these to align with population projections. The end distribution is not affected whether household sizes are applied to dwellings including vacancy or excluding vacancy since we have applied a uniform vacancy across all dwellings.

[42] AJM JV notes the exact ratio of GLA to GBA differs substantially between buildings. AJM JV has adopted a ratio of 1.66 for low-density dwellings and 1.35 for medium and high-density dwellings.

body of the report, Studio & 1-bedrooms and 3-bedrooms and 4+ bedrooms have been combined in their own categories.

Household size assumptions are based on data from the case studies, sourced from the 2021 Census. These assumptions are applied to both the Structure Plan and the 1600-metre radius in methodology. There are separate assumptions for dwelling density and bedroom numbers as outlined in Table E.3. They are kept constant through the forecast period. Because there will be more dense housing types in future with fewer bedroom numbers and lower household sizes, the shift towards these housing types will drive a downward shift in the overall household size for the Structure Plan Area, as has broadly been witnessed across Australia in recent decades.

TABLE E.3 HOUSEHOLD SIZE ASSUMPTIONS, 2021–2041

	STUDIO	1-BEDROOM	2-BEDROOMS	3-BEDROOMS	4+ BEDROOMS
Low-density	1.0	1.4	2.0	2.7	3.6
Medium-density	1.1	1.2	2.0	2.7	3.2
High-density	1.1	1.4	2.2	2.8	3.2

Source: ABS; AJM JV. Note Household sizes are applied as per Table E.3. However, population is always calibrated to match the census estimate or Structure Plan Area derived from SRL BIC. Therefore, household sizes extrapolated from modelled results will differ to those in Table E.3

Table E.4 outlines the Internal Area Assumptions. There internal area estimates were applied across existing as well as new dwellings.

To estimate the Gross Building Area (GBA), the floorspace numbers provided in the body of the report, escalation factors as outlined in Table E.5 were applied.

Internal areas assumptions represent the estimated internal floorspace of dwellings. This does not include any external areas such as car parks, gardens or backyards. For low and medium-density, estimates from RP Data was used which provides internal areas of households by density. However, as there are very few households in the Structure Plan Area that are studio or one-bedroom from low-density and medium-density, AJM JV has used professional knowledge to input internal areas for these dwelling types.

High-density internal areas have been estimated via reference to the Urbis Apartment Essentials. The Essentials database tracks all off the plan apartment sales (from developments with over 24 units) across Melbourne and other capital cities.

GBA escalation factors are estimated through professional knowledge of the construction sector.

TABLE E.4 INTERNAL AREA ASSUMPTIONS (SQ.M), 2021–2041

	STUDIO	1 BEDROOM	2 BEDROOMS	3 BEDROOMS	4+ BEDROOMS
Low-density	80	120	156	214	320
Medium-density	50	75	94	132	190
High-density	42	53	75	125	186

Source: Urbis Apartment Essentials; RP Data

TABLE E.5 CONVERSION OF INTERNAL AREA TO GROSS BUILDING AREA

DENSITY	INTERNAL AREA TO GBA FACTOR
Low-density	1.66
Medium and high-density	1.35

Source: AJM JV

BUILT-FORM AND HOUSING INDICATORS

The candidate case studies were compared to each of the 1600-metre radius area from each SRL station, across 11 built-form / housing indicators (listed in Appendix D) to find the best match. Depending on the SRL 1600-metre radius area, the indicator weightings were adjusted based on professional knowledge, to reflect the specific housing characteristics of each 1600-metre radius area – for example, in the instance of Clayton or Box Hill, the proximity of a hospital was considered more relevant, while in Burwood and Monash, the proximity to a university was more relevant.

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Appendix F

Housing for diverse community needs methodology

Social and affordable housing methodology

ELIGIBILITY FOR SOCIAL AND AFFORDABLE HOUSING

In 2018 the Victorian Government amended the *Planning and Environment Act 1987* (the Act) to define affordable housing as:

> '*housing, including social housing, that is appropriate for the housing needs of any of the following:*
>
> *(a) Very Low-Income Households*
>
> *(b) Low-Income Households*
>
> *(c) Moderate Income Households'*

The estimates for affordable housing in the body of the report are in line with those in the Planning and Environment Act.

Households were only included in the social and affordable housing assessment if they met the following criteria:

Social housing:

1. They are currently renting (as of the 2021 Census).
2. They are in rental distress, defined as spending above 30% of their incomes on rent.
3. Their incomes are within the ranges specified in Housing Victoria Social Housing Priority Access Housing Income Limits (provided in Table F.1).

Affordable housing:

1. They are currently renting (as of the 2021 Census).
2. They are in Rental Distress, defined as spending above 30% of their income on rent.
3. Their incomes are within the ranges specified in Governor-In-Council 2021 Order (provided in Table F.2). Governor in Council Order forms part of the definition of affordable housing under the Act. The Order specifies the income ranges for very low, low, and moderate-income households for affordable housing that is not social housing.

Experiencing homelessness:

An estimate of individuals experiencing homelessness is also incorporated into the assessment of the demand for social and affordable housing because it is vital to ensure they have accommodation in such housing as well.

People experiencing homelessness are defined below who are one of the following:

- Persons living in improvised dwellings, tents, or sleeping out
- Persons in supported accommodation for the homeless
- Persons staying temporarily with other households
- Persons living in boarding houses
- Persons in other temporary lodgings.

Table F.1 outlines the affordable housing income ranges while Table F.2 the social housing income limits.

TABLE F.1 GREATER CAPITAL CITY STATISTICAL AREA OF MELBOURNE AFFORDABLE HOUSING INCOME RANGE CLASSIFICATION

HOUSEHOLD TYPES	VERY LOW INCOME RANGE (ANNUAL)	LOW INCOME RANGE (ANNUAL)	MODERATE INCOME RANGE (ANNUAL)
Single Adult	Up to $26,200	$26,201 - $41,920	$41,921 - $62,860
Couple, No dependants	Up to $39,290	$39,291 - $62,870	$62,871 - $94,300
Family (with one or two parents) and dependent children	Up to $55,000	$55,001 - $88,020	$88,021 - $132,030

Source: Governor-In-Council-Order-1-July-2021.pdf (planning.vic.gov.au)

TABLE F.2 VICTORIA SOCIAL HOUSING PRIORITY ACCESS HOUSING INCOME LIMITS, GREATER MELBOURNE

HOUSEHOLD TYPE	ANNUAL INCOME LIMIT
Single person	$32,552
Couple, no dependants	$56,264
Family (one or two parents) with one dependent child	$58,292
Each additional dependant	$2028

Source: Housing Victoria

Detailed methodology

AFFORDABLE AND SOCIAL HOUSING

The methodology considers the relationship between household income and rents at the 2021 Census. It does not consider any future change to either household incomes or housing costs. These changes were not considered because for long-term forecasts such as these, the housing market is assumed to remain in equilibrium with the relationship between household income and rents unchanged.

For this analysis, group households were treated as Couples with no dependants, and other family as Family with dependent children. If the affordable housing income range did not fit within Census income ranges, the range was apportioned using a pro-rata approach.[43]

The methodology for social and affordable housing and homelessness is as follows:

1) Use 2021 ABS data for the Structure Plan Area to determine households on Very Low, Low and Moderate incomes, as per Figure F.1. ABS data includes all renters in the Structure Plan Area, including both those in rental distress and those not in rental distress.
2) Determine the proportions of households that rent on Very Low, Low and Moderate Incomes for the Structure Plan Area.
3) Apply the current proportion of households that rent (before looking at income levels) to Structure Plan modelled housing requirements.
4) Apply proportions from step 2 to the results of step 3.
5) Determine the proportion of renters who are in rental distress at the 2021 Census.
6) Apply proportion from step 5 to Structure Plan modelled demand to determine Affordable Housing estimates.
7) Determine the proportion of those eligible for social housing within Very Low and Low bands using Housing Victoria income brackets, as outlined in Table F.2.
8) Apply the proportion from step 7 to Affordable Housing estimates to calculate the demand for social housing.

A high-level diagram of the methodology for social and affordable housing is outlined in Figure F.1.

HOMELESSNESS

To estimate the potential homeless population which also needs to be considered for social and affordable housing, the following steps were taken:

1) To estimate the amount of homeless people within the Structure Plan, ABS estimates of the homeless population at the SA3 level were used, imputed from the 2021 Census of Population and Housing.
2) Calculate the proportion of individuals experiencing homelessness within the SA3 the Structure Plan Area is located in. From the analysis, this

[43] Pro rata apportioning was needed for all income brackets and to determine those eligible for social housing. That is, of lone person households within the very low income bracket, 96% were eligible for social housing.

proportion was 0.9% for the Monash SA3, which the Glen Waverley Structure Plan Area is located within.

3) Apply this proportion to the population forecasts for the relevant Structure Plan Area.

4) Depending on their family composition, those experiencing homelessness could be housed individually or together. Estimates of individuals are provided as a conservative (maximum) estimate of the number of dwellings needed to be provided for these people.

5) Note, the estimated homeless population are additional to the total demand for affordable and social housing, as they are not a part of the population forecast.

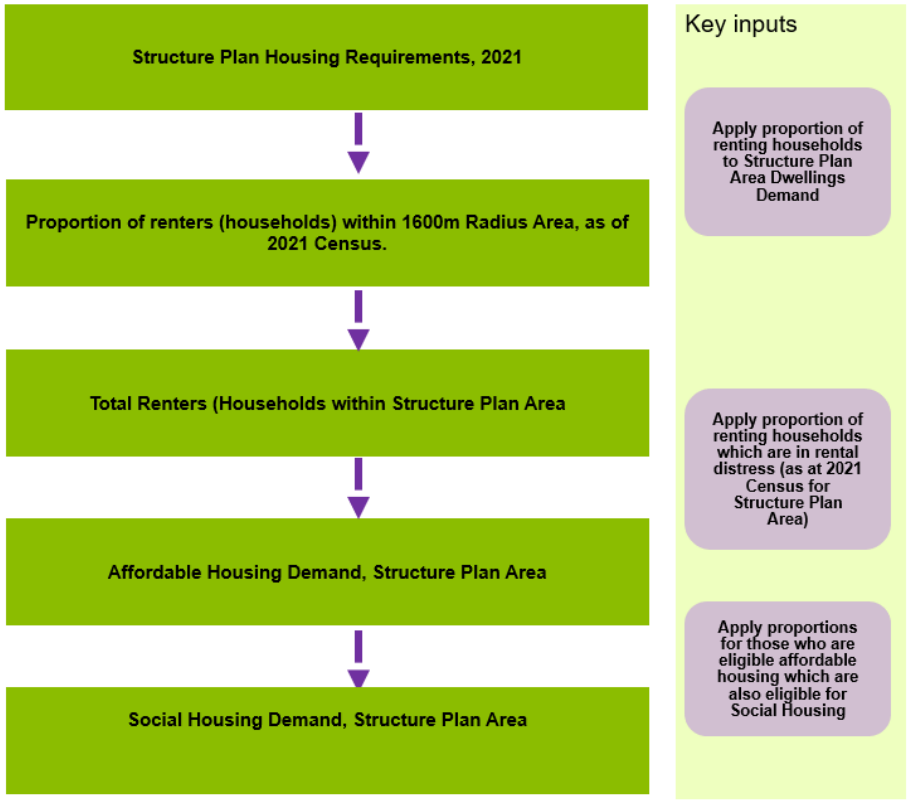

FIGURE F.1 METHODOLOGY FOR DETERMINING SOCIAL AND AFFORDABLE DEMAND

Source: AJM JV

Key worker housing

The method for estimating the future count of key workers in the Structure Plan Area is outlined below.

Note that the share of key workers in different industries and the share of those key workers on very low to moderate incomes and their place of residence was originally considered at the 1600-metre radius area (as opposed to the Structure Plan Area) due to data availability issues at a small area. The proportion of key workers by industry at the 1600-metre radius area was then applied to workers in the Structure Plan Area to calculate estimates for the Structure Plan Area.

The steps involved in estimating the number of key workers is as follows:

1) **Define relevant key worker occupations:** Occupations classified as key worker roles are based on a recent study conducted by the Australian Housing and Urban Research Institute (AHURI). These occupations are defined using defined using ABS four-digit occupation categories. Table F.3 includes a detailed list of eligible occupations.

   Note this compilation encompasses occupations typically associated with high incomes, such as Medical Practitioners. When overlaying income data, those individuals with high incomes will be excluded, while those with lower incomes, such as students, will be retained.

2) **Overlay worker incomes:** Identify key workers with very low, low, and moderate incomes based on the specified ranges outlined in the Victorian Planning and Environment Act.

3) **Consider the key worker's place of residence:** Overlay workers' place of residence by local government area to examine the number of key workers living outside the South East Region.

4) **Estimate the potential number of key workers in the future:** Use the current proportionate share of key workers in each broad industry sector and apply it to job projections for the Structure Plan Area (derived from CityPlan (published in SRL BIC)) to estimate the potential number of key workers in 2041.

TABLE F.3 KEY WORKER OCCUPATIONS BY BROAD INDUSTRY SECTOR

KEY WORKER OCCUPATIONS
• Education
• Education, Health and Welfare Services Managers, nfd
• Child Care Centre Managers
• School Principals
• Librarians
• Education Professionals, nfd
• School Teachers, nfd
• Early Childhood (Pre-primary School) Teachers
• Primary School Teachers
• Middle School Teachers (Aus) / Intermediate School Teachers (NZ)
• Secondary School Teachers
• Special Education Teachers
• Tertiary Education Teachers, nfd
• University Lecturers and Tutors
• Vocational Education Teachers (Aus) / Polytechnic Teachers (NZ)
• Miscellaneous Education Professionals, nfd
• Private Tutors and Teachers
• Teachers of English to Speakers of Other Languages
• Education Aides
• Library Assistants
• Health
• Health and Welfare Services Managers
• Medical Laboratory Scientists
• Health Professionals, nfd
• Health Diagnostic and Promotion Professionals, nfd
• Medical Imaging Professionals
• Optometrists and Orthoptists
• Pharmacists
• Other Health Diagnostic and Promotion Professionals
• Health Therapy Professionals, nfd
• Chiropractors and Osteopaths
• Complementary Health Therapists
• Dental Practitioners
• Occupational Therapists

- Physiotherapists
- Podiatrists
- Audiologists and Speech Pathologists \ Therapists
- Health (continued)
- Medical Practitioners, nfd
- General Practitioners and Resident Medical Officers
- Anaesthetists
- Specialist Physicians
- Psychiatrists
- Surgeons
- Other Medical Practitioners
- Midwifery and Nursing Professionals, nfd
- Midwives
- Nurse Educators and Researchers
- Nurse Managers
- Registered Nurses
- Legal, Social and Welfare Professionals, nfd
- Social and Welfare Professionals, nfd
- Counsellors
- Psychologists
- Social Professionals
- Social Workers
- Welfare, Recreation and Community Arts Workers
- Medical Technicians
- Community and Personal Service Workers, nfd
- Health and Welfare Support Workers, nfd
- Ambulance Officers and Paramedics
- Dental Hygienists, Technicians and Therapists
- Diversional Therapists
- Enrolled and Mothercraft Nurses
- Indigenous Health Workers
- Welfare Support Workers
- Carers and Aides, nfd
- Child Carers
- Personal Carers and Assistants, nfd
- Aged and Disabled Carers
- Dental Assistants

Nursing Support and Personal Care Workers

Special Care Workers

- Other
- ICT Professionals, nfd
- ICT Network and Support Professionals, nfd
- Computer Network Professionals
- ICT Support and Test Engineers
- Telecommunications Engineering Professionals
- ICT and Telecommunications Technicians, nfd
- ICT Support Technicians
- Science Technicians
- Protective Service Workers, nfd
- Defence Force Members, Fire Fighters and Police, nfd
- Fire and Emergency Workers
- Police
- Prison and Security Officers, nfd
- Prison Officers
- Road and Rail Drivers, nfd
- Automobile, Bus and Rail Drivers, nfd
- Automobile Drivers
- Train and Tram Drivers
- Delivery Drivers
- Truck Drivers
- Railway Track Workers
- Cleaners and Laundry Workers, nfd
- Commercial Cleaners
- Domestic Cleaners
- Housekeepers
- Laundry Workers
- Other Cleaners

Source: ABS

Note this is certainly not exhaustive in terms of occupations that could potentially be considered essential to a city's functioning. Other occupations not specifically reflected in the ABS's four-digit occupation categories, such as refuse collectors, also play an important role in city functioning. The implications of the findings could, therefore, extend beyond these specific occupation groups to include other workers.

Student accommodation

The methodology to forecast the demand for student accommodation for the Structure Plan Area given there is no current supply is outlined below:

1) Access international VET student enrolment data for the Melbourne – South East SA4 from the Commonwealth Department of Education.
2) Estimate total enrolments at the relevant campus in the Structure Plan using publicly available enrolment data. Total enrolments for Chisholm and Holmesglen Institute were accessed as these are the only VET institutions within the SA4. The proportion of total SA4 enrolments of the Holmesglen institute was determined and applied to the total SA4 international VET enrolments to establish international VET students in the Structure Plan Area.
3) Apply projected growth rates for the 18-64 years age cohort for the South East Region (based on CityPlan) to forecast enrolments out until 2041.
4) Apply propensities to enrolment data to calculate demand for student accommodation. Propensities refer to the proportion of enrolled students that reside in PBSA while studying. Propensities are sourced from Urbis Student Accommodation Benchmarks, explained in Appendix A.

Figure F.2 provides a simple overview of the methodology to estimate student accommodation demand.

FIGURE F.2 SCENARIO 1 PBSA DEMAND METHODOLOGY

Source: AJM JV

Retirement living

Below is a step-by-step outline of the approach to estimating retirement and aged care living requirements:

1) Use projections for the population over 65 years in the Structure Plan Area.
2) Determine the existing propensity for ILUs and RACs by taking the existing supply and dividing by the over 65 years population. The propensity for ILUs is increased in 2041 to account for the increased amenity offering in the Structure Plan Area while the RAC propensity is kept constant. When there is no existing supply the propensity to use ILUs or RACs across Greater Melbourne is applied.
3) To determine demand for ILUs apply relevant propensities for the over 65 population and divide by estimated household size of 1.25.
4) To determine demand for RACs apply relevant propensities for the over 65 population.

Below are simple diagrams outlining the demand for RAC and ILUs is calculated.

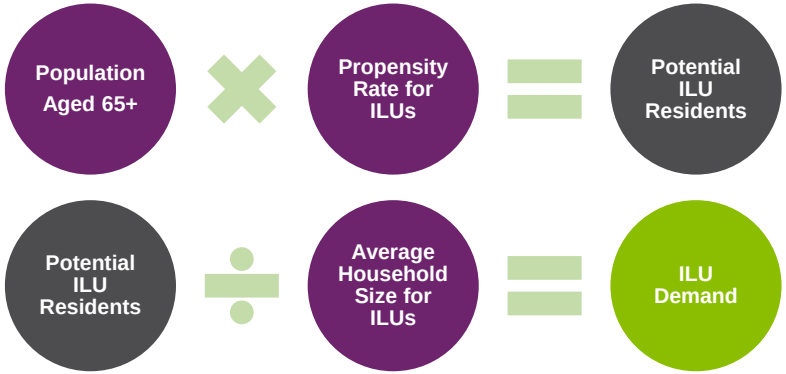

FIGURE F.3 ILU DEMAND METHODOLOGY

Source: AJM JV

FIGURE F.4 RAC DEMAND METHODOLOGY

Source: AJM JV

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Appendix G

Peer review report

Suburban Rail Loop East Precinct Planning Peer Review of Housing Technical Report Glen Waverley Station Precinct

14/02/2025

1.1 Scope of Peer Review

SGS Economics and Planning (SGS), led by Julian Szafraniec, have been engaged by White & Case together with Clayton Utz acting on behalf of the Suburban Rail Loop Authority (SRLA) to provide a peer review of the Glen Waverley Housing Needs Assessment (Technical Report) for the purpose of informing the Structure Plan (SP) and draft planning scheme amendment (PSA) for the Glen Waverley structure plan area (SPA).

SGS was first engaged in relation to this matter in early 2024, and through an iterative approach, has reviewed the housing and economic technical reports for all six SRL East precincts, along with the land use scenario and capacity assessment (LUSCA) report. This peer review report documents SGS' findings as they relate to the Technical Report (dated February 2025).

The peer review advice addresses:

- The appropriateness of the methodology used to translate assumed population projections (developed as part of the Business and Investment Case (BIC)) into various housing needs for the Glen Waverley SPA, specifically for the purposes of informing the SP and draft PSA.
- Understanding if the results of the analysis have then been appropriately presented and suitable precinct recommendations have been developed to inform the SP and draft PSA.

The peer review does not consider:

- Broader macro and regional trends, alternative population growth forecasts for the SRL corridor or station precincts, or the appropriateness of earlier studies, such as the BIC.
- Other technical reports or matters, such as urban design, traffic and community infrastructure.
- The extent to which the recommendations from the Technical Report were ultimately used and implemented in the Glen Waverley SP and draft PSA.

1.2 Summary of peer review

The remainder of this peer review document is structured as follows:

- Section 1.3 provides a summary and peer review of the appropriateness of the method used in the Technical Report for the purposes of informing the SP and draft PSA. This is consistent across all six precinct peer review reports as a consistent method was applied.
- Section 1.4 provides a peer review of the results and recommendations for Glen Waverley SPA specifically.
- Section 1.5 provides final concluding remarks from the peer review of the Technical Report.

1.3 Appropriateness of methodology, assumptions and limitations

The Technical Report is split into four Parts, along with an Executive Summary and a set of Appendices. The same overall structure, and method, for determining housing needs within the SPA has been used consistently across all six SRL East precinct reports. In summary the structure is as follows:

- Executive Summary provides an overview of the analysis and recommendations in the report.
- Introduction (Section 1) details the scope, key definitions, key assumptions, limitations and how the report relates to other technical reports and the SP process.
- Parts A and B provide a summary of key regional and local policy and housing trends.
- Part C contains the core analysis work and details how population projections were translated into various housing needs for the SPA specifically.
- Part D provides results and recommendations specific to the SPA to inform the SP and draft PSA.

The advice contained within this section of the peer review report focuses on the appropriateness of the methodology used (primarily documented in Part C) along with key definitions, assumptions and limitations (largely summarised in Section 1 and the Appendices of the Technical Report). It also provides some high-level commentary related to the appropriateness of the contextual research contained in Parts A and B, while it should be noted these sections do not materially impact the recommendations of the work.

Key inputs and interactions with other background and technical reports

Given the scale of SRL, the evidence base to inform the SP process includes many technical and background reports which investigate specific issues and combine into an overall package.

A key input into the Technical Report is the 1600m catchment precinct population projections which were derived using CityPlan as part of the BIC (August 2021). This is clearly documented in Section 1.6 and in Appendix A of the Technical Report. How they have been used, limitations and uncertainty associated with those inputs are also clearly noted. This includes noting that these projections are strategic and should be considered indicative and that material events (i.e. COVID, 2021 Census) have occurred since their development.

The Technical Report also interacts with other technical reports, including directly inputting to LUSCA (which SGS has separately completed a peer review of) and the SP. The scope and interactions with these other technical reports and the SP has informed the approach taken in the Technical Report. These interactions and broader body of work are clearly documented at Section 1.7 of the Technical Report and have been considered as part of the peer review - rather than considering the Technical Report purely in isolation.

Appropriate specification and application of definitions

For the Technical Report to appropriately inform a SP process, it is critical that any analysis directly relates to the SPA and planning horizon in question. Further, any definitions should be clearly defined and consistently applied to ensure results can be interrogated and correctly used in subsequent work.

These definitional aspects are primarily documented in Section 1 and Appendix A.

- Geography: the Technical Report results and recommendations specifically relate to the whole SPA (summarised in Section 1.8 of the Technical Report). Various inputs consider alternative geographies, including a '1600m catchment' precinct definition, travel zones and Local Government Areas (LGA). The report is clear on which geography is being used and why. In addition, a large feature of the methodology relates to translating the '1600m catchment' population forecasts from the BIC down to

the SPA geography. This draws on small area audit data and other locational assumptions which mean the spatial allocation is more nuanced than a simple 'area' split. Spatial misalignment limitations, common in this type of analysis, are likely to still exist and are also noted in Appendix B.
Overall, I believe the analysis has appropriately considered the land uses differences of various geographies and the final results and recommendations sufficiently reflect the SPA geography, for the purposes of informing a SP process.

In addition, it should be noted the Technical Report includes no sub-precinct results, beyond high-level locational recommendations and opportunities in Section 11. While more spatially detailed analysis could often be contained within a Technical Report such as this, that analysis has been completed in the LUSCA and with input from other technical reports, such as Urban Design. When considered as a package of technical reports which inform the SP process, I believe this is an appropriate approach, but increases the importance of having clear definitions that are consistently applied across all technical reports.

- Time horizon: the Technical Report analysis considers housing needs out to 2041 (20 years from 2021 or 17 years from 2024). I believe this an appropriate planning horizon for SP purposes and is consistent with Planning Practice Note 90: Planning for Housing which identifies a need to plan for "at least a 15-year period".
- Population, housing and floorspace definitions: the Technical report adopts a very broad definition of population, housing and floorspace (see Section 1.5 and Appendix A):
  - 'Population' aligns with standard ABS definitions and includes all 'long-term residents' including those in private and non-private dwellings, such as aged care, hospitals or student dormitories.
  - 'Dwelling' also includes both private and non-private dwelling forms given the definitional and counting challenges associated with non-private dwelling forms (discussed in Appendix A of the Technical Report). This means the dwelling needs and associated floorspace requirements, include both standard private market housing (i.e. detached, townhouse and apartment dwellings) along with other non-private accommodation (i.e. social housing, aged care, student accommodation) - even when the analysis is summarising results by low, medium high density or bedroom numbers.
  - 'Floorspace' in square metres relates to Gross Building Area (GBA) within the Technical Report. This definition includes space for the dwellings plus other internal circulation spaces (i.e. hallways)

  The broad definition of a 'dwelling' used in the report could create some confusion for readers (i.e. they may not understand it captures a bed in a nursing home). However, g*iven housing operates on a continuum, discrete categories can* often overlap and can be difficult to define. The benefit of this approach to how a 'dwelling' is defined, is that the overall dwelling and floorspace requirements in the Technical Report capture the entire population and scale of need within the SPA, with various segmentations by density, type and, diversity all forming a subset of this overall need. For the purpose of informing a SP process, I believe this is appropriate, as it provides the high-level guidance but then leaves more nuanced accommodation matters to still be considered in greater detail through other technical reports (i.e. urban design) and/or at a later stage (post amendment) when individual developments progress and further detailed planning needs to be completed. This broad definition for a dwelling is explained sufficiently, but may still cause confusion if the report is used for other purposes or if the reader is not clear on these complexities around accommodation forms.

  Floorspace definitions are clearly documented in Appendix A and used consistently across all technical reports. It primarily relates to a 'private dwelling' interpretation of requirements and further work would be required to understand how it should be used in various non-private dwelling contexts.

Suitability of background policy and current state analysis

Given the SRL precincts exist within an established urban context, it is critical that there is some analysis of the broader context and current state of the precinct and the housing market. This contextual analysis helps establish the baseline trends and informs the plausibility of assumptions and recommendations.

Part A and B of the Technical Report includes this contextual analysis:

- Part A includes a review of all relevant policy documents and considers a range of macro-trends related to the housing market and the drivers of high-density development. The latter is based solely on Urbis Apartment Essentials data, but the implications drawn, when combined with the broader macro trends analysed in that section provide a clear understanding of the key drivers and implications.
- Part B includes analysis of a range of population and housing trends, including housing costs, affordability and development trends. This draws on a wide range of datasets and, while much of the analysis does not directly relate to the SPA specifically, it provides a valuable understanding of the key trends, issues and opportunities in the precinct and surrounding area.

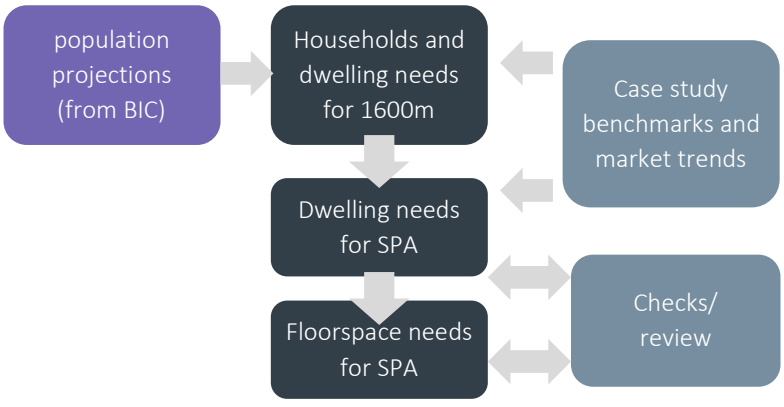
Overall, I believe these sections provide a sufficiently comprehensive summary of the key policy and housing trends that should be considered for a housing needs assessment and SP process as of December 2024. However, I would note that both the current policy and housing market contexts are rapidly evolving in Victoria. Given this, (and subject to the scale of any future (and unknown) changes) there may be a need to review and reconsider the implications from these sections, most likely post Amendment.

Estimating future housing requirements

The core purpose of the Technical Report is to estimate future housing needs in the SPA, to inform the LUSCA technical report and the SP process. The analysis should provide a clear connection between the current and planned population growth of the SPA and the associated housing requirements that should be planned for. To support this, the analysis will need to estimate the broad scale and type of housing that would be required, key locational factors and the ability for the market and current planning controls to deliver the change, or possible interventions/changes that might be implemented as part of the SP process (i.e. rezoning, policy guidance, government investment, etc).

Part C and Appendix E of the Technical Report details the methodology used to estimate housing needs for the SPA. This includes a number of steps required to both estimate housing needs and address various spatial and projections alignment challenges. A simplified version (created by SGS) is presented in Figure 1.

Figure 1: Simplified housing needs method



- **Population projections** for a 1600m catchment, from the BIC, form the basis of the housing needs analysis for each SRL station precinct. As with any projection, these have a number of limitations which are noted in Appendix B and the original BIC technical reports. In general, compared to previous and existing base forecasts, they reflect a higher (full realisation of SRL project) scenario, which in general is an appropriate scenario type on which to base a SP process. No alternative/ updated population scenarios have been considered in the Technical Report and the appropriateness (or otherwise) of these projections is beyond the scope of this peer review.
- **A Case Study** based approach is applied to shift household formation and dwelling preference trends and determine the overall housing requirements for the 1600m catchment population. There are a range of suitable ways to complete this type of analysis for a SP process, including this case study based approach. The advantage of this approach is that it will be grounded in 'real-world' examples, but it will also depend on the appropriateness of the case studies selected. Overall, the case study selection approach is robust and comprehensive, considering the same geographic extent (i.e. 1600m catchment) and a wide range of comparator metrics. While not fundamental, no Melbourne comparator locations were considered. This is discussed in Section 7.1.1 of the Technical Report and I do not believe applying different case studies would materially change the results. Overall, no case study is a perfect fit and I believe the case studies selected are appropriate for the SRL precinct and have been appropriately used in this stage of the analysis.

  Given the SRL precinct is a well-established urban location, there will need to be consideration of how new development will be required to displace existing development (i.e. a detached house may be removed to enable a set of townhouses to be built). Estimating this **displacement factor** is important to determine the 'net' additional housing and can also reflect the rate of change or disruption that a local area might experience. The displacement factor is detailed in Appendix E and Table E.2. It varies by dwelling type and has been based on general housing trends in the precinct. Within the Technical Report, and stage of the analysis, I would consider this displacement factor as indicative only, but still useful and sufficiently accurate. Ideally the displacement rate would consider sub-precinct development planning and capacity, which would further inform the rate of change (i.e. displacement) that is needed in various locations. However, that work is completed in the LUSCA report which is informed by the Technical Report and other technical reports (i.e. Urban Design). While all this analysis could have been included within the Technical Report, given the overall package of technical reports, I believe the approached used is still appropriate for informing the SP process.
- Dwelling needs by type (i.e. low, medium, high) are then **allocated to the SPA** specifically based on the existing split, with some adjustments based on housing market and policy preferences. This is discussed in Appendix E and Table E.1. In general, this distributes more of the future housing growth into the SPA - than has historically occurred. The shift in dwelling needs, to more dense forms, also contributes to growth being more centrally allocated. Conceptually, this is an appropriate approach which is grounded in existing housing development trends and planning policy. However, adjustments are still somewhat subjective. Where past trends are expected to dramatically shift, this subjective judgement becomes more material. However, without detailed analysis (similar to what has been completed within the SPA) for the areas outside the SPA, it is difficult to avoid this limitation. Ultimately, I believe the approach has sort to address these inherent trade offs as much as possible and the appropriateness of the adjusted spatial allocation proportion should be considered when reviewing the results (see Section 1.4)
- The resulting housing needs for the SPA are then **tested against a series of market** based questions which are used to both validate the results and inform the Technical Report recommendations around where policy and planning interventions are required. This is an important step that improves the robustness of the final results and recommendations.

- Finally, housing needs by dwelling type and number of bedrooms are translated into floorspace requirements in Part D – Section 10 of the Technical Report. This is based on a series of household size and floorspace benchmark assumptions derived from Urbis Apartment Essential and RP Data, which are detailed in Appendix E. Overall, these assumptions are within typical dwelling size ranges and the segmentation approach is appropriate. A further factor is applied to convert the internal dwelling floorspace into a GBA. This varies for low and medium/high density. There is limited data analysis or justification for these factors, however they are within a reasonable and appropriate range.

Housing diversity requirements

It is important that the housing needs assessment identifies the needs of diverse and vulnerable groups to inform the SP process, so that it can ensure they are sufficiently considered and identified.

Within the Technical Report housing diversity is considered as a subset of the total housing need previously estimated. This is considered in Section 9 which assesses future demand for housing tailored to specific community needs including social and affordable, key worker, student, aged care and retirement living.

For each of these community segments, a high-level trend and benchmarking based approach (see Appendix F) has been applied to gain an understanding of the scale of need that should be planned for.

- For social and affordable housing, the analysis has captured people currently experiencing homelessness, those currently in social housing and analysis of housing costs/income to determine households in housing stress and in need of social or affordable housing.
- For key workers a definition of key worker occupations by broad industry has been developed, consideration of incomes and place of residences has been used to determine the number of key workers that should be planned for.
- For student accommodation and aged care various benchmarks have been applied to enrolment and people over 65+ to determine the scale of requirements.

While these approaches are somewhat high level and only provide generalised demand estimates for each segment, I believe they are appropriate for this current stage of SP process. They should inform the scale and general nature of need that should be considered across these diverse community groups and signal what further detailed analysis should be completed at a later stage of implementation - post-amendment. This more detailed analysis might include consultation and further analysis of users/providers and further detail into sites/facilities, appropriate funding and deliver mechanisms.

1.4 Glen Waverley SPA analysis findings and recommendations

The following section considers how the method was applied to Glen Waverley SPA specifically and provides a review of the results and recommendations that have been developed.

Population projections and spatial allocation

The following considers how population growth compares across various geographies using data in Table 8.1 of the Technical Report. As of 2021 the SPA represents 31 per cent of the 1600m catchment dwellings. The applied method results in the SPA capturing 44 per cent of population growth (and a similar share of dwellings), which sees the overall share of population increase to 35 per cent by 2041.

Given the 1600m population projection, this allocation of population (and dwelling) growth in the SPA seems relatively low compared to other precincts. However, the SPA is slightly more narrowly defined and there

are a number of other residential nodes within the catchment but outside the SPA (i.e. Syndal). Given this I believe it is still a plausible and reasonable allocation proportion to use and is consistent with policy and market shifts from SRL.

Table 1: Population projection by geography, 2021-41

	Projected Population (no.)		Change (no.)
	2021	2041	2021-2041
Structure Plan Area	7,100	11,700	4,600
SPA as share of 1600m Catchment	31%	35%	44%
1600m Radius Area	23,000	33,500	10,500
South East Region	1,614,900	1,991,900	377,000
Greater Melbourne	4,975,300	7,087,100	2,111,800

Source: Derived from Table 8.1 of the Housing Needs Assessment, AJM, Feb 2025

Population and dwelling by type

The analysis indicates Glen Waverley will need to plan for 11,700 people within the SPA by 2041 and this will require 1,500 net additional dwellings (representing 122,100 square metres of GBA floorspace) to be accommodated within the SPA. The majority of this additional residential floorspace will be high and medium-density dwellings, with a small net reduction of low-density dwellings within the SPA.

The following two tables present some additional statistics that I have prepared based on the results in Table 8.3 of the Technical Report, which assisted my review. Table 2 estimates the resulting household size (i.e. average people per occupied dwelling) by comparing population to dwellings and accounting for 5 per cent vacancy rate. Table 3 then estimates a resulting average dwelling size by comparing the total floorspace to the number of dwellings.

This additional analysis highlights that across Glen Waverley SPA, there is a significant increase in household size for dwelling types over the planning horizon. While still within plausible levels, this rate of change is beyond typical trends and therefore would need to be supported through a range of pro-active policy initiatives in the SP and draft PSA. Appropriately, this is also identified directly in Recommendation 4 of Section 11, and would be supported by other recommendations including Recommendation 5 and 6 which encourage adequate supporting infrastructure and amenities and greater diversity of development types. This shift and implications associated with it (i.e. more diverse and 'family friendly' housing), would be a matter for the SP process to address via the recommendations from the Technical Report.

Table 2: Average household size by dwelling type, 2021-41

	2021	2041	2021-41 change (#)	2021-41 change (%)
Low-density	2.7	3.3	0.6	23%
Medium-density	2.1	2.7	0.6	28%
High-density	1.8	2.2	0.4	23%
Total dwellings	2.3	2.6	0.3	12%

Source: Derived from Table 8.3 of the Housing Needs Assessment, AJM, Feb 2025

In addition, Table 3, which I prepared from the data in Table 8.3 of the Technical Report presents the average resulting floorspace size by dwelling type. This shows more modest shifts in the dwelling sizes by dwelling types. The average size of all dwelling types has increased, appropriately reflecting that need to accommodate larger household sizes. Given the shift towards more high-density dwellings, the average of total floorspace compared to total dwellings has decreased.

Table 3: Average floorspace ratios by dwelling type, 2021-41

SQM floorspace per dwelling	2021	2041	2021-41 change (#)	2021-41 change (%)
Low-density	421.9	457.5	35.5	8%
Medium-density	174.8	177.4	2.6	2%
High-density	99.5	105.4	5.9	6%
Total dwellings	292.2	225.1	-67.1	-23%

Source: Derived from Table 8.3 of the Housing Needs Assessment, AJM, Feb 2025

If this household size shift is not fully realised the implication would ultimately be a need for more dwellings - assuming the same population was needing to be addressed. However, the impact on floorspace would be slightly reduced as there would likely be flow on implications for smaller dwellings.

Overall, while the dwelling and floorspace requirements for Glen Waverley present just one possible future scenario and do assume a shift in existing market trends, I believe they still present a plausible and appropriate scale and form of housing development to inform the SP and draft PSA process.

Review of recommendations proposed by Technical Report

Section 11 of the Technical report includes 14 Recommendations to inform the development of the SP and draft PSA. These recommendations cover the scale of housing need required, the need to plan for different types of housing (including sizes, forms, social/affordable, key worker, student and aged care) and the importance of providing open space, community facilities and other amenities to support this growth in housing and population. I believe these recommendations are appropriately evidenced via the analysis and cover the range of issues that the SP process should seek to address from a housing needs perspective.

In addition, the recommendations consider the preferred location for housing within the SPA. This includes a focus on higher density in the core and seeks to leverage opportunities from major strategic sites, such as The Glen Shopping Centre. In general, these locational recommendations are appropriate but will need to be balanced alongside recommendations made in other technical reports as part of the SP process.

1.5 Concluding comments of peer review

Overall, I believe, the final Technical Report's approach, findings and recommendations are an appropriate evidence base to inform the Glen Waverley SP and draft PSA.

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