



Appendix E

Housing Need Assessment

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ALKIMOS CENTRAL

Housing Need Assessment

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REPORT

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Appendices

Appendix A RPS Housing Needs Methodology

EXECUTIVE SUMMARY

Introduction

Alkimos Central is a planned major centre in the North West Corridor of metropolitan Perth collocated with major motorway roads (Mitchell Freeway and Romeo Road Extension) and passenger rail (METRONET Yanchep Rail Line) transport infrastructure and anchoring the Alkimos Eglinton District.

Alkimos Central is the largest activity centre within the District and is recognised as a “Secondary Centre” within the wider Perth Metropolitan activity centre network by State Planning Policy (SPP) 4.2, Directions 2031 and Beyond, Perth and Peel at 3.5m and the North West Sub-Regional Planning Framework.

In particular, the Sub-Regional Planning Framework establishes that:

Alkimos will support the strategic metropolitan centres with a mix of land uses, including retail, office, high density residential development, entertainment and community services. Alkimos will also be served by an extension of the Joondalup railway line. The centre will require detailed planning to maximise transit-oriented development and sustainable employment opportunities.

This is the second largest and most prominent centre category within the network, following Strategic Metropolitan Centres like Joondalup and Yanchep (planned).

Population and Age Profile of Alkimos/Eglinton

RPS has utilised the North West Statistical Area of Perth as the basis of the analysis. This area has been selected for a number of reasons including:

- It is a large area with a critical mass of population and housing, allowing for underlying age specific housing propensities to be relied upon in Alkimos modelling.
- It includes a range of residential areas at different degrees of demographic gentrification and new population growth/migration, providing guidance on potential changes in age specific housing propensities over time.

It includes a critical mass of non-inner city attached dwelling products, providing statistically significant data on dwelling stock mix to inform the analysis.

The population of Perth's – North West Statistical Area (composed of the Cities of Stirling, Joondalup and Wanneroo) - is increasing rapidly and is expected to reach almost 750,000 people by 2031. In contrast, the suburbs of Alkimos and Eglinton (which includes the Alkimos Eglinton DSP area) are expected to reach a population of 68,000 by 2041.

The age profile of the North West area is expected to become increasingly older over the next decade, with the share of population aged 65+ reaching 17.5% in 2031. This is almost equivalent to the share aged 0-14. However, the population of Alkimos/Eglinton is expected to remain significantly younger with the share of population aged 0-14 reaching 27% in 2041 while the share aged 65+ will reach only 7.2%.

Case Study Lessons

Examples of secondary centres (or equivalent) across Western Australia and nationally (namely Queensland) exhibit an above average share of non-house dwellings within the local area. Townhouses account for the majority of non-house dwellings in and adjacent to secondary centres, and on average represent between 20% and 30% of the total dwelling mix. Apartments are less common in secondary

centres, particularly those in non-coastal and non-inner city locations, accounting for 10-15% of dwelling stock. Newer apartment developments are starting to emerge in secondary centres nationally but tend to occur later in the development cycle of the centre. Higher apartment shares of dwelling mix are particularly dependent on tertiary education offerings being located in the secondary centre, providing student-based drivers of demand.

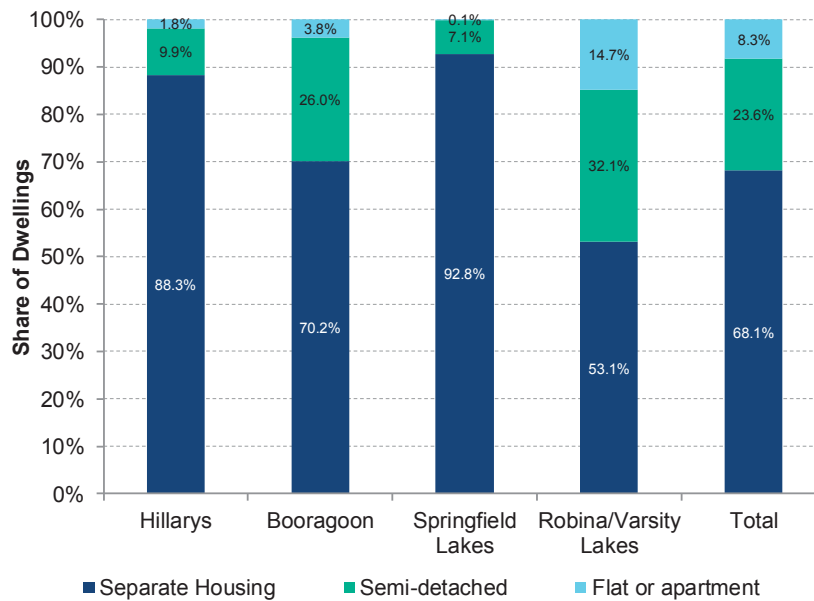


Figure 1 Share of Dwellings, by Format, Case Study Locations, 2016

Housing Potential Estimates for Alkimos Central

Key to estimating the future housing potential of an area, is understanding the housing preferences of each individual age-cohort. Analysis of housing preferences by age group is important as housing needs, requirements and preferences vary across one’s housing lifecycle, as demonstrated in section 3.0.

Similarly, it is important for housing preferences to be expressed in terms of both dwelling utility (number of bedrooms) and dwelling format (attached vs detached). This is important as it addresses presumptions that can exist in housing potential assessments that equate dwelling format and utility drivers (i.e. that detached dwellings are large and attached dwellings are small). While this may be true in most occasions, evolving demographic and housing trends means they are not always true (as reflected by the popularity of small lot houses).

This assessment is regarded as a housing potential assessment. In that regard, it is considered to be **unconstrained by the actual carrying capacity of the subject site** and instead is focused on the strategic role and function of Alkimos Central.

A full summary of the methodology and the individual age specific dwelling profiles are included in Appendix A.

Applying the housing need profiles in Appendix A to the population for the suburbs of Alkimos and Eglinton in section 2.0 of this report, RPS estimates that Alkimos Eglinton will require over 21,100 dwellings by 2041 to accommodate the 68,000 people expected for the two suburbs¹. Based on the age-specific housing preference profile for the area, approximately 11% of these dwellings will need to be non-detached housing

¹ Based on population projections for the suburbs of Alkimos and Eglinton (including the Alkimos Eglinton District Structure Plan) from ID for the City of Wanneroo.

products, including over 1,920 town houses. Apartments are only expected to account for 1.7% of dwelling preferences by 2051.

Alkimos Central will be the highest concentration of services, facilities and positive accessibility attributes in the District and wider area. This is likely to support higher density dwelling demand in the area and result in Alkimos Central accounting for the lion's share of smaller product (particularly studio, 1 and 2 bedroom dwellings).

Additionally, separate housing demand in Alkimos Central is expected to focus on smaller 3 bedroom offerings, in response to reduced demand for a second car garage in areas of the Centre with strong pedestrian accessibility to public transport. The reduced requirement for a second car allows for narrower frontages and supports smaller and more innovative dwelling formats including workers cottages and nano housing product – including 2 bedroom houses.

Overall, RPS estimates that by 2051, there will be a total potential for over 2,800 dwellings in Alkimos Central. This will be comprised primarily of separate houses (1,867) but with more significant numbers of townhouses (636) and apartments (279).

The result of this is that by 2051, approximately two-thirds of dwelling preferences will be for standalone detached houses with the remaining third for attached products. This will include 22.7% of demand for townhouses and a further 9.9% for apartments. This is illustrated below.

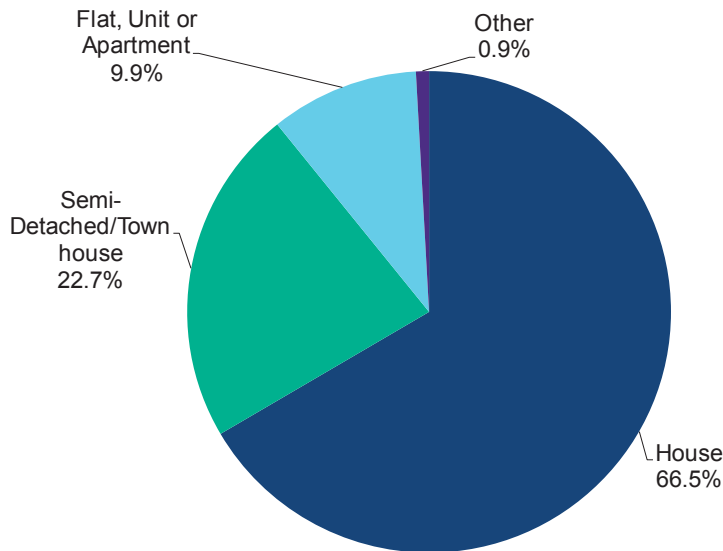


Figure 2 Dwelling Mix, Alkimos Central Housing Preferences, 2051

The use of Forecast ID population inputs for the suburbs of Alkimos and Eglinton mean that projections of demand are limited to 2041. However, it is expected that the Alkimos Central development will likely extend beyond this date and continue to add dwellings at least for a further 30 years (i.e. 2071).

A further 500-700 dwellings could be supported in Alkimos Central post 2051, assuming retail integration and tertiary health and/or education service provision. If 80%² of this demand is directed evenly to townhouses and apartment demand, then the dwelling mix of Alkimos Central is likely to become even more diverse.

² This is an assumption based on the built form expectations of net additional dwelling yields associated with tertiary facility or major retail integration. Drawn from case study analysis/benchmarks.

The addition of 500 new dwellings post 2041 will take the total dwelling number to over 3,300 with less than 60% as detached dwellings and 25.3% as semi-detached and townhouses and 14.5% as apartments.

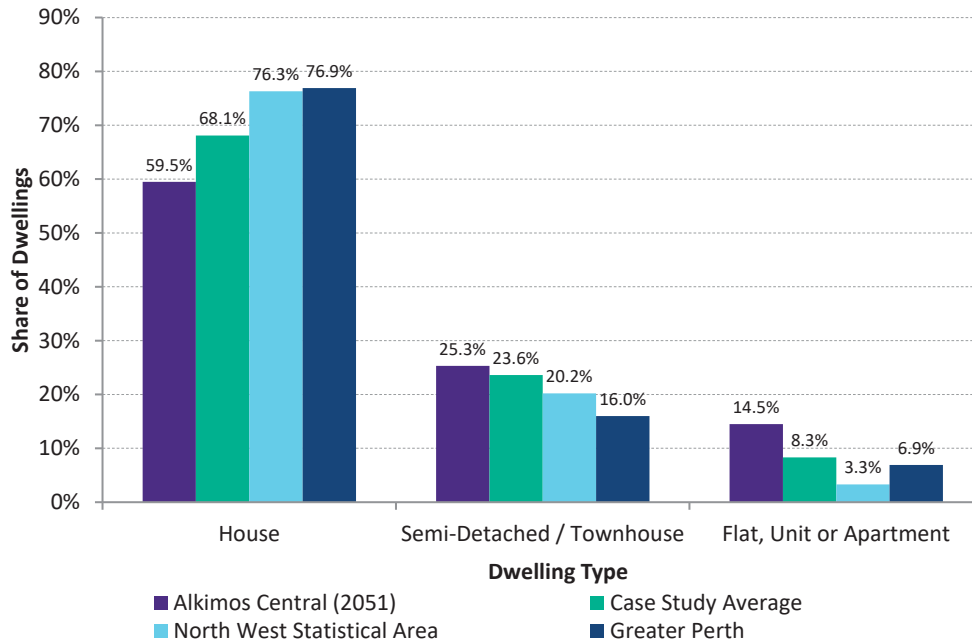


Figure 3 Dwelling Mix, Alkimos Central, As at 2051 compared to Case Study Average

Preliminary Apartment Feasibility Assessment

RPS has adopted a residual land value approach. This is regarded as an appropriate approach for determining the preliminary feasibility of a development. This approach estimates the sales price or value of a property and subtracts known construction development and margin costs. The remaining or residual value therefore represents the value that could be attributed to land as part of the overall development/transaction.

This high level feasibility analysis indicates that apartment development in Alkimos Central *at present* would likely yield a negative residual land value. Median house prices in the area will need to increase by 50% (in real terms maintain construction values in line with inflation) for residual land values for apartment developments to be positive. This is not expected until 2036-2041 at the earliest. However, even at this level, the residual land value may not be sufficiently high for development to be practically viable.

Intervention will be required in the market to transcend local demographic and feasibility challenges through investment in tertiary health and education services. These investments will add new and stronger drivers of apartment demand into the local market, augmenting long-term household gentrification and ageing to drive apartment demand.

Conclusion

Alkimos Central has the potential to see demand of up to 2,800 dwellings by 2051, including over 900 townhouses, semi-detached dwellings and apartment. Additionally, RPS estimates at least a further 500 dwellings could be supported post 2051, further diversifying and enhancing the housing choice of the area.

This demand potential exceeds the proposed dwelling capacity in 2051 under the Land Use Master Plan of 2,457. This indicates that it is likely there will be more than sufficient demand to meet the supply of dwellings of the Centre. The Land Use Master Plan proposes slightly higher shares of medium density housing than indicated in the model, though this is regarded as an appropriate response to the modelled demand for smaller 2 and 3 bedroom detached product as part of the demographic mix of the development (particularly in response to the delivery of tertiary health and education facilities). Additionally, as the project develops there is potentially to add additional density as well as redevelopment sites for higher density as overall feasibility improves.

1 INTRODUCTION

1.1 Background and Context

Alkimos is a suburb on the North West Coast of the Perth Metropolitan Area within the City of Wanneroo. The Alkimos Eglinton District is currently subject to an approved Structure Plan that provides a planning framework for the creation of a vibrant, sustainable new coastal community.

1.1.1 Alkimos and Alkimos Central

Alkimos Central is the largest activity centre within the District Structure Plan and is recognised as a “Secondary Centre” within the wider Perth Metropolitan activity centre network by State Planning Policy (SPP) 4.2, Directions 2031 and Beyond, Perth and Peel at 3.5m and the North West Sub-Regional Planning Framework.

In particular, the Sub-Regional Planning Framework establishes that:

Alkimos will support the strategic metropolitan centres with a mix of land uses, including retail, office, high density residential development, entertainment and community services. Alkimos will also be served by an extension of the Joondalup railway line. The centre will require detailed planning to maximise transit-oriented development and sustainable employment opportunities.

This is the second largest and most prominent centre category within the network, following Strategic Metropolitan Centres like Joondalup and Yanchep (planned).

1.1.2 Rail and Road Investments

A key factor requiring an update to retail and economic analysis previously undertaken for Alkimos Central is major proposed and planned transport infrastructure. Namely, this includes:

- The extension of passenger rail infrastructure to Yanchep as part of the METRONET project including a new Station at Alkimos Central; and
- the extension of the Mitchell Freeway to Alkimos including Romeo Road.

Both transport projects are currently under construction and are targeted for completion in 2022-23

Yanchep Rail Extension

The Yanchep Rail Extension is a 14.5km project that will deliver the last proposed section of the Joondalup rail line from Butler to Yanchep, helping to support ongoing growth in the area, as well as reducing road congestion. In the short-term, the Yanchep Extension Project will help develop activity centres by stimulating new employment opportunities in the Yanchep Strategic Metropolitan Centre and supporting higher density land use. In the long-term, the extension will help move the more than 150,000 future Yanchep-Two Rocks residents.

1.2 Research Purpose

RPS was engaged by DevelopmentWA to undertake research on the housing opportunities and needs at Alkimos Central. This is designed to support the development of an updated master plan and development concept for the Alkimos Central area.

The area encompasses the proposed Alkimos Secondary Centre, identified in the Alkimos Eglinton District Structure Plan, Perth & Peel @3.5M North West Sub Regional Planning Framework and Directions 2031. Alkimos Central is the largest centre within the District Structure Plan area and is collocated with the planned extensions of the Yanchep Rail Line and the Mitchell Freeway and the existing Marmion Avenue.

The Alkimos City Centre Local Structure Plan No 89, identified the potential for approximately 3,335 dwellings in the Alkimos Central area by 2050³. It also evaluated the dwelling yield potential and targets for the City Centre against both the requirements under the Alkimos Eglinton District Structure Plan and the SPP 4.2.

The analysis by RPS in this report is designed to answer several housing and dwelling related questions:

- What is the dwelling type and size requirements to meet the expected age and household type specific characteristics of the future population of Alkimos and Eglinton and what role does Alkimos Central play in meeting these requirements?
- What are the experiences and lessons from other secondary centres (or equivalent) nationally in terms of dwelling volumes and densities?
- What is the likely viability or feasibility of higher density dwellings in the Alkimos Central area?
- What is the potential impact of non-demographic factors like potential health and education facilities on dwelling types and size?

This analysis draws on custom and tailored housing need modelling by RPS as well as desktop research and best practice case study analysis from around Australia.

1.3 Alkimos Central Land Use Master Plan

At the time of this report, the Alkimos Central Land Use Master Plan version July 2021 (provided on the following page) is the latest version of the Land Use Master Plan. It is understood from this Concept that the Alkimos Central development is likely to have capacity to accommodate the following dwelling yields over 30 and 50+ year timeframes:

Table 1 Alkimos Central Dwelling Yield by Dwelling Type, 2051

| Year | Single Housing | Medium Housing | Apartments | Total |
|------|----------------|----------------|------------|-------|
| 2051 | 1,233 | 724 | 500 | 2457 |

³ LandCorp (2013) Alkimos Beach City Centre Activity Centre Structure Plan, Part Two: Explanatory Sections, accessed at http://www.wanneroo.wa.gov.au/downloads/file/2500/draft_alkimos_city_centre_activity_centre_structure_plan_no_89_-_part_2

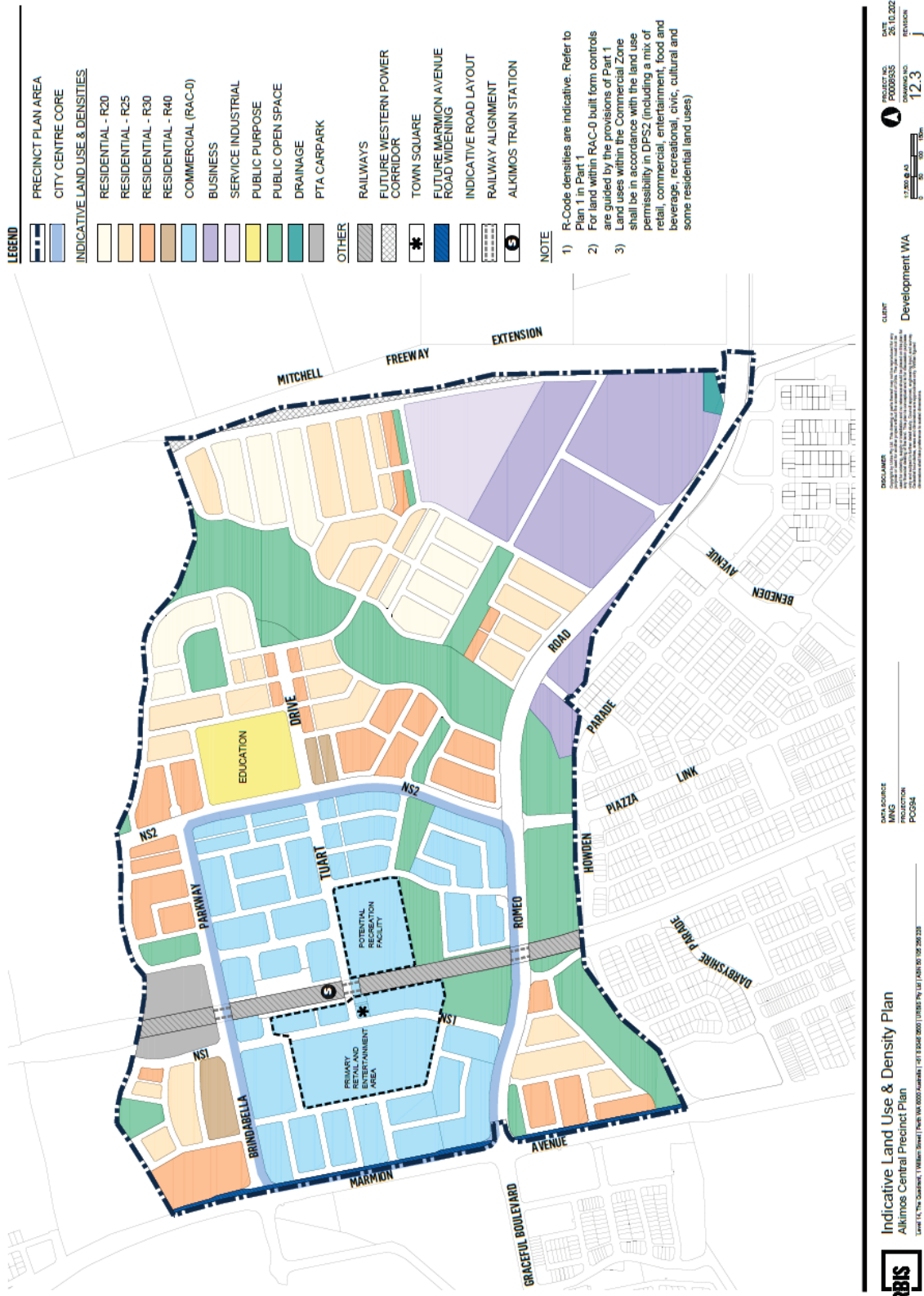


Figure 4 Alkimos Central Land Use Master Plan

1.4 Assessment Structure

The Alkimos Central Housing Need Assessment is comprised of the following key sections:

- **Introduction** – outline of the background, purpose and structure of the research and report;
- **Population and Demographic Profile of Alkimos Eglinton** – summary of the population and demographic profile of Alkimos and Eglinton and the wider North West Corridor of Perth;
- **Key Trends in Housing Preferences and Dwellings Delivery** – summary of key current and emerging trends in housing preferences and dwelling construction and delivery
- **Age-Specific Housing Preference Profiles** – outline of the age-specific housing preference profile for Alkimos and Eglinton including identification of key age cohort specific trends;
- **Housing Need Estimates for Alkimos Central** – outline of the role and function of Alkimos Central in District housing demand and analysis of the housing need for the Activity Centre;
- **Case Study Lessons** – case studies of other secondary centres and their level of residential density and development;
- **Apartment Feasibility Assessment** – high level residual land value analysis for apartment development at Alkimos Central;
- **Impact of Non-Market Housing Drivers in Alkimos Eglinton** – overview of the impact of potential tertiary health and education on higher density housing need; and
- **Conclusions and Recommendations** – summary of conclusions and key recommendations in the report.

1.5 Implications of COVID19

The majority of analysis for this report occurred during the onset of the COVID19 pandemic.

Analysis by Profile.ID for the City of Wanneroo indicates that in the year to September 2020, the Wanneroo LGA experienced a decline of Gross Regional Product of 2.0%, more than Greater Perth of -1.8% but less than Australia of -4.6% (reflecting the larger impact on the NSW and Victorian economies).

Despite this, local jobs and employment was less significantly impacted than both Greater Perth (-4.7%) and Australian (-3.7%) economies, with the City of Wanneroo experiencing a decline over the year of only -3.4%.

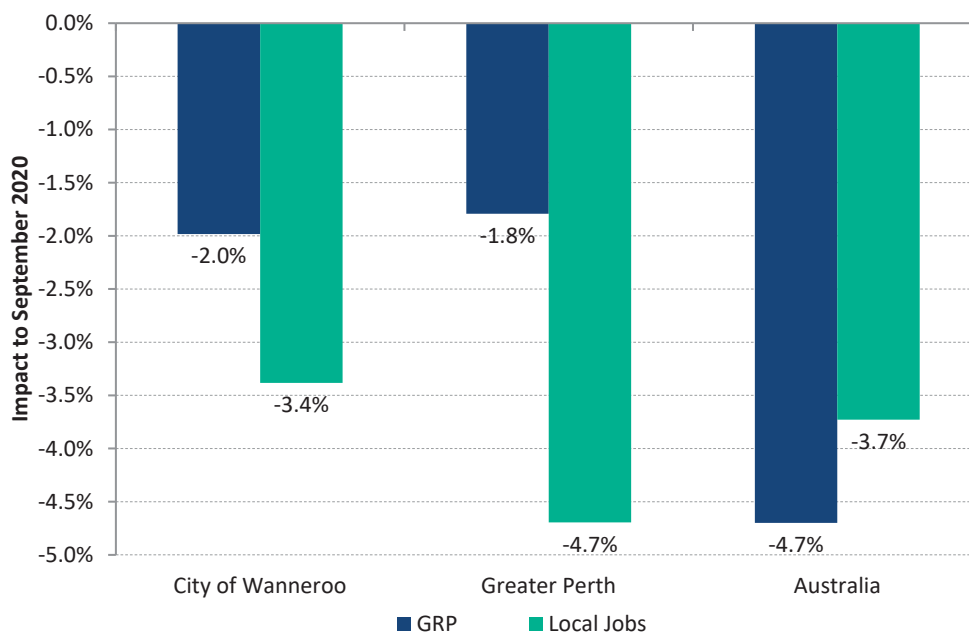


Figure 5 Gross Regional Product (GRP) and Jobs Impacts of COVID-19, Wanneroo ©, Greater Perth and Australia, Year to September 2020⁴

While the economic impacts of COVID19 are increasingly understood, the long-term implications for consumer and household dwelling preferences is not. In particular, it is possible that the pandemic, and associated social distances and travel restrictions, may accelerate emerging trends in areas such as house and amenity/service collocation/integration and SOHO type offerings.

At this stage, the advice from State and Federal Treasuries is for analysis on long-term housing, retail and economic trends to rely upon existing population and economic projections, assuming the impact of COVID19 is contained to the short-term only.

1.6 Glossary and Abbreviations

The following terms and abbreviations are used within this report.

| Term/Abbreviation | Definition |
|-------------------|------------------------------------|
| En Globo | Raw, undeveloped land |
| GFA | Gross Floor Area |
| GRP | Gross Regional Product |
| JDAP | Joint Development Assessment Panel |
| SA4 | Statistical Area Level 4 |
| SEQ | South East Queensland |
| SOHO | Small Office/Home Office |
| SPP | State Planning Policy |
| SQM | Square Metres |
| WA | Western Australia |

⁴ ID (2021) COVID-19 Impact Tool – City of Wanneroo accessed at <https://economy.id.com.au/wanneroo/covid19-quarter-impacts>

2 POPULATION AND AGE PROFILE OF ALKIMOS/EGLINTON

This section provides an overview of core population and demographic attributes of Alkimos/Eglinton and the Perth – North West region. This information provides important context for the housing need assessment.

Key Findings:

- The population of Perth's – North West Statistical Area (composed of the Cities of Stirling, Joondalup and Wanneroo) - is increasing rapidly and is expected to reach almost 750,000 people by 2031;
- The suburbs of Alkimos and Eglinton (which includes the Alkimos Eglinton DSP area) are expected to reach a population of 68,000 by 2041.
- While the share of the population in the North West Corridor aged 65+ is expected to increase over the next 25 years, the population in the suburbs of Alkimos and Eglinton is expected to remain comparatively young.

2.1 Defining the North West Corridor

RPS has utilised the North West Statistical Area of Perth as the basis of the analysis. This area has been selected for a number of reasons including:

- It is a large area with a critical mass of population and housing, allowing for underlying age specific housing propensities to be relied upon in Alkimos modelling
- It includes a range of residential areas at different degrees of demographic gentrification and new population growth/migration, providing guidance on potential changes in age specific housing propensities over time.
- It includes a critical mass of non-inner city attached dwelling products, providing statistical significant data on dwelling stock mix to inform the analysis.

2.2 Population in Perth's North West

According to WA Tomorrow population projections for the Cities of Stirling, Wanneroo and Joondalup, the Perth – North West Corridor population is expected to reach over 600,000 people by 2021 and almost 750,000 by 2031.

Table 2 Population Projections, North West Corridor, Medium Series, 2021 to 2031

| Year | 2021 | 2026 | 2031 |
|-------|--------|--------|---------|
| 0-9 | 79,800 | 86,400 | 93,200 |
| 10-19 | 74,000 | 81,100 | 87,800 |
| 20-29 | 81,300 | 90,000 | 102,400 |
| 30-39 | 95,200 | 98,000 | 104,100 |
| 40-49 | 81,400 | 91,600 | 104,400 |
| 50-59 | 76,000 | 81,600 | 85,900 |
| 60-69 | 60,400 | 68,700 | 77,000 |
| 70-79 | 40,400 | 49,400 | 57,400 |

| | | | |
|--------------|----------------|----------------|----------------|
| 80+ | 22,200 | 27,800 | 37,500 |
| Total | 610,700 | 674,600 | 749,700 |

The demographic composition of the Corridor is also expected to change, with the share of population aged 65 and over, reaching 14.8% in 2021 and 17.5% in 2031. Interestingly, despite this ageing, the share of population aged 0-14 (i.e. children) is expected to remain broadly flat, declining from 19.2% in 2021 to 18.3% in 2031.

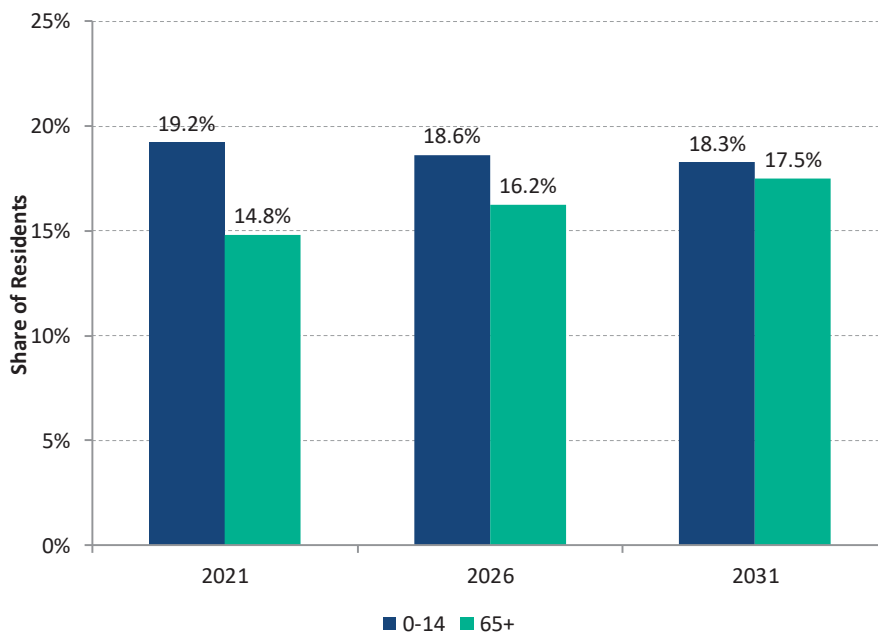


Figure 6 Share of Population, 0-14 and 65+, Perth – North West SA4, 2021 to 2031

2.3 Population and Age Profile in Alkimos and Eglinton

Local population estimates for the Alkimos and Eglinton suburbs and District are not available from WA Tomorrow projections. RPS has drawn on population projections for these suburbs from the City of Wanneroo’s Forecast ID.

Current projections for the suburbs of Alkimos (including Trinity at Alkimos outside of the Alkimos-Eglinton District) is for the population to reach 22,334 by 2021, over 50,000 by 2031 and 68,183 by 2041. Further growth is expected to be subdued beyond this period.

Table 3 Population by Age, Alkimos and Eglinton, 2021 to 2041⁵

| Year | 2021 | 2026 | 2031 | 2036 | 2041 |
|-------|-------|-------|-------|--------|--------|
| 0-4 | 2,689 | 4,033 | 5,374 | 6,429 | 6,552 |
| 5-14 | 3,958 | 6,668 | 9,246 | 11,250 | 11,855 |
| 15-24 | 2,977 | 5,111 | 7,427 | 9,355 | 10,131 |
| 25-34 | 4,731 | 6,668 | 8,709 | 10,235 | 10,149 |
| 35-44 | 3,867 | 6,311 | 8,457 | 10,025 | 10,219 |
| 45-54 | 2,083 | 3,785 | 5,837 | 7,696 | 8,720 |
| 55-64 | 1,096 | 1,986 | 3,138 | 4,481 | 5,643 |

⁵ Forecast ID (2019) Population Projections – Wanneroo accessed at <https://forecast.id.com.au/wanneroo>

| | | | | | |
|--------------|---------------|---------------|---------------|---------------|---------------|
| 65-74 | 573 | 1,022 | 1,665 | 2,393 | 3,110 |
| 75-84 | 178 | 415 | 680 | 1,041 | 1,507 |
| 85+ | 182 | 172 | 193 | 222 | 297 |
| Total | 22,334 | 36,171 | 50,726 | 63,127 | 68,183 |

The demographics of Alkimos-Eglinton is expected to differ from the wider North West Corridor, with people over the age of 65 expected to account for less than half the share in the local area, while the share of children (0-14) is expected to decline only marginally from 30% to 27% over the assessment period.

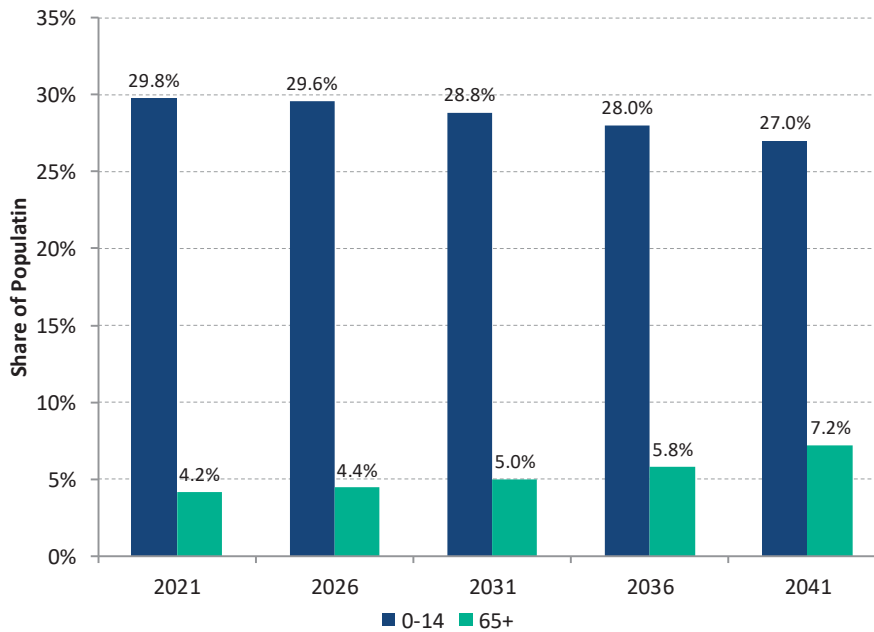


Figure 7 Share of Population, 0-14 and 65+, Alkimos Eglinton Suburbs, 2021 to 2041

3 KEY TRENDS IN HOUSING PREFERENCES AND DWELLINGS

This section summaries the key trends in housing preferences nationally and internationally, as well as emerging trends in dwelling construction and development.

Key Findings:

- Housing preference studies have confirmed that the dwelling utility (number of bedrooms and number of living spaces) are primary factors driving dwelling preferences;
- This is followed by safety and accessibility (proximity to social networks, services and public transport). Dwelling format (detached) is more important than most accessibility issues but is less important than dwelling utility.

3.1 Housing Preferences Now and in the Future

A wide range of factors influence the housing preferences and decision making of households to purchase a home. These include Dwelling Features – features associated with the specific dwelling under consideration – and Location Features – including safety and security, convenience and access and attractiveness of the environment.

The seminal study and survey undertaken by the Grattan Institute, identified these factors including their order of importance and priority to buyers. Key factors, in order of importance in the survey, include:

1. The number of bedrooms
2. Safety for people and property
3. Near family and friends
4. The number of living spaces
5. Whether house is detached
6. Near local shops
7. Near a shopping centre
8. Near a bus, tram or ferry stop
9. Has a garage
10. Limited congestion.

A number of interesting insights emerged from this Study, including:

- **Number of bedrooms most important** – this factor is less a reflection of desire or want in the buyer but of ensuring the dwelling has the necessary capacity to support the current and future number of household members. This is therefore heavily influenced by the relevant cohort or psychometric group

of the buyer, with Couple Family with Children Households⁶ generally requiring more bedrooms than lone person households.

- **The dwelling type was not the most important factor** – whether or not the dwelling was detached was the fifth most important factor. Instead, the survey revealed the attributes like the number of bedrooms and living spaces were more important factors. These attributes are positively correlated with detached dwellings (which traditionally have a larger floor plate than apartments) but the built form itself was not as important.
- **Safety very important** – the level of safety for people and the property was second most important factor. This is regarded as a need, rather than a want and is regarded as the most important Location Feature in any dwelling acquisition decision by a household.
- **Shopping also important** – access to shops, both local and regional, was also regarded as an important feature. This reflects a combination of the amenity provided by local shops as well as the convenience and reduced time cost associated with shopping for essentials (such as weekly grocery shopping). Increasing proximity to major retail also increases the likelihood of retailers delivering goods to the purchaser's home – particularly important in light of the recent introduction of Amazon to Australia and the growing use of online platforms and home delivery services by Australian retailers.
- **Transport important, but less so** – a combination of transport factors completed the top 10 list of location and dwelling features. The most important of these was access to public transport, with garage capability and congestion levels less important (albeit marginally). This reflects the desire of the buyer to have access to the maximum number of transport options available in the local area from the dwelling. This does not mean the buyer or household members will necessarily use the public transport. It is important for reasons of providing choice and alternatives for residents, and also helping to maintain and grow the capital value of the dwelling into the future.
- **Proximity to work not as important** – while conventional wisdom suggests that proximity to work would be an important factor, this was not borne out in the study. While access to transport, including travel to work options, was important, the relative distance to work was not. This issue figured as more of a priority for younger lone households, when access to a diverse range of work options is regarded as essential to both job security and career progression. However, proximity to work was not regarded as important for any other age group of household type.
- **Older households care more about the location** – older households, both lone person and couples over the age of 65 years place greater emphasis on the Location Features. While factors such as age-friendly design and air conditioning were important, other factors such as proximity to family and friends (social networks), health services, shops and the natural environment figured more prominently.
- **Family households care more about the dwelling** – in contrast to older households, family households place greater emphasis on the characteristics of the dwelling itself, including the number of bedrooms and living spaces, garage capacity and number of bathrooms.

3.2 Key House Buyer Groups

Major property developers in Australia categorise different segments of the residential market by sets of psychometric, demographic and socio-economic characteristics. Defining these segments, and their respective role in and attractiveness to the subject development, allows for developers to optimise the urban design, product mix and price points of their communities.

While there are many ways to segment and categorise the housing market, RPS utilises the following key segments in advising property development clients.

⁶ ABS definition of Couple Family with Children Households available at <https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2900.0~2016~Main%20Features~Family%20Composition~10148>

Table 4 Common Housing Market Segments

| Segment | Characteristics/Attributes |
|------------------------|---|
| Young Prospects | <ul style="list-style-type: none"> • Single and couple only households • Typically younger than 30 years • Commonly renting • Well educated but still early in their careers • Double income no kids • Value amenity and access to services and jobs while renting • Represent potential home buyers saving for a deposit |
| New Entrants | <ul style="list-style-type: none"> • Single and couple family households with young children • Typically younger than 35 years • Have started a family or looking to start in the short-term • First home buyers • Often one income households due to starting a family • Seeking affordable entry product • Looking to “get into the market” • Price and value conscious • Less priority on proximity to jobs so long as transport options are good (i.e. will travel for work) • Stronger focus on access to quality school options (both public and private) • Value local amenities and facilities and a “sense of community” • If a double income household, access to childcare is critical |
| Upgraders | <ul style="list-style-type: none"> • Single and couple family households with younger or older children • Typically aged than 35-45years • Owned first home for minimum of 6 years and has equity • Seeking to upgrade the family home • Existing home is too small for the maturing family • Seeking opportunity to move “closer” to the CBD for employment and service access • Seeking opportunity to increase investment in the property market through the family home. • Incomes and purchasing power are higher as residents are further along in their career • Seeking product that represents “good value” • Strong focus on a combination of home and investment drivers • Less priority on proximity to jobs so long as transport options are good (i.e. will travel for work) • Strong focus on access to quality school options (both public and private), particularly secondary schools • Value local amenities and facilities |
| Aspirers | <ul style="list-style-type: none"> • Subset of Upgraders and Retirees • Seeking to maximise the quality of the family home and the location • The family home represents the “status” of the household • Willing to pay above market prices for “aspirational” properties in high profile/visible locations • Larger houses, penthouse units and dwellings in high profile, high amenity locations favoured • Value a sense of exclusivity in the wider community and the specific location of the development • High amenity views and vistas are important |
| Downsizers | <ul style="list-style-type: none"> • Couple family with no children households • Typically aged older than 55 years • Own family home outright or with significant equity • Seeking to sell the family home and purchase a smaller lower cost dwelling • Realise equity in the family home to help fund lifestyle and retirement. • Move to a smaller and more manageable home • Willing to consider non-detached dwellings (including apartments and townhouses) • Still favour 3 bedroom dwellings • Have minimal care needs (apart from general health care) |

| Segment | Characteristics/Attributes |
|--------------------|--|
| | <ul style="list-style-type: none"> • Seeking to live locally to maintain social networks • Values cafes and restaurants, the quality of the urban environment and access of general health services |
| Lifestylers | <ul style="list-style-type: none"> • Couple family with children and without children households • Typically aged older than 55 years (but not necessarily) • Own family home outright or with significant equity • Seeking to move to a new dwelling for a change of lifestyle (e.g. sea change/green change) • Seeking affordable dwelling options to release equity in the family home to fund lifestyle • Value natural environment and local amenities and services • Less emphasis placed on transport accessibility and proximity to employment • Willing to consider non-detached dwellings (including apartments and townhouses) if this maximises lifestyle preferences • Dwelling size determined by household size • Have minimal care and education needs |
| Retirees | <ul style="list-style-type: none"> • Lone person and Couple Only households • Typically aged older than 65 years (but regularly 75+) • Own family home outright • Seeking to sell the family home and purchase a smaller lower cost dwelling • Release equity in the family home to help fund lifestyle and retirement • Move to a smaller and more manageable home • Less emphasis placed on transport accessibility and proximity to employment • More significant health care needs (less than 15 hours per week) requiring regular care and support • Still relatively independent and self-sufficient • Strong focus on dwelling features including comfort and in-home accessibility |

These household segments seek different Dwelling and Location Features, have varying levels of acceptance of non-detached housing options and purchasing powers.

3.3 Emerging Trends in Housing

The long-term nature of the Study Area redevelopment means that consideration must be given to the future nature of housing in Australia and around the world. Changes in the way dwellings are designed, constructed, integrated with the natural and urban environment and utilised by households are already emerging across Australia. Examples of emerging trends are outlined below.

Table 5 Trends Impacting Future Housing

| Segment | Characteristics/Attributes |
|-------------------------------|---|
| Nano- and Tiny Housing | <p>Poor levels of housing affordability in Australia and other parts of the Western World are seeing average dwelling and lot sizes compress. This reflects a need to ensure housing product prices continue to remain within the purchasing power of major housing segments.</p> <p>The most extreme examples of this dwelling size compression are trends in nano- and tiny housing in Australia and in countries like the US.</p> <p>In terms of nano-housing, Western Australia is leading the country with the recent release of micro residential lots (detached housing lots) at 80sqm in Ellenbrook by LWP Properties. These micro lots, supporting both one and two storey terrace houses have frontages as low as 4.5m. The initial release of micro lots (sized at 120sqm) in 2015 were intentionally quarantined for first home buyers (with investors excluded from purchasing). This was a conscious decision of the developer to maximise the benefit of the product type for first home buyers⁷.</p> |

⁷ Perth Now (2017) Perth real estate Micro blocks of 80sqm to go on sale accessed at <https://www.perthnow.com.au/news/wa/perth-real-estate-micro-blocks-of-80sqm-to-go-on-sale-ng-fb75cd088bc1186db42ddf87033ea375>

| Segment | Characteristics/Attributes |
|---|--|
| | <p>Tiny housing is an alternate housing model that entails the construction of purpose built nano-dwellings sometimes as small as 40sqm. Costs can vary, with companies in the US building tiny homes for as little as \$25,000⁸. The Future Housing Taskforce in Queensland prepared a paper entitled <i>Smarter Smaller Housing</i> which identified a series of unique and innovative dwelling designs that could be constructed for less than \$100,000 using a combination of lighter materials, more efficient designs and smaller floor plates.</p> |
| <p>Smart Homes</p> | <p>Advanced telecommunications and automation technologies are becoming increasingly affordable and intelligent, opening up opportunities for integrating such technologies into the family home.</p> <p>Smart home technology continues to be nascent and relatively fragmented, with individual smart home devices being able to be networked. This fragmented approach does not maximise the potential benefits of smart home technologies.</p> <p>A recent assessment by Forbes magazine included predictions on the future of smart home technologies including:</p> <ul style="list-style-type: none"> • Improvements in the cybersecurity overlays of smart home systems • Structured integration of whole smart home systems • Increased role of artificial intelligence and digital personal assistants at home • Increased prominence of smart surveillance and security as part of smart home systems • Smart Home “big data” will provide opportunities for resource sustainability to be managed and optimised for whole communities • Tailorable and customisable smart home solutions post installation • Integration of smart home systems into external parts of the house, including management of yard and garden maintenance, watering and climate control. • Seamless voice control usage and integration⁹. <p>Smart home technologies will not only provide conveniences and amenities for the average households, but will also allow for older households to manage their homes on a daily basis for longer and integrate patient monitoring, falls warnings and other alerts and as part of ageing-related e-health initiatives.</p> |
| <p>3D Printing and Modular Home Construction</p> | <p>An alternative response to degrading housing affordability in Western countries has been the emergence of alternative housing construction approaches.</p> <p>Modular housing models have become more popular in recent years, with overseas manufacturing capacity in countries like China increasing the opportunities for modular housing products to be fabricated and imported, complementing local capacity. Modular housing has figured prominently in regional mining areas of the country where the combination of poor affordability and rapid rising demand rendered traditional construction methods impossible. Similarly, the lower cost of construction has also seen modular housing become a growing part of aged accommodation and retirement living in NSW, where regulations support and facilitate such development.</p> <p>In the longer-term, fabrication-based modular housing will likely give way to increased use of 3D printing. 3D Printing is the process of making a 3 dimensional digitally designed model by placing successive thin layers of material. At present 3D Printing is restricted primarily to smaller item manufacturing and fabrication. However, the use of the process for housing has already been identified.</p> <p>In 2014, a Chinese company constructed 10 houses using 3D Printing technology. Since then a full house was again printed in China in 2016 in under 45 days, while in Russia in 2017 a small nano-house was printed in under 24 hours with a build and materials cost of less than \$10,000.</p> |
| <p>Vertical Retirement</p> | <p>Retirement and over 55s villages have generally been low density development located on the urban fringe and peri-urban towns in major Australian cities. This has reflected a combination of land availability and cost constraints in the feasibility of the model and</p> |

⁸ Future Housing Taskforce (2017) Is America’s “Tiny Home Movement” Taking Hold Here? Accessed at <http://futurehousingtaskforce.com.au/wp-content/uploads/2016/05/Tiny-Home-Movement-SBS-Report.pdf>

⁹ Forbes (2018) 14 Predictions For The Future Of Smart Home Technology <https://www.forbes.com/sites/forbestechcouncil/2018/01/12/14-predictions-for-the-future-of-smart-home-technology/2/>

| Segment | Characteristics/Attributes |
|--|---|
| | <p>the general preference among developers/operators to stage retirement village development.</p> <p>Retirement living is typically a more affordable aged accommodation option than traditional residential or serviced apartments. Entry prices are generally 15-30% lower than a comparable apartment, allowing the resident to realise more of the equity in the family home to fund their retirement.</p> <p>However, in recent years, the number of vertical retirement villages proposed or under construction has increased significantly and the size and scale of developments has grown.</p> <p>To facilitate vertical retirement villages and improve their feasibility relative to traditional apartment buildings, Brisbane City Council recently introduced an incentives package to support development. This package includes pseudo prioritisation of vertical retirement villages in the local planning scheme, discounted and in some cases eliminated infrastructure charges requirements and streamlined development assessment and approvals processes¹⁰.</p> |
| <p>SOHO and Work and Business-Integrated Living</p> | <p>In 2016, approximately 13% of the workforce either worked from home, telecommuted or used their home as a hub or base for mobile employment¹¹.</p> <p>As employment and business activity becomes more flexible in response to both technology and lifestyle options, new dwelling product types will be required to facilitate these changes. Examples of new and innovative work-integrating living includes:</p> <ul style="list-style-type: none"> • SOHO (Small Office/ Home Office) Apartments and Townhouses; • Shop-Top medium density housing with combined ownership structures; • Warehouse-top housing allowing boutique and niche manufacturers and other businesspeople to live in a semi-industrial environment; and • Allowance for customer parking in front of residential dwellings (including guest parking in apartment buildings). |

3.4 Role of Social and Affordable Housing in Transit-Oriented Developments

The current investment in major road and rail transport infrastructure coupled with the proximity of Alkimos Central to the beach and the proposed delivery of major facilities and amenities, will all contribute to price and value growth in the local residential market over time. This value growth is regarded as an appropriate response to the fundamental amenity and accessibility attributes of the transit-oriented nature of Alkimos Central and should be distinguished from price growth linked to market cycles.

However, this value and price growth has the potential to raise affordability challenges for some purchaser groups in the market if not appropriately managed.

The most common driver of **general affordability challenges** in a transit oriented development is a lack of diversity of housing stock, with households that otherwise would seek smaller and higher density dwellings forced by a lack of options into larger and more expensive product. The proposed Land Use Master Plan seeks to deliver a diversity of housing typologies and sizes that will help to meet the needs of a diversity of household market segments and provide choice for customers. However, the short-term ability of the market to deliver compact residential products (e.g. apartments) in outer metropolitan locations is challenging given the relative affordability of prevailing green title residential house & land product (e.g. \$425,000 to \$525,000 at Alkimos). To attract buyers to the alternative apartment products, these will need to be priced at a substantial discount below nearby house & land prices, with an apartment sale price likely to be below the cost of its construction, resulting in a current lack of viability for apartments in such locations.

Due to this, it is likely in the short to medium term that the market will not be able to readily provide smaller and higher density housing product (e.g. apartments) that is **affordable to lower income households** in the

¹⁰ BCC (2017) Retirement and Aged Care accessed at <https://www.brisbane.qld.gov.au/community-safety/community-support/seniors/retirement-aged-care>

¹¹ ABS (2017) 2016 Census Community Profiles, Australian Bureau of Statistics, Canberra

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community (such as socio-economically disadvantaged households, key service worker, students and new migrants). These groups represent some of the most housing vulnerable cohorts in the community and will likely lack the purchasing power to access housing in the local market (outside of the rental market) in the absence of Government support (in the form of direct social housing provision and other Government-funded interventions).

4 CASE STUDY LESSONS

This section profiles a selection of case study locations – focused on more established master planned communities across WA and the rest of Australia – and assesses the housing mix in each location and the lessons learnt.

Key Findings:

- Examples of secondary centres (or equivalent) across Western Australia and nationally (namely Queensland) exhibit an above average share of non-house dwellings within the local area.
- Townhouses account for the majority of non-house dwellings in and adjacent to secondary centres, and on average represent between 20% and 30% of the total dwelling mix.
- Apartments are less common in secondary centres, particularly those in non-coastal and non-inner city locations, accounting for 10-15% of dwelling stock.
- Newer apartment developments are starting to emerge in secondary centres nationally but tend to occur later in the development cycle of the centre.
- Higher apartment shares of dwelling mix are particularly dependent on tertiary education offerings being located in the secondary centre, providing student-based drivers of demand.

4.1 Case Study Locations

RPS has identified 4 locations across Australia for review. These locations include:

- **Whitford Activity Centre, Hillarys** – centred on the Whitford Activity Centre in the City of Joondalup, the Whitford Activity is a secondary centre in the North West Corridor of Perth. It was selected for review as it includes a major regional shopping centre (Westfields Whitford City established in 1977), is in close proximity to a strategic metropolitan centre (Joondalup), is not located on the coast but has a major amenity draw in the form of both Sorrento Beach and Hillarys Boat Harbour to its west on the coast;
- **Booragoon Activity Centre** – located around the Garden City Shopping Centre the centre was first established in 1972 but underwent a major redevelopment in 2000. The Booragoon Activity Centre is a secondary centre in the southern part of Perth Metro Area. It was selected as it is one of the more mature and advanced secondary centres within the Perth Metro Area and has been subject to greater levels of residential densification in recent cycles;
- **Springfield Central, Springfield Lakes** – is located as part of the Greater Springfield Master Plan (first established in 1993), Springfield Central (within the Springfield Lakes SA2) is a secondary activity centre in South East Queensland. It is located in close proximity to the principal activity centre of Ipswich, is a major long-term Master Plan that is still under development and includes both tertiary health and education activities in addition to a major regional shopping centre and train station; and
- **Robina and Varsity Lakes** – is a Master Planned community on the Gold Coast, some parts of Robina, Stephens and Andrews formed Varsity Lakes in 2002. Located close to the Queensland Coast (near Miami and Burleigh Heads). It is an established community, that includes major tertiary health and education uses, is connected to the SEQ Translink rail network, has a major sports stadium and lakes-based amenities.

4.2 Dwelling Mix in 2016

A review of the Census data in 2016 for the dwelling mix in the case study locations revealed significant variation across the locations. This in part reflects variations in the spatial and compositional extent of each of the corresponding statistical areas. Locations such as Springfield Lakes and Robina/Varsity Lakes include both major master plan communities and major activity centres. In contrast, Booragoon has been subject to significant intensification of residential densities, namely semi-detached dwellings, while Hillarys includes a concentration of established and gentrified lower density coastal suburbs communities with more emerging levels of residential intensification.

Table 6 Dwelling Format and Mix, Case Study Locations, 2016

| Dwelling Format | Hillarys | Booragoon | Springfield Lakes | Robina/ Varsity Lakes | Total |
|---|--------------|--------------|-------------------|-----------------------|---------------|
| Separate Housing | 3,638 | 4,405 | 4,946 | 8,065 | 21,054 |
| Semi-detached, row or terrace house, townhouse etc | 408 | 1,633 | 381 | 4,876 | 7,298 |
| Flat or apartment | 73 | 241 | 3 | 2,238 | 2,555 |
| Other | 5 | 3 | 0 | 3 | 0 |
| Total | 4,124 | 6,282 | 5,330 | 15,182 | 30,907 |

Overall, Robina/Varsity Lakes had the highest share of non-separate housing of the case study locations, with 46.9%. Two thirds of these non-house dwellings are semi-detached and town houses with 14.7% or more than one in eight dwellings a flat, unit or apartment.

In reality, Robina and Varsity Lakes – while adjoining each other – are two distinct but interconnected economic nodes. Robina Town Centre is centred around retail, health and sporting facilities of a critical mass while Varsity Lakes is centred around Bond University.

The housing mix also varies between the two locations, though they both share a common trend of above average shares of medium density (29.7% of Robina housing and 35.6% of Varsity Lakes housing are semi-detached). The role of apartments differs however, with 11% of dwellings in Robina and 20% in Varsity Lakes being flats, units and apartments. This reflects the impact of university accommodation demand (particularly student apartment-based housing) on local dwelling mix. Booragoon had the next highest share of non-detached dwellings with 29.8%, again with semi-detached dwellings accounting for the lion's share. Hillarys and Springfield Lakes had significantly lower share of non-house density dwellings, at or below approximately one in ten dwellings.

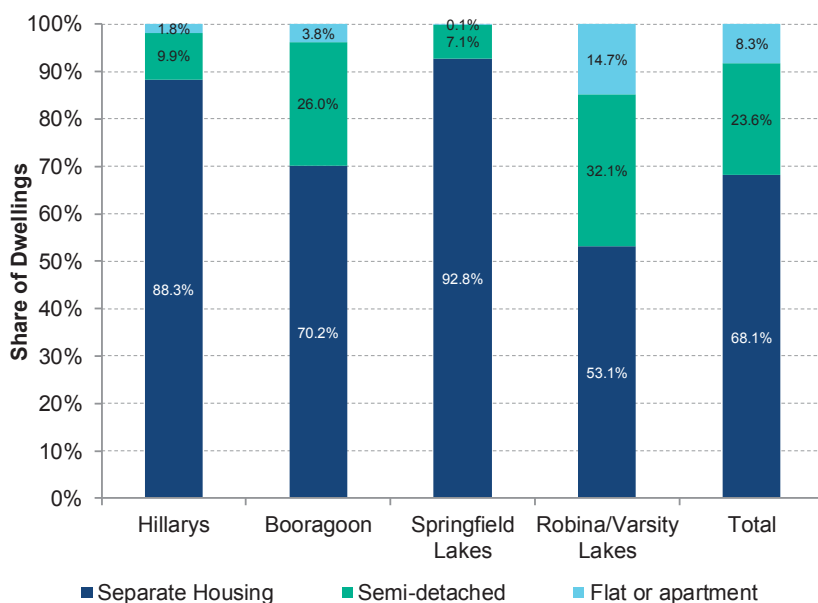


Figure 8 Share of Dwellings, by Format, Case Study Locations, 2016

Overall, the weighted average across the case studies has 68% separate houses, 23.6% semi-detached and 8.3% apartments.

4.3 Recent Development

Since 2016, there has been further non-detached dwelling approval and development activity in the case study locations:

- Westfield Whitford City** – in 2018, an updated application for a \$42m commercial and residential development to the west of Westfield Whitford City shopping centre in Hillarys was approved by the Metro North-West Joint Development Assessment Panel (JDAP). The development includes an 87 apartment building over 9 floors including over 700sqm of commercial floor space. The application was an increase over the 2017 application, increasing both the number of apartments and the height of the built form¹².
- Park Avenue, Springfield Central**– The main apartment development in recent years at Springfield Central has been Park Avenue development. Located as part of the Robelle Domain parklands and adjacent to the Mater Private Hospital Springfield. The Park Avenue development includes approximately 45 apartments over 7 storeys and includes ground floor café and restaurant offering¹³. Additionally, the Health City precinct which is anchored by the Mater Hospital also includes a major vertical retirement village offering by Aveo¹⁴.
- Garden City Booragoon** – Amara City Apartments at Booragoon are a luxury apartment complex collocated with Garden City Shopping Centre. The 125 apartment, 14 storey building includes ground floor commercial tenancies, 3 levels of above ground car parking (including sleeved apartments) and

¹² Community News (2018) Hillarys: Approval for \$42m commercial and residential development next to Westfield Whitford City, Joondalup Times accessed at <https://www.communitynews.com.au/joondalup-times/news/hillarys-approval-for-42m-commercial-and-residential-development-next-to-westfield-whitford-city/>

¹³ Springfield City Group (2019) Park Avenue Apartments accessed at <https://www.greaterspringfield.com.au/lifestyle/park-avenue-apartments/>

¹⁴ Springfield City Group (2019) Avenue Springfield Seniors Living accessed at <https://www.greaterspringfield.com.au/health/seniors-living/>

community garden and sunset deck. Construction commenced in January 2021 and presales have seen several apartment configurations in the first stage sell out.¹⁵

4.4 Implications for Alkimos Central

Townhouses and semi-detached dwellings feature prominently in the case study locations and secondary centres in general. While local centre catchments (both within and adjacent to the centre areas) continue to include a majority of their dwellings as detached separate houses, townhouse and semi-detached products account for between 20% and 30% of total housing product.

Apartments conversely represent a significantly lower share. Robina/Varsity Lakes had the highest share, particularly around the Bond University campus with student accommodation driving overall apartment potential in the area. Apartment developments adjacent to and as part of major retail offerings are becoming increasingly common, particularly in WA secondary centres. These developments of 50-125 apartments are being undertaken by shopping centre developers and owners as part of later stages in order to help diversify local land uses, offsetting changes in retail spending patterns and responding to policy changes by Local and State Governments.

¹⁵ Amara City Gardens (2019) About Amara City Gardens Booragoon accessed at <https://www.amaracitygardens.com.au/>

5 HOUSING POTENTIAL ESTIMATES FOR ALKIMOS CENTRAL

This section summarises age-specific housing preference profile for the suburbs of Alkimos and Eglinton.

Key Findings:

- The population of Alkimos Eglinton is expected to remain young, comprised of young and mature families. These groups have the most homogenous and least diverse housing preferences, driven by need for multiple bedrooms.
- This results in a long-term housing demand profile in Alkimos Eglinton that remains principally for detached dwellings, accounting for almost 90% of demand by 2041.
- Townhouses are the next dwelling format of choice, particularly larger 3 bedroom town houses as more affordable options in the area.
- Alkimos Central is expected to play an important role in delivering residential density and choice in the wider District accounting for the vast majority of smaller dwellings (0-2 bedrooms) and will contribute significantly to meeting townhouse and apartment demand in the area owing to the proximity to public transport, services and amenities.
- There will be demand for a total of 2,806 dwellings in Alkimos Central by 2051, of which approximately one third will need to be townhouses (22.7%) and apartments (9.9%).
- A further 500 dwellings post 2051 is also regarded as viable and may see an increase in attached dwelling share based on population ageing, household gentrification, later stage retail development and tertiary education and health facility investment.
- Opportunity exists for the required dwelling utility to be met through non-traditional housing options. Separate house demand is likely to be for smaller than average dwellings in Alkimos Central, owing to the proximity to services and public transport and the reduced need for a second car.
- This will mean that 3 and even 2+ bedroom houses, in the form of workers cottages, nano-housing and other small lot product is likely to have potential.

5.1 Summary of Approach

Key to estimating the future housing potential of an area, is understanding the housing preferences of each individual age-cohort. Analysis of housing preferences by age group is important as housing needs, requirements and preferences vary across one's housing lifecycle, as demonstrated in section 3.0.

Similarly, it is important for housing preferences to be expressed in terms of both dwelling utility (number of bedrooms) and dwelling format (attached vs detached). This is important as it addresses presumptions that can exist in housing potential assessments that equate dwelling format and utility drivers (i.e. that detached dwellings are large and attached dwellings are small). While this may be true in most occasions, evolving demographic and housing trends means they are not always true (as reflected by the popularity of small lot houses).

This assessment is regarded as a housing potential assessment. In that regard, it is considered to be **unconstrained by the actual carrying capacity of the subject site** and instead is focused on the strategic role and function of Alkimos Central.

A full summary of the methodology and the individual age specific dwelling profiles are included in Appendix A.

5.2 Summary of Key Age Preferences

The development of the housing preference profiles in Appendix A revealed a series of core housing preferences among key age-cohorts likely to call Alkimos Eglinton home:

- **Children (0-9)** – Overwhelmingly 3 and 4 bedroom houses. No representation in apartments and minor share of townhouses.
- **Young Workers (20-39)** – peak shares of town houses (3 bedrooms) and smaller houses. First home buyers and young families.
- **Mature Families (40-64)** – Least diverse dwelling preferences with 4 bedroom houses dominating dwelling types (over 2/3rds) and houses generally (90%).
- **Early Retirees (65-74)** – Shift to smaller houses and townhouses as an early downsizing opportunity.
- **Later Retirees and Pre-Aged Care (70-80+)** – highest level of apartment living with continued strong preferences for small houses and townhouses.

Overall, populations in non-inner city locations are generally more represented by younger and mature family households, particularly in master planned communities. Older households are currently concentrated in inner and middle ring suburbs as a consequence of both downsizing-related internal migration and ageing-in-place. The current housing preference profile shows only limited desire for non-inner city apartment living among younger households outside of key tertiary education-based locations. This means that apartment demand in Alkimos Eglinton is likely to be primarily driven in the short-to-medium term by older households, which are also likely to have a choice of more affordable townhouse options to downsize.

5.3 Dwelling Potential of Alkimos Eglinton

Applying the housing need profiles in Appendix A to the population for the suburbs of Alkimos and Eglinton in section 2.0 of this report, RPS estimates that Alkimos Eglinton will require over 21,100 dwellings by 2041 to accommodate the 68,000 people expected for the two suburbs¹⁶. Based on the age-specific housing preference profile the area, approximately 11% of these dwellings will need to be non-detached housing products, including over 1,920 town houses. Apartments are only expected to account for 1.7% of dwelling preferences by 2051.

¹⁶ Based on population projections for the suburbs of Alkimos and Eglinton (including the Alkimos Eglinton District Structure Plan) from ID for the City of Wanneroo.

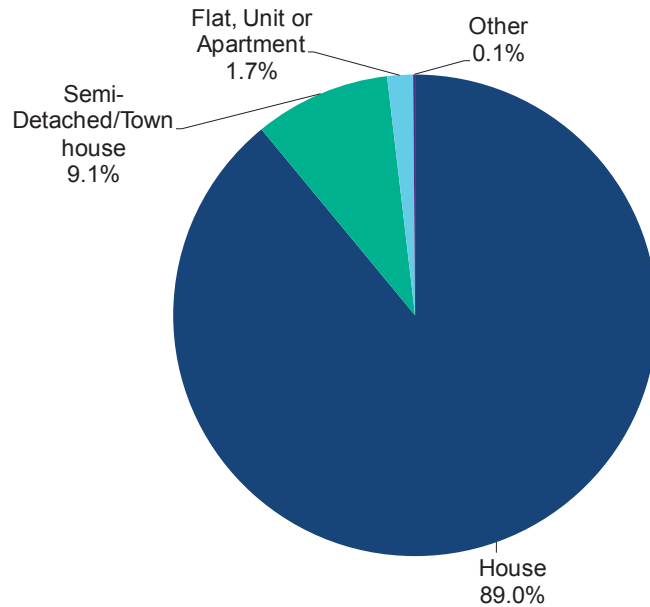


Figure 9 Dwelling Mix, Alkimos Eglinton Housing Preferences, 2051

This outcome is not unexpected. The combination of the relative age of the development by 2051 (less than 30 years) and the maintenance of a very young age profile throughout the assessment period means that the suburbs as a whole are likely to retain an above average share of younger and more mature families. These households have the lowest level of diversity of housing preferences and are the drivers of overall demand in the market for detached dwellings with 4 or more bedrooms.

Assuming post 2051, that the local resident population begins to gentrify and age in the area, older age cohorts who are most likely to demand apartment living in the long-term are unlikely to account for a significant share of the local population until 2071 onwards.

5.4 Alkimos Central Role and Function

Alkimos Central will be the highest concentration of services, facilities and positive accessibility attributes in the District and wider area. This is likely to support higher density dwelling demand in the area and result in Alkimos Central accounting for the lion’s share of smaller product (particularly studio, 1 and 2 bedroom dwellings).

Additionally, separate housing demand in Alkimos Central is expected to focus on smaller 3 bedroom offerings, in response to reduced demand for a second car garage in areas of the Centre with strong pedestrian accessibility to public transport. The reduced requirement for a second car allows for narrower frontages and supports smaller and more innovative dwelling formats including workers cottages and nano housing product – including 2 bedroom houses.

Overall, RPS estimates that by 2051, there will be a total potential for over 2,800 dwellings in Alkimos Central. This will be comprised primarily of separate houses (1,867) but with more significant numbers of townhouses (636) and apartments (279). The approach adopted to calculate these dwelling estimates is outlined in Appendix A.

Table 7 Dwelling Potential Estimates, Alkimos Central, by Type and Number of Bedrooms, by 2051

| Bedrooms | House | Semi-Detached/Townhouse | Flat, Unit or Apartment | Other | Total |
|--------------|--------------|-------------------------|-------------------------|-----------|--------------|
| 0 | 45 | 0 | 6 | 0 | 51 |
| 1 | 75 | 148 | 93 | 12 | 327 |
| 2 | 366 | 309 | 170 | 13 | 857 |
| 3 | 774 | 164 | 10 | 0 | 948 |
| 4 | 575 | 15 | 0 | 0 | 590 |
| 5+ | 33 | 1 | 0 | 0 | 33 |
| Total | 1,867 | 636 | 279 | 24 | 2,806 |

The result of this is that by 2051, approximately two-thirds of dwelling preferences will be for standalone detached houses with the remaining third for attached products. This will include 22.7% of demand for townhouses and a further 9.9% for apartments. This is illustrated below.

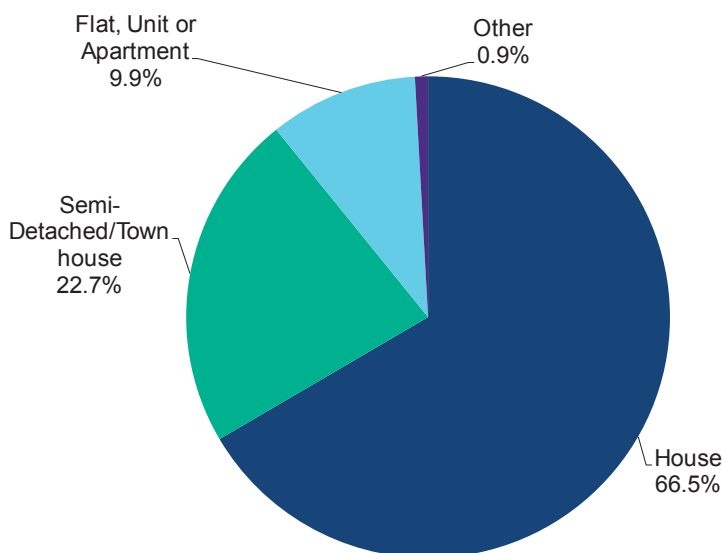


Figure 10 Dwelling Mix, Alkimos Central Housing Preferences, 2051

A review of potential dwelling demand by bedroom numbers confirms the stronger demand for 2 and 3 bedroom housing options expected for Alkimos Central. By 2041-2051, there will be potential demand for over 850 2 bedroom dwellings and approximately 950 3 bedroom dwellings. Interestingly, the fact the age profile of the Alkimos area by this time remains comparatively young underpins the higher level of demand for 4 bedroom dwellings (590) than 1 bedroom dwellings (327).

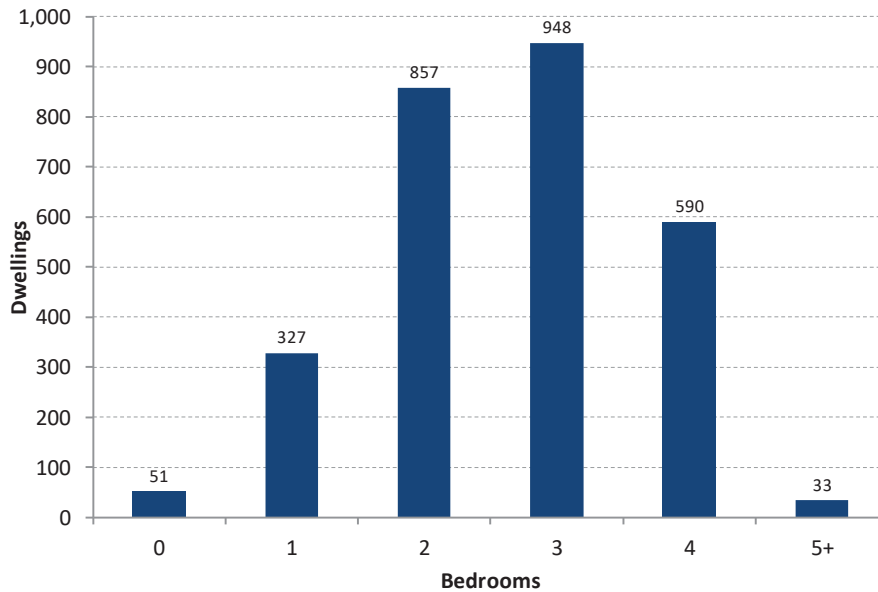


Figure 11 Dwelling Demand Potential, by Number of Bedrooms, Alkimos Central, 2051

5.5 Post-2051 and the Impact of Tertiary Health and Education

The use of Forecast ID population inputs for the suburbs of Alkimos and Eglinton mean that projections of demand are limited to 2041. However, it is expected that the Alkimos Central development will likely extend beyond this date and continue to add dwellings at least for a further 20 years (i.e. 2071). By this time, the Alkimos Central development will be approaching 50 years and new dwelling demand will likely benefit from a number of important milestones:

- Population ageing** – post 2051, the population of Alkimos Eglinton is likely to start ageing. Traditional separate housing supplies in the District are likely to be close to exhausted with available supplies limited to multi-dwelling lots. It is expected that at this time, current emerging trends in vertical retirement and aged care will be fully established in the market, with Alkimos Central a highly suitable and appropriate location for this activity.
- Household gentrification** - At the same time, the proportion of younger families is likely to have declined, meaning mature families with greater levels of household wealth (and correspondingly higher house prices) are likely to be the norm. These trends will drive demand for townhouses and apartments as both an affordable entry alternative to the local market as well as an emerging downsize option for older households;
- Late Stage Retail Development Integrating Residential** – post 2051, the major retail development in Alkimos Central is likely to be approaching its final stages. This presents an opportunity for higher density residential apartments to be incorporated or collocated with the last stage of the development; and
- Tertiary Education and/or Health** – Scenario 1 of the Alkimos Central Economic Development Strategy identifies potential need for investments in tertiary education and/or health in the Centre. As demonstrated from the case studies, the inclusion of tertiary facilities can drive apartment demand through student accommodation as well as vertical seniors living options collocated with hospital and health developments. These types of facilities are likely necessary to drive non-demographic demand for apartment living in the centre, post 2051.

A further 500-700 dwellings could be supported in Alkimos Central post 2041-2051, assuming retail integration and tertiary health and/or education service provision. If 80%¹⁷ of this demand is directed evenly to townhouses and apartment demand, then the dwelling mix of Alkimos Central is likely to become even more diverse.

The addition of 500 new dwellings post 2041 will take the total dwelling number to over 3,300 with less than 60% as detached dwellings and 25.3% as semi-detached and townhouses and 14.5% as apartments.

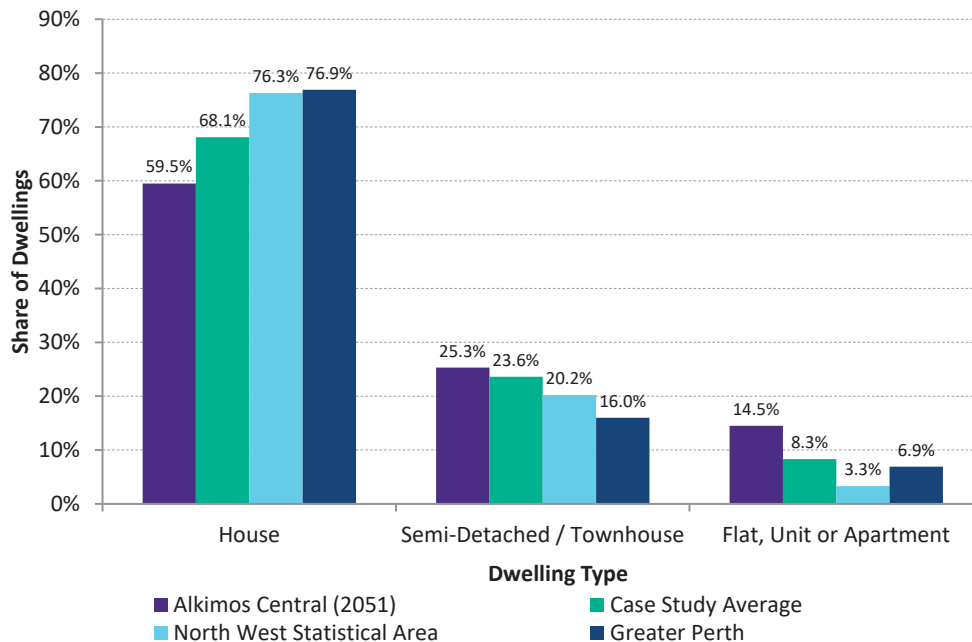


Figure 12 Dwelling Mix, Alkimos Central, as at 2051 compared to Case Study Average

5.6 Comparison of Alkimos Central Potential with Case Studies

Overall, this scale and mix of this dwelling potential is regarded as appropriate and reasonable in the long-term and is broadly in line with case study locations.

While none of the case study locations are perfectly representative of the attributes of Alkimos Central, Robina and Booragoon centres provide the greater insights into the dwelling mix and scale potential of the centre.

Of particular note is the similarities between Booragoon and Alkimos Central in terms of Faltnowhouse opportunities. Conversely Robina, as a less integrated and more spatially disconnected centre than what is planned for Alkimos Central, has a higher share of apartment living, in part reflecting the location of tertiary health and education within that centre.

Alkimos Central therefore represents a unique opportunity to provide a diverse range of housing choices in the local area – a diversity that will be further enhanced if tertiary health and/or education are delivered.

5.7 Comparison with Alkimos Central Land Use Master Plan Dwelling Yields

A review of dwelling yields proposed for the Alkimos Central Land Use Master Plan outlined in section 1.3 indicates that demand for dwellings in Alkimos Central is likely to outstrip supply by 2051. While there is the

¹⁷ This is an assumption based on the built form expectations of net additional dwelling yields associated with tertiary facility or major retail integration. Drawn from case study analysis/benchmarks.

potential for over 2,800 dwellings worth of demand to be directed at Alkimos Central by 2051, the proposed Land Use Master Plan has a likely capacity at this time of 2,457 dwellings.

The largest difference is likely to be in demand for detached dwellings. This is to be expected as while the housing preferences of many age cohorts favour detached dwellings, the constrained nature of land supplies within a secondary activity centre around a major public transport node will limit the availability of detached dwelling supply. Fortunately, any unmet demand for detached dwelling demand out to 2051 can be readily managed through either the natural market based transfer of demand to other more appropriate detached dwelling locations in the corridor, or the conversion of demand (particularly small house demand) in to comparable attached product.

This is reflected in the Land Use Master Plan, which seeks to provide a higher level of townhouse product. This approach is regarded as appropriate as the housing preference profiles for smaller detached and medium density attached housing product (particularly in terms of bedroom numbers) are very similar and are designed to meet the need of similar dwelling cohorts.

The Land Use Master Plan also indicates the potential for further dwelling demand post 2051. This aligns with the analysis within this report for as outlined in section 5.5, with further dwelling yield potential arising from progressive intensification of development over time. This is particularly relevant for apartment offering, due to feasibility and market depth challenges expected (refer to section 6.0 for further information).

Overall, RPS considers the Land Use Master Plan dwelling yield to be appropriate. The analysis within this report indicates that there will be sufficient demand to accommodate the supply proposed while the development concept will support continued residential redevelopment and intensification over time to help Alkimos Central realise its full residential potential.

6 PRELIMINARY APARTMENT FEASIBILITY ASSESSMENT

This section provides a high level overview of the feasibility of apartment development at Alkimos Central in the short, medium and long-term, based on a residual land value approach.

Key Findings:

- High level feasibility analysis indicates that apartment development in Alkimos Central at present would likely yield a negative residual land value.
- Median house prices in the area will need to increase by 50% for residual land values for apartment developments to be positive. This is not expected until 2036-2041. However, even at this level, the residual land value may not be sufficiently high for development to be practically viable.
- Student accommodation and seniors living apartments may be more viable than traditional apartments in the long-term due to different development attributes.
- Intervention will be required in the market to transcend local demographic and feasibility challenges through investment in tertiary health and education services. These investments will add new and stronger drivers of apartment demand into the local market, augmenting long-term household gentrification and ageing to drive apartment demand.

6.1 Testing Development Feasibility

The purpose of this preliminary development feasibility is to provide guidance on the feasibility of apartment developments in Alkimos Central. The assessment is not a full development feasibility – instead, it is preliminary in nature and represents a static assessment of the relationship between different drivers of apartment feasibility.

6.1.1 Residual Land Value Approach

RPS has adopted a residual land value approach. This is regarded as an appropriate approach for determining the preliminary feasibility of a development. This approach estimates the sales price or value of a property and subtracts known construction development and margin costs. The remaining or residual value therefore represents the value that could be attributed to land as part of the overall development/transaction.

There are three key outcomes that can occur from this approach:

- **Negative value** – the remaining value after the construction and development costs is negative, meaning there is no value that can be attributed to the land. A development feasibility with a negative residual value is regarded as unviable;
- **Positive value** – the remaining value after the construction and development costs (inclusive of a development margin) is positive, meaning there is value that can be attributed to the land. However, this may not necessarily indicate underlying development feasibility, unless the positive residual value is above that of the market value of the land with inclusion of a market acceptable value for profit and risk; and;
- **Viable value** – the remaining value after the construction and development costs (inclusive of a development margin) with an allowance for developer profit are positive and are above the underlying market value of land.

Under this approach, questions of funding are not considered. This includes issues of financing and associated costs.

6.1.2 Development for Testing

For the purpose of this assessment, RPS has tested the feasibility of 1 (80sqm), 2 (100sqm) and 3 (120sqm) bedroom apartments in a 4-8 storey apartment building with basement parking. Feasibility has been tested and 3 grades of finishes – low, medium and high – which impacts the total value of construction.

6.1.3 Key Variables

The following table outlines the key variables of the development feasibility testing.

Table 8 Development Feasibility Variables

| Variable | Measure | Value |
|--|-----------------------------|-----------|
| Current Median House Prices (Alkimos) | \$ per house | \$398,000 |
| Future Median House Price (Alkimos – 150% current level) | \$ per house | \$597,000 |
| Base Construction Costs | Sourced from BMT QS | |
| Professional Services | Of Base Construction Costs | 10% |
| Marketing and Advertising | Of Base Construction Costs | 10% |
| Developer Margin | Of Total Construction Costs | 20% |
| Development Size | Storeys | 6 |
| Units | Per Floor | 8 |
| Non-Unit GFA | | 20% |
| Plot Ratio | | 2.0 |

Note that unit prices for each apartment size are based on equivalent median house prices (small, medium and large) in the area. These prices have been sourced for 3 and 4 bedroom homes from realestate.com.au and other locations.

Additionally, price weightings have been applied based on the level of finishes. These weightings are applied to the median house price (equivalent) to account for the underlying quality of the apartment product.

6.2 Individual Apartment Feasibility

6.2.1 Base Feasibility

Applying the variables outlined above, the preliminary development feasibility assessment confirms that the residual land value for apartment developments in Alkimos Central is currently negative across all apartment sizes and all level of finishes. 1 bedroom apartments with medium finishes have the best residual land value at -\$66.5k while 3 bedroom apartments with low finishes have the worst at -\$190.4k.

Table 9 Preliminary Development Feasibility, Apartments by Number of Bedrooms, Current Median House Price, Alkimos Central

| Scenarios | 1 Bed | 2 Bed | 3 Bed |
|---|-------------------|-------------------|-------------------|
| Dwelling Size (GFA) | 80 | 100 | 120 |
| Median House Price (eq) | \$337,000 | \$398,500 | \$460,000 |
| Finishes Levels | Low | Medium | High |
| Unit Price Weighting | 60% | 80% | 100% |
| Low Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$202,200 | \$239,100 | \$276,000 |
| Base Construction (including Builder's Margin) | \$207,298 | \$259,123 | \$310,947 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$259,123 | \$323,903 | \$388,684 |
| + Developer Margin | \$310,947 | \$388,684 | \$466,421 |
| Residual Land Value (Per Apartment) | -\$108,747 | -\$149,584 | -\$190,421 |
| Medium Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$269,600 | \$318,800 | \$368,000 |
| Base Construction (including Builder's Margin) | \$224,094 | \$280,118 | \$336,141 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$280,118 | \$350,147 | \$420,176 |
| + Developer Margin | \$336,141 | \$420,176 | \$504,212 |
| Residual Land Value (Per Apartment) | -\$66,541 | -\$101,376 | -\$136,212 |
| High Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$337,000 | \$398,500 | \$460,000 |
| Base Construction (including Builder's Margin) | \$274,482 | \$343,103 | \$411,723 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$343,103 | \$428,878 | \$514,654 |
| + Developer Margin | \$411,723 | \$514,654 | \$617,585 |
| Residual Land Value (Per Apartment) | -\$74,723 | -\$116,154 | -\$157,585 |

6.2.2 Real Median Price Adjusted Feasibility

RPS has also assessed the development feasibility of apartments at a higher median house price in Alkimos. This scenario is based on a median house price 50% higher (in real terms) than current levels, adjusted across the 3 unit scenarios. This is equivalent to 15-20 years of growth at an average of approximately 2-3% real price growth per annum.

Based on this adjustment, residual land values for individual apartments are positive for all bedroom types under medium and high finishes but remain marginally negative under the low finishes. This likely reflects the fact that lower quality product would likely need to have changes to the structure of the built form – such as at grade car parking – to be viable at this level.

Table 10 Preliminary Development Feasibility, Apartments by Number of Bedrooms, Adjusted Median House Price, Alkimos Central¹⁸

| Scenarios | 1 Bed | 2 Bed | 3 Bed |
|---|-----------------|------------------|------------------|
| Dwelling Size (sqm GFA) | 80 | 100 | 120 |
| Median House Price (eq) | \$505,500 | \$597,750 | \$690,000 |
| Finishes Levels | Low | Medium | High |
| Unit Price Weighting | 60% | 80% | 100% |
| Low Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$303,300 | \$358,650 | \$414,000 |
| Base Construction (including Builder's Margin | \$207,298 | \$259,123 | \$310,947 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$259,123 | \$323,903 | \$388,684 |
| + Developer Margin | \$310,947 | \$388,684 | \$466,421 |
| Residual Land Value (Per Apartment) | -\$7,647 | -\$30,034 | -\$52,421 |
| Medium Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$404,400 | \$478,200 | \$552,000 |
| Base Construction (including Builder's Margin | \$224,094 | \$280,118 | \$336,141 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$280,118 | \$350,147 | \$420,176 |
| + Developer Margin | \$336,141 | \$420,176 | \$504,212 |
| Residual Land Value (Per Apartment) | \$68,259 | \$58,024 | \$47,789 |
| High Spec | 1 Bed | 2 Bed | 3 Bed |
| Sales Price | \$505,500 | \$597,750 | \$690,000 |
| Base Construction (including Builder's Margin | \$274,482 | \$343,103 | \$411,723 |
| Total Construction (inc Professional Services, Marketing and Advertising) | \$343,103 | \$428,878 | \$514,654 |
| + Developer Margin | \$411,723 | \$514,654 | \$617,585 |
| Residual Land Value (Per Apartment) | \$93,777 | \$83,096 | \$72,416 |

¹⁸ Based on current prices. Note that Base Construction costs will likely increase over time.

6.3 Apartment Building Feasibility

RPS has also tested the results of the preliminary feasibility assessment on the notional development concept outlined in section 6.2.2. Assuming 48 apartments over 6 storeys and applying the residual land value of the 2 bedroom medium finishes apartment based on an adjusted median house price, this yields a notional land value per sqm for the development of \$242. This is summarised below.

Table 11 Apartment Building Feasibility, Preliminary Only¹⁹

| Indicator | Value |
|---------------------------------|--------------|
| Number of Apartments per Floor | 8 |
| Total Number of Apartments | 48 |
| Total SQM (GFA) | 5,760 |
| Total Land Area (SQM) | 11,520 |
| Residual Value (Site) | \$2,785,140 |
| Residual Value (per SQM) | \$242 |

Currently, median prices for residential lots in greenfield developments across Perth are between \$500-\$600 per sqm²⁰. While the value of en globo land or development sites can be lower than this benchmark, the per square metre residual value from the apartment building feasibility is low and may not be viable even at the adjusted median house price for the area.

6.4 Alternative Apartment Development Options

The feasibility analysis is based on traditional apartment development in suburban locations outside of the inner city of Perth (i.e. for apartments between 4 and 8 storeys). As such, development viability may be improved in if non-traditional apartment development options are pursued. This may include:

- **Student accommodation** – student accommodation apartments are typically a lower cost than traditional apartments, owing to smaller sizes, reduced facilities and shared amenities;
- **Vertical seniors living** – the pricing and purchase model for seniors living different from traditional strata title apartments, including ongoing service fees and Deferred Management Fees which impact development feasibility; and
- **Lower density apartments** – the analysis in this report was based on an apartment development of between 4 and 8 storeys. Changes to this development height may improve the overall feasibility, with lower density apartments with at-grade and under croft parking costing 10% less per sqm than higher density dwellings.

These types of dwellings are particularly prominent in the case study locations with the presence of tertiary health and education helping to directly and indirectly drive alternative apartment developments that provide residential density in the centres.

¹⁹ Note that if the plot ratio is higher than 2.0 that this may improve the RLV for local apartment sites. However, it may also impact the cost of construction which may in turn worsen the RLV.

²⁰ Statista.com (2019) Price per Square Metre of Residential Land in Perth from 2009 to 2018 accessed at <https://www.statista.com/statistics/736618/australia-land-price-per-square-meter-perth/>

7 CONCLUSIONS AND RECOMMENDATIONS

Alkimos Central has the potential see demand of up to 2,800 dwellings by 2051, including over 900 townhouses, semi-detached dwellings and apartment. Additionally, RPS estimates at least a further 500 dwellings could be supported post 2051, further diversifying and enhancing the housing choice of the area.

This demand potential exceeds the proposed dwelling capacity in 2051 under the Land Use Master Plan of 2,457. This indicates that it is likely there will be more than sufficient demand to meet the supply of dwellings of the Centre. The Land Use Master Plan proposes slightly higher shares of medium density housing than indicated in the model, though this is regarded as an appropriate response to the modelled demand for smaller 2 and 3 bedroom detached product as part of the demographic mix of the development (particularly in response to the delivery of tertiary health and education facilities). Additionally, as the project develops there is potentially to add additional density as well as redevelopment sites for higher density as overall feasibility improves.

Development feasibility for apartments is likely to be challenging prior to 2041 and is likely to continue to be a constraint on more intensive residential development to 2051. This coupled with the lack of a suitable demographic means that more than half of apartment development in Alkimos Central is unlikely to occur until post 2051 at the earliest (and potentially as late as 2071).

Intervention will be required in the market to transcend these demographic and feasibility challenges through investment in tertiary health and education services. These investments will add new and stronger drivers of apartment demand into the local market, augmenting long-term household gentrification and ageing to drive apartment demand.

Appendix A

RPS Housing Needs Methodology

Methodology

RPS has assessed housing needs potential in the Alkimos Central area by using an age-specific housing preferences approach. This approach models the preferences of individual age groups (in 10 year cohorts) across different types of accommodation and applies these age-specific preferences to the projected population for an area (Alkimos and Eglinton).

Dwellings preferences are broken down by:

- Broad category and individual type;
- Number of bedrooms (as a proxy for dwelling size).

This approach is preferred as it takes into consideration the age (and therefore household type) based drivers of housing demand which allows the changing age profile of an area over time to influence housing need. It also allows for housing demand to be expressed in terms of both dwelling format and dwelling utility. This is important as, while related, these two factors are not always correlated. Traditional housing analysis presumes that detached dwellings are larger than attached dwellings in terms of number of bedrooms, but this is a presumption, and not a wholly accurate conclusion.

RPS has modelled the age-specific housing preferences for Alkimos and Eglinton based on Census data from Perth Metro, the North West SA4 (Stirling, Joondalup and Wanneroo) as well as benchmark locations across Australia for 2006, 2011 and 2016.

The combination of locations was used to balance the competing drivers and factors in the model:

- Regional data is used to mirror and reflect the housing preferences of population cohorts in the same or similar property market or sub-region as the subject site;
- Metropolitan wide data is used to provide a baseline for housing preferences in a wider market with a critical mass of dwelling supply as a proxy for dwelling preferences being unconstrained by supply; and
- Benchmark data is used to make adjustments to regional data to reflect both the urban form and structure of the subject site (i.e. activity centre, master planned area, TOD) as well as examples of dwelling mix.

Data is compiled and analysed across three Census periods to account for rapid changes in dwelling preferences in response to dwelling supply shifts and demographic changes. This is to ensure that the final dwelling preferences developed are adjusted to be broadly representative of future dwelling demand. Once the population of the area is allocated to preferred dwelling types and sizes, dwelling type specific household sizes are applied to estimate total numbers of occupied dwellings in Alkimos and Eglinton. Adjustments are made for dwelling occupancy to calculate the total dwelling need.

RPS has then applied dwelling type and size specific assumptions to reflect the role and function of Alkimos Central in the wider District. This includes review and consideration of planned dwelling supply and mix across the District as reflected in the individual Local Structure Plans. As part of this analysis, RPS applied the following average household sizes.

Table 12 Average Household Size Assumptions, by Number of Bedrooms

| Bedrooms | 0 | 1 | 2 | 3 | 4 | 5+ |
|------------------------|-----|-----|-----|-----|-----|-----|
| Average household size | 1.0 | 1.5 | 1.8 | 2.7 | 3.5 | 4.5 |

Housing Dwelling Preference Profiles

The following tables summarises the age-group specific housing dwelling preferences prepared for the suburbs of Alkimos and Eglinton.

Table 13 Housing Dwelling Preferences Profile, by Age Group, Alkimos Eglinton

| 0-9 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.0% | 0.3% | 3.0% | 1.1% | 0.1% | 4.5% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.0% | 0.1% | 0.4% | 0.2% | 0.1% | 0.8% |
| Separate house | 0.0% | 0.1% | 0.7% | 20.0% | 63.0% | 11.0% | 94.8% |
| Total | 0.0% | 0.1% | 1.1% | 23.4% | 64.3% | 11.2% | 100.0% |

| 10-19 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.0% | 0.2% | 1.8% | 1.0% | 0.1% | 3.1% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.0% | 0.1% | 0.4% | 0.3% | 0.2% | 1.0% |
| Separate house | 0.1% | 0.1% | 0.5% | 13.5% | 65.2% | 16.2% | 95.6% |
| Total | 0.1% | 0.1% | 1.1% | 15.7% | 66.5% | 16.5% | 100.0% |

| 20-29 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.2% | 1.0% | 0.3% | 0.0% | 0.0% | 1.5% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.1% | 0.3% | 0.3% | 0.0% | 0.0% | 0.7% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.1% | 0.2% | 0.3% | 0.0% | 0.0% | 0.6% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.1% | 0.1% | 5.0% | 1.5% | 0.1% | 6.8% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.2% | 0.5% | 1.0% | 1.0% | 0.2% | 2.9% |
| Separate house | 0.1% | 0.2% | 1.0% | 22.0% | 53.8% | 10.5% | 87.6% |
| Total | 0.1% | 0.9% | 3.1% | 28.8% | 56.3% | 10.8% | 100.0% |

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| 30-39 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|-------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.5% | 0.5% | 0.1% | 0.0% | 0.0% | 1.1% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.2% | 0.3% | 0.1% | 0.0% | 0.0% | 0.6% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.1% | 0.3% | 0.1% | 0.0% | 0.0% | 0.5% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.2% | 0.5% | 4.5% | 1.5% | 0.1% | 6.8% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.2% | 0.2% | 1.0% | 0.3% | 0.1% | 1.8% |
| Separate house | 0.1% | 0.2% | 1.0% | 24.0% | 57.0% | 7.0% | 89.3% |
| Total | 0.1% | 1.4% | 2.7% | 29.8% | 58.8% | 7.2% | 100.0% |

| 40-49 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.1% | 0.4% | 3.0% | 1.0% | 0.0% | 4.5% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.1% | 0.2% | 1.0% | 0.5% | 0.0% | 1.8% |
| Separate house | 0.0% | 0.1% | 0.9% | 18.0% | 63.0% | 11.6% | 93.6% |
| Total | 0.0% | 0.3% | 1.6% | 22.0% | 64.5% | 11.6% | 100.0% |

| 50-59 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|--------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.2% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.1% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.0% | 0.1% | 0.3% | 0.0% | 0.0% | 0.4% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.2% | 1.0% | 3.0% | 0.7% | 0.1% | 5.0% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.1% | 0.2% | 1.0% | 0.4% | 0.1% | 1.8% |
| Separate house | 0.1% | 0.2% | 1.0% | 20.0% | 60.0% | 11.0% | 92.3% |
| Total | 0.1% | 0.6% | 2.5% | 24.4% | 61.1% | 11.2% | 100.0% |

REPORT

| 60-69 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|-------------|--------------|--------------|-------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.3% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.2% | 0.2% | 0.0% | 0.0% | 0.4% |
| Flat, unit or apartment in a one or two storey block | 0.0% | 0.1% | 0.2% | 0.3% | 0.0% | 0.0% | 0.6% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 0.5% | 1.2% | 3.5% | 0.5% | 0.0% | 5.7% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.5% | 0.2% | 1.0% | 0.5% | 0.0% | 2.2% |
| Separate house | 0.1% | 0.3% | 2.0% | 27.0% | 53.1% | 8.3% | 90.8% |
| Total | 0.1% | 1.5% | 4.0% | 32.0% | 54.1% | 8.3% | 100.0% |

| 70-79 Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|--------------|--------------|--------------|-------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.2% | 0.3% | 0.0% | 0.0% | 0.0% | 0.5% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a four or more storey block | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.2% |
| Flat, unit or apartment in a one or two storey block | 0.1% | 0.2% | 0.5% | 0.4% | 0.0% | 0.0% | 1.2% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% | 0.2% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 1.5% | 5.0% | 6.0% | 0.5% | 0.1% | 13.1% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.5% | 1.0% | 1.0% | 0.3% | 0.0% | 2.8% |
| Separate house | 0.1% | 0.5% | 5.0% | 30.0% | 41.3% | 5.1% | 82.0% |
| Total | 0.3% | 3.0% | 12.0% | 37.4% | 42.1% | 5.2% | 100.0% |

| 80+ Age Cohort | 0 | 1 | 2 | 3 | 4 | 5 + | Total |
|---|-------------|-------------|--------------|--------------|--------------|-------------|---------------|
| Caravan, cabin, houseboat | 0.0% | 0.2% | 0.5% | 0.1% | 0.0% | 0.0% | 0.8% |
| Flat, unit or apartment attached to a house | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Flat, unit or apartment in a four or more storey block | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Flat, unit or apartment in a one or two storey block | 0.2% | 0.5% | 1.5% | 1.0% | 0.0% | 0.0% | 3.2% |
| Flat, unit or apartment in a three storey block | 0.0% | 0.1% | 0.5% | 0.5% | 0.0% | 0.0% | 1.1% |
| House or flat attached to a shop, office, etc. | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Improvised home, tent, sleepers out | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Semi-detached, row or terrace house, townhouse etc with one storey | 0.0% | 2.0% | 12.0% | 10.0% | 0.5% | 0.0% | 24.5% |
| Semi-detached, row or terrace house, townhouse etc with two or more storeys | 0.0% | 0.5% | 0.5% | 1.0% | 0.3% | 0.0% | 2.3% |
| Separate house | 0.0% | 0.5% | 8.0% | 27.0% | 28.0% | 4.5% | 68.0% |
| Total | 0.2% | 3.8% | 23.1% | 39.6% | 28.8% | 4.5% | 100.0% |