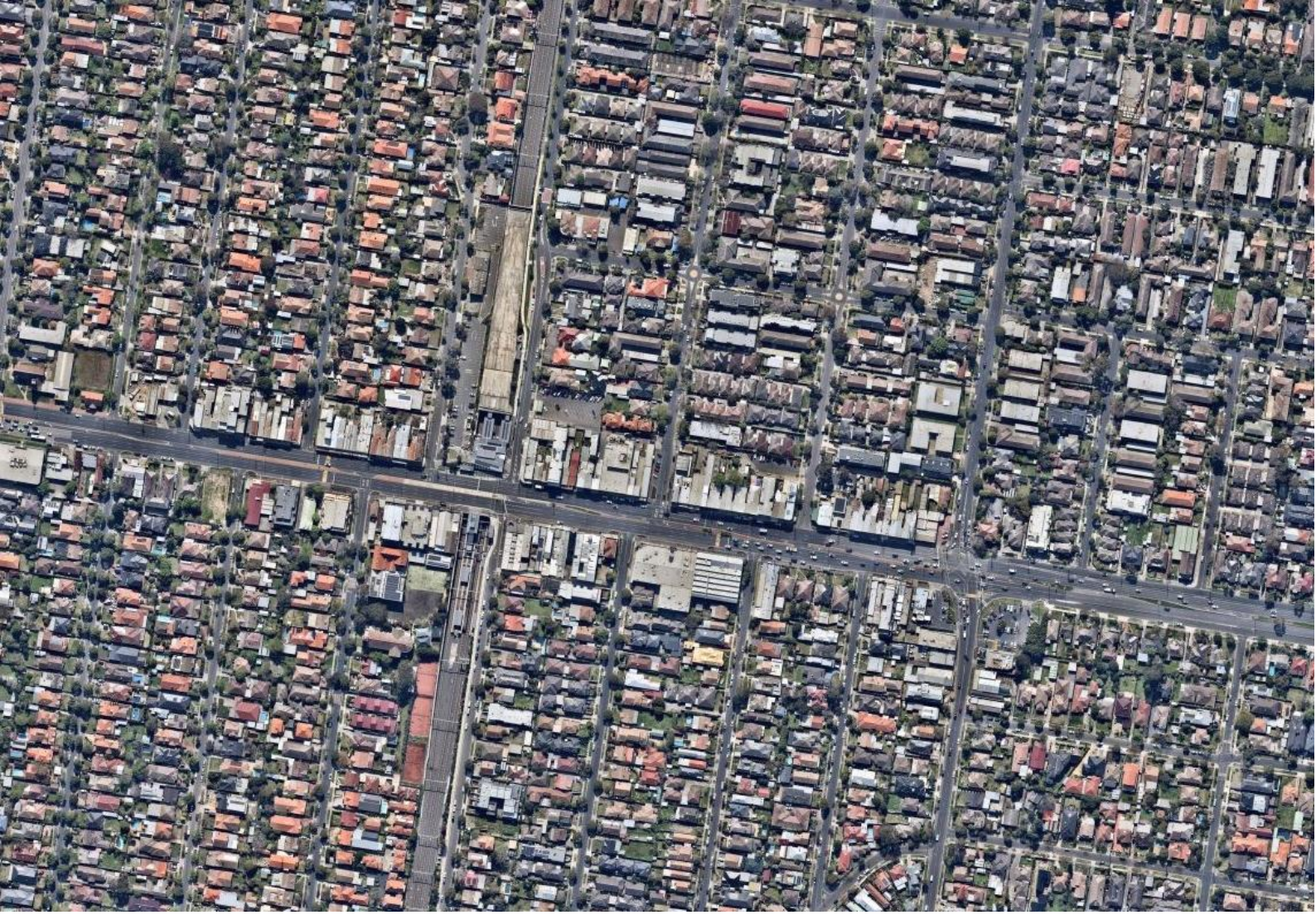

Glen Eira Housing Capacity and Demand Analysis

Prepared for Glen Eira City Council

12 | 8 | 2022

This is an updated version of the 2021 SGS work that is a background document to the Housing Strategy that was adopted by Council in November 2022.

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Executive summary

This report analyses the supply, demand, and capacity for housing in the municipality. This report provides an evidence base to underpin Council's planning for future housing development in the local government area (LGA), to meet the community's current and future needs.

The report sets out:

- How much and what types of housing will be needed in the future, to cater to the community's needs up to 2036, but allowing for a horizon beyond this.
- The types of housing being built under current planning controls, and how this aligns with likely housing demand.
- The implications of any mismatch between housing supply and demand.

More detailed information about the project scope and report contents is set out in Section 1 of the main report.

Demographic profile relevant to understanding future housing demand

Glen Eira's population is forecast to grow from around 148,600 in 2016, to 188,200 in 2036. The population will likely increase at around 2,000 people per year. While this is lower than recent very high growth rates (almost 3,000 people in 2017), it still means the LGA will grow by 26.6 per cent over a 20-year period. Historically, young adults aged 15-24, and adults age groups 45-54, 55-64 and 65-74 experienced the most growth in Glen Eira (2006 to 2016).

The household profile in Glen Eira reflects trends across Greater Melbourne, with 32.9 per cent couple families with children, and 22.9 per cent couple families without children. In recent years (2011-2016), the proportion of lone person households has decreased, while the most growth occurred in the couple with or without children household types.

There is a long-term trend across Australia for average household sizes to decrease as living arrangements become more diverse. However, the average household size in Glen Eira has been increasing since 1996, from 2.35 people per household in 1996 to 2.47 in 2016. SGS forecasts this increase is likely to continue until 2036, reaching 2.55. The increase reflects a decreasing proportion of lone person households and increasing proportion of couples with children in the community, and more people sharing housing with others they are unrelated to. In part this is likely to be driven by housing unaffordability, with people putting off forming a separate household or moving elsewhere.

Despite Glen Eira's increasing average household size, there is a trend towards households living in medium sized or small dwellings which are well-located rather than separate houses (which are less affordable).

An overview of Glen Eira's housing supply

There were 65,815 dwellings in the Glen Eira LGA on the 30Th of June 2021, as recorded in Council's rates data.

NUMBER OF DWELLINGS BY TYPE IN THE GLEN EIRA LGA (2021)

	Separate house	Attached housing	Apartments	Total
Number of dwellings	24,405	22,144	19,266	65,815
% of total dwellings	37%	34%	29%	100%

Source: Glen Eira Council 2021 rates data

Separate houses are the most common dwelling type in Glen Eira, but make up only 37 per cent of dwellings. According to the 2016 ABS census, 30 per cent of dwellings have two bedrooms and 37.2 per cent three-bedrooms. Analysis of census data shows the average number of bedrooms in Glen Eira in 2016 was 3.3 for separate houses, 2.7 for attached dwellings (such as townhouses and villas) and 1.8 for flats and apartments. This is generally consistent with averages calculated for 2021 from Council's rates data (3.3 for separate houses, 2.7 for attached dwellings and 1.7 for flats and apartments).

The ABS census calculates how many bedrooms would be needed to house the occupants of each household. Around 76 per cent of three-bedroom dwellings have more bedrooms than the minimum needed, compared to 90 per cent of four-bedroom dwellings. In some cases, there may be a market for households to downsize from these larger dwellings. However, many households are likely to use bedrooms for other purposes like working from home, or having one bedroom per child (the ABS assumes that some children can share bedrooms in their calculations).

Recent dwelling development over the period 2006-2016 shows negative growth in separate housing (-0.6 per cent per year on average) along with delivery of more attached housing or low rise 2-storey apartments (+1.9 per cent per year on average), and apartments in higher-rise buildings (+11.7 per cent per year on average). Glen Eira's average annual housing growth rate during that period was relatively low, at 0.9 percent, compared to Greater Melbourne which has an average annual housing growth rate of 1.7 percent.

Since 2016, development has been proceeding much more rapidly in Glen Eira, with Council's rates data shows the annual average housing growth has increased to 2.1 percent from 2016-2021. There has been a 142% increase in the number of dwellings being built per year (1,299 per year compared to 537 between 2006 and 2016). A comparable benchmark annual growth rate of growth for Greater Melbourne since 2016 is not available.

The higher recent growth rate in Glen Eira has corresponded with apartments becoming the dominant kind of dwelling built in the LGA, making up 66% of new dwellings between 2016-2021 compared to 37% of new dwellings being apartments in buildings of three or more storeys between 2006-2016.

Housing demand

Estimates of housing demand in Glen Eira have been generated using SGS's best-practice housing demand model. This model estimates implied demand for dwellings of each type by analysing the likelihood (or propensity) of various age groups forming different household types, and then the likelihood of those household types residing in different types dwelling.

These housing demand modelling results indicate that around 12,230 additional dwellings will be needed between 2021-2036. Demand is split mostly between medium and high density, with significant demand for both but greater need for medium density. Demand for separate houses is forecast to decline, in line with recent trends. This would be expected as some separate houses are redeveloped into medium and high-density dwellings.

Medium density in this case is defined as attached dwellings or apartments in two storey buildings, while high density is defined as apartments in buildings of three or more storeys. A categorisation into medium and high density is required as a result of problems with ABS census data. However, modelled increases in demand for medium density should be considered as additional demand for additional attached dwellings, or for other types of dwellings which also fulfil a 'middle' position in housing markets between separate houses (which are commonly larger and associated with more land) and apartments (which are commonly smaller). Similarly, the modelled increase in demand for high density should be considered as increasing demand for apartments.

HOUSING DEMAND RESULTS

Dwelling type	2016	2021	2026	2036	Change 2021 - 2036	Average annual growth rate
Separate house	29,578	**29,414**	28,538	26,742	-2,672	-0.5%
Medium density	26,022	**27,837**	30,189	36,284	8,447	1.7%
High density	4,014	**6,076**	8,260	12,514	6,438	5.9%
Other	211	**214**	219	235	21	0.5%
Total	**59,825**	**63,541**	**67,206**	**75,775**	**12,234**	**1.2%**

Source: SGS Economics and Planning, 2021.
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

Breaking the results of housing demand modelling down into yearly rates, and comparing these with development between 2006-2016 and between 2016-2021 reveals that:

- Total development rates between 2016-2021 have far outpaced those between 2006-2016, with slightly more medium density but much more high density delivered.
- Total development rates modelled for 2021-2036 are greater than those between 2006-2016, but less than those between 2016-2021.

- An increase in medium density/attached housing delivery would be needed from recent (2016-2021) development rates to meet modelled need, but compared to what has been delivered recently, it is anticipated that fewer high density dwellings will be needed.

Housing capacity

Housing capacity is an estimate of the quantum of housing that could be accommodated in an area. It is based on existing planning controls, recent housing supply trends and planned future land-release precincts. It is a theoretical assessment of the maximum number of dwellings that could be developed under current planning controls and development conditions and in future precincts. It follows from a high-level analysis and is intended to be indicative rather than absolute.

Only a portion of sites which could be developed will be developed in any one year, and so only a part of the overall capacity should be expected to be developed over a 15-year period. Capacity results should be read in conjunction with the modelled likely take-up of the capacity, which is discussed in the following section, to assess the ability for planning controls to accommodate housing development in line with modelled demand.

A total of three scenarios have been modelled to understand future housing capacity based on current planning controls and potential future changes to planning controls. A summary of the assumptions underpinning each scenario is:

- Base Case 1: Current policy settings reflecting current planning controls and expected yields in major development precincts. This scenarios includes temporary (referred to in policy as "interim controls") built form controls currently in place at the Carnegie, Elsternwick and Bentleigh Major Activity Centres.
- Base Case 2: Current policy scenario without temporary built form controls on the residentially zoned land at the Carnegie, Elsternwick and Bentleigh Major Activity Centres. This scenario also slightly adjusts the heights in the commercial areas of these centres to be more in line with what would be likely to be achieved in the absence of specific controls, reflecting anticipated changes to revised structure plans and subsequent planning scheme amendments.
- Proposed Housing Framework scenario: This scenario modelled the proposed policy changes that will accommodate the housing needs identified by the demographic and initial land capacity results from the Base Case scenarios. The key changes proposed under the Proposed Housing Framework are:
    - Remove the temporary built form controls from the residential zones near the three Major Activity Centres and propose (or re-confirm) zones in these locations based on their strategic location, and neighbourhood character values, in accordance with Planning Practice Notes.
    - Remove the Garden Area Requirement from all General Residential Zone (GRZ) land.
    - Identify well-serviced Neighbourhood Residential Zone (NRZ) areas where additional unit or townhouse developments (three or more units, up to two-storeys) could reasonably be supported in terms of strategic location and neighbourhood character. The scenario tests the effects of introducing a new NRZ schedule for these areas, with fewer variations to Clause 54 and 55 (known as ResCode or the residential design standards) compared to the current NRZ planning controls.

The overarching results for each scenario are shown below. These results show that there is capacity for between 48,712 additional dwellings in the LGA under current planning controls, increasing to 50,363 under base case 2, and 55,394 under the proposed framework. This capacity is split between attached dwellings and apartments, although most capacity for attached dwellings is located in the NRZ. This is partly a result of the large amount of NRZ zoned land in the LGA, and partly a result of most new dwellings built in the GRZ (the other zone in which attached dwellings are commonly built) being apartments.

NET HOUSING CAPACITY RESULTS

Scenario	Dwelling type	Major activity centres	N'hood and local centres	Major precincts	RGZ & Sub. Ch. Area 2	GRZ & Sub. Ch. Area 1	NRZ & Incr. Ch. Area	Total
Base case 1	Attached			300		2,175	16,214	18,689
	Apartment	6,180	10,017	4,008	2,690	7,128		30,024
	Total	*6,180*	*10,017*	*4,308*	*2,690*	*9,303*	*16,214*	*48,712*
Base case 2	Attached			300		2,190	16,214	18,704
	Apartment	7,207	10,030	4,008	3,120	7,293		31,658
	Total	*7,207*	*10,030*	*4,308*	*3,120*	*9,484*	*16,214*	*50,363*
Proposed framework	Attached			300		3,650	16,874	20,824
	Apartment	7,207	10,030	6,386	3,339	7,608		34,570
	Total	*7,207*	*10,030*	*6,686*	*3,339*	*11,258*	*16,874*	*55,394*

Source: SGS Economics and Planning, 2021.
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

The capacity take-up and gap

Potential take-up of capacity between 2021-2036 following the Base Case scenarios has been assessed assuming that development rates in the future in each area will be the same as recent rates between 2016-2021 (noting that these rates are historically high), and that development in each area will continue until capacity is exhausted. In this sense, development is assumed to be constrained by both the development market, and by overall capacity.

This analysis shows that under base case 2, there would be 19,792 additional dwellings would be built between 2021-36, more than the 12,234 additional dwellings expected to be needed. Under the proposed framework, this would increase to 25,392 additional dwellings. These results indicate that there is enough capacity to accommodate demand as a whole given recent development trends. However, when capacity and take-up is broken down spatially and by development type, a different picture emerges. When considering different zones:

- The percentage take-up rates in major centres are relatively high and would indicate a high degree of change over a 15-year period (48 per cent overall in base case 2, between 34 - 63 per cent for

different centres). However, this level of change may be possible in a centre where high density development is occurring. Master-planning of these centres to facilitate high density development will be helpful in facilitating this level of development.

- Other centres currently have a lower level of take-up expected.
- The NRZ zone has a relatively low level of overall take-up expected.
- The GRZ1 and GRZ2 levels of take-up are relatively high given that properties may need to be amalgamated for development to occur (51 per cent for GRZ1 and 40 per cent for GRZ2) but may be achievable.

The RGZ is expected to have a very high level of take-up (95 per cent under base case 2), indicating substantial changes to housing character under this zone, although noting this is the policy intent of the zone.

The modelled take-up of development by dwelling type is shown in the table below. This can be compared to modelled demand to indicate if planning controls make suitable provision for housing development, accounting for the projected population, trends in housing preferences and reasonable development rates.

Other dwellings have not been individually modelled, but have been grouped with high density dwellings owing to the relatively small size of dwellings expected in both cases.

MODELLED DEMAND COMPARED TO TAKE-UP BETWEEN 2021-36

Dwelling type	Base case 1		Base case 2		Proposed framework	
	Modelled change	Difference from demand	Modelled change	Difference from demand	Modelled change	Difference from demand
Separate houses	-3,877		-3,999		-4,481	
Medium density / Attached dwellings	7,364	2,288 less	7,370	2,404 less	9,527	729 less
High density / Flats or apartments & Other dwellings	15,832	9,394 more	16,421	9,983 more	20,346	13,908 more
Total	**19,319**	**7,083 more**	**19,792**	**7,558 more**	**25,392**	**13,158 more**

Source: SGS 2021
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

Base cases take up and demand alignment

Overall, there is enough capacity to accommodate the total quantum of housing need. However, not enough medium density housing is being delivered to accommodate the expected population under base cases 1 and 2. This is because most capacity for medium density is located in the NRZ, where take-up rates are not currently high enough to deliver the total dwelling demand. These take-up rates are influenced by:

- The spatial requirements (for example, the 60sqm private open space standards and site coverage standard) in the current NRZ schedule, which appear to facilitate two-unit developments on a site, rather than three or more units.
- The number of properties being sold.
- The institutional capacity of the development market, and specifically the mostly smaller developers likely to be operating in the NRZ.
- The competitiveness of developers bidding against prospective homeowners in the NRZ and resulting difficulty developing sites.
- The limited demand for expensive dual occupancies which are built in the NRZ when compared to overall medium density demand.

The last point speaks to the lack of housing diversity offered in the NRZ, where only large and relatively expensive dual occupancies are being delivered. Focusing only on the NRZ to deliver the required medium density would risk pricing many people out of Glen Eira, and not delivering needed housing diversity, noting the existence of sub-markets within the medium density demand.

Garden area requirements appear to be a constraint on development take-up and density in both the GRZ and NRZ (based on a review by Council of development applications since the garden area requirement was introduced).

Sufficient high-density housing is being delivered under recent take-up rates and under current planning controls to meet modelled demand between 2021-36. The higher modelled rates of development than modelled demand should not be interpreted as a problem with planning controls providing there is enough capacity for housing diversity in the form of attached dwellings. Rather, given uncertainty around rates of housing development and the performance-based nature of the Victorian planning system, the aim of planning policy should be to ensure there is enough capacity to allow development to occur rather than to aim for a target of modelled demand.

Proposed framework take up and demand alignment

The proposed framework would likely increase delivery of both attached dwellings and high-density housing. Modelling shows there may still be a small shortfall in attached dwelling supply of around 730 dwellings by 2036. This compares to the modelled demand for 8,447 additional attached/medium density dwellings (under both the base case and proposed framework). This shortfall is substantially reduced compared to modelled outcomes under the current planning framework.

Creation of more capacity would reduce the size of the possible small shortfall and reduce the moderately high take-up rates otherwise needed in the GRZ. This could be accomplished through additional rezoning or through other policy approaches in Glen Eira's housing strategy such as other statutory changes, negotiating with developers and proactively monitoring and responding to development outcomes.

Next steps

The findings from this report provide an evidence base to underpin Council's planning for future housing development in the local government area (LGA), to meet the community's current and future needs. The data will be used to test and refine any potential planning policy reform to facilitate sufficient and appropriate housing for the Glen Eira's residents in future. This may include amendments

to the Glen Eira Planning Scheme to address any short-falls (capacity gaps) in the housing capacity the Council is required to provide following the Department of Land, Water, Environment and Planning's (DELWP's) guidelines for housing provision. *Planning Practice Note 90 (PPN90): Planning for Housing* requires 15 years' supply of land for housing be available across the municipality.

1. Introduction

SGS Economics and Planning has been commissioned by Glen Eira City Council (Council) to analyse the supply, demand, and capacity for future housing in the Glen Eira local government area (LGA).

Recent population growth and change in the Glen Eira LGA means it is timely to review the current housing supply, to ensure that land for future housing is appropriate to facilitate the community's housing preferences and needs. This project aims to update Council's previous strategic work regarding housing demand and supply in light of recent development trends and population projections. It will provide an evidence base that will help Council decide whether planning policy reform is required to facilitate adequate and appropriate housing into the future, and to confirm that the current policy settings will allow for the population increase anticipated by Victoria in Future (VIF, 2019) figures to the year 2036.

The dynamics of housing supply and demand preferences across Melbourne have been rapidly evolving in recent years. Traditional models and expectations no longer align with current and future needs for a range of social, economic, and demographic reasons. Demographic and housing market change places pressure on development outcomes and prices which has implications for affordability, suitable dwelling outcomes, and the alignment of supply with demand.

Matters addressed in this study are:

- A demographic profile of the LGA
- A profile of the LGA's current housing supply
- Housing market analysis
- Housing demand analysis
- Housing capacity analysis
- Capacity and take-up gap.

Findings from the analysis will be used to underpin Council's strategic planning for housing demand in future, including potential Glen Eira Planning Scheme amendments that may be required to accommodate that demand.

1.1 Report structure

This report contains the following sections:

1. Introduction (this section)
2. Demographics and housing supply: profiles the Glen Eira LGA's population, households, and population projections, and how these relate to the supply and demand for housing. This section also profiles the housing in the LGA in terms of dwelling type, dwelling size and recent development.

3. Housing demand: discusses the likely future demand for housing in the Glen Eira LGA, broken down by type and size.
4. Housing capacity: considers the capacity and opportunities for growth given the current planning controls. Capacity is documented by number, type, and local area.
5. Capacity and take-up gap: brings together analysis of future housing development potential and housing demand to illustrate the extent to which current planning controls are sufficient to accommodate the LGA's future population.
6. Summary of key findings.

1.2 Terms used in this report

Several technical terms are used throughout the housing demand, supply and capacity analysis. These have been defined below to support interpretation of the results.

Dwelling types

Dwellings are classified in the following way in this report:

- Separate houses – dwellings which are on their own property and not attached to other dwellings by common walls
- Attached dwellings are joined to other dwellings horizontally but not vertically. Examples include terraces, townhouses and villas.
- Flats and apartments are joined to other dwellings vertically as well as horizontally, with some units above other units.
- Other dwellings include cabins, caravans, improvised dwellings and flats attached to an office

This classification applies to private dwellings, which are self-contained and each house a single household. Buildings in which people live communally rather than in completely self-contained units (for example aged care, boarding schools or hospitals) are called non-private dwellings and not included in the above categorisation.

Household types

The following household types have been used in this report, aligned with those used in the ABS Census:

- Couple family with children means a family with two adults and one or more children.
- Couple family without children means a couple in a lone term-relationship without children. This includes both young couples and older couples whose children have moved out.
- One parent family means one parent living with one or more children.
- Other family includes 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.

As defined by the ABS, and in this report, a family can have unrelated people living with them. For example, a couple sharing a dwelling with one or more other unrelated people would count as a couple family without children rather than a group household.

2. Demographic and housing profile

This section profiles the Glen Eira LGA's population, households, and population projections, and how these relate to the supply and demand for housing. This section also profiles the housing in the LGA in terms of dwelling type, dwelling size and recent development.

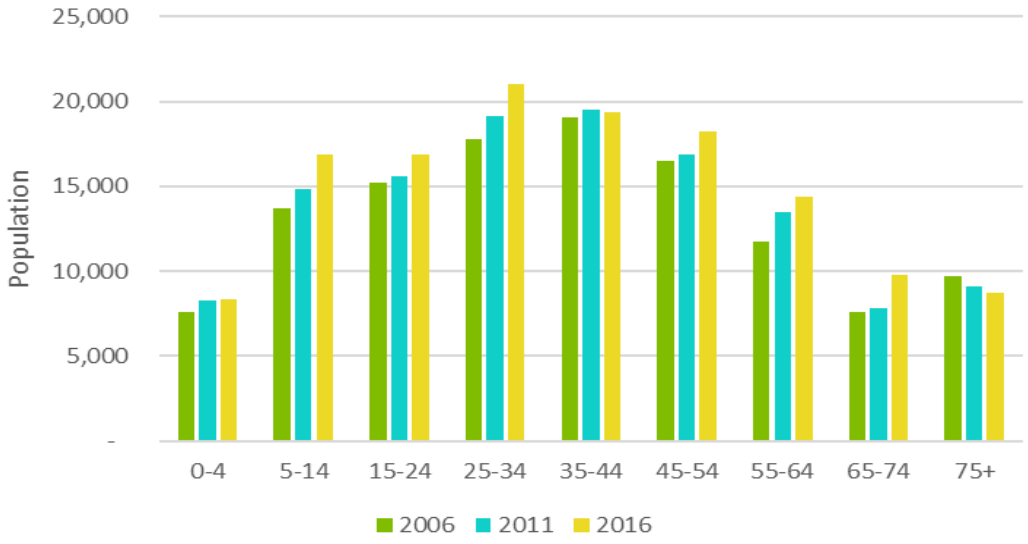
2.1 Age profile

Glen Eira is an established residential municipality in the Southern Metro Region of Greater Melbourne. This lends a population profile that has strong family representation; the median age is 37 years, and children aged 0-14 years make up around 14 per cent of the population.

Recent change

Recent changes in the population age profile in Glen Eira are shown in the figure below. Overall, the number of people aged 5-34 and 45-74 increased over this time period, while the number of people aged 0-4 and 35-44 was relatively static and the number of people aged 75+ declined ().

FIGURE 1: HISTORIC POPULATION AGE PROFILE FOR GLEN EIRA

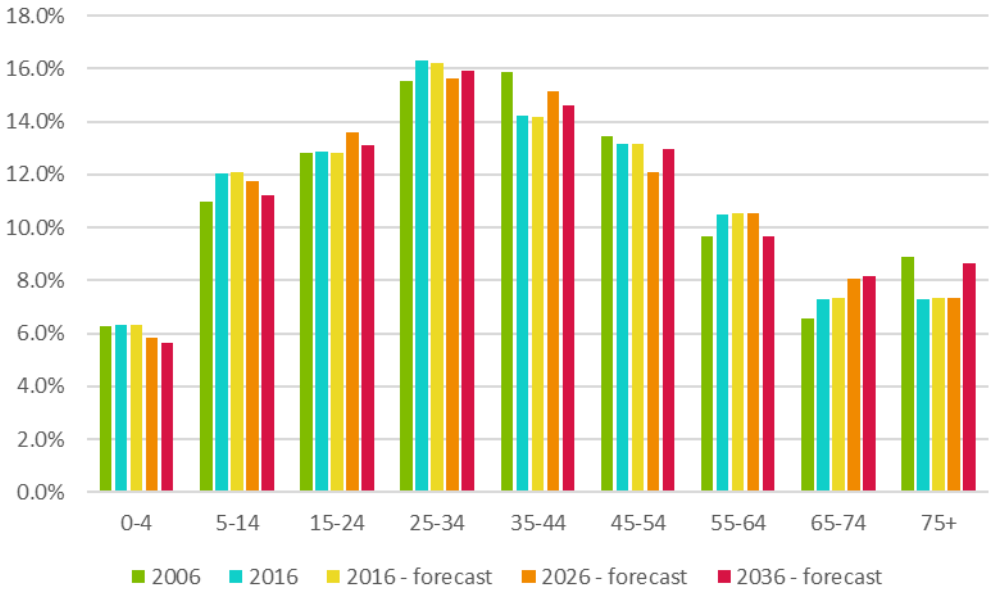


Source: ABS Estimated Residential Population.

Forecast change

These shifts can be compared with the forecast proportional age breakdown of the population from the VIF forecasts, which is shown in the second figure below (Figure 2). The 2016 percentage breakdown in VIF is similar to, but slightly different than, the breakdown from ABS data.

FIGURE 2: HISTORIC AND FORECAST POPULATION IN GLEN EIRA LGA, 2006-2036



Source: ABS Estimated Residential Population 2006, 2016, VIF Forecast 2019.

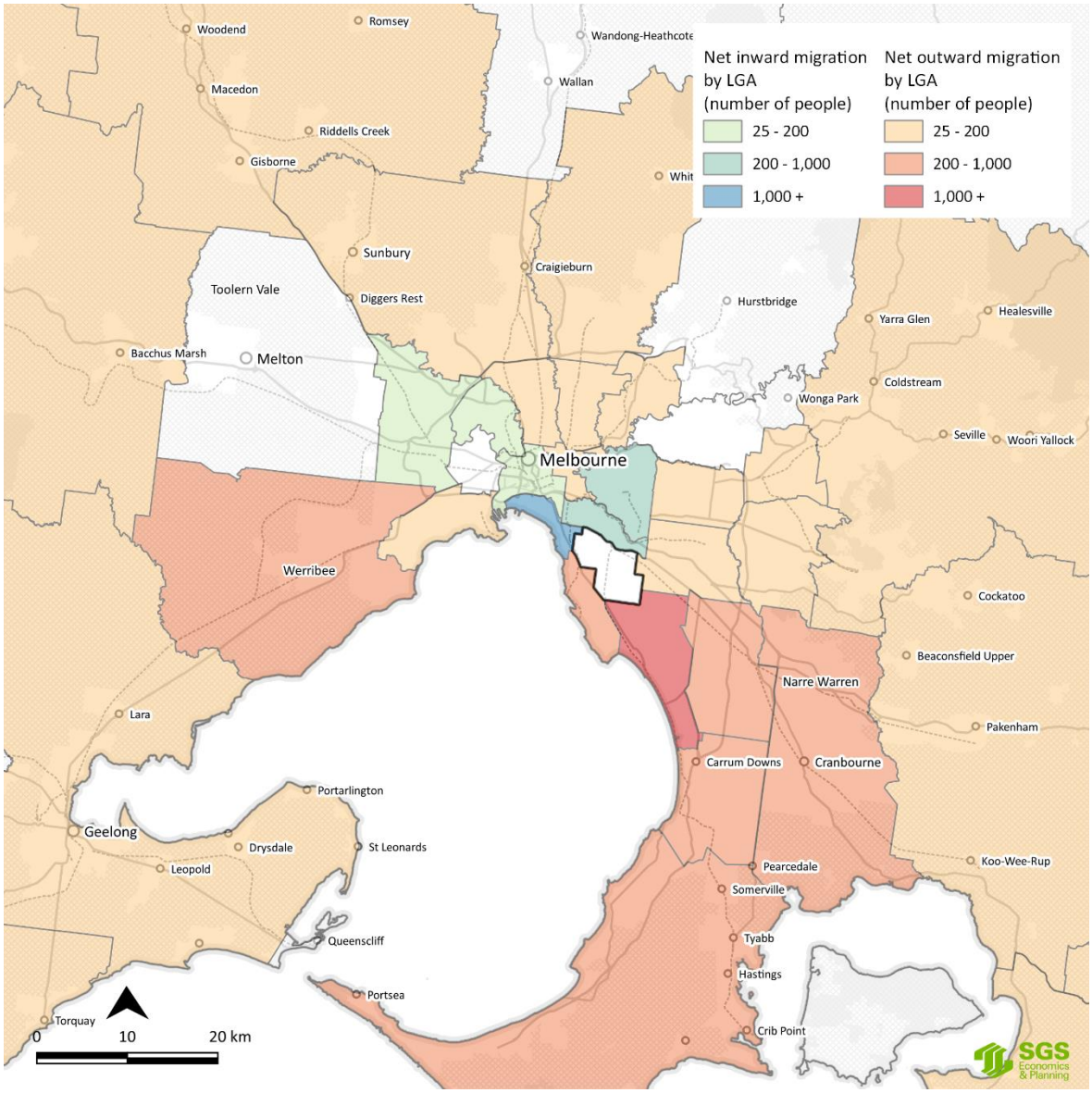
However, the trends VIF forecasts for the future differ from recent trends in Glen Eira VIF forecasts the % of people aged 75+ to increase, in contrast to the contraction of the number of people in this age group in 2006-2016. Other age groups which become more common between 2006-2016, including 5-14, 25-34 and 55-64, are forecast to become less common in the future. In this way, VIF may overstate the likely number of older people and understate the likely number of younger people in the future.

Overall results

Overall migration across age groups illustrates Glen Eira's overall position as a transitional LGA between the inner city and more affordable areas further from Melbourne, with people moving to Glen Eira from inner city areas and outwards to more affordable LGAs, particularly in Melbourne's south-east.

There is also net inwards migration from Brimbank and Moonee Valley, potentially as Glen Eira is viewed as a more desirable area than some western suburbs.

FIGURE 3: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA, 2011-2016



Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

2.2 Population forecast

The key driver of housing demand, and the input to this model, is an LGA-wide population projection by year broken down by five-year age groups, in line with the ABS census (0-5 years, 5-10 years and so on).

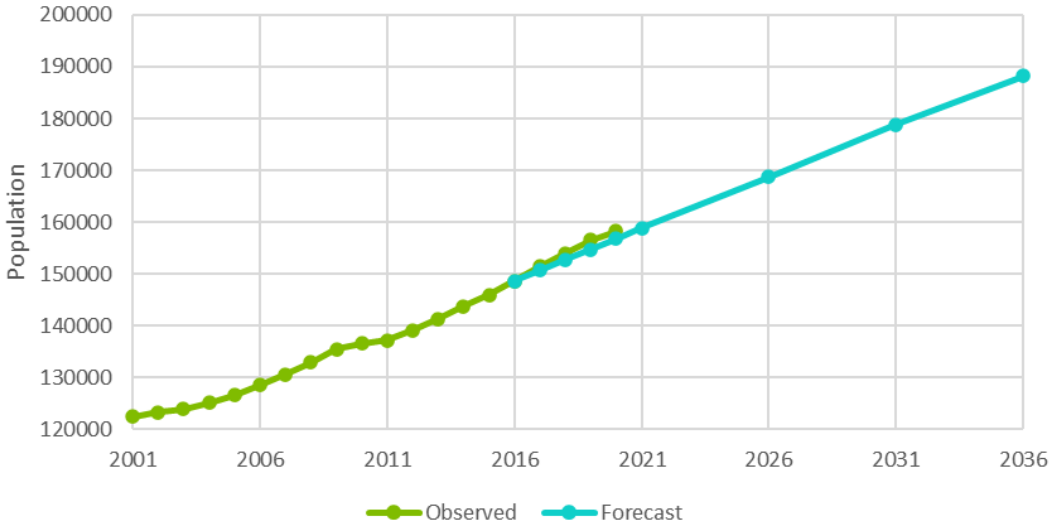
The Victoria in Future (VIF) forecast is produced by the Victorian Government and provides planning assumptions with a common approach across Metropolitan Melbourne and other parts of the State. These have been used as the basis of modelling housing demand in this study.

The VIF projections are a projection of the total estimated residential population (ERP) in the LGA. ERP is a population estimate created by the ABS, and historical ERP is the best available estimate of the overall population. In creating ERP estimates, the ABS corrects for undercounts in the ABS census,

residents temporarily overseas and other small corrections, and so ERP figures are higher than census counts.

Historical ERP statistics and the VIF projections for Glen Eira are shown in the figure below (Figure 4). Under these projections, the population would grow from around 148,600 in 2016 to around 188,200 in 2036.

FIGURE 4: POPULATION FORECASTS FOR GLEN EIRA COMPARED TO HISTORICAL GROWTH



Source: SGS 2021 using ABS Estimated Residential Population, Victorian Government Victoria in Future Forecasts 2019.

The following figure (Figure 5) provides more detail on the yearly change in population in these forecasts. Under the VIF forecast used for this study, Glen Eira's population is expected to grow by around 2,000 per year throughout the timeframe of the projections. This is lower than recent very high rates of growth (almost 3,000 people in 2017), although higher than the rates seen in some years (637 in 2011 and 1,681 in 2020).

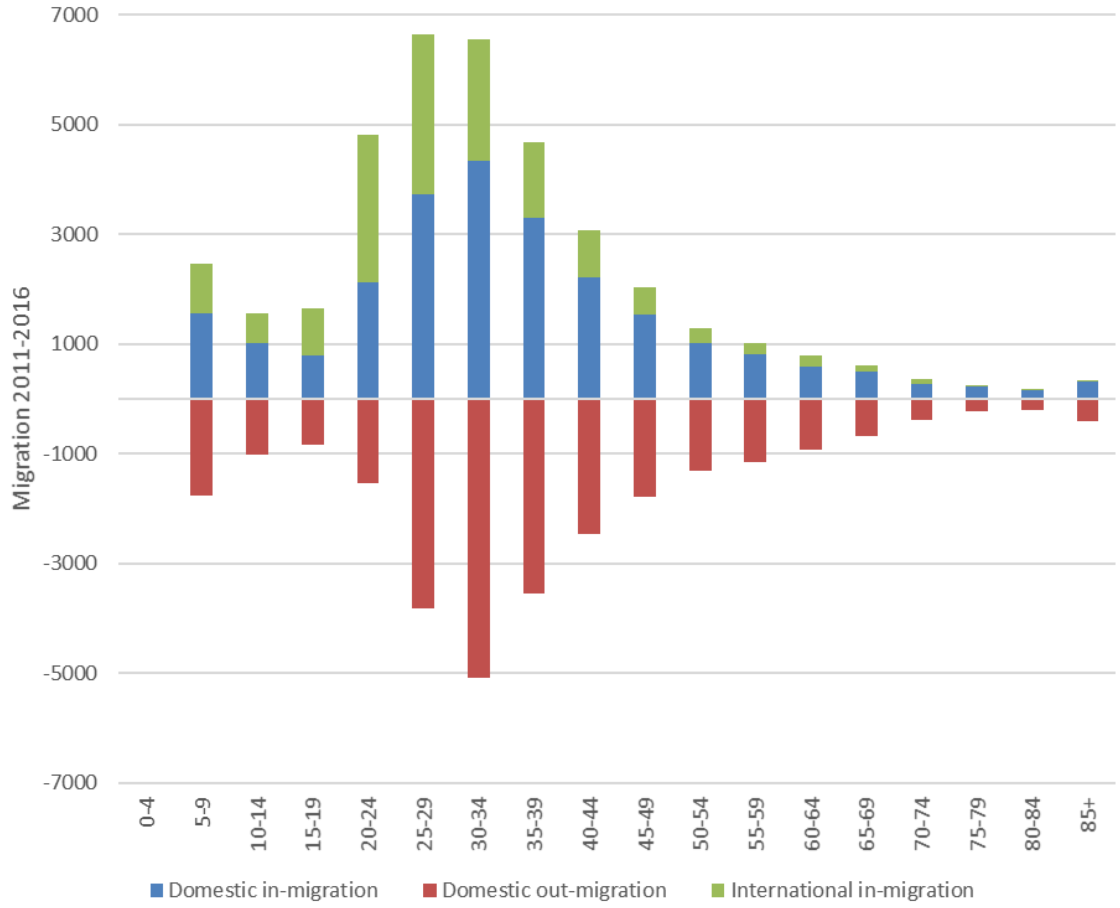
FIGURE 5: FORECAST POPULATION GROWTH FOR GLEN EIRA COMPARED TO HISTORICAL GROWTH

Source: SGS 2021 using ABS Estimated Residential Population, Victorian Government Victoria in Future Forecasts 2019.

2.3 Migration

Overall migration data shows that people move into and out of Glen Eira in all age groups. People move the most when they are between 20-40, with older people moving house much less. Most older people remain in their houses as they age, with a small proportion downsizing. In all age groups, inward migration exceeds outward migration, up until the age group 55-59 years and older, where people tend to leave the municipality rather than moving into Glen Eira.

FIGURE 6: OVERALL MIGRATION IN AND OUT OF GLEN EIRA 2011-2016



Source: ABS Census 2011, 2016.

International out-migration data is not available, so this chart does not show overall migration. Nonetheless, it is clear that there is substantial migration to Glen Eira from internationally, with the most migration in the 20–35-year-old age groups.

Overall internal migration

Grouping LGAs into Inner City, Middle Ring (urban but not growth areas), Growth Areas, Peri-urban, and regional reinforces Glen Eira's position as a transition LGA between the Inner City and middle ring – Glen Eira contains areas with inner-city high-amenity activity, but also contains more traditional suburbs. The metropolitan strategic plan, *Plan Melbourne 2017-2050* identifies Glen Eira as one of the four inner-south eastern municipalities.

Net domestic migration patterns to and from Glen Eira in line with this categorisation of other LGAs in Victoria are shown in the following figure.

FIGURE 7: NET DOMESTIC MIGRATION WITHIN VICTORIA TO AND FROM GLEN EIRA, 2011-2016

Source: SGS 2021 using ABS Census 2011, 2016.

Figure 7 shows that within housing life cycles:

- There is net outward migration of families to more affordable middle ring LGAs and growth areas, particularly young families (30–40-year-olds and 0–10-year-olds).
- Young people between 20-30 move to Glen Eira from interstate, LGAs further from the city and regional areas, attracted by a location close to Melbourne and inner-city amenity. Similarly, there is net outward migration from Glen Eira to Inner City LGAs closer to Melbourne. Some also move outwards, in part to start a family.
- As people age beyond 40, they become less likely to move house. Beyond 50, there is some net outward migration to the middle ring and growth areas.

This sets up a key policy challenge to provide a more affordable housing option that appeals to young people as they get older and want to start a family or want more space, but that doesn't require them to leave Glen Eira.

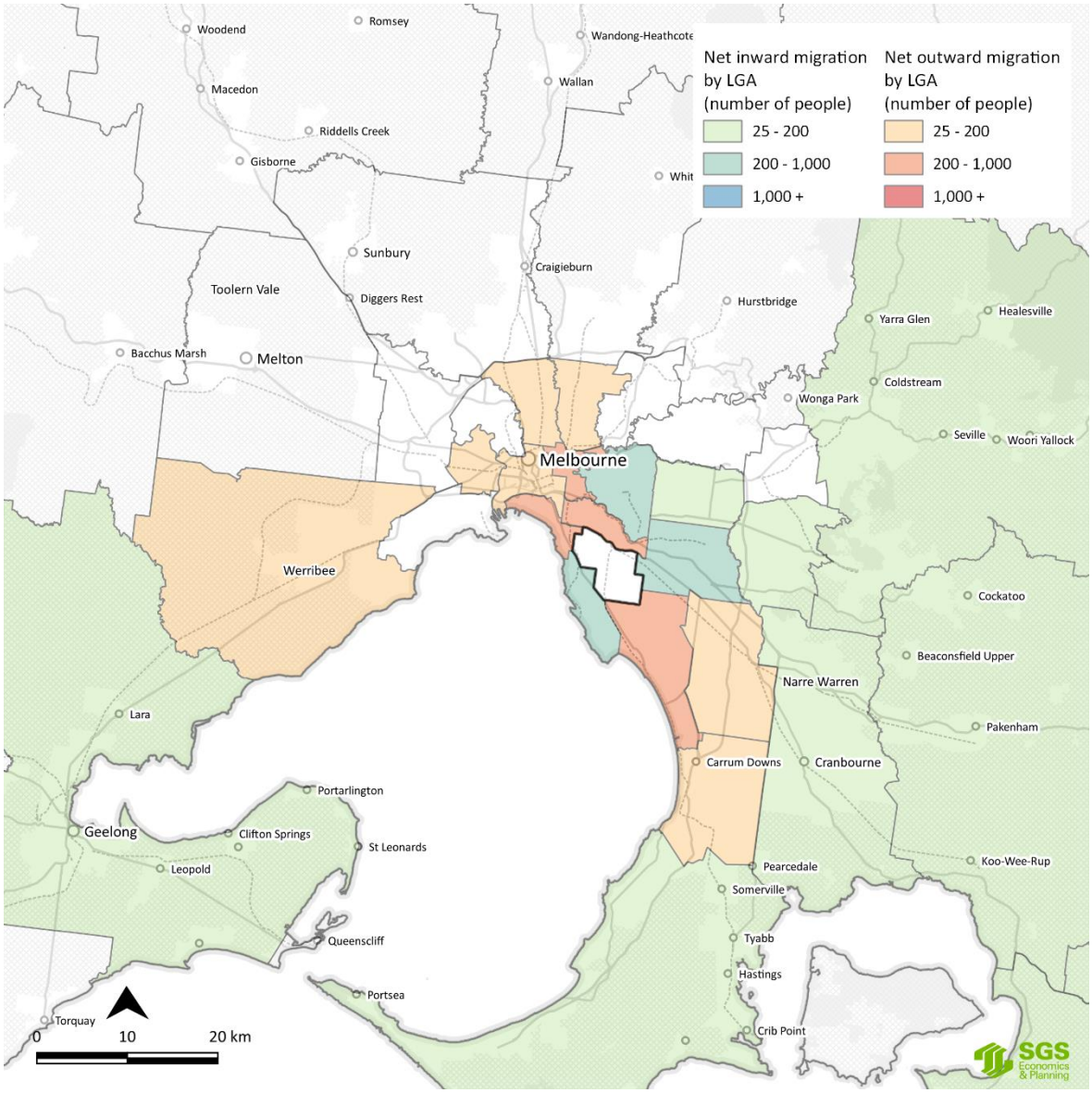
Domestic migration mapping

The following pages contain more detailed mapping of the origin and destination of people leaving/moving into Glen Eira, by age group.

Children and teenagers (0 to 20-year-olds)

People aged 0 to 20 years old moved with their parents to outer urban and growth areas, and into Kingston and Bayside. As part of families, they moved into Glen Eira from inner city LGAs including Melbourne, Port Phillip, Yarra and Stonnington, as well as from Darebin and Western Melbourne LGAs.

FIGURE 8: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 0–20-YEAR-OLDS, 2011-2016



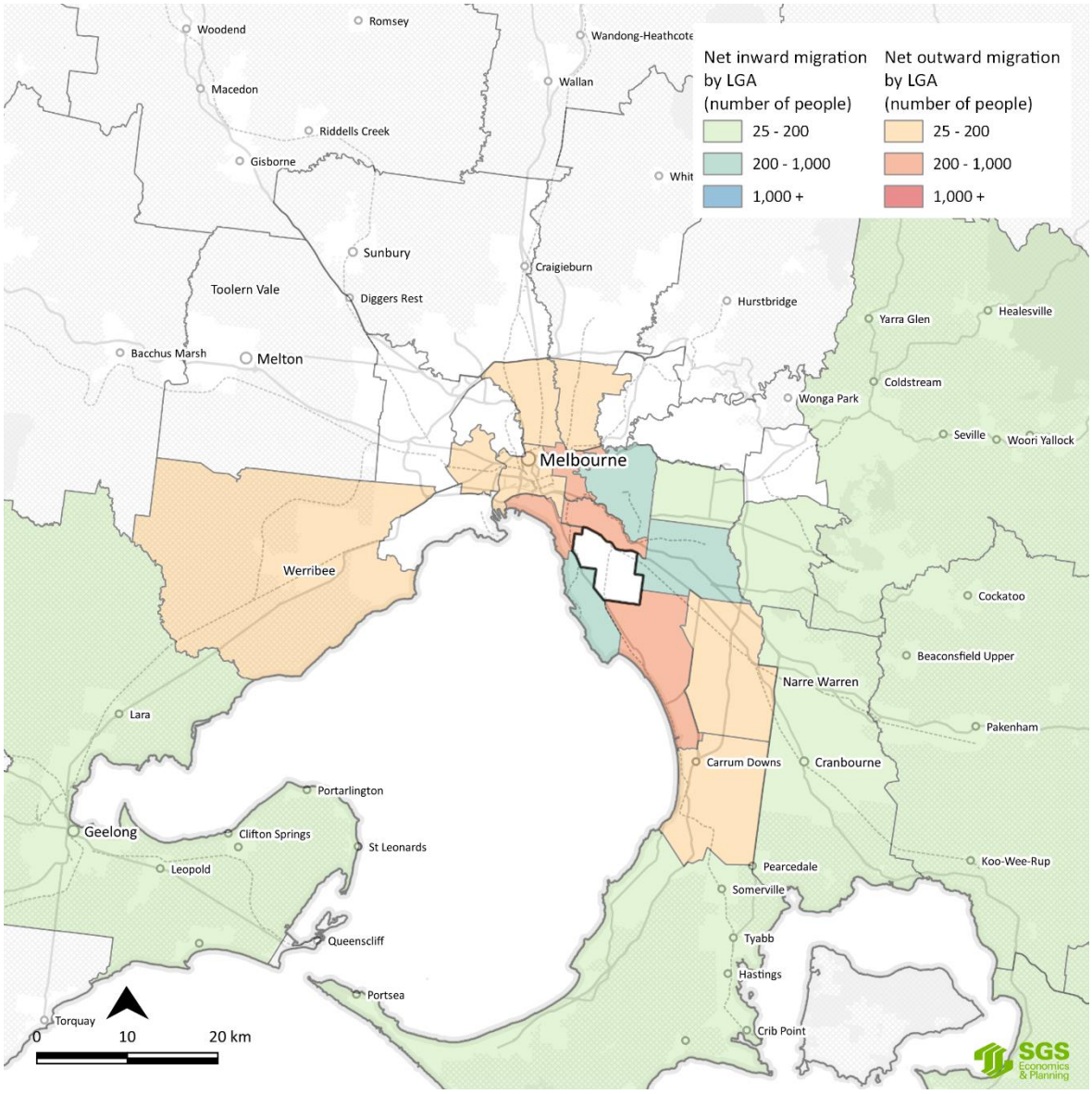
Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

Young people (20 to 30-year-olds)

There are three broad patterns apparent for internal migration for people aged 20 to 30 years olds:

- They moved from LGAs with less activity or further from Melbourne than Glen Eira and from Peri-urban and regional locations.
- They moved from Glen Eira into inner city LGAs and others popular with younger people (Stonnington, Port Phillip, Yarra, Melbourne, Darebin, Moreland and Maribyrnong).
- Some moved further outwards within the South-Eastern suburbs, likely to access more affordable housing and before starting a family.

FIGURE 9: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 20–30-YEAR-OLDS, 2011-2016



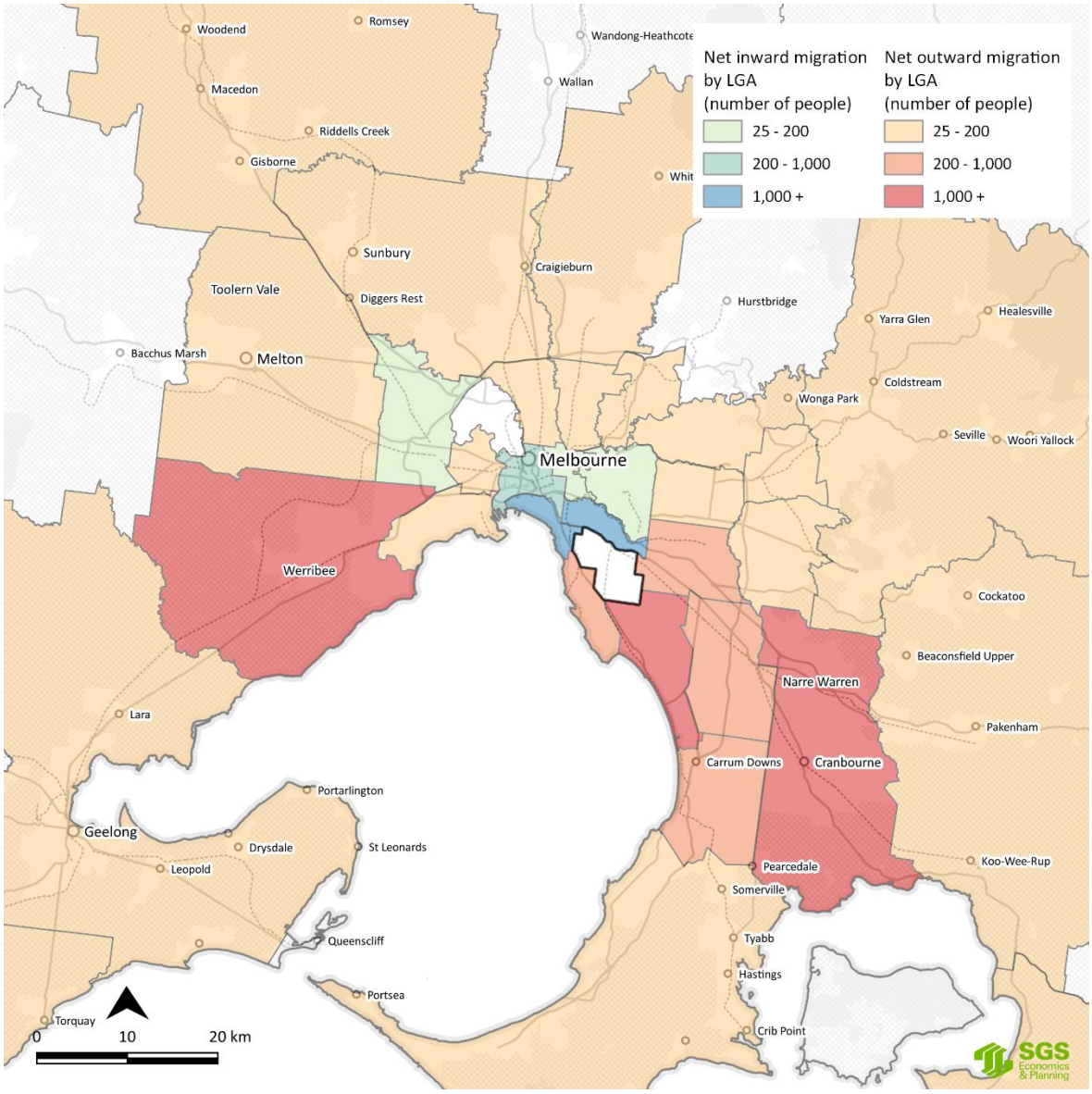
Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

Establishing adults and homemakers (30 to 40-year-olds)

Migration patterns for people aged 30 to 40 years old are indicative of people moving in search of more affordable property or larger housing. Many are likely to be starting families. In this vein:

- People moved from inner-city LGAs (Melbourne, Yarra, Stonnington and Port Phillip) to Glen Eira.
- There was net outward migration from Glen Eira to LGAs further from Melbourne in the South-Eastern suburbs and to growth areas (Wyndham and Cardinia).
- There was net outward movement (although less than to growth areas and the South-Eastern suburbs) to other LGAs not in the inner city, and to Peri-urban areas.

FIGURE 10: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 30–40-YEAR-OLDS, 2011-2016

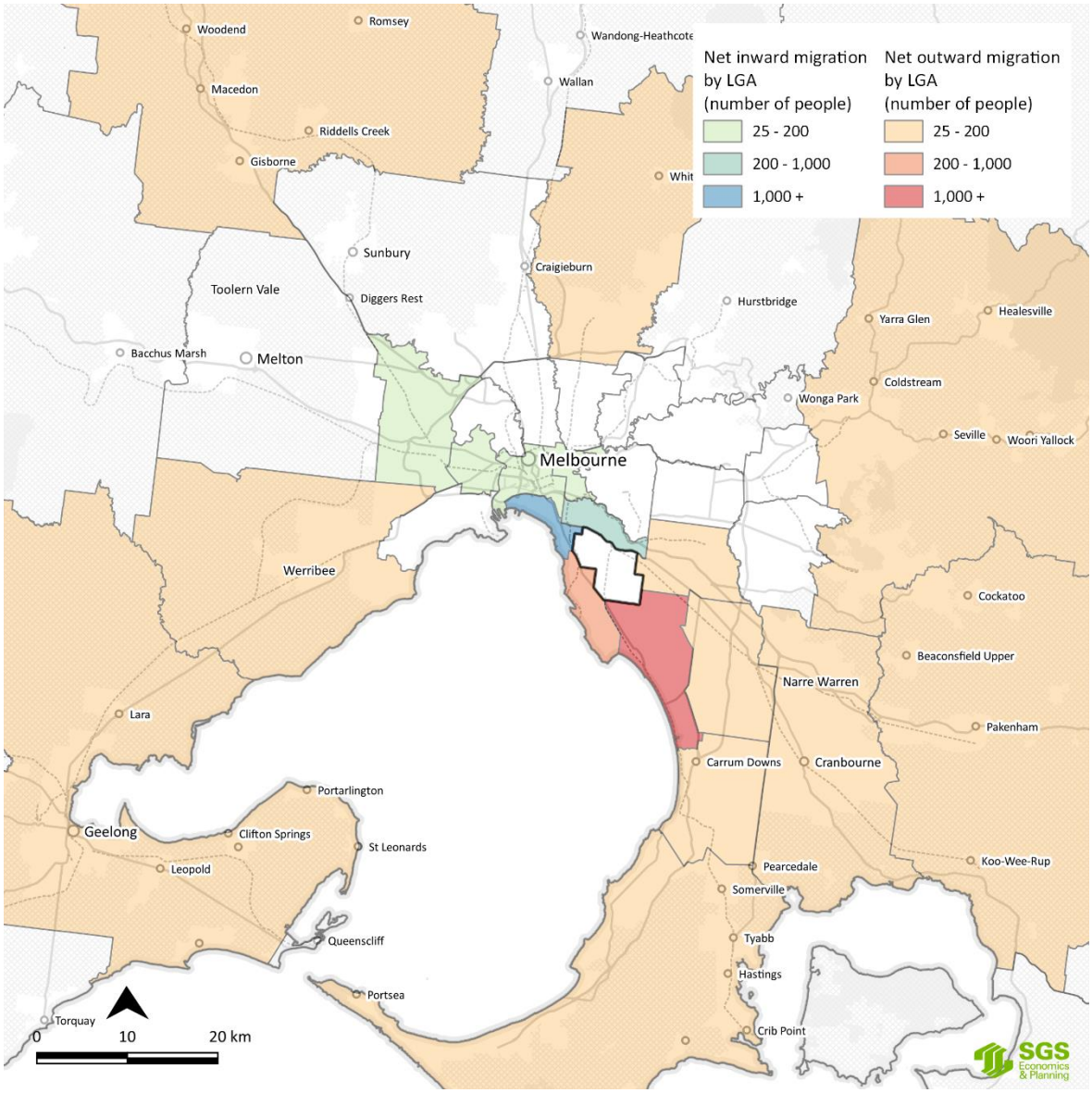


Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

Established adults (40 to 50-year-olds)

Migration patterns for people aged 40 to 50 years old are similar to those for those aged 30 to 40, but with a lower overall level of migration, as people are generally more settled and less likely to move long distances as they age.

FIGURE 11: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 40–50-YEAR-OLDS, 2011-2016



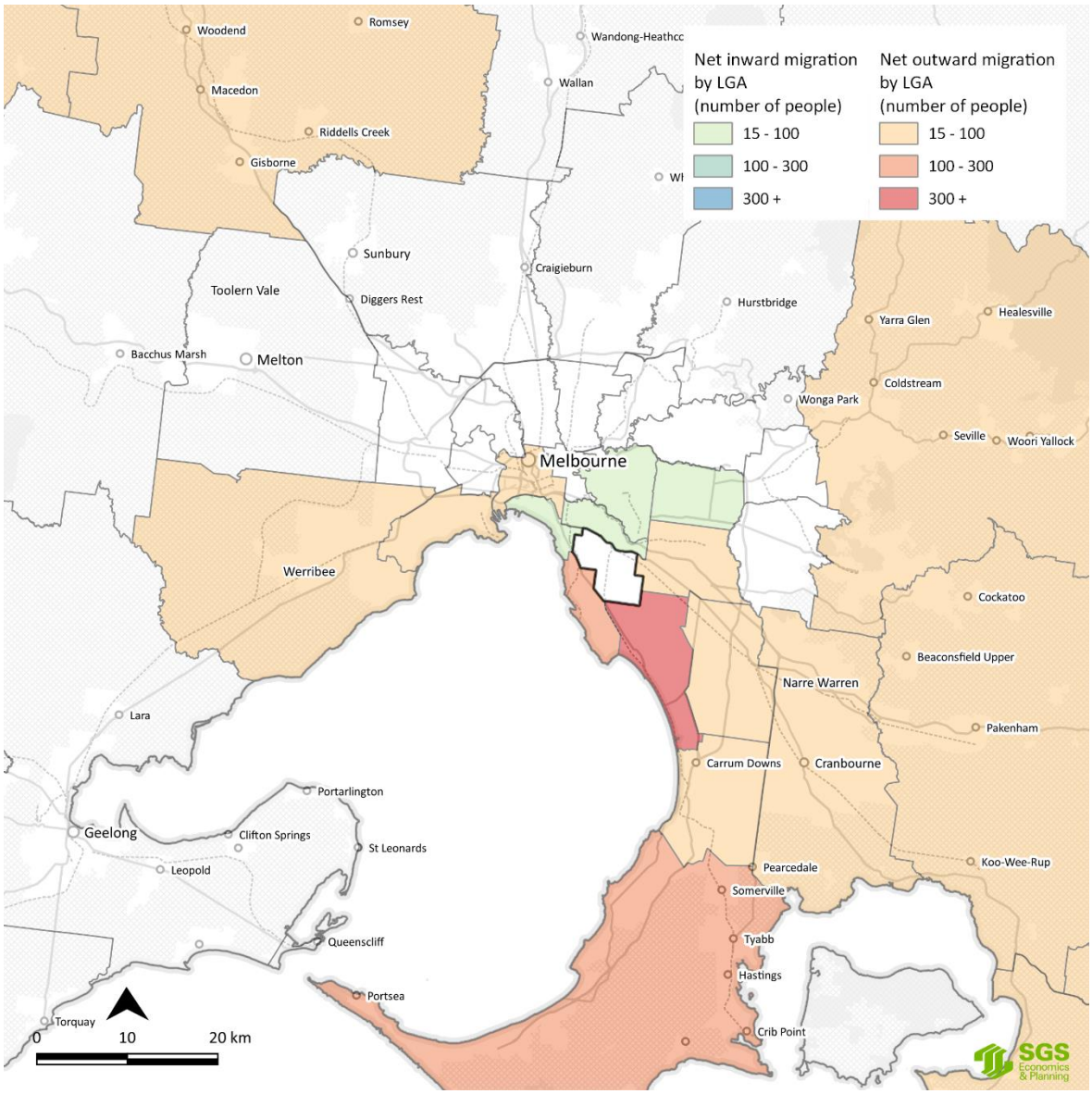
Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

Established adults and pre-retirees (50 to 65-year-olds)

There are several trends evident in migration patterns for people aged 50 to 65 years old:

- There was net outward migration to the City of Melbourne, likely indicating down-sizing. This trend is also likely to have limited the size of the net inward migration from Stonnington and Port Phillip, although there is still net inward migration from these areas.
- As with younger age groups, there was net outward migration to more affordable south-eastern suburbs and growth areas.
- Compared to people aged 40 to 50, there is increased outward migration to places like the Mornington Peninsula, which is a retirement destination.

FIGURE 12: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 50–60-YEAR-OLDS, 2011-2016



Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

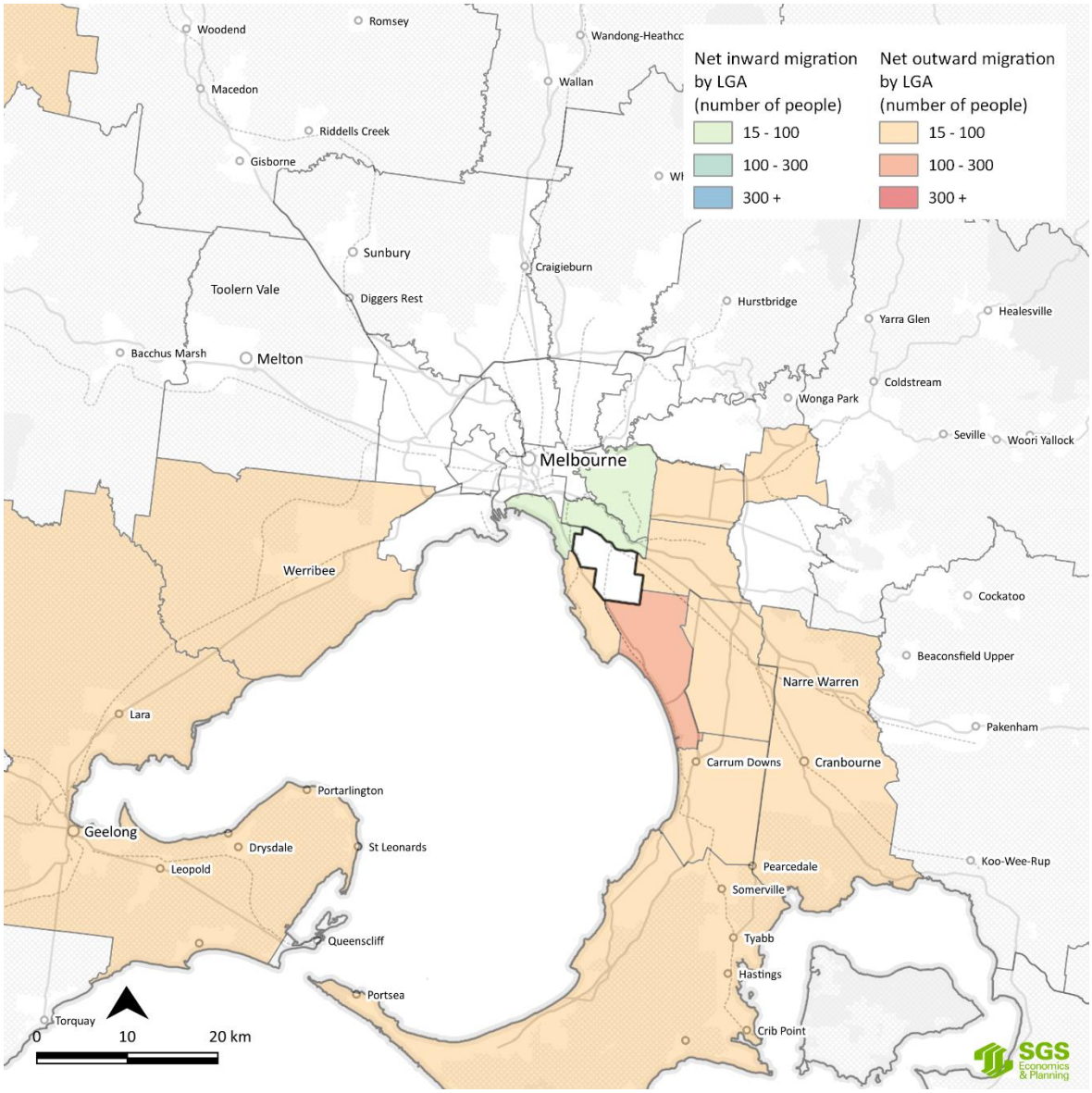
Older people and retirees (65+ years old)

People become less likely to move as they get older (past the age of around 40), so overall migration levels for people aged 65 and older are lower than most other age groups.

Like people aged 50 to 65 years old, and younger age-groups, there was net outward migration to more affordable south-eastern suburbs and growth areas.

There was also net inward migration from Boroondara, Port Phillip and Stonnington with Glen Eira nearby but likely to be more affordable.

FIGURE 13: NET DOMESTIC MIGRATION TO AND FROM GLEN EIRA FOR 65+ YEAR OLDS, 2011-2016

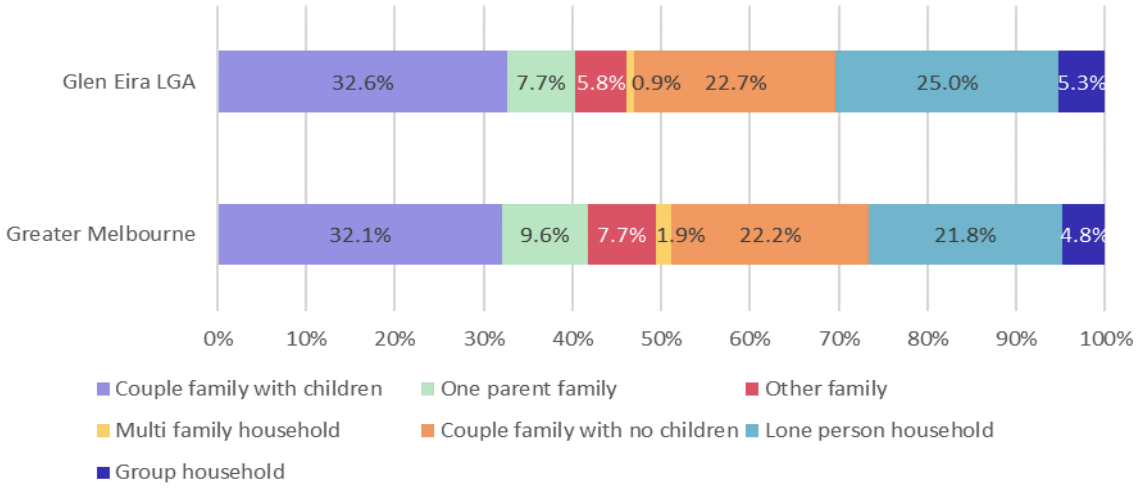


Source: SGS Economics and Planning, 2021, based on ABS Census 2011 and 2016.

2.4 Glen Eira's households

The kinds of households living in the Glen Eira LGA (and the comparison area of Greater Melbourne) is shown in Figure 14. The Glen Eira LGA houses a wide variety of household types. Compared to Greater Melbourne, Glen Eira accommodates a slightly higher proportion of lone person households (25.2 per cent compared to 22.2 per cent), and a lower proportion of one parent families (7.8 per cent compared to 9.7 per cent).

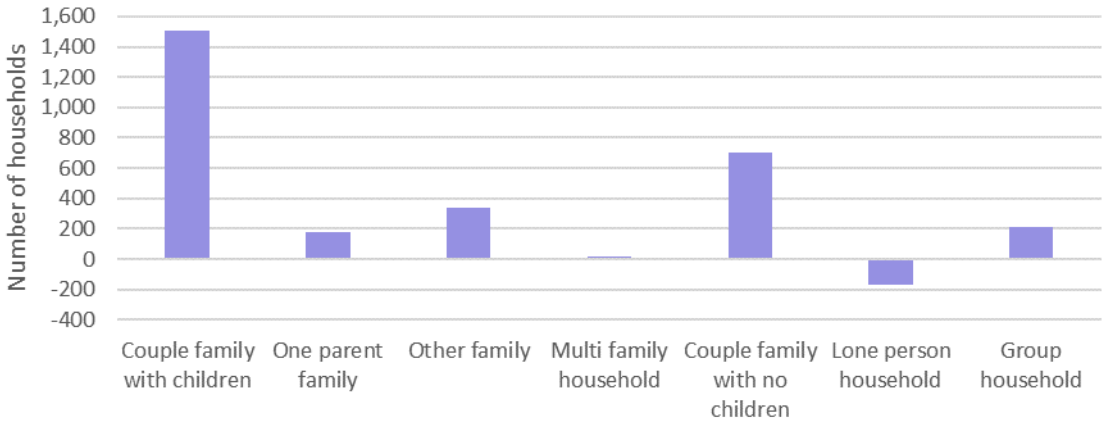
FIGURE 14: HOUSEHOLD COMPOSITION (2016)



Source: SGS Economics and Planning, 2021, based on ABS Census of Population and Housing, 2016.

Between 2011-2016, the number of households in the Glen Eira LGA grew by around 2,800. The breakdown of this growth by household type is shown below (Figure 15). The number of households of every type grew from 2011 to 2016, except lone person households which decreased by 170. Couple families with children, and couple families with no children, represented the greatest increase (around 1500 and 700 respectively).

FIGURE 15: CHANGE IN NUMBER OF HOUSEHOLDS 2011-2016



Source: SGS Economics and Planning, 2021, based on ABS Census of Population and Housing, 2011 and 2016.

2.5 Current housing supply

Dwelling type

The 2016 census recorded 59,739 private dwellings in the Glen Eira LGA in 2016 (this excludes places with communal living arrangements like aged-care facilities and boarding schools). The breakdown of these dwellings by type, as well as by population living in each type of dwellings, is shown in the table below.

TABLE 1: NUMBER OF DWELLINGS BY TYPE IN THE GLEN EIRA LGA (2016)

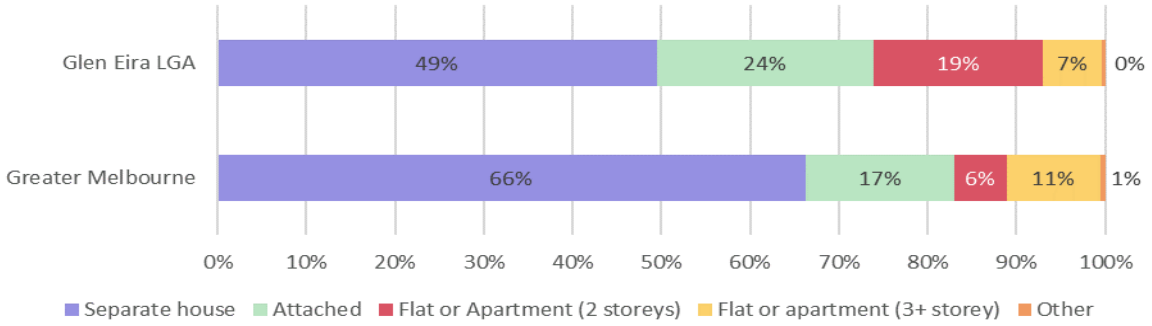
Dwelling type	Separate house	Attached	Flat or apartment (2 storey)	Flat or apartment (3+ storey)	Other	Not stated	Total
Number of dwellings	29,440	14,565	11,331	3,986	225	192	59,739
% of total dwellings*	49.4%	24.5%	19.0%	6.7%	0.4%		100.0%
Population in dwellings	79,617	31,551	19,730	6,480	438	429	138,245
% of population*	58%	23%	14%	5%	0%		100%

Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.
* - Note 'not stated' is not included in the % calculations

While separate houses are the most common type of dwelling in Glen Eira, they made up just less than 50% of all dwellings in 2016, with most dwellings other types including attached, flats and apartments. A higher proportion of all *people* lived in separate houses (58%) as a result of the larger average household size in separate houses.

The types of dwellings in each part of the Glen Eira LGA and in the benchmark area of Greater Melbourne are shown in the chart overleaf (Figure 16). Glen Eira has a higher proportion (50 per cent) of attached dwellings and flats or apartments overall than Greater Melbourne (33 per cent). However, the proportion of higher-rise flats and apartments (those with 3+ storeys) in Glen Eira is less than in Greater Melbourne (7 per cent compared to 11 per cent). Glen Eira also has a lower proportion of separate houses (49.2 per cent compared to 66 per cent respectively).

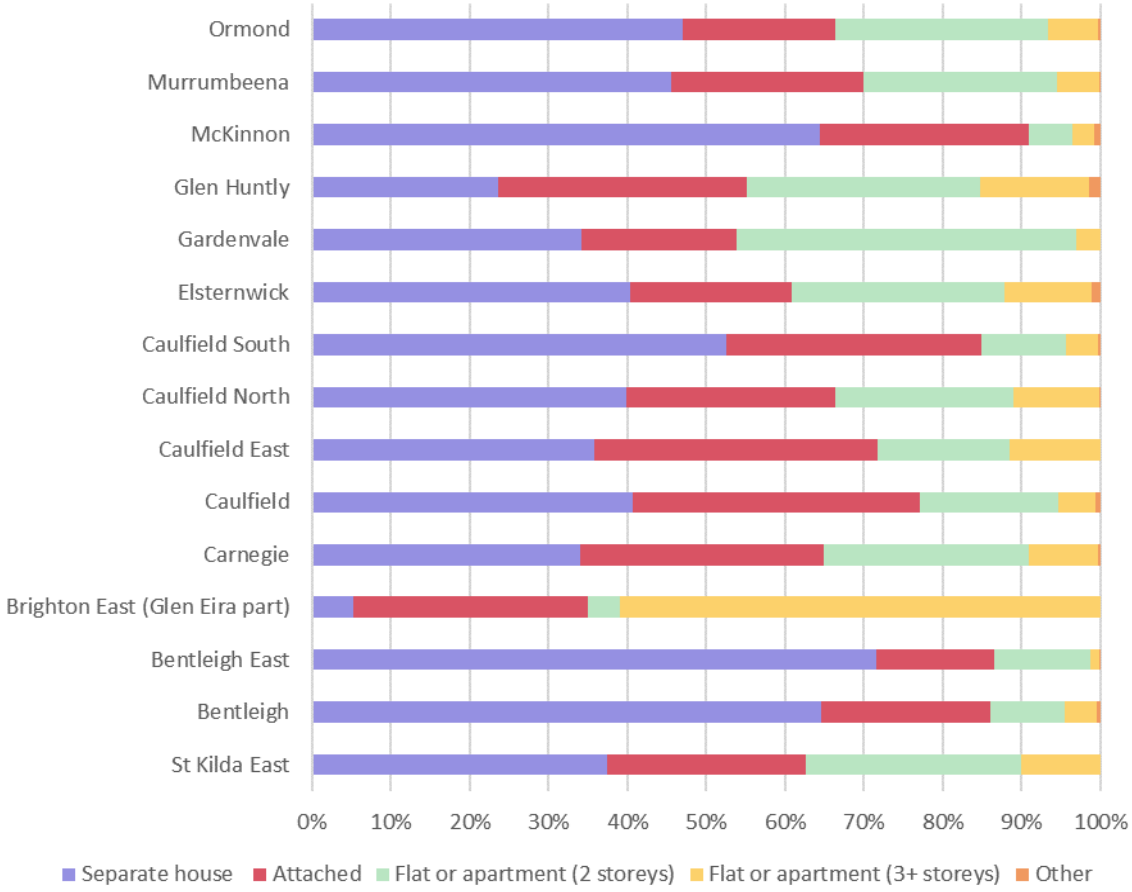
FIGURE 16: DWELLING TYPES IN THE GLEN EIRA LGA AND GREATER MELBOURNE (2016)



Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.

The mix of dwelling types varies across the LGA (Figure 17), with a higher proportion of apartments in and around the Major Activity Centres and some neighbourhood/local activity centres (Bentleigh, Carnegie, Caulfield North, Elsternwick, Glen Huntly, Gardenvale, and Ormond). Locations with the highest proportion of separate (detached) houses are McKinnon, Caulfield South, Bentleigh East and Bentleigh. The Glen Eira part of Brighton East has a very different dwelling mix than other parts of the LGA, but this is only a very small area.

FIGURE 17: DWELLING TYPES ACROSS THE GLEN EIRA LGA, BY LOCALITY (2016)



Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.

More up-to-date data on current housing stock by dwelling type in Glen Eira as of 2021 is available from Council's rates data. This data is shown in the table below.

TABLE 2: NUMBER OF DWELLINGS BY TYPE IN THE GLEN EIRA LGA (2021)

	Separate house	Attached housing	Apartments	Total
Number of dwellings	24,405	22,144	19,266	65,815
% of total dwellings	37%	34%	29%	100%

Source: Glen Eira Council Rates Data 2021.

As this data comes from a different source and uses a different methodology from the ABS census data, it is not possible to directly compare the two. Some dwellings may have different categorisations in Council's data to the ABS census, which provides comprehensive information on other things including dwelling size, tenure, suitability and living arrangements, as well as data on housing supply in benchmark areas like Greater Melbourne. As such, Council's rates data provides the best picture of current housing supply in the LGA, but census data is necessary to analyse other relevant variables and to compare the types of housing in Glen Eira to other areas.

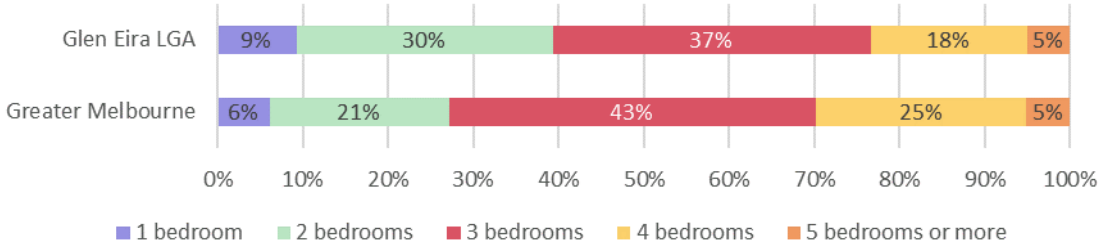
According to Council's rates data, separate houses are still the most common dwelling type in Glen Eira by number of dwellings but make up only slightly more than a third of all dwellings. Attached housing and apartments are also very common, and together make up 63% of all housing the LGA.

Dwelling size

The size of dwellings in the Glen Eira LGA can be considered through the proxy measure of how many bedrooms they contain. This is shown below for the LGA compared to Greater Melbourne (Figure 18), and by suburb (Figure 19). The LGA contains a variety of dwelling sizes, with 3-bedrooms the most common number (37.2 per cent of dwellings), followed by 2-bedrooms (30.1 per cent). In comparison to Greater Melbourne:

- Greater Melbourne has a smaller proportion (27.1 per cent) of 1- and 2-bedroom dwellings than Glen Eira LGA (39.4 per cent).
- The proportion of 3- and 4-bedroom dwellings in Greater Melbourne (67.1 per cent) is higher than across the Glen Eira LGA (55.6 per cent).
- Both Glen Eira and Greater Melbourne have a similar proportion of 5-bedroom or larger dwellings (around 5 per cent).

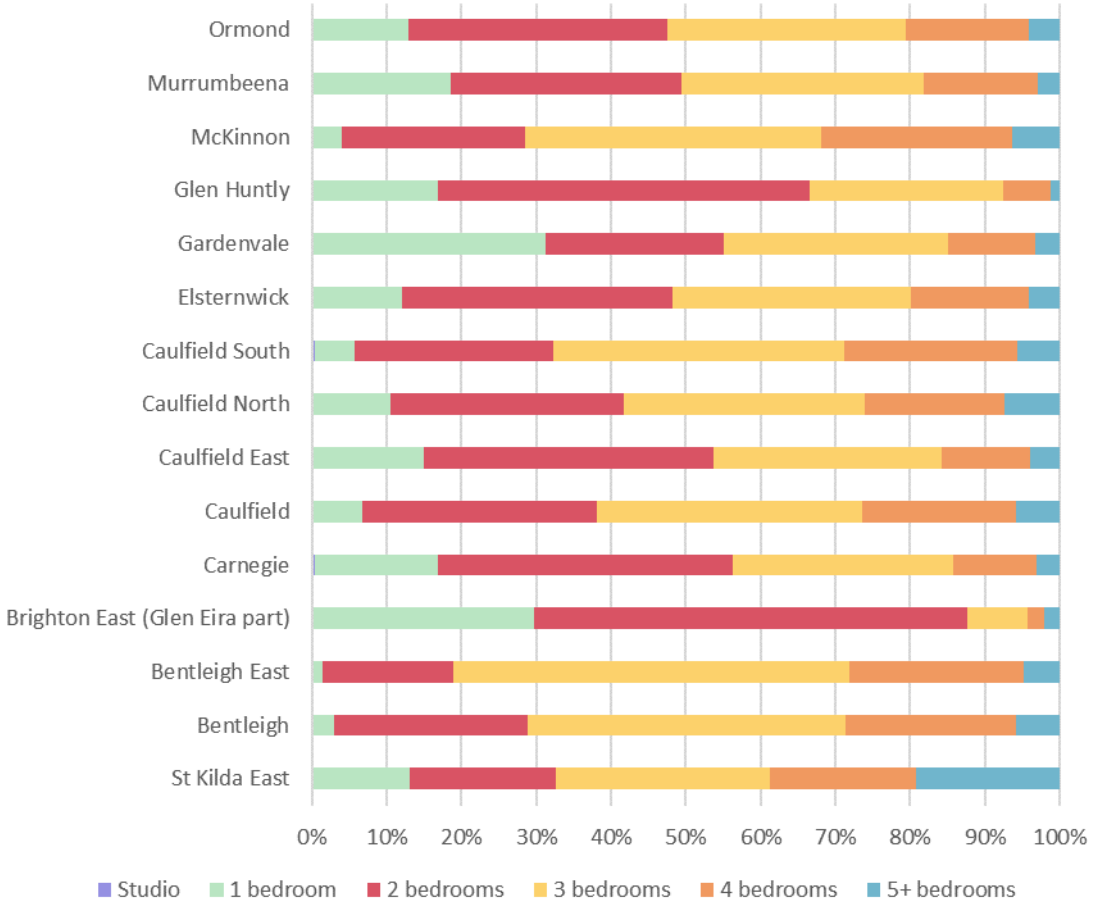
FIGURE 18: NUMBER OF BEDROOMS IN THE GLEN EIRA LGA AND GREATER MELBOURNE (2016)



Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.

Figure 19 shows that Bentleigh, Bentleigh East, Caulfield, Caulfield South, and McKinnon have the highest proportion of larger (3-bedroom or larger) dwellings in the LGA. The locations with a greater proportion of 1- and 2-bedroom dwellings are Glen Huntly, Gardenvale, Elsternwick, Caulfield East and Carnegie. These locations roughly correspond to the areas where there are higher proportions of apartments, while locations with more bedrooms on average generally correspond to the localities with a higher proportion of separate dwellings.

FIGURE 19: NUMBER OF BEDROOMS IN THE LGA, BY SUBURB (2016)



Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.

Although the supply of different dwelling sizes and types varies across the LGA and compared to Greater Melbourne, the average number of bedrooms by housing type is very similar (Table 3).

TABLE 3: AVERAGE NUMBER OF BEDROOMS (2016)

Location	Separate house	Attached	Flat or apartment	Other
Glen Eira LGA	3.36	2.65	1.82	2.08
Greater Melbourne	3.39	2.62	1.83	1.96

Source: SGS Economics and Planning, 2021, based on the ABS Census of Population and Housing, 2016.

More current data on number of bedrooms is also available from Council's rates data, which estimates the number of bedrooms in each dwelling. The average number of bedrooms for different dwelling types in the LGA from this data are shown below. Overall, the 2021 averages are similar to those derived from the 2016 census, apart from apartments which may be becoming slightly smaller on average over time due to the increased number of 1-bedroom apartments in new developments compared to older buildings.

TABLE 4: AVERAGE NUMBER OF BEDROOMS (2021)

Separate house	Attached dwellings	Apartments
3.34	2.70	1.73

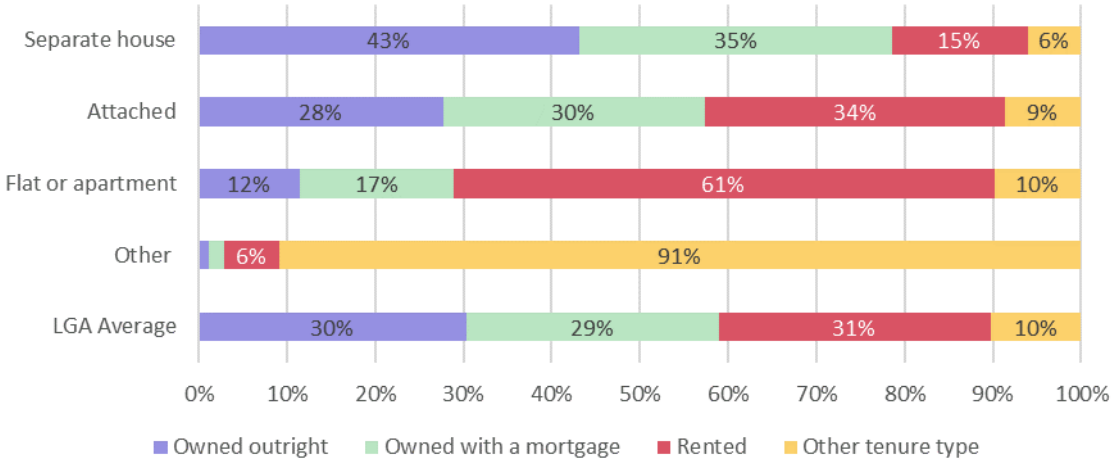
Source: SGS Economics and Planning, 2021, based on Glen Eira Council rates data, 2021.

Dwelling tenure

Different dwelling types in Glen Eira have quite different tenure arrangements overall (see Figure 20 overleaf). Across Glen Eira, most separate houses are either owned outright or with a mortgage (78 per cent), with only 15 per cent being rented. By contrast, the majority of flats and apartments are rented (61 per cent). The tenure arrangements of attached dwellings lie between those for separate houses and flats or apartments.

These distinctions reflect in part that most new apartment dwellings are bought by (and marketed heavily to) investors rather than owner-occupiers. By contrast, separate houses are sold for much higher prices and generally offer lower rental yields. They are more attractive to people who are willing to pay more for increased space and want to stay in the area, but less affordable for people newly entering the housing market, and less available for private renters.

FIGURE 20: TENURE BY DWELLING TYPE, GLEN EIRA LGA (2016)



Source: SGS Economics and Planning, 2021, based on ABS Census of Population and Housing, 2016.

Dwelling suitability

Dwelling suitability is a measure of how suitable a dwelling's size is for its occupants. This is an indication of relative housing affordability as well as of the availability of appropriately sized housing. It is calculated by the ABS based on the usual residents and the number of bedrooms in each dwelling with the following rules:

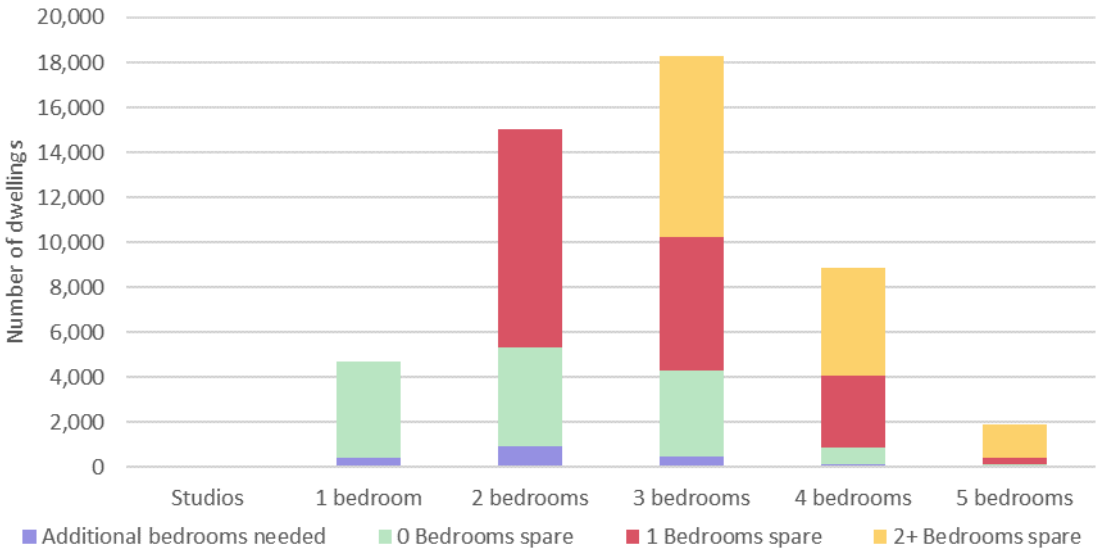
- One bedroom is needed for each couple or single adult in a household
- Up to two children of the same sex under 18 can share a bedroom
- Children of different sexes under five can share a bedroom.

A designation of a bedroom as spare does not mean that is not used, only that the household may be able to live in a smaller dwelling.

Dwelling suitability for the Glen Eira LGA is shown in Figure 21.

It reveals that 3-bedroom dwellings are the most common in Glen Eira. Around 32 per cent of these dwellings have one spare bedroom, and 44 per cent have two or more spare bedrooms. In 4-bedroom houses, 36 per cent have one, and 54 per cent have two or more spare bedrooms. In 5-bedroom houses, 76 per cent have two or more spare bedrooms. This suggests there is a potential market for households to downsize, although some small households with spare bedrooms may intend to have children in future, continue to live in a relatively large dwelling, or, based on recent shifts to hybrid working as a result of COVID-19, may be using spare bedrooms for work more often than before. Older people are often discussed as a demographic likely to downsize. More discussion about the housing choice of older people is set out in Section 2.7.

FIGURE 21: DWELLING SUITABILITY IN THE GLEN EIRA LGA (2016)



Source: SGS Economics and Planning, 2021, based on ABS Census of Population and Housing, 2016.

A relatively small but significant proportion of all dwellings would need additional bedrooms to house their occupants appropriately (8.5 per cent of one bedroom, 6.3 per cent of two bedroom, and 2.5 per cent of three-bedroom dwellings). These proportions are similar to those in Greater Melbourne (9 per cent of one-bedroom dwellings, 6 per cent of two-bedroom dwellings and 4 per cent of three-bedroom dwellings) and suggest that housing unaffordability may be leading to households living in smaller dwellings than would be considered appropriate for their needs.

2.6 Recent development

Recent dwelling development the Glen Eira LGA and Greater Melbourne as reported in the ABS census in is shown in Table 5. Two storey apartment buildings must be grouped with attached dwellings in this data due to a problem with dwellings classification between different censuses.

Overall the number of dwellings in Glen Eira grew by 9.9 per cent over the 10-year period (an average increase of 0.9 per cent per year), around half the development rate of Greater Melbourne where the number of dwellings increased by 18.4 per cent over the same period (or 1.7 per cent per year).

The number of separate dwellings in the Glen Eira LGA decreased by 5.6 percent between 2006 to 2016, an annual average growth rate of -0.6 per cent. This reflects the redevelopment of some properties containing separate houses to make way for attached dwellings or apartments (although some of these new dwellings are also built in areas which do not contain separate houses).

In contrast, the number of both attached dwellings and flats and apartments increased across Glen Eira. Attached dwellings and lower-rise (two storey) flats and apartments made up 61% of new housing development, with an average growth rate of 1.9 per cent per year). Higher-rise flats and apartments (three or more storeys) made up only 37% of the growth, but there were relatively few of these in 2006 and so the number of dwellings increased by 11.7 per cent per year on average, or by 203% over the ten-year period.

Compared to Greater Melbourne, attached dwellings and two storey flats and apartments made up a lower proportion of all new dwellings, while three or more storey flats and apartments made up a higher proportion, and had a much higher average annual growth rate.

TABLE 5: CHANGE IN NUMBER OF DWELLINGS BY TYPE IN THE GLEN EIRA LGA (2006-2016)

Location		Separate house	Attached or flat/apartment (2 storeys)	Flat/apartment (3+ storeys)	Other	Not stated	Total
Glen Eira LGA	Change in dwellings	-1,759	+4,413	+2,669	-56	+106	+5,373
	Average annual growth rate	-0.6%	+1.9%	+11.7%	-2.2%	+8.4%	+0.9%
	% of total increase	N/A	61%	37%	N/A	1%	N/A
Greater Melbourne	Change in dwellings	+100,829	+76,553	+86,961	+892	+4,789	+270,024
	Average annual growth rate	+0.9%	+2.2%	+6.7%	+1.0%	+32.5%	+1.7%
	% of total increase	37%	28%	32%	0%	2%	N/A

Source: SGS Economics and Planning, based on ABS Census of Population and Housing, 2006 and 2016.

Rates data from Council provides a more up to date picture of recent development rates, but as noted in Section 2.5 above, there may be some inconsistency in dwelling classification between the ABS census and Council's data.

Development between 2016 and 2021 according to Council's rates data is shown in the table below. Over this period, the average annual rate of increase of dwellings in the LGA has been much higher than between 2006 and 2021 (2.1 per cent compared to 0.9 per cent). Flats and apartments made up around two thirds (66 per cent) of all new dwellings, with only 34 per cent being attached dwellings. As it is unlikely that many new two storey flats or apartments were built between 2006 and 2016 or 2016 and 2021, it is likely that attached housing development has gone from around 61 per cent of all new housing to 34 per cent, while higher density apartment development has come to be the dominant development type.

TABLE 6: CHANGE IN NUMBER OF DWELLINGS BY TYPE IN THE GLEN EIRA LGA (2016-2021)

Dwelling type	Separate house	Attached	Flat or apartment	Total
Change in dwellings	-1,366	+2,694	+5,168	+6,496
Average annual growth rate	-1.1%	+2.6%	+6.4%	+2.1%
% of total increase	N/A	34%	66%	N/A

Source: SGS Economics and Planning, based on Glen Eira City Council rates data 2021.

Another way to compare development rates over the different time periods is to compare the average numbers of dwellings built per year, which are shown in the table below. Between 2016 and 2021, more than double the number of dwellings was built each year on average in the LGA compared with the period between 2006 and 2016. While the number of attached dwellings being built has increased slightly between the two period, the number of higher-rise flats and apartments being built has increased much more dramatically.

TABLE 7: AVERAGE YEARLY NUMBER OF DWELLINGS CONSTRUCTED IN GLEN EIRA

Time period	Separate house	Attached	Flat/apartment (2 storeys)	Flat/apartment (3+ storeys)	Other	Total
2006-2016	-176	441		226	-6	537
2016-2021	-273	539	1,034			1,299

Source: SGS Economics and Planning, based on ABS Census of Population and Housing, 2006 and 2016 and Glen Eira City Council rates data 2021.
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

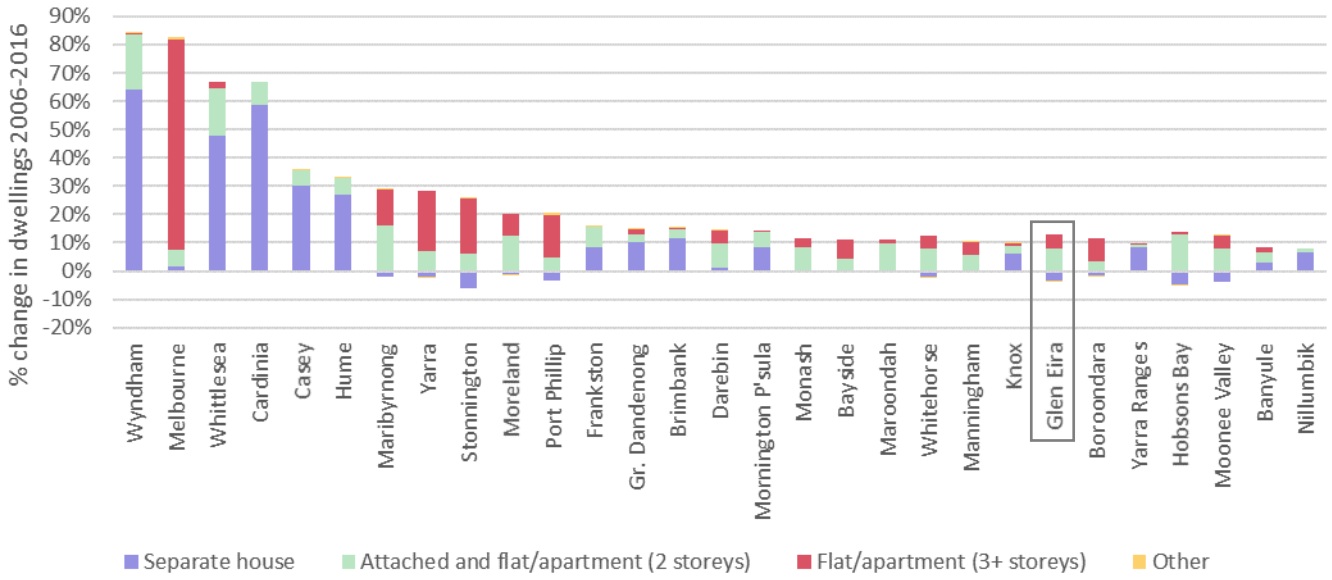
Comparison of dwelling development rate with other LGAs

Dwelling development between 2006-2016 in Glen Eira and other LGAs across Greater Melbourne is broken down into dwelling types in Figure 22. This provides further context to interpret how Glen Eira's growth rate compares to other LGAs, and why Glen Eira's growth rate was slower than Greater Melbourne's between 2006-2016.

Apart from the City of Melbourne, the fastest growing LGAs in Greater Melbourne between 2006-2016 were those in which large amounts of greenfield development occurred. By contrast, LGAs accommodating predominately infill development can be defined by excluding those in which separate houses made up most development (as well as Maroondah, which appears to be subject to a census dwelling classification error between 2006 and 2016 and so for which there is not reliable dwelling type information). These infill LGAs had an annual average growth rate for dwellings of 1.6% between 2006-2016, lower than Greater Melbourne's average of 2.3%, but much higher than Glen Eira's 0.9 per cent.

Comparing Glen Eira to other infill LGAS in Figure 22 shows that those LGAs in which much higher growth rates were experienced had higher levels of high-density housing development.

FIGURE 22: CONTRIBUTION OF DIFFERENT DWELLING TYPES TO DEVELOPMENT IN GREATER MELBOURNE LGAS (2006-2016)



Source: SGS Economics and Planning, 2021, based on ABS Census data, 2006 and 2016.

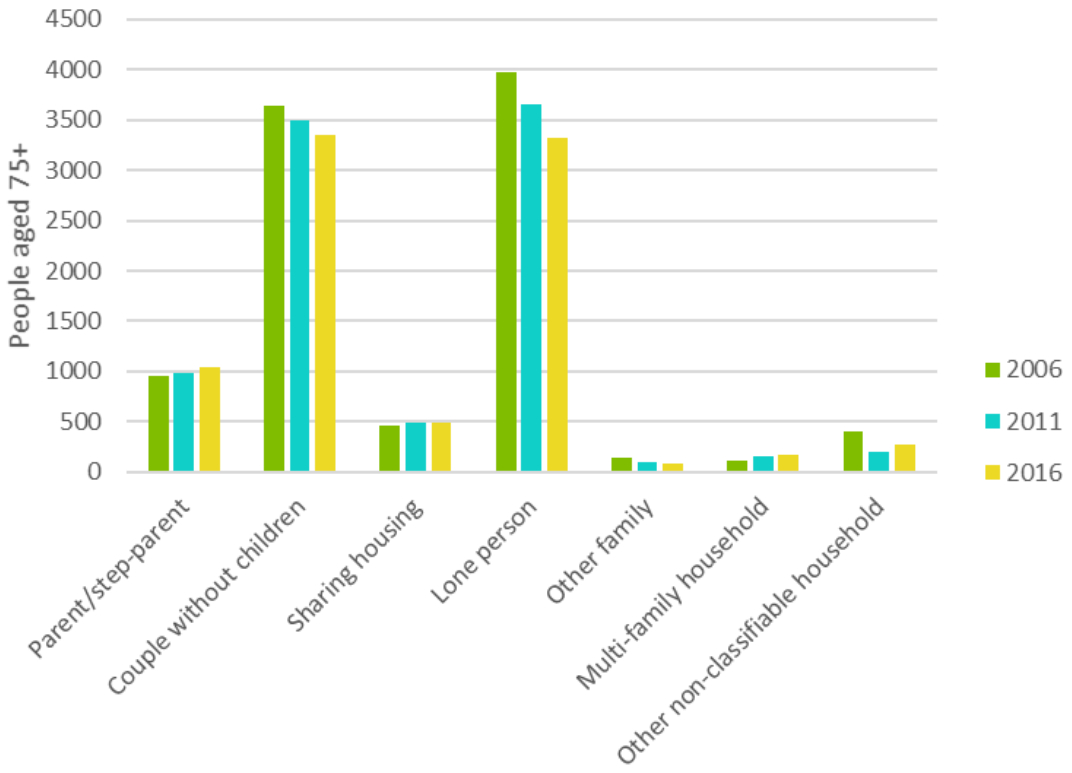
2.7 Living arrangements of particular demographic groups

Older people

Some insight into the reduction in the number of older people aged 75+ can be gained from the number of people of this age who occupied different household types between 2006 and 2016, as reported in the ABS census (note that this does not include people in nursing homes or aged care).

The number of people aged 75+ shrank for most household and relationship types, including couples without children and lone person households. The number of people aged 75+ living with their children, or with other family or non-family members increased, but not nearly enough to offset the overall decline in population in this age group.

FIGURE 23: RELATIONSHIP WITHIN HOUSEHOLD FOR OLDER PEOPLE (AGED 75+) IN GLEN EIRA



Source: SGS Economics and Planning, based on ABS Census 2006, 2011 and 2016.

Younger people

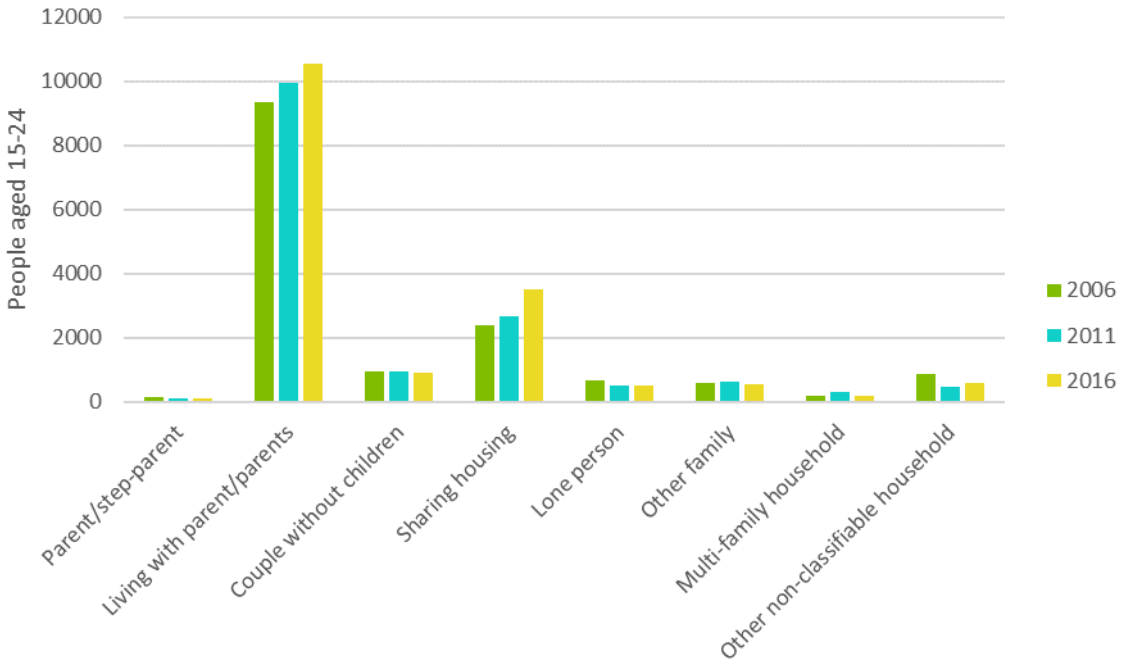
The household and relationship types for people aged 15-24 and 25-34 as reported in the census are shown in the figures below. These are two age groups which experienced substantial growth between 2006-2016.

From this information, it appears that the increase in the number of people aged 15-24 has been driven by more families with older children living in the area (noting the increased number of people aged 45-64 in the LGA between 2006-2016), by children living at home with their parents for longer, and by a large increase in the number of people living in shared accommodation.

The increase in the number of people aged 25-34 corresponds with a large increase in the number of couples without children living in the LGA in this age group. It also relates to the increase in shared housing and people living with their parents among those aged 15-24 years old. There was a small increase in the number of young parents aged 25-34 over the period 2006 to 2016.

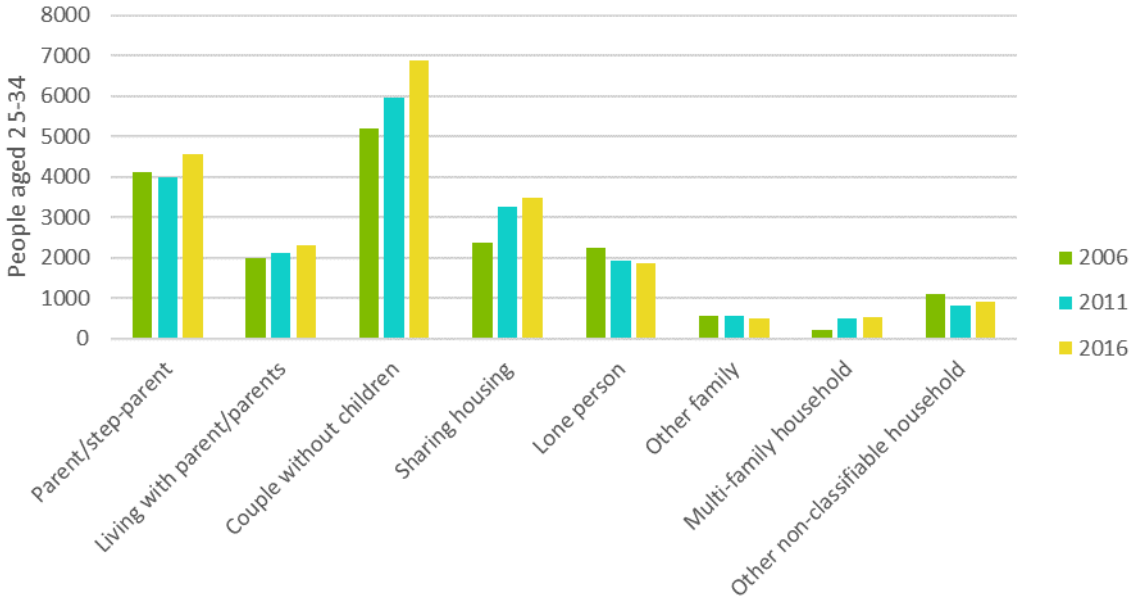
The number of people living by themselves aged 15-24 and 25-34 decreased, likely in part due to a decrease in housing affordability between 2006 to 2016. The decrease in housing affordability likely contributed to the trends discussed in the paragraph above.

FIGURE 24: RELATIONSHIP WITHIN HOUSEHOLD FOR PEOPLE AGED 15-24 IN GLEN EIRA



Source: SGS Economics and Planning, based on ABS Census 2006, 2011 and 2016.

FIGURE 25: RELATIONSHIP WITHIN HOUSEHOLD FOR OLDER PEOPLE AGED 25-34 IN GLEN EIRA



Source: SGS Economics and Planning, based on ABS Census 2006, 2011 and 2016.

2.8 Summary

Key findings from this section are:

- Glen Eira's population is forecast to grow from around 148,600 in 2016, to 188,200 in 2036. The population will likely increase at around 2,000 people per year. While this is lower than recent very high growth rates (almost 3,000 people in 2017), it still means the LGA will grow by 26.6 per cent over a 20-year period.
- Historically, young adults aged 15-24, and the adults age groups 45-54, 55-64 and 65-74 experienced the most growth in Glen Eira (2006 to 2016).
- The household profile in Glen Eira reflects trends across Greater Melbourne, with 32.9 per cent couple families with children, and 22.9 per cent couple families without children. In recent years (2011-2016), the proportion of lone person households has decreased, while the most growth occurred in the couple with or without children household types.
- The housing profile across Glen Eira is predominantly separate dwellings, with 30 per cent two-bedroom and 37.2 per cent three-bedroom dwellings. The average number of bedrooms for separate houses in Glen Eira is 3.3, while in medium density housing (such as townhouses and low-rise apartment/unit buildings) the average number of bedrooms is 2.6.
- Around 76 per cent of three-bedroom dwellings may have one or more spare bedrooms, while 90 per cent of four-bedroom dwellings may have one or more spare bedrooms. This suggests there is a potential market for households to downsize, although some households with spare bedrooms may intend to have children in future, continue to live in a relatively large dwelling, or intend to use spare bedrooms as work-from-home spaces based on recent hybrid working trends.
- Recent dwelling development over the period 2006-2016 shows negative growth in separate housing (-0.6 per cent average annual growth rate), while more medium density housing is being provided (6.6 per cent average annual growth rate, or a total 6,904 dwellings from 2006-2016). Compared to Greater Melbourne, Glen Eira's housing growth rate is very low: 2.3 per cent compared to 0.9 per cent respectively.

The implications of recent demographic shifts and the current housing profile in Glen Eira for future housing provision are set out over the following sections.

3. Housing demand

This section explains the approach and findings for housing demand modelling, based on the likelihood of various age groups forming different household types, and the likelihood of those household types residing in different dwellings.

3.1 Housing demand method

Estimates of housing demand in Glen Eira have been generated using the SGS's best-practice housing demand model.

This model estimates implied demand for dwellings of each type by analysing the likelihood (or propensity) of various age groups forming different household types, and then the likelihood of those household types residing in different types dwelling. The operation of the model is illustrated in the diagram below.

In each step classifications used are consistent with the ABS Census, from which demographic trends are calculated that are used in the model. While the ABS census information is now several years old, with the most recent results from 2016, it is by far the most comprehensive and accurate demographic information available on household types, housing types and how they are related.

The model operates based on linear trends in propensities, with all propensities calculated for the Glen Eira LGA as a whole.

FIGURE 26: HOUSING DEMAND MODELLING METHOD

Source: SGS Economics and Planning, 2021.

Dwelling type

It is not possible to break future housing demand into demand for attached dwellings and flats and apartments in Glen Eira due to inconsistency in classification of some dwellings by the ABS in different censuses, which provide the base data for housing demand analysis. As a result, this section uses the following alternative classification:

- Separate house
- Medium density including attached dwellings and flats and apartments in two storey buildings
- High density including flats and apartments in buildings of at least three storeys
- Other dwellings

Housing preference data discussed in Section 3.3 shows that over time people have become more likely to live in medium density, while the housing demand results in Section 3.4 including additional demand in the future for both medium and high density.

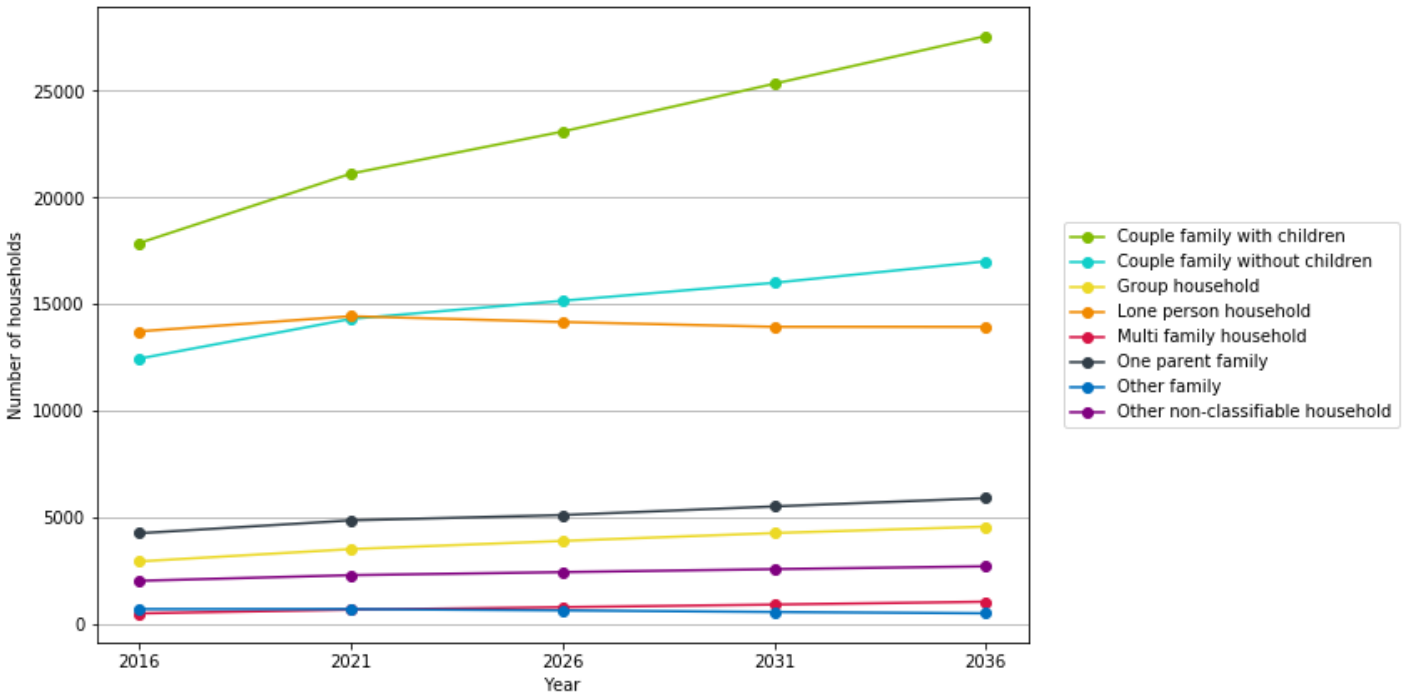
It is expected that almost all two storey apartment buildings in the LGA are relatively old and that very few if any have been built in the last 10 years. Given this, increases in preferences for medium density over the last 10 years can be considered as arising from an increased preference for attached dwellings among households, and forecast increased housing demand for medium density housing can be considered as increasing demand for attached dwellings. Similarly, forecast increases in high density demand can be considered as additional apartment demand. Nonetheless, for the sake of correctness and clarity this section discusses medium and high density instead of apartments and attached dwellings.

3.2 Household forecast

The forecast number of households in each year, and the percentage makeup of households in the LGA observed in 2016 and forecast in 2036 are shown overleaf (Figure 27 and Figure 28).

Most household types are forecast to increase between 2016-2036. The exception to this is that the number of lone person households, which is expected to decline. This is a continuation of recent demographic trends, which have seen the number of lone person households in Glen reported in the census decrease from 14,122 in 2006 to 13,706 in 2016 (refer to Section 2.3).

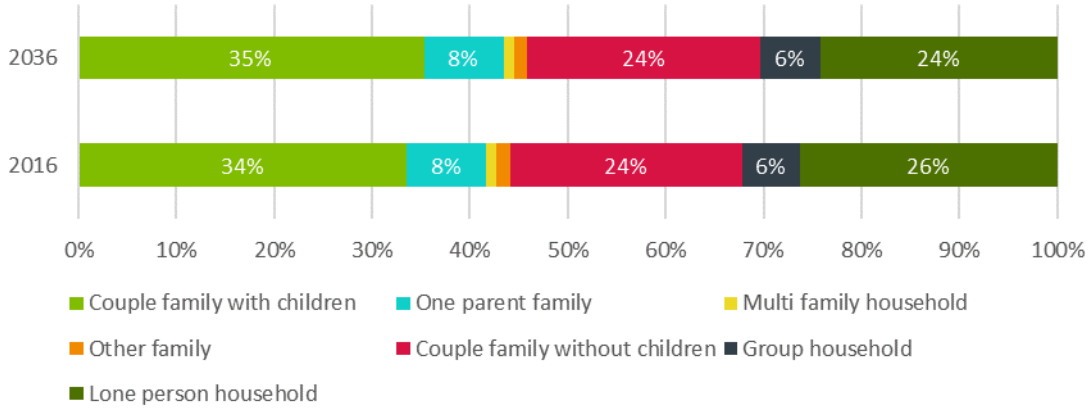
FIGURE 27: NUMBER OF HOUSEHOLDS FORECAST



Source: SGS Economics and Planning, 2021.

The percentage makeup of households in the LGA as a whole is expected to remain similar in the future, with couples with children becoming slightly more common and lone person households slightly less common.

FIGURE 28: FORECAST CHANGE IN HOUSEHOLD COMPOSITION



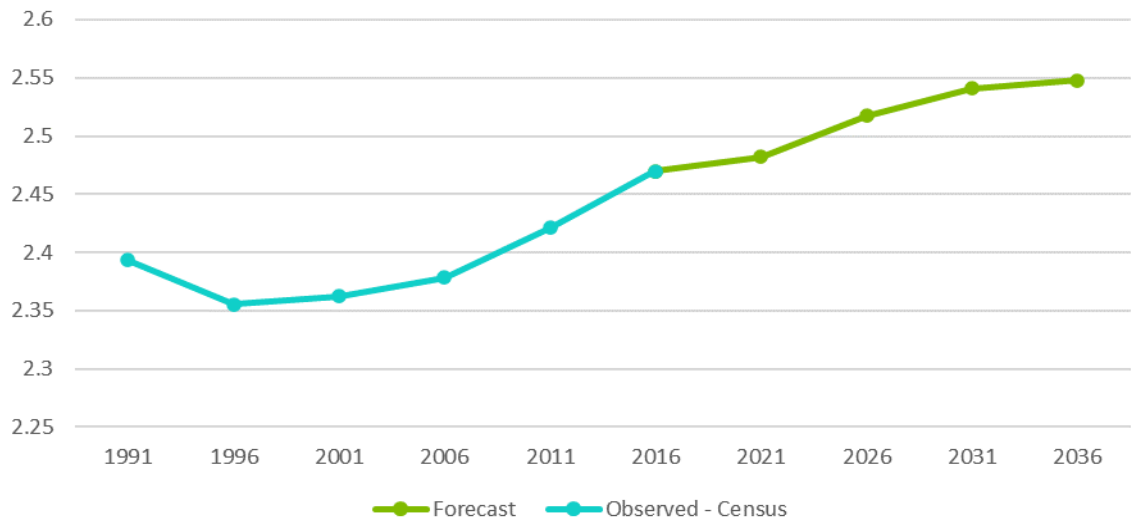
Source: SGS Economics and Planning, 2021.

Household forecast

Analysis of ABS census data shows that the average household size in the Glen Eira LGA has been increasing since 1996, from 2.35 in 1996 to 2.47 in 2016. As 2021 census results have not been released, an average size for 2021 based on data is not available.

SGS forecast that under the VIF population projections and recent demographic trends, average household size in Glen Eira is expected to continue to increase, reaching 2.55 in 2036 (Figure 29). The average household size is forecast to be 2.48 in 2021.

FIGURE 29: AVERAGE HOUSEHOLD SIZE IN GLEN EIRA



Source: SGS Economics and Planning, 2021, based on ABS Census 1991 – 2016.

This increase is driven by two main factors:

- A forecast slight increase in the proportion of households which are couples with children and decrease in the proportion of lone person households.
- A forecast increase in the average household size of couples without children and group households, related to the increase in the number of people in shared accommodation (couples who have others sharing with them).

3.3 Housing preferences

The proportion of each household type living in each dwelling type is commonly referred to as *revealed housing preferences*. As people are constrained in the kinds of housing available and affordable and so must make trade-offs when choosing where to live, revealed preferences can differ from people's ideal (unconstrained preferences). People may also wish to stay in their current dwelling, even if it differs from their ideal preference.

Factors which influence revealed preferences include what kinds of dwellings households would like to live in, what kinds of dwellings are available and how affordable those dwellings are. Revealed preferences evolve over time as these variables change, as well as in response to shifts in local demographics.

Recent changes in revealed preferences in the Glen Eira LGA are shown on the following page. As a baseline forecast, SGS's model continues these trends in the future.

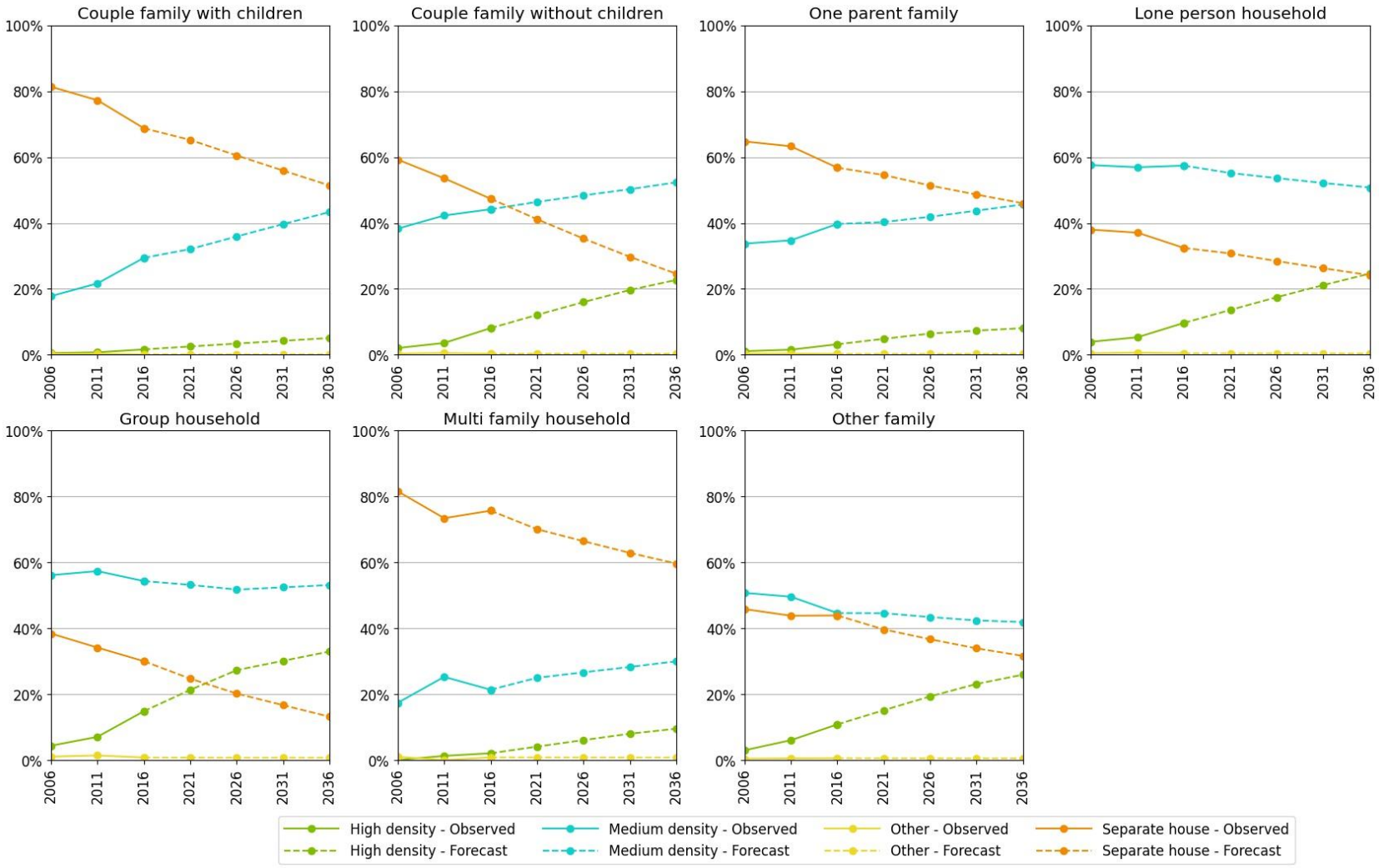
The 2011-2016 increase in revealed preferences for high density housing is much higher than the 2006-2011 increase. It has been predicted that the high rate of growth of preference for high density seen between 2011-2016 will continue. This is because the trend evident in 2011-2016 of many more high-density dwellings being delivered has continued between 2016-2021. This is shown by Council's rates data, which has been used to estimate change in dwellings by type between 2016-2021.

Housing preferences key findings

Overall, the following observations can be made about housing preferences in Glen Eira:

- The proportion of households living in separate houses is predicted to decrease, and the number of medium and high density to increase across all household types.
- Revealed preferences for separate houses are highest in couples with children, one parent families and multifamily households, followed by couples without children.
- Revealed preferences for medium density are highest in group households, lone person households, other families, and couples without children.
- Revealed preferences for high density are highest in group households, lone person households, other families, and couples without children (the same household types that favour medium density).
- A dramatic shift towards medium density is forecast for couples with children. In this context additional medium density dwellings would provide a more affordable price point in Glen Eira for families than separate houses, especially as the revealed preferences show little inclination for couple families with children to live in high density housing.

FIGURE 30: HOUSING PREFERENCE FORECASTS



Source: SGS Economics and Planning, 2021, based on ABS Census 2006, 2011, 2016.

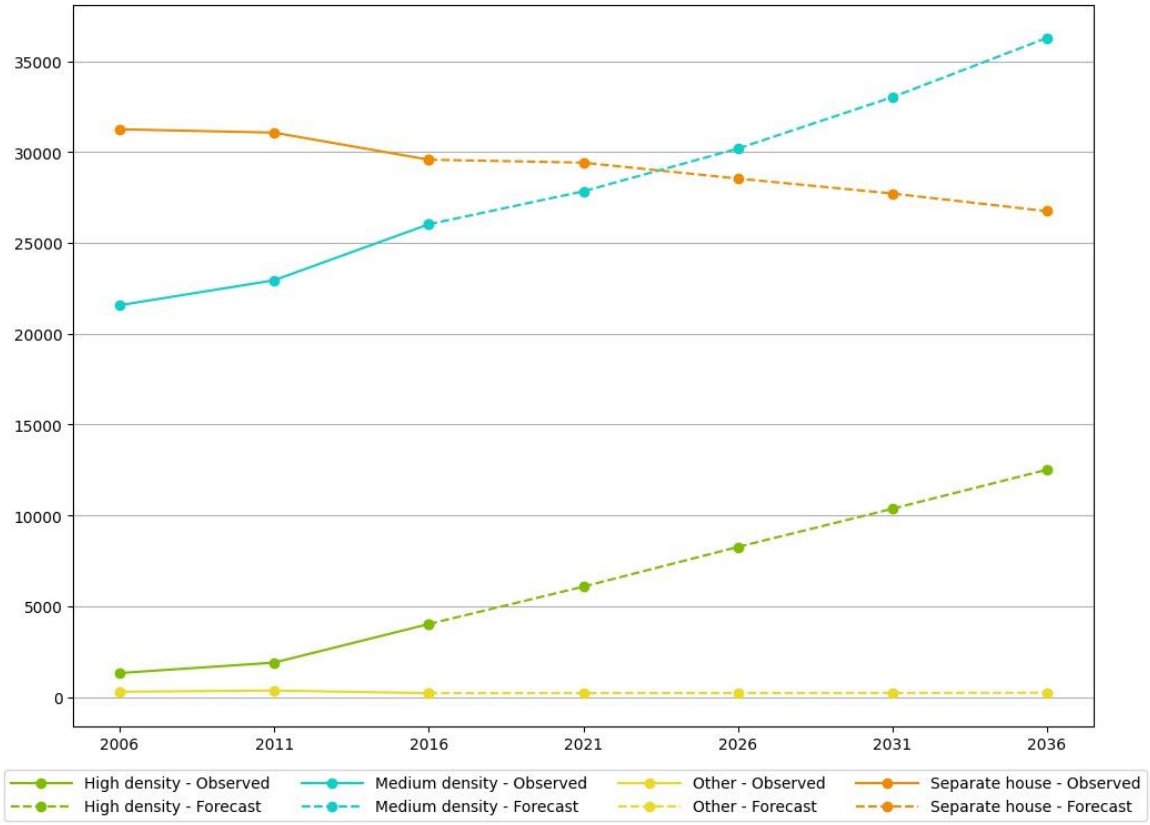
3.4 Housing demand results

Overall, housing demand results are shown in the chart and table below.

These results indicate that around 12,230 additional dwellings will be needed between 2021-2036. Demand is split mostly between medium and high density, with significant demand for both but greater need for medium density.

Demand for separate houses is forecast to decline, in line with recent trends. This would be expected as some separate houses are redeveloped into medium and high-density dwellings.

FIGURE 31: HISTORIC AND FORECAST HOUSING DEMAND



Source: SGS Economics and Planning, 2021, based on ABS Census 2006, 2011, 2016.

TABLE 8: HOUSING DEMAND RESULTS

Dwelling type	2016	2021	2026	2036	Change 2021 - 2036	Average annual growth rate
Separate house	29,578	**29,414**	28,538	26,742	-2,672	-0.5%
Medium density	26,022	**27,837**	30,189	36,284	8,447	1.7%
High density	4,014	**6,076**	8,260	12,514	6,438	5.9%
Other	211	**214**	219	235	21	0.5%
Total	**59,825**	**63,541**	**67,206**	**75,775**	**12,234**	**1.2%**

Source: SGS Economics and Planning, 2021.
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

Breaking the results of housing demand modelling down into yearly rates, and comparing these with development between 2006-2016 and between 2016-2021 reveals that:

- Total development rates between 2016-2021 have far outpaced those between 2006-2016, with slightly more medium density but much more high density delivered.
- Total development rates modelled for 2021-2036 are greater than those between 2006-2016, but less than those between 2016-2021.
- An increase in medium density housing delivery would be needed from recent (2016-2021) development rates to meet modelled need, but compared to what has been delivered recently, it is anticipated that fewer high density dwellings will be required in future.

TABLE 9: COMPARISON BETWEEN HISTORICAL AND FORECAST RATES OF HOUSING DEVELOPMENT

Dwelling type	2006 - 2016		2016 - 2021		Forecast 2021 - 2036	
	Yearly change	% of yearly growth	Yearly change	% of yearly growth	Yearly change	% of yearly growth
Separate house	-167		-273		-178	
Medium density / Attached dwellings	446	62%	539	34%	563	57%
High density / Flats and apartments	270	38%	1,034	66%	429	43%
Other	-8				1	
Total	540	100%	1,299	100%	816	100%

Source: SGS Economics and Planning, 2021, ABS Census 2006, 2016, Glen Eira Council Rates Data.
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

4. Housing capacity

This section explains the approach and assumptions that underpin the housing capacity analysis for Glen Eira.

4.1 Housing capacity method

Housing capacity is an estimate of the quantum of housing that could be accommodated in an area. It is based on existing planning controls, recent housing supply trends and planned future land-release precincts. It is a theoretical assessment of the maximum number of dwellings that could be developed under current planning controls and development conditions and in future precincts. It follows from a high-level analysis and is intended to be indicative rather than absolute.

The figure below charts the four-step process for determining dwelling capacity. The logical flow is to firstly identify land where residential development is permitted before filtering out all the lots which are unlikely to be developed/redeveloped, and then calculating the potential development yield of each lot.

FIGURE 32: HOUSING CAPACITY METHOD

STEP 1: NET LAND AREA IDENTIFICATION

Removal of land that cannot be developed for residential purposes.

E.g. roads, footpaths

STEP 2: AVAILABLE LAND ASSESSMENT

Exclusion of lots that would not be able, or would be unlikely, to yield additional housing beyond what already exists.

E.g. Small lot size, recently developed sites, heritage status

STEP 3: POTENTIAL YIELD ASSESSMENT

Density and yield assumptions (using statutory height limits, setbacks, garden area requirements etc.) are applied to lots defined as available.

The total 'yield' for individual sites is then compared to the current number of dwellings on each lot to determine net capacity.

Source: SGS Economics and Planning, 2021.

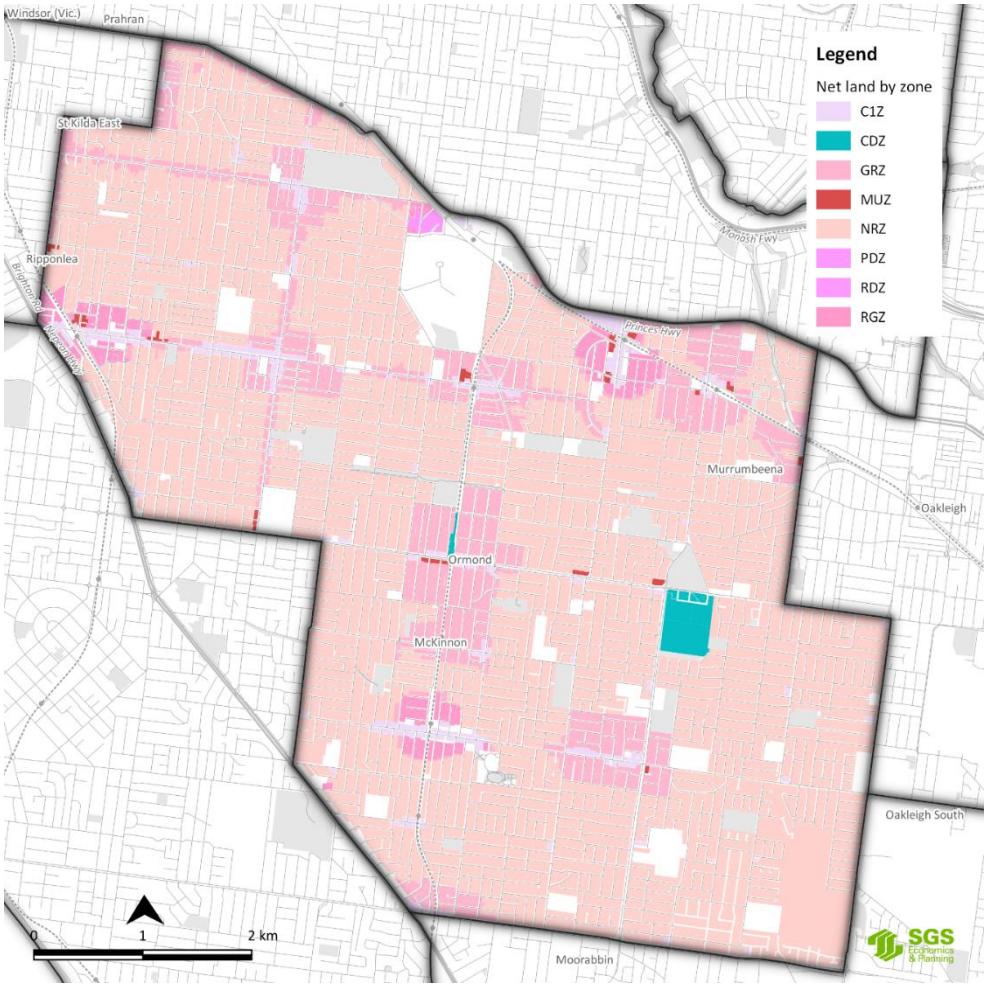
Only a small portion of available lots are likely to be developed in any one year and some lots are likely to be withheld from development. For these reasons, greater capacity than (expected) demand is required to ensure that future development is not constrained. There are likely to be site-specific attributes which may affect the development potential of some sites, but which cannot be assessed in an LGA-wide capacity analysis.

4.2 Net land

Net land refers to total land where residential development is permitted, minus the land that cannot be developed for residential purposes, such as roads and footpaths. The capacity calculation is conducted on a lot-by-lot basis, with only lots where residential development is permissible considered, and so parts of the public domain are automatically excluded.

The base property layer is formed from Vicmap Property. Council's rates data has been joined onto this cadastral layer to estimate the number and type of dwellings on each property. Only the overall property is included in the base property layer for subdivided properties with multiple parcels (for example villa developments).

FIGURE 33: NET LAND



Source: SGS Economics and Planning, 2021.

4.3 Available land

Available land represents any land that is likely to be able to accommodate additional housing in the LGA. It is derived from the net land, from which lots which cannot be developed, or are relatively unlikely to be developed, are excluded.

Designation of a lot as available land does not mean that development is necessarily feasible or that property owners are ready or willing to develop these sites. Typically, only a small portion of available lots are likely to be developed in any one year. There are also likely to be site-specific attributes which may affect the development potential of some sites, but which cannot be included in an LGA-wide capacity analysis.

Land exclusions

The table below shows the land use exclusions used. Development is broken down by zone and centre/site type. An x in the table indicates a reason that properties are excluded from being assessed as available for development in that zone or development type.

TABLE 10: DEVELOPMENT EXCLUSIONS

Exclusions	NRZ	GRZ	RGZ	Local and n'hood centres	Major centres	Major d'pment precincts & sites
Small areas or frontages	X	X	X			
Heritage overlay	X	X	X	X		
Neighbourhood character overlay	X	X	X			
Recent development	X	X	X	X	X	
Multi-unit development or subdivision	X	X	X	X	X	
High existing building footprint or approximate GFA	X	X	X	X	X*	
Excluded land uses	X	X	X	X	X	

* Strategic sites deemed likely to be redeveloped despite the level of existing development have been included.

Heritage

Properties are excluded if a heritage overlay applies to more than 20% of them, including site specific and precinct-based heritage overlays.

Properties which have heritage significance are considered to be less likely to be redeveloped or to have limited development potential.

This exclusion does not apply to major centres which have a specific building height mapped under a DDO overlay, as the mapped heights are likely to reflect the development potential given heritage affectation.

Multi-unit development and subdivision

Properties which contain existing multi-unit developments often have distributed strata ownership, making acquisition for redevelopment difficult. They would also be very expensive for a developer to acquire given the high cost of acquiring multiple dwellings. These properties are unlikely to be redeveloped unless very high densities are proposed, and until other development sites are exhausted.

Properties are excluded from development under this exclusion where there are three or more dwellings on a site (dual occupancies are more likely to be redeveloped if suitable densities are available), or if they are subdivided into more than one residential parcel.

Recent development

Properties which have been recently developed are less likely to be redeveloped in the short-medium term given the recent investment in them.

To reflect this, properties are excluded if a change in the number of dwellings was recorded between 2016-2021. Broader information on where non-residential development has occurred could also limit development potential but has not been included.

Excluded land uses

Properties with several existing land uses have been excluded. These land uses include infrastructure, social infrastructure and community uses which either should not be redeveloped given the valuable role they play for the community, or which are unlikely to be redeveloped on a reasonable timeframe.

The following land uses have been excluded from redevelopment:

- Schools
- Other major educational facilities
- Retirement villages
- Hospitals and major medical centres
- Gardens, parks and sports grounds
- Power sub-stations
- Community centres.

Existing building footprint or approximate GFA

Properties which contain substantial non-residential development are relatively unlikely to be redeveloped in the short-medium term given the likely high existing use value created by existing development.

Existing building sizes have been assessed using the Geoscape dataset, which contains the building footprints and approximate average heights of every building in Australia. Approximate GFA has been assessed by multiplying the building footprint by approximate number of storeys, which is quantified by the average building height divided by 3.5.

Properties zoned GRZ, NRZ or RGZ are excluded if they contain building footprints of 1,000sqm or more. Sites zoned MUZ or C1Z generally have greater development potential, and are excluded if their approximate GFA is 3,000sqm or more. This exclusion has not been applied where a site is expected to be redeveloped based on manual audits.

Property area or frontage

Suburban properties containing single houses are only likely to be redeveloped if either they are large enough to permit redevelopment without significant site amalgamation, or where very high redevelopment densities are possible.

For this reason, properties in the NRZ, GRZ and RGZ zone are excluded if they fall below a minimum area and frontage. This area and frontage have been assessed based on profiling of developments which occurred between 2016-2021. The range of areas and frontages observed in this time period is shown in the figures on the right.

Based on this analysis, the following minimums have been used:

- NRZ: 500sqm and 15m
  95% of NRZ development sites have a frontage of more than 15m, and 99% of sites have an area of at least 500sqm.
- GRZ: 500sqm and 14m
  95% of GRZ development sites have a frontage of more than 14m, and 94% of sites have an area of at 400 sqm.
- RGZ: 400sqm and 14m
  98% of RGZ development sites have a frontage of more than 14m, and 94% of sites have an area of at 400 sqm.
  Some amalgamation of sites zoned RGZ is expected, but most amalgamated sites are at least 800sqm in size to permit an apartment development (twice the applied minimum).

No minimum area or frontage is applied in the C1Z or MUZ, as a higher level of site amalgamation is expected.

How to read box and whisker plots

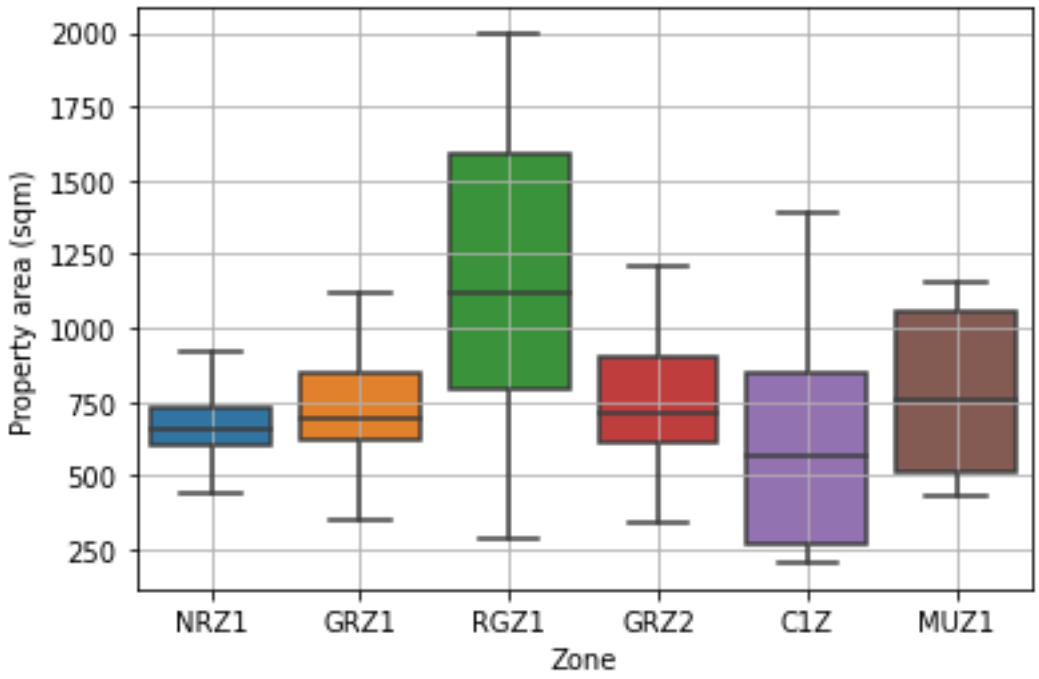
The following figures illustrates data related to the land areas and frontages with box and whisker plots.

The line in the middle of each box shows the median value.

The box covers the area between the 25th and 75th percentiles. This is the area in which the middle half of values lie.

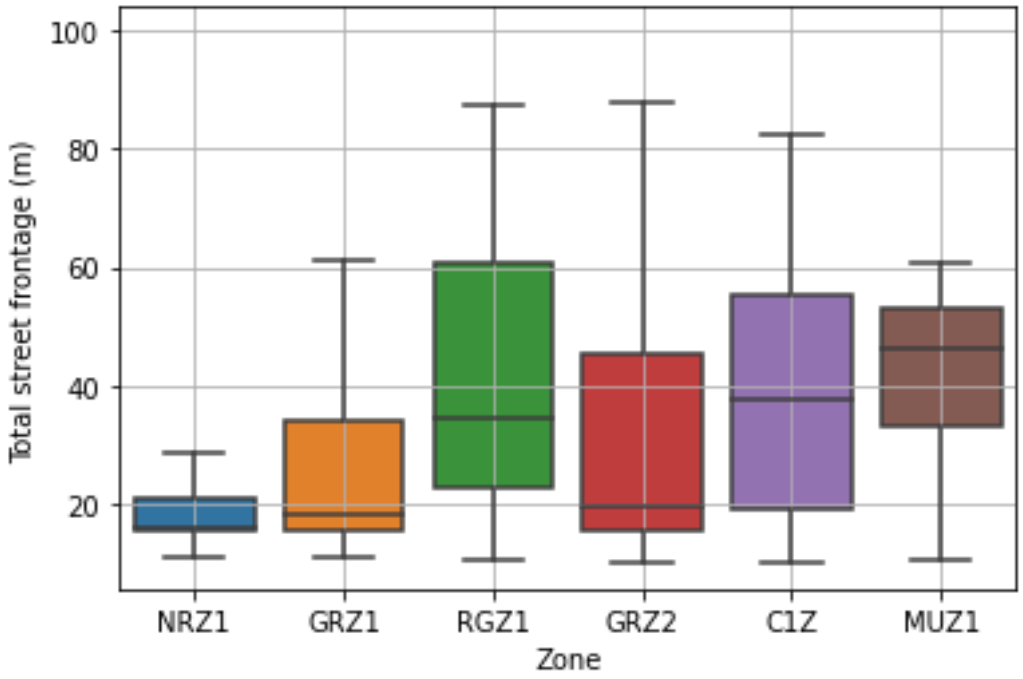
The whiskers show the range in which data outside the middle 50 per cent lies. The top and bottom of these whiskers show the most extreme values, excluding any distant outliers.

FIGURE 34: AREA OF DEVELOPMENT SITES BETWEEN 2016-2021



Source: SGS Economics and Planning, 2021, using Council Rates Data.

FIGURE 35: FRONTAGE OF DEVELOPMENT SITES BETWEEN 2016-2021

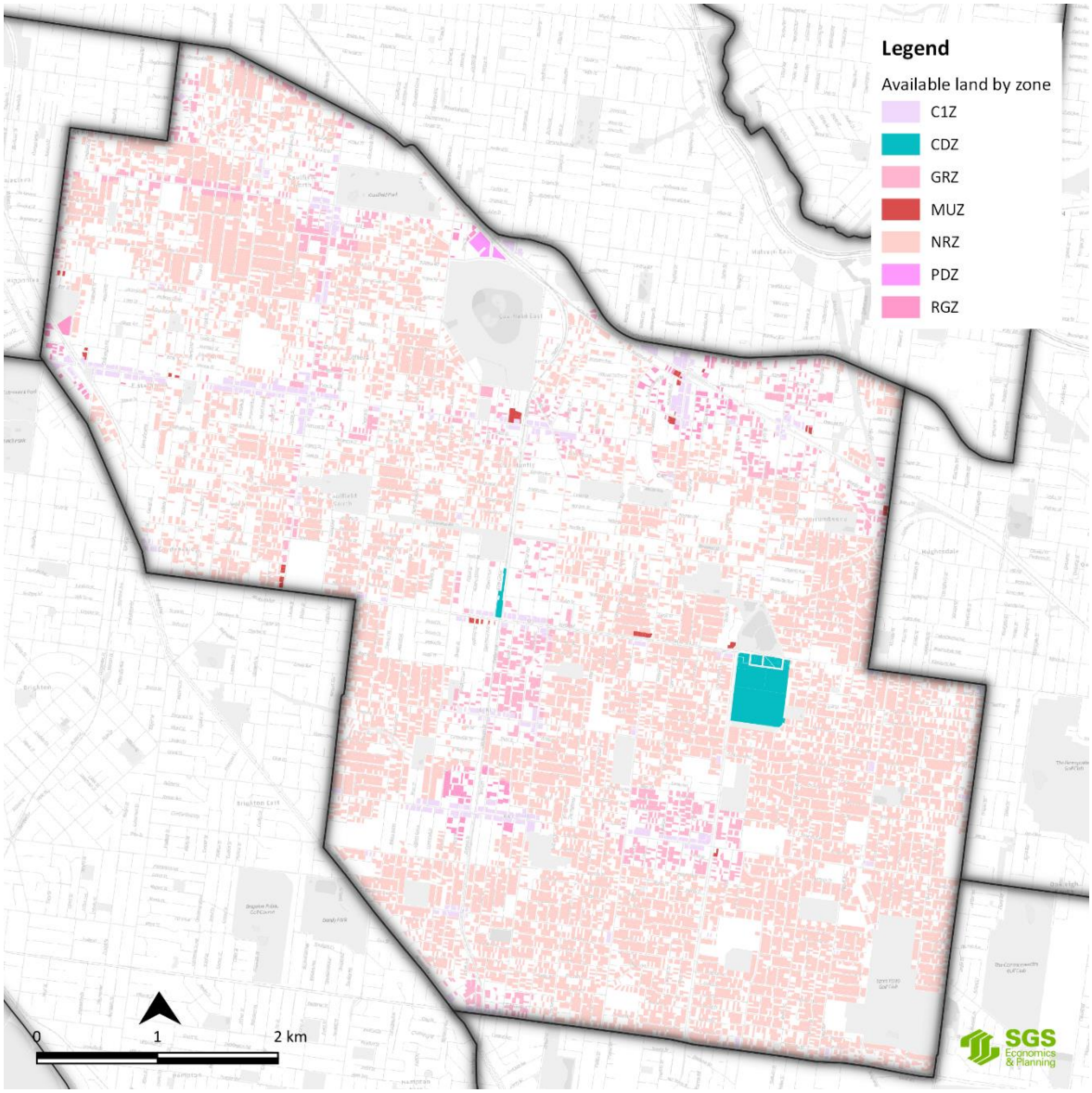


Source: SGS Economics and Planning, 2021, using Council Rates Data.

Available land results

Available land in Glen Eira (under Base Case 1) after exclusions have been applied are shown in the figure below.

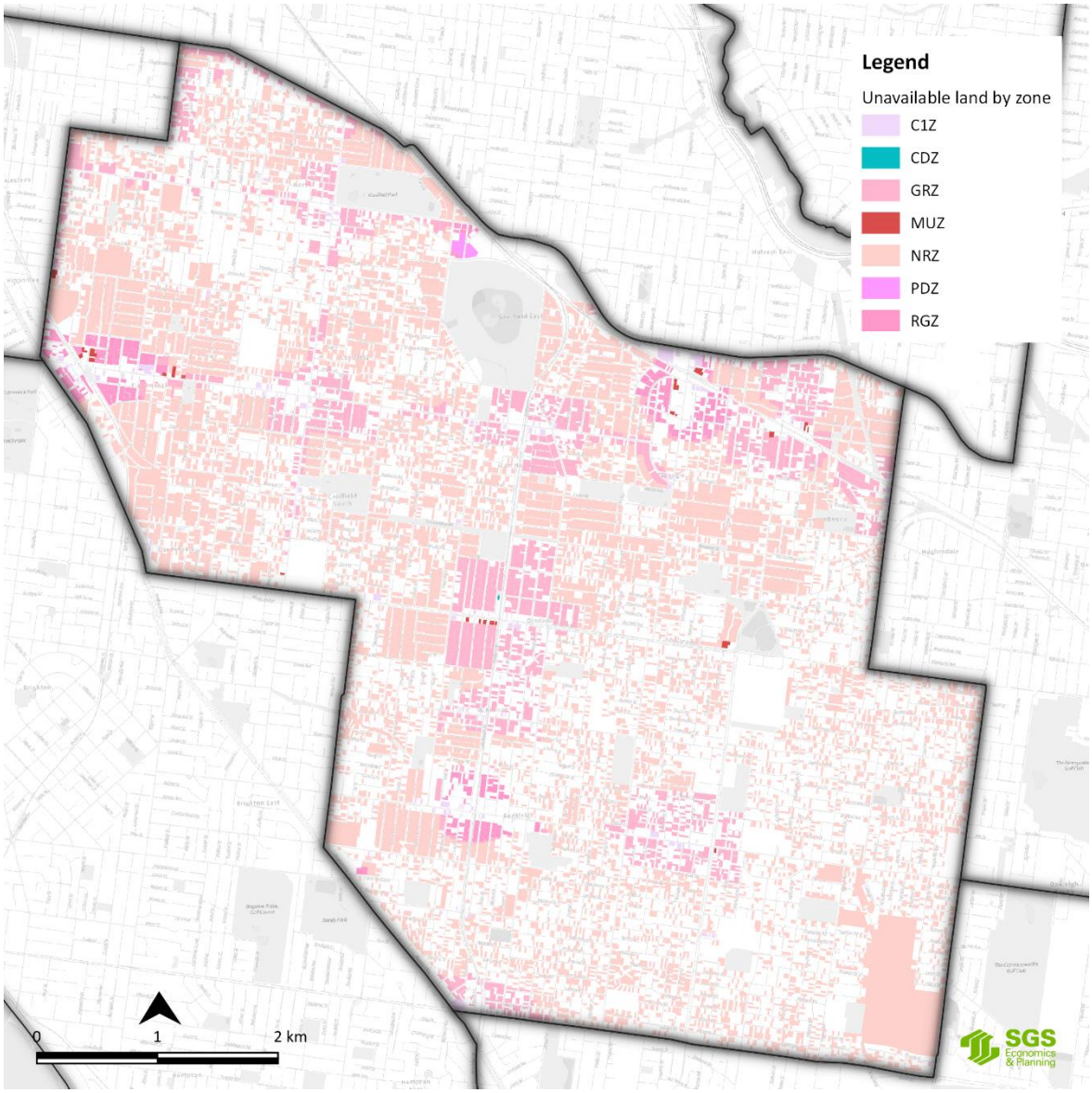
FIGURE 36: AVAILABLE LAND RESULTS (BASE CASE 1)



Source: SGS Economics and Planning, 2021.

The map below shows sites which are unavailable for development due to the development exclusions.

FIGURE 37: LAND UNAVILABLE FOR DEVELOPMENT (BASE CASE 1)



Source: SGS Economics and Planning, 2021.

4.4 Potential yield

Potential property yields have been assessed in most cases using likely development densities. These densities come from the following methods, discussed in more detail in the following sections:

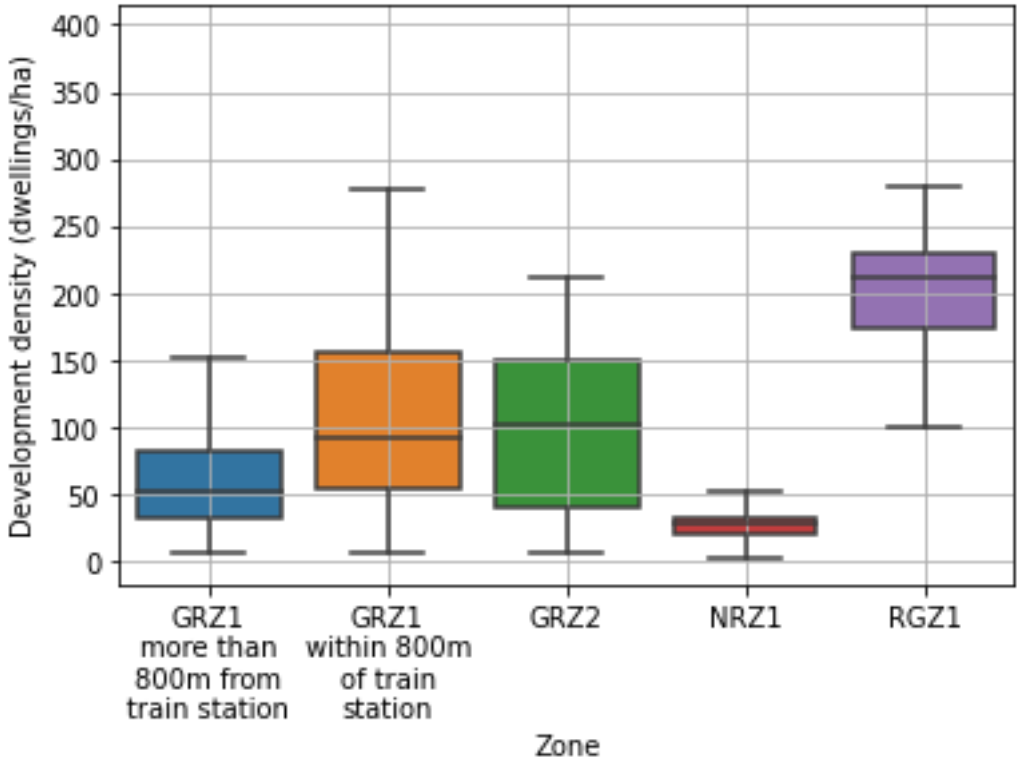
- Benchmarks of average density delivered by zone and location between 2016-2021, along with the assumption that densities delivered in the future will be market-driven and similar to those delivered recently
- On sites where specific height controls are available through DDOs, by calculating the likely density given a range of development parameters
- On major development sites and precincts where specific yields are expected, those yields are used as they are likely to be more reflective of the development outcome than calculations based on high level assumptions.

The existing number of dwellings on each site (based on Council rates data) is subtracted from the potential yield to give the net capacity on each available site.

Benchmark densities

The chart below shows the densities of developments completed between 2016-2021 in the NRZ, GRZ and RGZ, weighted by development area.

FIGURE 38: DENSITY RANGE OF DEVELOPMENT BETWEEN 2016-2021



Source: SGS Economics and Planning, 2021, using Council Rates Data.

The NRZ has a very narrow and relatively low-density band, because almost every profiled development was a conversion of a property with one separate house into a dual-occupancy with both dwellings facing the street. There was no variation in development yield.

The GRZ zones have relatively high average development densities, as most developments in this zone are three storey apartment buildings rather than townhouse or villa developments.

The GRZ1 has been split into less than and more than 800m of a train station given observed variation in densities across the LGA. Densities are noticeably higher near centres anchored by train stations than elsewhere (Caulfield, Caulfield North and Bentleigh East). The same variation is not present in the GRZ2 zone, which delivers mostly apartments and similar densities throughout the LGA.

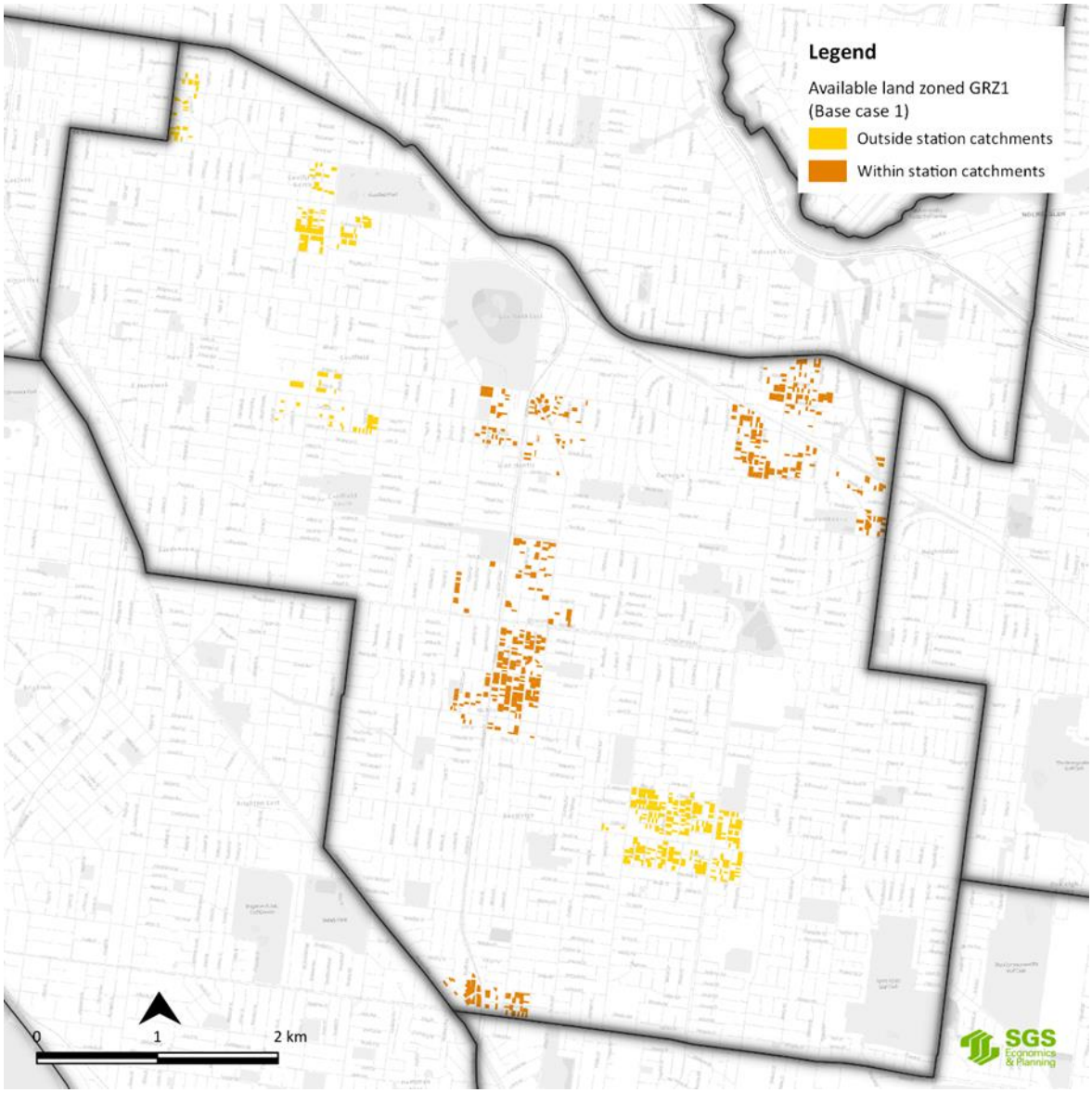
The RGZ delivers the highest densities, with most developments four storey apartment buildings.

Following from this analysis, the following densities have been adopted to calculate the potential yield in the GRZ1, GRZ2 and RGZ1 zone:

- GRZ1 more than 800m from a train station: 78 dwellings/ha. This is the average density achieved between 2011-2016
- GRZ1 within 800m of a train station, or GRZ2: 100 dwellings/ha. This is close to the average density achieved between 2011-2016.

It has been assumed, under the base case scenarios (modelling current policy settings), that all available sites in the NRZ1 zone would achieve a yield of two dwellings, consistent with observations between 2011-2016.

FIGURE 39: AVAILABLE LAND ZONED GRZ1 INSIDE AND OUTSIDE TRAIN STATION CATCHMENTS



Source: SGS Economics and Planning, 2021.

Development type

It has been assumed that the proportional split of resulting dwellings between medium and high-density development in each zone will remain similar in the future as between 2016-2021:

- Centres (C1Z and MUZ) and RGZ: 100% high density.
- GRZ1 within 800m of train stations: 70% high density, 30% medium density.
- GRZ2: 90% high density, 10% medium density.
- NRZ1: 100% medium density.

Together with adopting the average densities delivered between 2016-2021, this implies that the average densities of attached and apartment development, and the land split between them, in each zone will also remain the same.

TABLE 11: BREAKDOWN OF NUMBER OF DEVELOPMENT SITES BY DEVELOPMENT TYPE, 2016-2021

Development type	GRZ1 (within 800m catchment)	GRZ (outside 800m catchment)	GRZ2	NRZ1	RGZ1
Attached housing	62%	79%	40%	100%	18%
Apartments	38%	21%	60%	0%	82%

SGS Economics and Planning, 2021, using Council Rates Data.

TABLE 12: BREAKDOWN OF DEVELOPMENT YIELD DEVELOPMENT TYPE, 2016-2021

Development type	GRZ1 (within 800m catchment)	GRZ (outside 800m catchment)	GRZ2	NRZ1	RGZ1
Attached housing	30%	47%	10%	100%	4%
Apartments	70%	53%	90%	0%	96%

Source: SGS Economics and Planning, 2021, using Council Rates Data.

Built form model

A built form model has been used to calculate densities in centres where the number of storeys is set by planning controls or there is an expected number of storeys based on recent development, policy and the centre hierarchy.

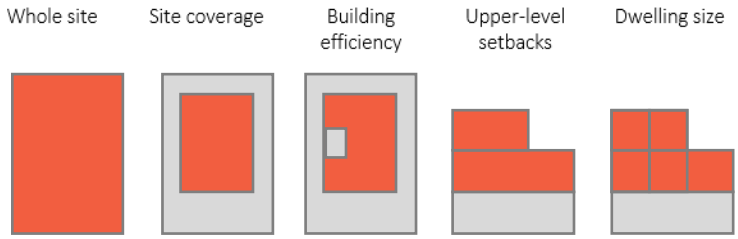
The built form model calculates an average density by applying several standardised assumptions around multi-level development to estimate the number of dwellings and so density on a hypothetical development site. It is depicted diagrammatically in the figure below (Figure 40).

The assumptions required are:

- Site coverage: How much of the land a building would likely cover.

- **Building efficiency**: How much of the building footprint is useable (ie. Not including floorspace used by lifts or stairwells in apartment buildings).
- **Building height**: The number of storeys developed.
- **Non-residential storeys**: The number of storeys which will not be used for residential purposes
- **Upper-level setbacks**: Setbacks of the upper levels, either above a podium or in line with other requirements like ResCode.
- **Dwelling size**: The average size of a dwelling within the development.

FIGURE 40: DIAGRAMMATIC REPRESENTATION OF BUILT FORM MODEL TO ESTIMATE DEVELOPMENT DENSITY



Source: SGS Economics and Planning, 2021.

The specific assumptions made in the built form models for this project are listed in the table below for centres and the residential growth zone.

TABLE 13: ASSUMPTIONS UNDERPINNING THE BUILT FORM MODEL

Assumption type	Centres	Residential growth zone	Notes/source
Site coverage	– 85%	– 65%	– Derived from desktop profiling of recent development
Building efficiency	– 80%	– 80%	– General estimate for residential apartment development
Building height	– The maximum height set in a structure plan or DDO will be achieved	– Four storeys, unless a lower height is specified in a structure plan or DDO	– It is expected that developers will seek to maximise yield, and so will build as high as possible
Non-residential storeys	– Ground floor and 50% of the first floor in major centres, and only the ground floor in other centres	– 30% of the ground floor is expected to be required for services	
Upper-level setbacks	– 2 storey podium if under a heritage overlay, otherwise 3 storey podium.	– The upper levels will be setback slightly depending on the height allowed	– Expectations of setbacks are based on recent developments and design requirements.

Assumption type	Centres	Residential growth zone	Notes/source
	– Above the podium, a 70% reduction in floorplate area – Above 15 storeys, a podium and tower typology with a 6 storey podium, and a tower with a floorplate 50% as large as the podium. – A transition in densities has been assumed from 10 – 15 storeys.		
Dwelling size	– 75 sqm per dwelling	– 75 sqm per dwelling	

Source: SGS Economics and Planning, 2021.

Base case scenarios

Two base case scenarios have been considered:

- **Base Case 1: Current policy settings** including temporary (referred to in policy as "interim controls") built form controls currently in place at the Carnegie, Elsternwick and Bentleigh Major Activity Centres, and:
  - Estimates relating to the future Caulfield Village Precinct Structure Plan.
  - Height controls based on the draft *Neighbourhood Activity Centre Built Form Frameworks* for Caulfield Park, Caulfield South and Bentleigh East Neighbourhood Activity Centres.
  - Assumed five-storey controls on the Commercial 1 Zone (C1Z) land at the Ormond, McKinnon and Murrumbeena Neighbourhood Centres.
- **Base Case 2: Current policy scenario without temporary built form controls** on the residentially zoned land at the Carnegie, Elsternwick and Bentleigh Major Activity Centres. This was done as the temporary controls currently limit the heights of some Residential Growth Zone (RGZ) land to two- and three-storeys, which is a feature that is not anticipated to be carried through in the revised structure plans and subsequent planning scheme amendments.

  This scenario also slightly adjusts the heights in the commercial areas of these centres to be more in line with what would be likely to be achieved in the absence of specific controls.

  Apart from these changes (removing temporary built form controls and adjustments to heights), base case 2 uses the same assumptions as base case 1.

Proposed housing framework

Council has provided SGS with spatial layers showing proposed changes to the housing framework in Glen Eira. The capacity scenario under these changes has the same assumptions as base case 2, but with the following key modifications:

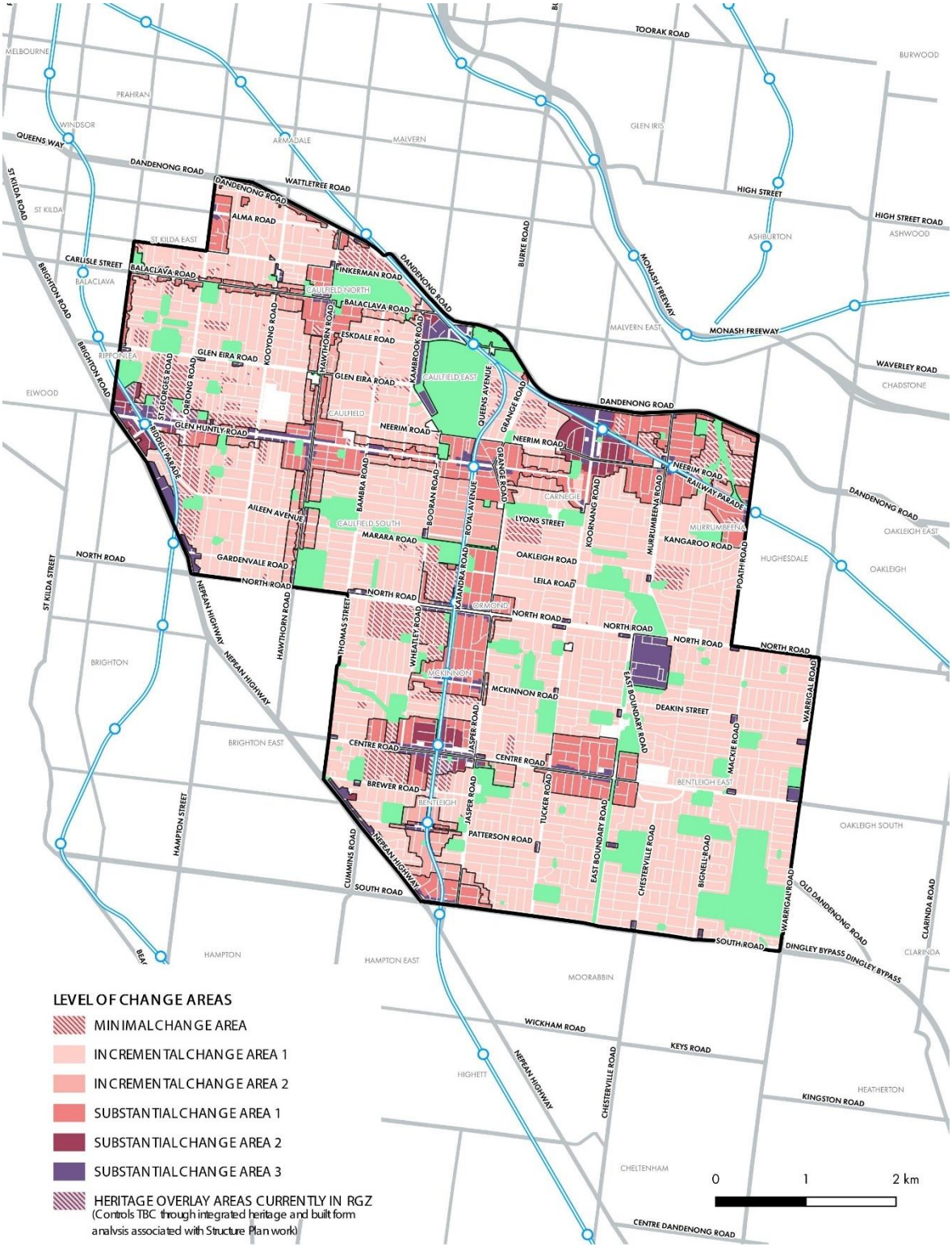
- Remove the Garden Area Requirement from all General Residential Zone (GRZ) land.
- Identify well-serviced Neighbourhood Residential Zone (NRZ) areas where additional unit or townhouse developments (three or more units, up to two-storeys) could reasonably be supported in terms of strategic location and neighbourhood character. The scenario tests the effects of introducing a new NRZ schedule for these areas, with fewer variations to Clause 54 and 55 (known as ResCode or the residential design standards) compared to the current NRZ planning controls.
- Identification of additional sites and development around the Caulfield Racecourse and surrounding precincts.

In more detail, the proposed framework splits Glen Eira into the following designations:

- Minimal change area: Neighbourhood residential zones under the neighbourhood character overlay or heritage overlay, with little change anticipated. These areas are already excluded from the capacity assessment of base case 1 and 2.
- Incremental change area 1: A similar zone to the current NRZ1.
- Incremental change area 2: A new NRZ schedule 2 with less stringent design requirements (generally ResCode and zone defaults), with the aim of facilitating development of 3 or more units or a property.
- Substantial change area 1: The current general residential zones, with the schedule for GRZ2 adjusted to remove or adjust the rear setback requirement, supporting additional development on sites. The garden area requirement will also be removed from land zoned GRZ to improve developability.
- Substantial change area 2: The current RGZ.
- Substantial change area 3: Centres and other locations subject to structure plans, precinct structure plans, comprehensive development plans, built form frameworks.

The proposed framework is shown overleaf.

FIGURE 41: PROPOSED HOUSING FRAMEWORK



Source: Glen Eira City Council 2021

Modelling assumptions

The exclusion assumptions were unchanged when assessing capacity under this framework. The base case yield assumptions for the NRZ1, GRZ and RGZ and centres were applied to the incremental change area 1 and substantial change areas 1, 2 and 3 respectively.

The yield for the incremental change area 2 was based on design work by Tract showing that it would be possible to develop 3 units on a property slightly larger than 600sqm under the proposed controls, but not under the current controls. On this basis, it was assumed that one unit could be developed per 200sqm of property area under the new zone, equating to a density of 50 dwellings/ha, with the resulting yield rounded down on each property as minimal property amalgamation is anticipated. This approach means that properties of 600sqm – 800sqm in area, which are common in the proposed incremental change area 2, would be able to be developed to yield 3 units.

4.5 Housing capacity results

Net housing capacity results for all scenarios are shown in the following table. There is a net capacity for 48,712 additional dwellings in Glen Eira under current planning controls, increasing to 50,363 if some of the interim controls in activity centres were removed and to 55,394 under the proposed framework.

Most of the capacity in all cases is for apartments. This is distributed across major activity centres, neighbourhood activity centres, major precincts, the RGZ and GRZ.

While there is substantial capacity for both apartments and attached dwellings in all scenarios, almost all of the attached dwelling capacity (particularly in base case 1 and base case 2) is in the NRZ. This reflects both the amount of land in the NRZ, as well as the high proportion of apartments in development in the GRZ.

TABLE 14: NET HOUSING CAPACITY RESULTS FOR ALL SCENARIOS

Scenario	Dwelling type	Major activity centres	N'hood and local centres	Major precincts	RGZ & Sub. Ch. Area 2	GRZ & Sub. Ch. Area 1	NRZ & Incr. Ch. Area	Total
Base case 1	Attached			300		2,175	16,214	18,689
	Apartment	6,180	10,017	4,008	2,690	7,128		30,024
	Total	*6,180*	*10,017*	*4,308*	*2,690*	*9,303*	*16,214*	*48,712*
Base case 2	Attached			300		2,190	16,214	18,704
	Apartment	7,207	10,030	4,008	3,120	7,293		31,658
	Total	*7,207*	*10,030*	*4,308*	*3,120*	*9,484*	*16,214*	*50,363*
Proposed framework	Attached			300		3,650	16,874	20,824
	Apartment	7,207	10,030	6,386	3,339	7,608		34,570
	Total	*7,207*	*10,030*	*6,686*	*3,339*	*11,258*	*16,874*	*55,394*

Source: SGS Economics and Planning, 2021.

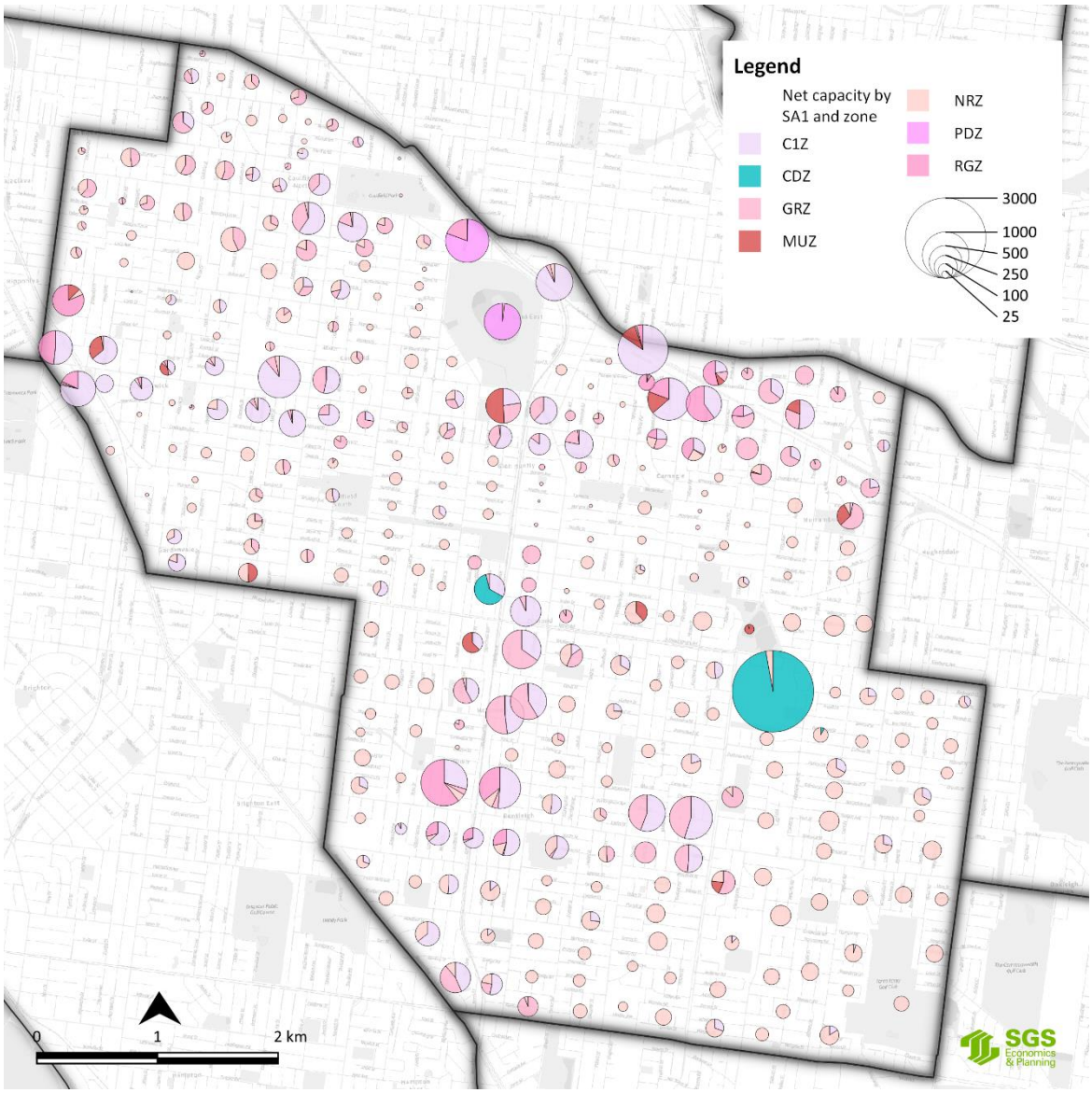
Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

Base case 1

The net yield aggregated into SA1s across the LGA, and split by land zone, is shown below, and further explored in Table 18, in Section 5 .

Spatially, much of the development density is clustered within and around centres in the GRZ, NRZ, C1Z and MUZ zones. There is capacity across the LGA in the NRZ, but the size of this capacity in any one area is relatively modest.

FIGURE 42: BASE CASE 1 HOUSING CAPACITY RESULTS



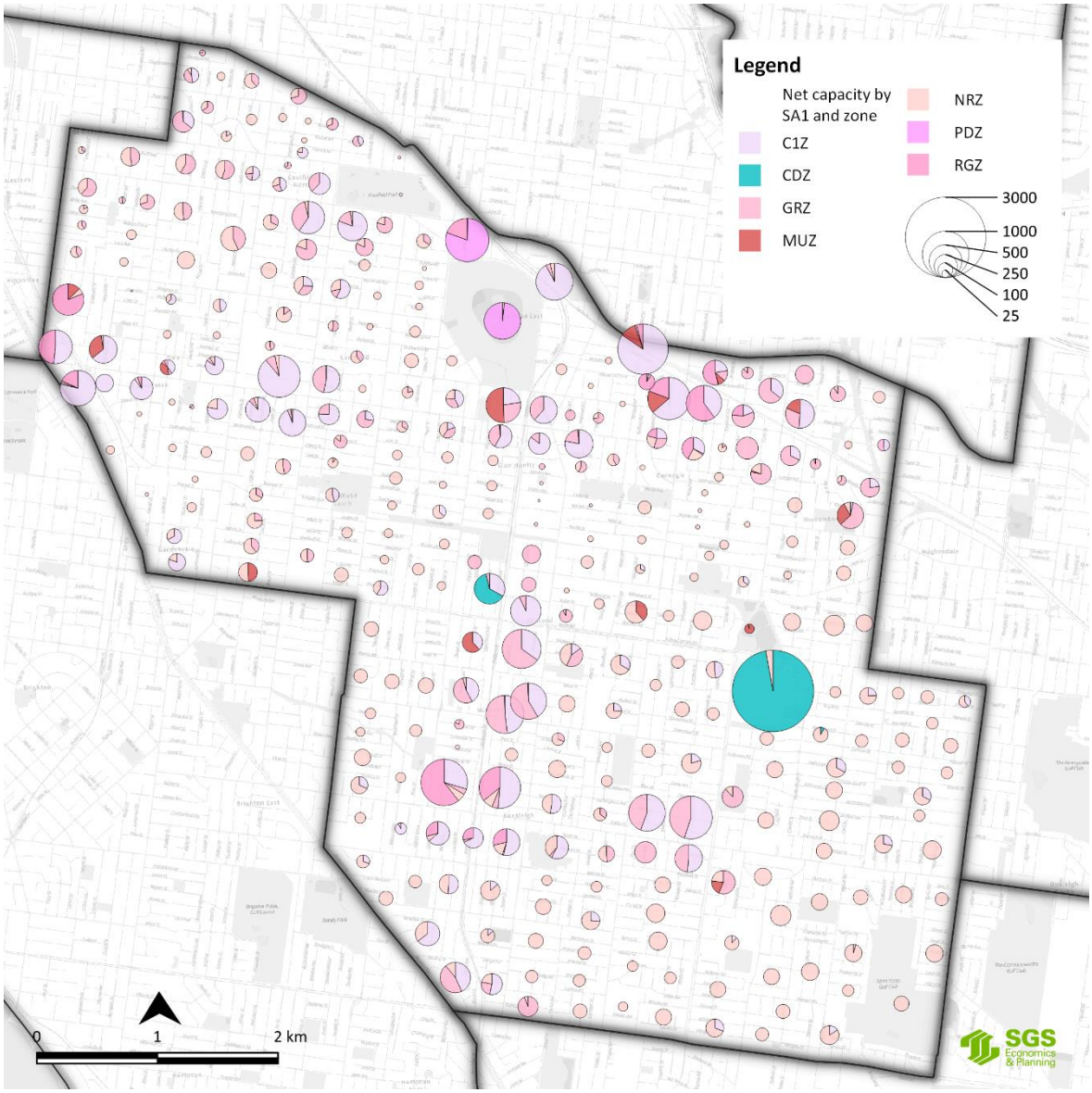
Source: SGS Economics and Planning, 2021.

Base case 2

The net yield in each zone and centre is shown on the map below, and in Table 19 at Section 5.

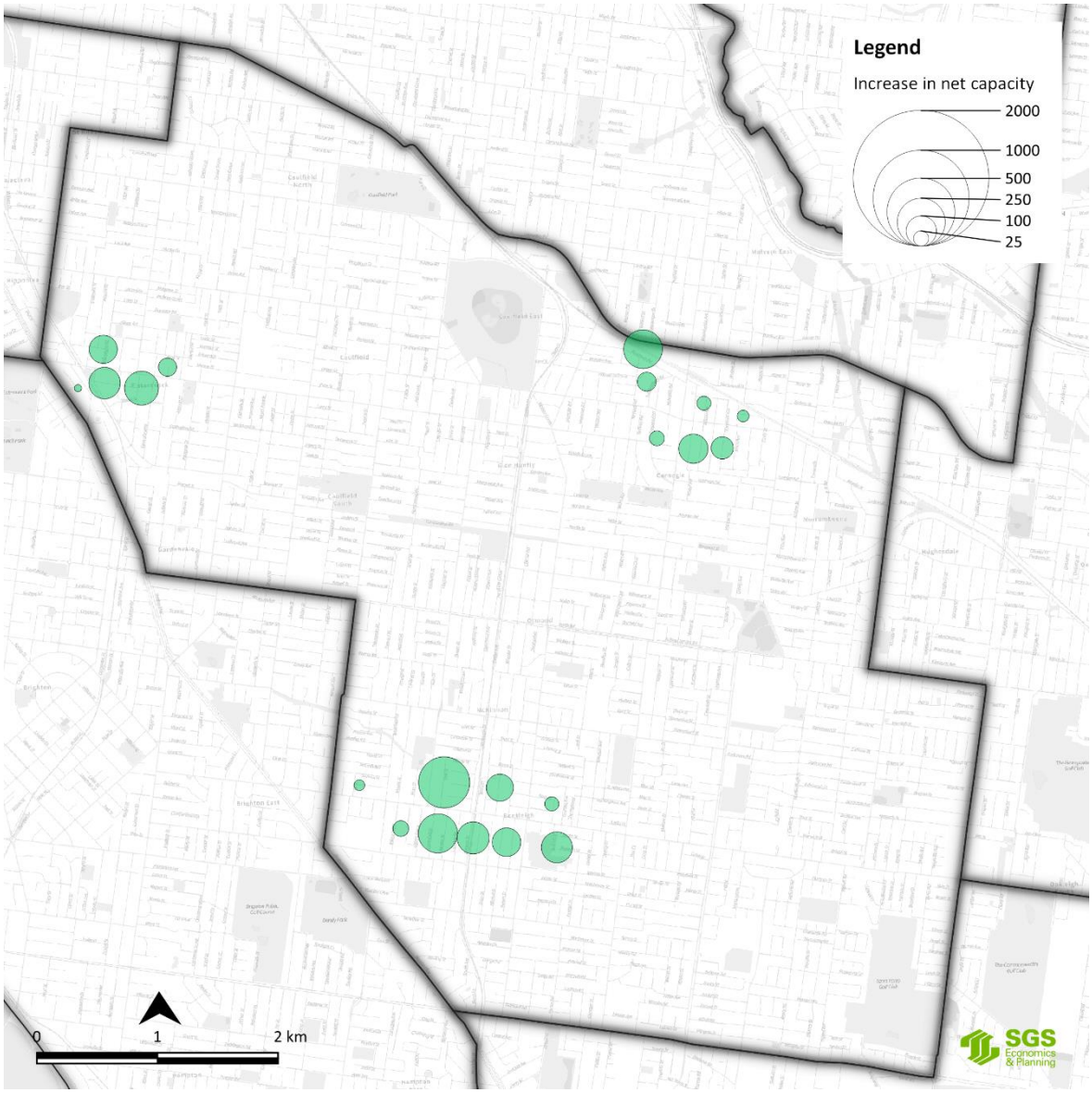
Overall, there is capacity across the LGA for a total yield of 68,611 dwellings, and capacity for a net yield of 50,363 dwellings. Base Case 2 creates additional capacity in the major activity centres, and in the land surrounding the Residential Growth Zone (RGZ) and General Residential Zone, schedule 2 (GRZ2).

FIGURE 43: BASE CASE 2 HOUSING CAPACITY RESULTS



Source: SGS Economics and Planning, 2021.

FIGURE 44: ADDITIONAL NET HOUSING CAPACITY IN BASE CASE 2 COMPARED TO BASE CASE 1



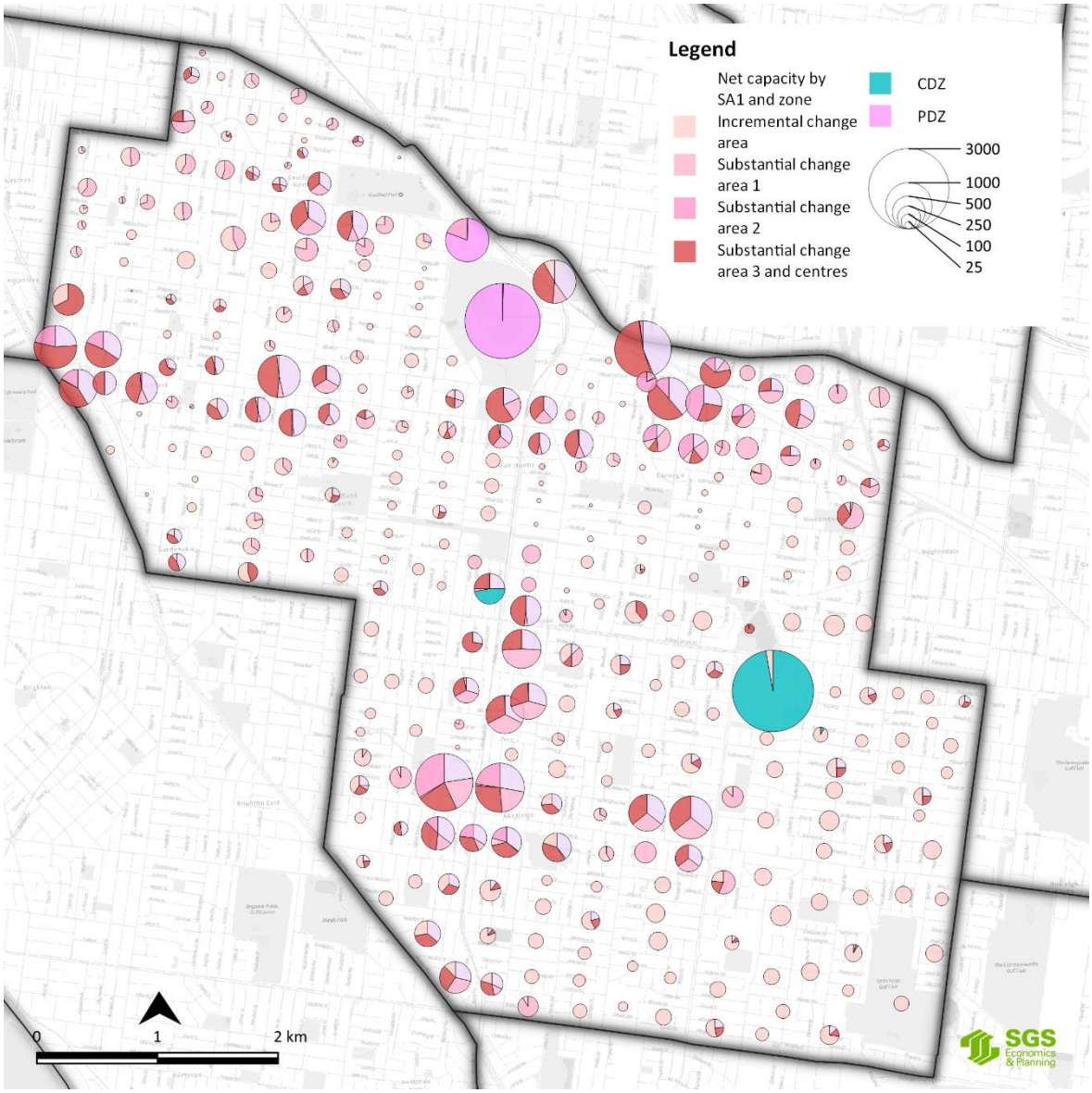
Source: SGS Economics and Planning, 2021.

Project case

The net yield in each zone and centre is shown on the map below, and in Table 19 at Section 5.

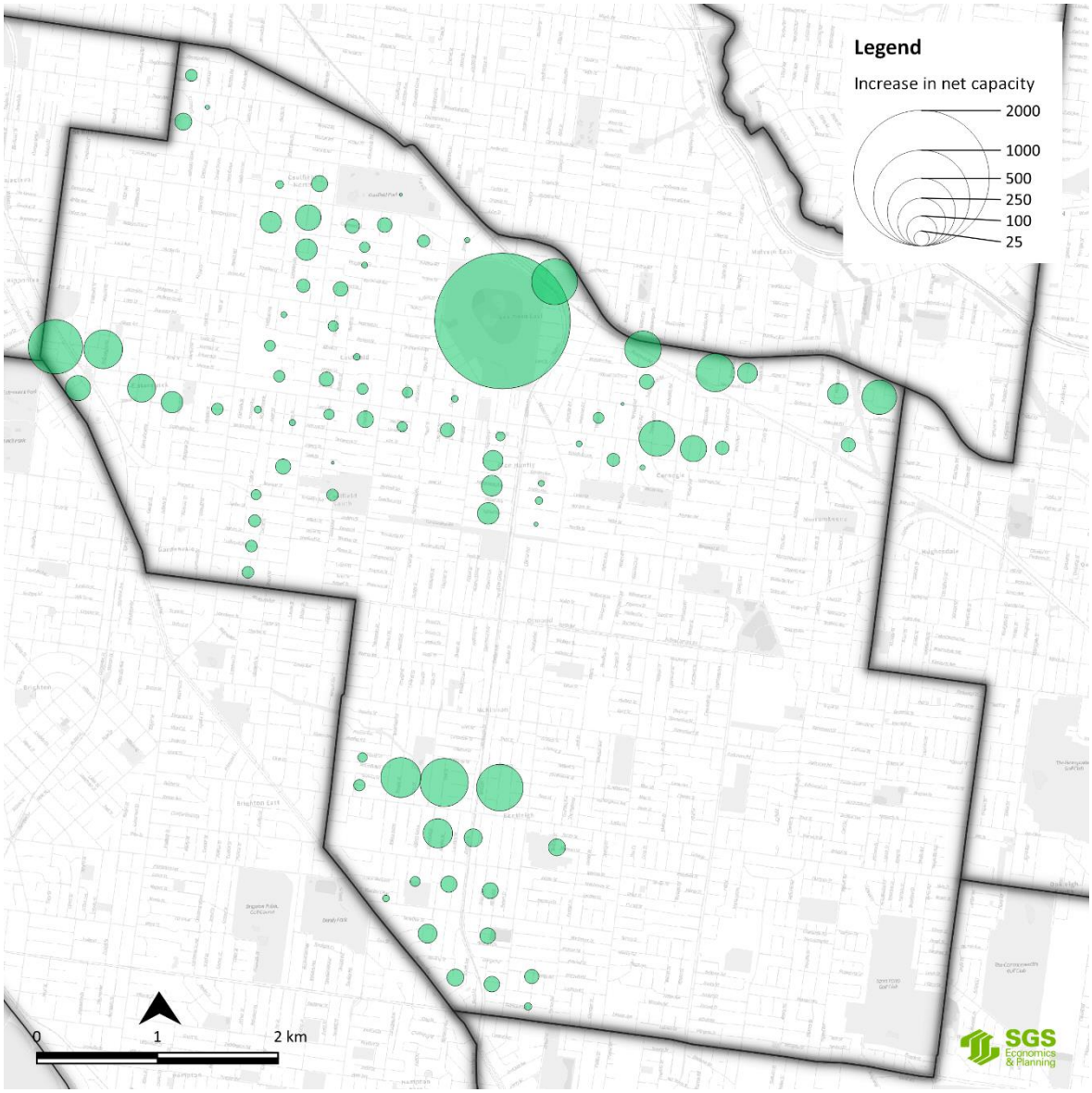
Overall, there is capacity across the LGA for a total yield of 73,668 dwellings, and capacity for a net yield of 55,394 dwellings. Base Case 2 creates additional capacity in the major activity centres, and in the land surrounding the Residential Growth Zone (RGZ) and General Residential Zone, schedule 2 (GRZ2).

FIGURE 45: BASE CASE 2 HOUSING CAPACITY RESULTS



Source: SGS Economics and Planning, 2021.

FIGURE 46: ADDITIONAL NET HOUSING CAPACITY UNDER THE PROPOSED FRAMEWORK COMPARED TO BASE CASE 2



Source: SGS Economics and Planning, 2021.

Detailed results tables

The following pages contain and more detailed tables showing the breakdown of available land, capacity and net capacity by location and zone for each scenario.

TABLE 15: BASE CASE 1 CAPACITY RESULTS

Zone and location		Available land (ha)	Attached		Apartments		Total	
			Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
Major activity centres	Bentleigh	7.0			1,489	1,476	1,489	1,476
	Carnegie	0.8			2,258	2,233	2,258	2,233
	Caulfield PSP - Darby Road Precinct	5.2			585	585	585	585
	Elsternwick	1.6			1,901	1,886	1,901	1,886
	Subtotal	*14.7*			*6,233*	*6,180*	*6,233*	*6,180*
Neighbourhood activity centres		*26.8*			*7,730*	*7,626*	7,730	*7,626*
Local centres	Gardenvale, Patterson and Kooyong Rd x Glen Huntly Rd	3.8			996	965	996	965
	Other	9.7			1,513	1,427	1,513	1,427
	Subtotal	*13.5*			*2,508*	*2,391*	*2,508*	*2,391*
Major sites and precincts	East Village	23.7	300	300	2,700	2695	3,000	2,995
	Caulfield PSP - Caulfield Village	2.6			1,313	1313	1,313	1,313
RGZ1		14.8			2,963	2,690	2,963	2,690
GRZ1	Within catchment	47.3	1,692	1,307	3,984	3,530	5,677	4,837
	Outside catchment	34.7	824	612	946	824	1,771	1,437

Zone and location		Available land (ha)	Attached		Apartments		Total	
			Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
	Subtotal	*82.0*	*2,517*	*1,919*	*4,931*	*4,355*	*7,448*	*6,274*
GRZ2		34.6	333	256	3,132	2773	3,465	3,030
NRZ1		1,083	32,276	16,214			32,276	16,214
Total		**1,296**	**35,426**	**18,689**	**31,510**	**30,024**	**66,935**	**48,712**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

TABLE 16: BASE CASE 2 CAPACITY RESULTS

Zone and location		Available land (ha)	Attached		Apartments		Total	
			Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
Major activity centres	Bentleigh	7.0			2,027	2,014	2,027	2,014
	Carnegie	0.8			2,399	2,375	2,399	2,375
	Caulfield PSP - Darby Road Precinct	5.2			585	585	585	585
	Elsternwick	1.6			2,247	2,233	2,247	2,233
	Subtotal	*14.6*			*7,258*	*7,207*	*7,258*	*7,207*
Neighbourhood activity centres		26.8			7,730	7,626	7,730	7,626
Local centres	Gardenvale, Patterson and Kooyong Rd x Glen Huntly Rd	3.8			996	965	996	965
	Other	9.7			1,526	1,439	1,526	1,439
	Subtotal	*13.5*			*2,521*	*2,404*	*2,521*	*2,404*
Major sites and precincts	East Village	23.7	300	300	2,700	2695	3,000	2,995
	Caulfield PSP - Caulfield Village	2.6			1,313	1313	1,313	1,313
RGZ1		14.8			3,393	3,120	3,393	3,120
GRZ1	Within catchment	47.3	1,692	1,307	3,984	3,530	5,677	4,837
	Outside catchment	34.7	824	612	946	824	1,771	1,437

Zone and location		Available land (ha)	Attached		Apartments		Total	
			Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
	Subtotal	*82.0*	*2,517*	*1,919*	*4,931*	*4,355*	*7,448*	*6,274*
GRZ2		36.7	353	271	3,319	2939	3,672	3,210
NRZ1		1,083	32,276	16,214			32,276	16,214
Total		**1,298**	**35,446**	**18,704**	**33,165**	**31,658**	**68,611**	**50,363**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

TABLE 17: PROPOSED FRAMEWORK CAPACITY RESULTS

Zone and location		Available land (ha)	Attached		Apartments		Total	
			Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
Major activity centres	Bentleigh	7.0			2,027	2,014	2,027	2,014
	Carnegie	0.8			2,399	2,375	2,399	2,375
	Caulfield PSP - Darby Road Precinct	5.2			585	585	585	585
	Elsternwick	1.6			2,247	2,233	2,247	2,233
	Subtotal	*14.6*			*7,258*	*7,207*	*7,258*	*7,207*
Neighbourhood activity centres		26.8			7,730	7,626	7,730	7,626
Local centres	Gardenvale, Patterson and Kooyong Rd x Glen Huntly Rd	3.8			996	965	996	965
	Other	9.7			1,526	1,439	1,526	1,439
	Subtotal	*13.5*			*2,521*	*2,404*	*2,521*	*2,404*
Major sites and precincts	East Village	23.7	300	300	2,700	2695	3,000	2,995
	Caulfield PSP - Caulfield Village and additional Caulfield racecourse sites	10.9			3,313	3,313	3,313	3,313
	Caulfield Dudley Street Precinct	0.8			390	378	390	378

Zone and location	Available land (ha)	Attached		Apartments		Total	
		Capacity	Net capacity	Capacity	Net capacity	Capacity	Net capacity
Substantial change area 2 (RGZ with updated schedules)	15.9			3,634	3,339	3,634	3,339
Substantial change area 1 (GRZ 1 or 2 with updated schedules)	136.7	4,638	3,650	8,506	7,608	13,144	11,258
Incremental change area 2 (Proposed new NRZ2 area)	71.1	3,016	1,975			3,016	1,975
Incremental change area 1 (NRZ1 with new schedules)	993.7	29,662	14,899			29,662	14,889
Total	**1,308**	**37,616**	**20,824**	**36,053**	**34,570**	**73,668**	**55,394**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

5. Capacity take-up and gap

5.1 Take up analysis method

Potential take-up of capacity between 2021-2036 has been assessed assuming that development rates in the future in each area will be the same as recent rates between 2016-2021 (noting that these rates are historically high), and that development in each area will continue until capacity is exhausted. In this sense, development is assumed to be constrained by both the development market, and by overall capacity. Base Case 2 has been used for this analysis.

In more detail, the following method was used:

- Calculate average number of dwellings built per year in each suburb and zone for the GRZ, NRZ and RGZ zones, or suburb and centre type for the C1Z and MUZ zones.
- Group together small suburb/zone intersections where there is limited capacity or development data.
- Assume that in each profiled area, the future development rate in dwellings developed/year will be the same in the future as it has been between 2016-2021, noting that 2016-2021 has seen higher rates of development than have observed since 1996.
- Manually adjust the rate of development in locations where it is expected to increase in the future as the development market shifts or as a result of strategic planning. In this case, Bentleigh had low development rates recently and so the rate was increased, and it was assumed that major sites and precincts would be completely delivered by 2036.
- Cap total development in each profiled area at the total development capacity.

Proposed housing framework

To model how take-up will change in the proposed housing framework, the method and development rates used for the base cases were treated as a starting point, but modified with the following assumptions:

- The new incremental change area 2 will have a similar take up rate per year (as a % of total housing capacity in 2016) as the general residential zone on average.

  This assumption is intended to reflect that delivery of 3 or more dwellings on a lot under the new zone resembles development patterns in the current general residential zone much more than those for the current neighbourhood residential zone, which is in effect restricted to dual occupancy developments.
- The take-up rate in the substantial change area 1 (the former general residential zone) will increase proportionally with the proposed increase in capacity in this area.

  This reflects an assumption that the current extent of the general residential zone limits the take-up rate, and so applying this zone to more land will provide a greater supply of potential sites to developers and increase the development rate.

- A further increase in development rate in areas formerly zoned GRZ2 of 50% will occur reflecting the reduction or removal of rear setback requirements to facilitate development.

  Analysis of historical development rates showed that the percentage of total capacity developed per year in areas zoned GRZ1 (without the additional rear setback requirements) was on average around twice as large as that in those zoned GRZ2. Although locational and market factors may underpin some of this difference, the size of the difference supports the assumption that development rates will increase if rear setback requirements are reduced.

In addition, some suburb-specific take-up rates have been adjusted to reflect the standardisation of the new substantial change area 1, and the proportional breakdown of attached housing and apartment development in substantial change area 1 has been adjusted to reflect average across historic development breakdowns from the former GRZ1 and GRZ2.

5.2 Results

The results are shown in the tables on the following pages. Overall, the net take-up estimated over 15 years is higher than the net demand estimated between 2021-2036 (12,234), indicating that there is enough capacity to accommodate demand as a whole given recent development trends.

However, when capacity and take-up is broken down by spatially and development type, a different picture emerges. When considering different zones:

- The percentage take-ups in major centres are relatively high and would indicate a high degree of change over a 15-year period (52 per cent overall in base case 1, between 46 – 61 per cent for different centres). However, this level of change may be possible in a centre where high density development is occurring. Master-planning of these centres to facilitate high density development will be helpful in facilitating this level of development.
- Other centres have a lower level of take-up expected.
- The NRZ zone has a relatively low level of overall take-up expected, which is likely to be achievable.
- The GRZ1 and GRZ2 levels of take-up are moderate and may be achievable but would significantly change the character in these zones.

The GRZ1 is expected to have a very high level of take-up, indicating whole changes to housing character under this zone, although noting this is the policy intent of the zone.

TABLE 18: BASE CASE 1 TAKE-UP ANALYSIS RESULTS

Zone and location		Attached		Apartments		Total		Total capacity	% of capacity taken up
		Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
Local centres	Gardenvale, Patterson and Kooyong Rd x Glen Huntly Rd			252	249	252	249	996	25%
	Other			126	119	126	119	1,513	8%
	Subtotal			*378*	*368*	*378*	*368*	*2,508*	*15%*
Neighbourhood activity centres				1,783	1,769	1,783	1,769	7,730	23%
Major activity centres	Bentleigh			690	684	690	684	1,489	46%
	Carnegie			1,107	1,095	1,107	1,095	2,258	49%
	Caulfield PSP - Darby Road Precinct			287	287	287	287	585	49%
	Elsternwick			1,160	1,150	1,160	1,150	1,901	61%
	Subtotal			*3,244*	*3,215*	*3,244*	*3,215*	*6,233*	*52%*
Major sites and precincts	East Village	300	300	2,700	2,695	3,000	2,995	3,000	100%
	Caulfield PSP - Caulfield Village			1,313	1,313	1,313	1,313	1,313	100%
RGZ1				2,667	2,417	2,667	2,417	2,963	90%
GRZ1	Within catchment	809	627	1,904	1,690	2,713	2,316	5,677	48%
	Outside catchment	500	371	574	500	1,074	871	1,771	61%

Zone and location		Attached		Apartments		Total		Total capacity	% of capacity taken up
		Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
	Subtotal	*1,309*	*998*	*2,478*	*2,190*	3,786	3,188	*7,448*	*51%*
GRZ2		137	105	1,269	1,122	1,406	1,227	3,465	41%
NRZ1		5,619	2,826			5,619	2,826	32,276	17%
Total		**7,364**	**4,229**	**15,832**	**15,089**	**23,196**	**19,319**	**66,935**	**35%**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

TABLE 19: BASE CASE 2 TAKE-UP ANALYSIS RESULTS

Zone and location		Attached		Apartments		Total		Total capacity	% of capacity taken up
		Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
Local centres	Gardenvale, Patterson, and Kooyong Rd x Glen Huntly Rd			252	249	252	249	996	25%
	Other			126	119	126	119	1,526	8%
	Subtotal			*378*	*368*	378	368	*2,521*	*15%*
Neighbourhood activity centres				1,783	1,769	1,783	1,769	7,730	23%
Major activity centres	Bentleigh			690	686	690	686	2,027	34%
	Carnegie			1,107	1,096	1,107	1,096	2,399	46%
	Caulfield PSP - Darby Road Precinct			270	270	270	270	585	46%
	Elsternwick			1,160	1,152	1,160	1,152	2,247	52%
	Subtotal			*3,227*	*3,204*	3,227	3,204	*7,258*	*44%*
Major sites and precincts	East Village	300	300	2,700	2,695	3,000	2,995	3,000	100%
	Caulfield PSP - Caulfield Village			1,313	1,313	1,313	1,313	1,313	100%
RGZ1				3,216	2,847	3,216	2,847	3,393	95%
GRZ1	Within catchment	809	627	1,904	1,690	2,713	2,316	5,677	48%
	Outside catchment	500	371	574	500	1,074	871	1,771	61%

Zone and location		Attached		Apartments		Total		Total capacity	% of capacity taken up
		Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
	Subtotal	*1,309*	*998*	*2,478*	*2,190*	3,786	3,188	*7,448*	*51%*
GRZ2		143	110	1,326	1,172	1,469	1,282	3,672	40%
NRZ1		5,619	2,826			5,619	2,826	32,276	17%
Total		**7,370**	**4,234**	**16,421**	**15,558**	**23,791**	**19,792**	**68,611**	**35%**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

TABLE 20: PROPOSED HOUSING FRAMEWORK TAKE-UP ANALYSIS RESULTS

Zone and location		Attached		Apartments		Total		Total capacity	% of capacity taken up
		Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
Local centres	Gardenvale, Patterson, and Kooyong Rd x Glen Huntly Rd			252	249	252	249	996	25%
	Other			126	119	126	119	1,526	8%
	Subtotal			*378*	*368*	378	368	*2,521*	*15%*
Neighbourhood activity centres				1,783	1,769	1,783	1,769	7,730	23%
Major activity centres	Bentleigh			690	686	690	686	2,027	34%
	Carnegie			1,107	1,096	1,107	1,096	2,399	46%
	Caulfield PSP - Darby Road Precinct			270	270	270	270	585	46%
	Elsternwick			1,413	1,405	1,413	1,405	2,247	63%
	Subtotal			*3,480*	*3,457*	3,480	3,457	*7,258*	*48%*
Major sites and precincts	East Village	300	300	2,700	2,695	3,000	2,995	3,000	100%
	Caulfield Dudley St Precinct			390	390	390	390	390	100%
	Caulfield PSP - Caulfield Village			3,313	3,313	3,313	3,313	3,313	100%

Zone and location	Attached		Apartments		Total		Total capacity	% of capacity taken up
	Take-up	Net take-up	Take-up	Net take-up	Take-up	Net take-up		
Substantial change area 2 (RGZ with updated schedules)			3,209	2,945	3,209	2,945	3,634	88%
Substantial change area 1 (GRZ 1 or 2 with updated schedules)	2,881	2,263	5,094	4,552	7,974	6,815	13,144	61%
Incremental change area 2 (Proposed new NRZ2 area)	959	631			959	631	3,016	32%
Incremental change area 1 (NRZ1 with new schedules)	5,387	2,709			5,387	2,709	29,662	18%
Total	**9,527**	**5,903**	**20,346**	**19,489**	**29,873**	**25,392**	**73,668**	**41%**

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

5.3 Take-up alignment with demand

The following table compares the modelled number of additional dwellings needed to the total net capacity. Separate houses are not shown because demand for separate houses is not expected to increase, and because this table shows the *net* capacity (i.e. the capacity for additional dwellings once the separate houses that will be lost have been subtracted).

As outlined in Section 3.1, increasing medium density housing demand from the modelling results has been interpreted as demand for additional attached dwellings, while increasing high density housing demand has been interpreted as demand for additional flats and apartments.

TABLE 21: MODELLED DEMAND COMPARED TO NET CAPACITY RESULTS

Dwelling type	Modelled additional demand	Net capacity		
		Base case 1	Base case 2	Proposed framework
Separate houses	-2,672	N/A		
Attached dwellings	8,447	18,689	18,704	20,824
Flats and apartments & other dwellings	6,459	30,024	31,658	34,570
Total	**12,234**	**48,712**	**50,363**	**55,394**

Source: SGS 2021

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

This comparison shows that the overall net capacity is substantially higher than the modelled demand for additional dwellings under each scenario and for both attached dwellings and flats and apartments. This shows that there is enough *theoretical* capacity for development to occur in line with demand. However, as noted earlier in this report, this does not mean that this capacity is likely to be developed, an issue which is examined further through the take-up analysis.

The following table compares modelled take-up to demand. It shows the modelled change in demand for each dwelling type as well as the modelled change in number of dwellings (note that absolute changes in demand rather than net figures are shown here, as separate houses are included in the table).

TABLE 22: MODELLED DEMAND COMPARED TO TAKE-UP ANALYSIS RESULTS

Dwelling type	Modelled change in demand	Modelled change (take-up analysis)		
		Base case 1	Base case 2	Proposed framework
Separate houses	-2,672	-3,877	-3,999	-4,481
Attached dwellings	8,447	7,364	7,370	9,527
Flats and apartments & other dwellings	6,459	15,832	16,421	20,346
Total	**12,234**	**19,319**	**19,792**	**25,392**

Source: SGS 2021

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

This table illustrates that despite there being a large amount of theoretical capacity, the modelled take-up of attached dwellings under both of the base case scenarios is lower than the modelled demand. This is a result of most of the capacity for this housing type being provided in the NRZ zone, in which only a slow take-up rate can be expected.

In addition, development in the NRZ has only a low level of uplift, replacing one existing house with two dwellings. As a result, the decline in separate houses would be much larger than the modelled decline, meaning that the supply of separate houses would fall short of demand. In this case, some people may choose to live in a relatively large attached dwelling instead of a separate house (for example those being built in the NRZ), so a shortfall in supply of separate housing would translate into increased demand for attached dwellings.

The size of the gap between modelled demand and take-up can be quantified by subtracting the demand from the take-up. This gap is shown in the table overleaf for each scenario. A single gap is shown for separate houses and attached dwellings, as these housing types can in some cases be considered relatively interchangeably as discussed above.

TABLE 23: GAP BETWEEN MODELLED DEMAND AND TAKE-UP (TAKE-UP – DEMAND) NEGATIVE NUMBERS INDICATE UNMET DEMAND

Dwelling type	Modelled change (take-up analysis)		
	Base case 1	Base case 2	Proposed framework
Separate houses			
Attached dwellings	-2,288	-2,404	-729
Flats and apartments & other dwellings	9,394	9,983	13,908
Total	**7,085**	**7,558**	**13,158**

Source: SGS 2021

Note that the values in this table have been rounded so the sum of the rows or columns may be different to the reported total. In these cases the reported total is more accurate.

The gap calculation shows a likely gap in supply of separate houses and attached dwellings by 2036 under current planning controls (base case 1) or the removal of interim controls around centres (base case 2). Additional capacity would need to be created, or development of attached housing facilitated, to reduce this gap.

The proposed framework is likely to increase attached dwelling development. The size of the separate house and attached dwelling gap would be considerably reduced, although not entirely eliminated, under the proposed framework.

Under all scenarios, modelled take-up of flats and apartments is much higher than modelled demand. This means that the planning framework makes sufficient provision for apartment development.

High density capacity-demand alignment

The rate of apartment development modelled in the take-up analysis is in line with recent development rates in different parts of the LGA, but is much greater than is suggested by the housing demand model. This leads to the modelled apartment take-up being much higher than modelled demand. However, this should not be regarded as a failing of the Glen Eira planning scheme.

For the following reasons, it is generally important to provide more housing capacity in planning controls than likely demand to ensure that the development market is not constrained:

- As noted in Chapter 4 of this report, capacity analysis is necessarily high-level, and some sites which are deemed to have capacity are likely to be unable or unlikely to be developed for site-specific reasons.
- The housing capacity assessment has been based on the best available data on density of development, as well as on assumptions around likely building form as set out in Chapter 4. Some sites may not be able to achieve the assumed densities once applications are assessed on their planning merits.

- Even if sites are available for development, only a small portion of available sites would be expected to turn over or be developed in any year (as reflected in the take-up analysis which shows less than 100% of total capacity being developed).
- Developers will generally have a pipeline of development projects, sometimes acquiring sites some time before development actually occurs.
- Housing demand projections are trend-based and based on population projections, and so while they a best estimate of how much housing is needed to accommodate the future community, more housing may actually be required. Developers may deliver more housing than is projected, but in a setting like Glen Eira developers will generally not deliver much more than there is *market* demand for.

The Victorian planning system is largely performance based rather than prescriptive, with development proposals assessed on their merits rather than being granted a given height, density or yield as of right. For this reason, it would be difficult, even if it were desirable, to design a planning scheme to provide an exact targeted yield. For these reasons, strategic planning should ensure that there is *at least enough* capacity to facilitate projected demand given reasonable take-up rates, rather than to aim exactly for projected demand.

Provision of significant additional high-density capacity could have the following potential drawbacks:

- If there is not enough demand for medium density/attached housing, more high-density housing may be provided instead which would risk not accommodating this who need larger dwellings but cannot afford a separate house.
- Facilitating rapid development in multiple different areas can risk stretching a council's ability to co-ordinate development with associated infrastructure improvement and other planning work (SGS is not suggested that this is occurring in Glen Eira).
- Planning for significantly higher density in an area than there is market appetite for risks encouraging land speculation or over-valuing of land, which can discourage development at currently viable densities and investment in sites.

As such, the provision of additional high-density capacity should not be regarded as a problem providing that zoning reflects the community's appetite for change, sufficient capacity for attached housing is also provided, densities and locations of high-density zoning are generally in line with market appetite, and development can be coordinated with infrastructure and other associated strategic planning.

Other dwellings

Dwellings counts in the other dwellings category from the ABS census are relatively unreliable and often fluctuate between different censuses. For this reason, the forecast of increasing demand for other dwellings should be considered as carrying a high degree of uncertainty.

Nonetheless, as dwellings within the other dwellings category are generally quite small, they have been grouped with flats and apartments/high density dwellings in the above discussion. This is because flats and apartments are generally smaller than other types of dwellings and so may be regarded as the most interchangeable with other dwellings, for which it is not possible to isolate specific capacity values.

5.4 Discussion

Base cases

Overall, there is enough capacity under current planning controls to accommodate the total quantum of housing need, but not enough attached housing is being delivered to accommodate the expected population. This is because most capacity for medium density is in the NRZ, where take-up rates are not high enough to deliver the total dwelling demand. These take-up rates are influenced by:

- The spatial requirements (for example, the 60sqm private open space standards and site coverage standard) in the current NRZ schedule, which appear to facilitate two-unit developments on a site, rather than three or more units.
- The number of properties being sold.
- The institutional capacity of the development market, and specifically the mostly smaller developers likely to be operating in the NRZ.
- Competition between prospective homeowners and developers in the NRZ.
- The limited demand for expensive dual occupancies which are built in the NRZ when compared to overall medium density demand.

The last point speaks to the lack of housing diversity offered in the NRZ, where predominantly large and relatively expensive dual occupancies are being delivered under the current planning controls. Focusing only on the NRZ to deliver the required medium density would risk pricing many people out of Glen Eira, and not delivering needed housing diversity, noting the existence of sub-markets within the medium density demand.

Development take-up rates in the GRZ (delivering both attached housing and apartments) as well as NRZ may be constrained by garden area requirements under the current planning framework. This has been shown by a review by Council of development applications submitted since the garden area requirement was introduced . In addition, as noted in Section 5.1 high take-up rates have been modelled in some parts of the GRZ, but others (particularly GRZ2 zones) how relatively low rates.

Sufficient *high-density* housing is being delivered under recent take-up rates (which form the basis of the take-up analysis) to meet modelled demand between 2021-36.

Development of “other” dwelling types has not been specifically modelled, but any change in demand could likely be accommodated within existing zones and development given the modest size of this demand.

Proposed framework

Modelling results shows that the proposed framework would reduce the size of the gap between modelled demand for attached housing and modelled take-up, although a small gap would still remain. However, the size of this shortfall is relatively small compared to the total demand, and is much lower than the expected gap under the current planning controls. Other actions could be explored in Council’s housing strategy to address any remaining gap (discussed further in the following chapter). It is also likely that any reduction in the rate of demolition of separate houses would mean that the number of separate houses and attached dwellings would be very close to meeting demand.

It should be noted that modelling has shown high take-up rates occurring in some parts of the GRZ, which could constrain the capacity for attached dwellings to be delivered as modelled in this report. As noted in Section 5.1, it has been assumed that GRZ take-up rates will increase in those areas currently zoned GRZ2.

Modelling of the take-up of attached housing under the proposed framework has relied on assumptions around how the take-up rate of development will change under new planning controls. These assumptions are considered to be reasonable and, in some cases relatively conservative with regard to the amount of development which may occur. Nonetheless, they are theoretical, and either higher or lower rates of development may occur particularly as the development market shifts over the next 15 years. Monitoring development will enable Council to make further changes to planning controls as necessary depending on the development market and impacts of the currently proposed changes. It would also enable Council to respond in the case of take-up being constrained (for example as noted above as a result of the high take-up rates needed).

6. Summary of key findings

This section sets out a summary of key findings from Sections 2 to 4 and presents potential approaches that could be used to address the capacity gaps identified in Section 5.

Population growth

Glen Eira's population is forecast to grow from around 148,600 in 2016, to 188,200 in 2036. The population will likely increase at around 2,000 people per year. While this is lower than recent very high growth rates (almost 3,000 people in 2017), it still means the LGA will grow by 26.6 per cent over a 20-year period. Additional housing is required to accommodate the growing population

Changing living arrangements and need for housing diversity

Historically, young adults aged 15-24, and established adults aged 45-74 experienced the most growth in Glen Eira (2006 to 2016). Young people aged 20-30 move to Glen Eira from interstate and places further form Melbourne CBD. However, there is also strong outward migration from Glen Eira to more affordable LGAs further from the CBD, particularly around the ages people commonly start families (30-40) and in older people (aged 50+).

The household profile in Glen Eira reflects trends across Greater Melbourne, with couples with children the most common household type followed by couples without children. The average household size in Glen Eira has been increasing since 1996, driven in part by a declining share of lone person households and couples without children, and by more people sharing housing with others.

The migration patterns and trends in living arrangements in Glen Eira reflect a lack of housing affordability, with separate houses increasingly out of reach of younger people. Apartments fill an important role in the housing market and are in increasing demand. However, it is also important to ensure there is enough capacity for development of moderately sized dwellings which are larger than many apartments, but more affordable than separate houses. This would allow people to stay in the LGA as their housing needs change and they need more space (for example if they are starting a family), and would provide scope for older people to downsize from a separate house while staying in the same area.

Housing supply trends

Despite the increasing household size, there is an increasing trend towards households living in attached dwellings or flats and apartments. While separate houses were historically the predominant dwelling type in Glen Eira, the housing stock is now relatively diverse with separate houses making up only 37% of all dwellings.

Housing development rates between 2016-2021 have been historically high, with apartments the predominant type of dwelling constructed (66% of all new dwellings). A large number of the attached dwellings which have been built recently are dual occupancies in the NRZ, which are often similar in size

to detached dwellings, and are still relatively unaffordable. This reflects the results of the capacity analysis, which finds that most capacity for attached dwelling development in Glen Eira is in the NRZ.

Alignment of housing capacity with demand

Based on population projections and trends in demographics and housing preferences, 12,234 additional dwellings will be needed to accommodate the population in Glen Eira between 2021-36. Both attached dwellings/medium density and apartments/high density development is needed to accommodate the forecast community.

There is sufficient capacity under current planning controls to accommodate the number of dwellings required by 2036 given the continuation of recent take-up rates. However, take-up rates for attached dwellings are too low to accommodate modelled demand. This means that without changes to planning controls or development trends, there may be a lack of housing diversity, with apartments continuing to dominate new dwellings.

The proposed housing framework would likely lead to increased delivery of attached dwellings leaving only a small shortfall from modelled demand. This shortfall could potentially be addressed through a range of mechanisms in Glen Eira's housing strategy.

Ways to increase capacity for attached dwellings

There are multiple approaches which could be used to further increase capacity for attached dwellings, or for a medium density kind of housing which includes attached dwellings and other dwellings that would fall within a similar housing submarket to attached dwellings (for example relatively large or versatile apartments with ground-floor access). These approaches include:

- Shift development patterns in the GRZ to facilitate more attached dwelling development instead of apartment development.
- Facilitate delivery of an increased amount of attached/medium density housing in large development sites or precincts when Council is in negotiation with proponents.
- Facilitate increased density of attached housing developments, to allow them to be more cost-competitive with apartment development when developers are acquiring sites.
- Facilitate an increased proportion of apartments which fit within the attached housing/medium density submarket.
- Rezone additional land to the proposed incremental change area 2, or to GRZ.

Each of these outcomes could be sought through multiple different mechanisms that could form part of a housing strategy, for example engaging with developers to understand constraints on attached housing development, influencing dwelling mix through negotiation with developers and changing statutory planning rules (noting that Council has limited control over statutory planning mechanisms as a result of the standardisation of residential zones and design requirements in Victoria).

Monitoring dwelling mix and development rates in the new incremental change area 2 and in the GRZ (substantial change area 1) will also be important to ensure that sufficient housing diversity is being delivered and to determine whether further rezoning is required in the future.

Appendix A: Key terms

Key terms used in this report

TABLE 24: KEY TERMS AND INITIALISMS

Term/initialism	Definition
Attached dwellings	Dwellings which share horizontal, but not vertical walls with other dwellings. This typically includes townhouses, terraces, villas and semi-detached dwellings. These dwellings are generally larger than apartments, but smaller than separate houses.
DPH, dwellings per hectare (sometimes used as a unit denoted dw/ha in text)	The density of housing on a given property or development site, measured as the number of dwellings per 10,000 square metres of land.
GRZ	General Residential Zone
RGZ	Residential Growth Zone
High density housing	In this report, high density housing is a category referring to flats and apartments in buildings of at least three storeys. Housing demand modelling uses this category as a result of data problems in the ABS census.
Housing capacity	The number of total dwellings that could be built on all sites which are available for development. Properties are available if they are not specifically prohibited from development and not reasonably unlikely to be redeveloped.
Housing demand	Housing demand is modelled in this report as the number of dwellings required to accommodate the population appropriately given trends in what kinds of housing different kinds of households live in. This is different from, but related to, market demand, which is more associated with the number of dwellings the development sector will deliver.
Housing supply	The number of dwellings in a given area.
Medium density housing	Either attached dwellings or flats and apartments in buildings of two storeys. Housing demand modelling uses this category as a result of data problems in the ABS census. This description is also used more conceptually to refer to housing of a density and size between higher-rise apartment development and separate houses. Medium density housing typically appeals to households who want a dwelling which is an intermediate size between an apartment and separate house, and to other households who would want a separate house but cannot afford one where they want to live.

Net housing capacity	The number of *additional* dwellings (i.e. maximum number minus existing dwellings) that could be built on all sites which are available for development. Properties are available if they are not specifically prohibited from development and not reasonably unlikely to be redeveloped.
Net take-up	The number of additional dwellings expected to be built (i.e. total dwellings built minus existing number of dwellings) in a given zone and area in the future given recent development trends. This will in general be lower than the total net capacity.
NRZ	Neighbourhood residential zone
Revealed housing preference	The proportion of each different household type, living in each different dwelling type
Separate dwelling	A house on its own block of land, with walls not adjoining any other dwelling
Take-up	The number of dwellings expected to be built in a given zone and area in the future given recent development trends. This will in general be lower than the total capacity.
Take-up rate	The rate at which housing is built in a given zone and area measured in dwellings per year or percentage of capacity developed per year

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