

Knox Housing Monitoring and Review Program

Annual Report for 2018

Prepared April 2019

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How to Read this Document

Sections 1 and 2 of this document set out the purpose of the Knox Policy Housing Monitoring and Review Program and how it fits with the other documents and reports that define housing policy at the State and local level.

Section 3 provides a brief summary of the factors that define the current state of housing in Knox and the issues that are driving future changes.

Section 4 gives an overview of the indicators that are used to assess the performance of housing policy in Knox and how they relate to the *Knox Community and Council Plan 2017-2021*, which sets out the overall vision, shared goals, and targets for measuring progress toward those goals.

Section 5 steps through each of the housing indicators, providing a summary of the data used to measure progress and an interpretation of the findings for each.

Section 6 provides future directions for the Knox Housing Monitoring Program, including a description of potential future indicators and the Knox Housing Scorecard currently under development.

1. The Housing Policy Monitoring and Review Program

This report provides information from the 11th annual Housing Policy Monitoring and Review Program. This Program was developed in 2007 to measure the effectiveness of the Knox Housing Policy in assisting in the delivery of the *Knox Housing Statement 2005*, Council's initial strategic plan for housing and residential development in Knox. It has been updated this calendar year to reflect the *Knox Housing Strategy 2015*, which was adopted by Council in January 2015. Subsequent changes to the Knox Planning Scheme were approved in March 2016 via Amendment C131.

2. Current Policy Framework

The *Knox Housing Strategy 2015* (the Housing Strategy) was supported by the Knox@50 community engagement program and developed within the State Government's regional planning framework of *Plan Melbourne 2017-2050*. The underlying strategy for housing across Melbourne is to direct most new development toward Activity Centres, those areas near existing shopping centres and transportation. This has two key effects on housing in Knox. One is to deliver housing efficiently, where the infrastructure and services can best support it. The other is to protect existing neighbourhoods and areas with particular significance – like the Dandenong Foothills – from overdevelopment.

The Housing Strategy builds on that idea by setting out a scaled approach to housing in Knox. The Housing Strategy divides the city into four housing areas – Bush Suburban, Knox Neighbourhood, Local Living, and Activity Areas – and provides guidance on what types of dwellings are preferred and permissible in each area (see Figure 1). Parts of the city designated as Activity Areas and Local Living areas are expected to experience the most change, accommodating medium and higher density development over time. Bush Suburban and Knox Neighbourhood areas are expected to experience less change in order to preserve existing areas of environmental significance and neighbourhood character.

The previous regional planning framework, *Melbourne 2030*, set out a series of aspirational housing targets that each city would need to meet to cater to expected levels of population growth through the year 2030 (see Table 1). While the first version of *Plan Melbourne* did not include housing targets, the current state government is working to re-establish a new set of targets that will help guide growth across the metropolitan region. The previous targets have been used as a benchmark in every Housing Monitoring Program report since 2008, and still provide the most current guide for understanding how well Knox will be able to meet the need for future housing.

The Housing Policy Monitoring and Review Program also works with the annual State of Knox report to provide guidance on the *Knox Community and Council Plan*, the City's overarching strategic document that provides a vision statement for the Knox community, shared goals and strategies to achieve the vision, an outline of the role and focus of Council, and the targets and initiatives that Council has set to help achieve those shared goals. Section 4 of this report sets up how housing indicators examined here relate to the overall goals of the latest *Community and Council Plan*.



Table 1: Aspirational housing distribution for Knox, 2001-2030, as defined in Melbourne 2030

Potential number and percentage of new dwellings in Knox							
Location	2001-05	2006-10	2011-15	2016-20	2021-25	2026-30	TOTAL
Greenfield sites	2377 92%	200 8%	0 0%	0 0%	0 0%	0 0%	2,577 (17% of 2001-2030 total)
Activity Centres	30 0%	578 8%	910 12%	1895 25%	1895 25%	2269 30%	7,577 (50% of 2001-2030 total)
Strategic Redevelopment Sites and along the PPTN	88 5%	425 23%	500 28%	500 28%	175 10%	107 6%	1,795 (12% of 2001-2030 total)
Dispersed Development (including the Dandenong Foothills)	855 27%	700 22%	456 15%	380 12%	380 12%	380 12%	3,151 (21% of 2001-2030 total)
TOTAL	3,350	1,903	1,866	2,775	2,450	2,756	15,100

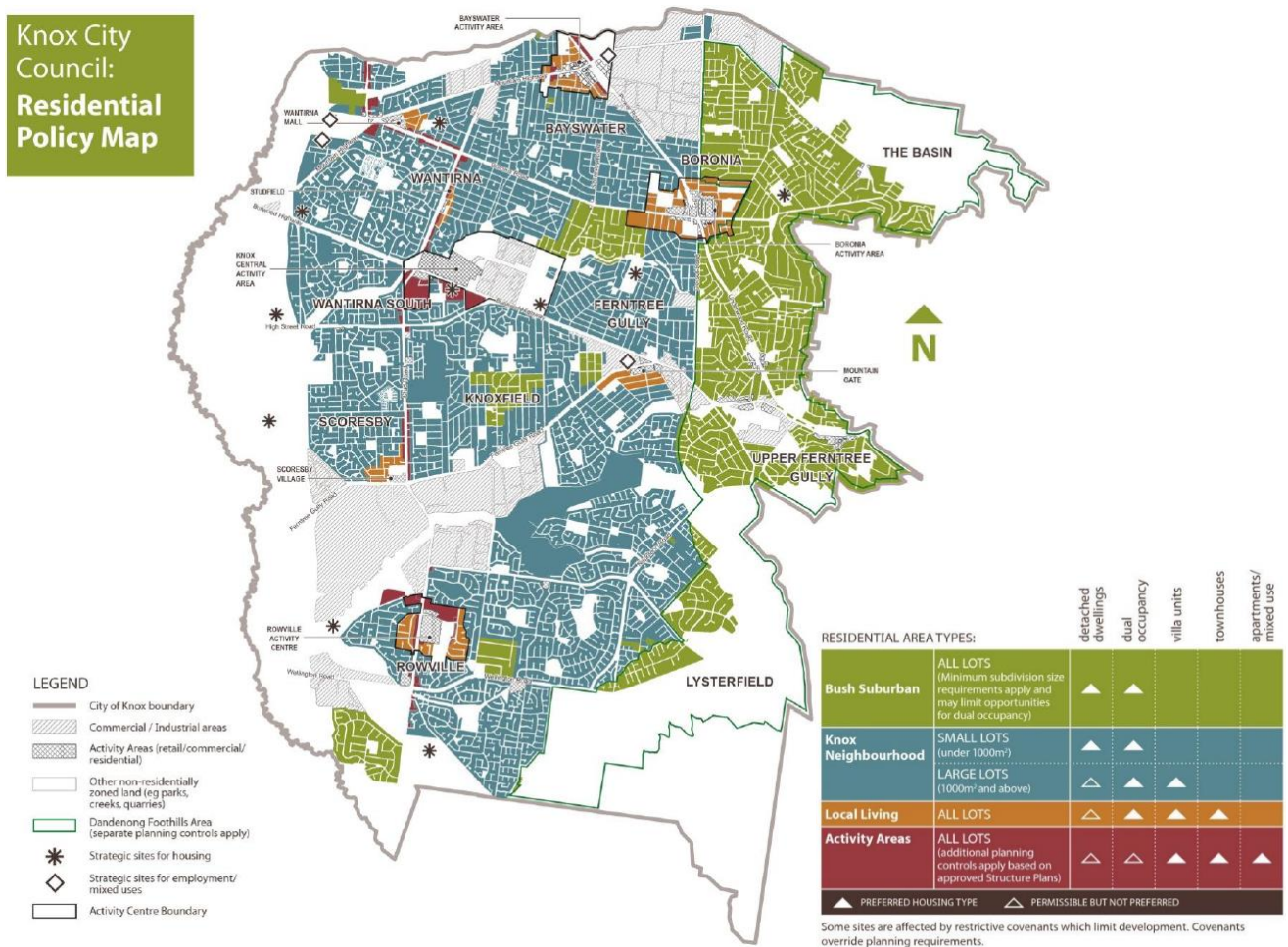


Figure 1: Housing Policy Areas as defined in the Knox Housing Strategy 2015

3. Key Challenges and Opportunities

An Ageing Population

Knox's population is ageing in line with national trends. According to current projections, nearly one in three people living in Knox will be over 55 years old by 2041, and there will be as many people of traditional retirement age (65 years or older) as people under 18 years old. This will mean an increasing demand for housing for older people, including retirement villages and aged care facilities as well as flexible, accessible dwellings located in places where people looking to downsize want to live.

Declining Household Size

The average household size has been steadily declining over the last 20 years, from a peak of 3.17 people per household in 1991 to 2.70 people per household in 2016. This reflects broader regional trends towards greater numbers of couple-only and single-person households. By 2041, it is projected that there will be more one and two-person households in Knox (36,000) than families with children (33,000). These projections estimate that household size will continue to decline to 2.63 people per household in Knox by 2041, which would likely mean further increases in the demand for smaller dwellings.

Increasing Number of Vulnerable Households

The number of vulnerable households on a very low income¹ in Knox has increased from 1,668 households in 2006 (3.3%) to 2,146 households in 2011 (4.1%) and 2,204 households in 2016, representing 3.8% of total households in Knox. Significant numbers of lower income households are experiencing housing stress² as mortgage and rental payments consume an increasing share of household incomes and the availability of affordable private rentals is decreasing. One in ten lower-income mortgage holders and one in four low-income renter households in Knox are under financial stress (2016 Census), though rates remain more favourable than the metropolitan average and the extent of housing stress varies across Knox. Directing a significant proportion of income towards housing costs places pressure on meeting other household expenses such as transport, health, education and food – leaving people more vulnerable to changes in circumstances and further disadvantaging those already facing hardship including the unemployed and single parent families.

Pressure on Climate and Resources

According to CSIRO, “the duration, frequency and intensity of heatwaves have increased across large parts of Australia since 1950. There has been an increase in extreme fire weather, and a longer fire season, across large parts of Australia since the 1970s.”³ Future rainfall events are predicted to be more frequent and more intense, even if average rainfall levels decrease overall. With energy and water prices increasing along with landfill fees, measures to address the efficient use of these resources will be needed to help mitigate pressures of everyday costs of living.

¹ Lowest 10% of equivalised household incomes, nationally

² Households in the lowest 40% of incomes, nationally that are paying more than 30% of their usual gross weekly income on housing costs.

³CSIRO, <https://www.climatechangeinaustralia.gov.au/en/climate-campus/australian-climate-change/australian-trends/>, accessed July 2017.

Declining Affordability

Knox is becoming a less affordable place to live. The Knox median house price passed the metropolitan Melbourne average for the first time in 2014. In 2018, half of all houses in Knox cost \$790,000 or more, compared to \$670,000 across Melbourne. Knox experienced a 55% increase in median house price in the five years to 2018⁴. This is double the increase in the median house price for metropolitan Melbourne overall (28.8%).

Growth in median household income has failed to match the pace of rising house prices over the last few decades. The median house price in Knox increased by 52% from 2006-2011, but median household income only rose by 20% over the same period. An easing in housing prices is starting to be seen across Greater Melbourne, including Knox, though this has not yet been reflected in the data Council uses for official figures in this area. The most recent census shows a 49% increase in median house price in Knox from 2011-2016, compared with an 11.5% growth in median household income over that time. The latest official figures from the 2016 census continue a trend that has been accelerating over the last 20 years. The cost of a dwelling affordable for the 'typical' Knox household⁵ was calculated at \$414,000 in 2016, compared with a median house price locally of \$716,250 at that time. This represents an 'affordability gap' of 42%, which is beginning to widen again after signs of improvement in 2014. As across Melbourne generally, average household income is no longer high enough to comfortably service the mortgage on an average house in Knox.

Rental and wage increases were more closely aligned between 2011 and 2016 (a median rent increase in Knox of 17% compared with a 15% increase in average wages nationally over the same period). However, a major divergence between 2006 and 2011 when median rental increase was more than double the increase in average wages, has left a legacy of ongoing rental burden and the proportion of rental households in stress has risen from 24.4% in 2011, to 26.5% in 2016 (an increase of nearly 600 households). The amount of social housing and affordable private rentals continues to be insufficient to meet housing needs of the most vulnerable in the Knox community.

An Identified Shortage of Social Housing

In 2016, social housing comprised 2% of the total housing stock in Knox, compared with a metropolitan average, 2.6% (a decline since 2011 when the level was 2.1% and 2.9% respectively). Knox has an identified shortage of social housing relative to current and projected future demand. The shortfall was assessed at 390 dwellings in 2016⁶ and is projected to increase to 860 dwellings by 2036 if no action is taken to increase supply. The percentage of affordable housing need that can be met by social housing and affordable private rental housing in Knox declined from 86% in 2010 to 83% by 2014 and 82% in 2016, and is currently projected to decline further to 69% by 2036 if supply is not increased.⁷ Knox City Council has estimated that between 43 and 106 new social housing dwellings would be needed each year depending on the time span desired to meet current and future low cost housing needs.⁸

⁴ \$510,00 (2013) & \$790,000 (2018)

⁵ Price that would allow a Knox household on the median income to service a new mortgage without falling into housing stress, benchmarked at not more than 30% of gross household income.

⁶ This is a downward revision (from the 460 forecast for 2016 in a 2014 review) due mainly to a 5% decrease in the number of housing vulnerable households determined from the 2016 Census (representing a loss of 110 households). Loss of social housing and affordable rental opportunities over the same period offset the full impact of the reduction in lowest income households)

⁷ Knox City Council, *Minimum Supply of Social Housing, Knox (2016-2036)*, 2017

⁸ As above.

4. Housing Policy Directions, Tools, and Measures

Housing that Provides Choice through Diversity

For many of us our lifestyles and family structures are changing, and with this comes a change in housing needs.

– Knox Community and Council Plan, 2017-2021

Overall, 84% of the dwellings in Knox are separate houses, most of which have three bedrooms or more.⁹ Medium and higher density housing, which tends to also be smaller, though increasing, only comprises 15% of Knox’s housing stock – less than half the Melbourne average of 33% in 2016. This limits housing choice and the ability to accommodate a wider variety of household types, or respond to the changes in household size and structure Knox is experiencing, though there is evidence that housing strategy is effecting a change.

The mismatch between supply and demand for smaller housing, though still evident, is improving. Between 2006 and 2011, the net increase in number of smaller households was six times as large as the net increase in number of smaller dwellings – and notionally there were three smaller households for every smaller dwelling located in Knox in 2011. More recently, the net increase in supply of more compact housing options (1,782 dwellings between 2011 and 2016) has outpaced the increase in number of smaller households (1,376). In 2016 there were 2.7 smaller household types for every smaller dwelling locally.

While these trends are favourable, a mismatch remains that may constrain the ability of younger locals to move out of their parents’ home and start their own household in Knox. It may also make it difficult for older residents wishing to downsize to a smaller dwelling within their neighbourhood.

While Knox, with its supply of larger, family sized homes, will continue to attract new families with children, a steady increase in smaller households will generate demand for smaller housing choices. As Knox becomes more age and household diverse, a wider choice of housing stock will be needed. This includes accessible housing that can accommodate the needs of aged residents.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
Strategy 2.1: <i>Plan for a diversity of housing in appropriate locations</i>	Objective 1: <i>A diversity of housing is provided in appropriate locations</i>

Existing Policy Tools

- The Knox Planning Scheme (Residential Zones and Schedules)
- Knox Housing Strategy 2015
- Structure Plans and Local Area Strategic Plans

2018 Housing Monitoring Indicators

- Alignment with Housing Policy Areas
- Dwelling Typology

⁹ Australian Bureau of Statistics, Census of Population and Housing, 2016

Housing that Responds to Current and Future Needs

When people have secure and affordable housing that is appropriate to their life circumstances, other needs can be met, such as employment, education and life opportunities.

– Knox Community and Council Plan, 2017-2021

Knox will need more housing options for older people, in the future, as people’s health care needs increase. This includes smaller dwellings for those wishing or needing to downsize for health or financial reasons. Much of the housing stock in Knox is large family homes with larger garden areas and higher utility and maintenance costs, which are often not preferred option for older residents. An ageing population will also require more flexible housing, including single-story housing that can accommodate wheelchairs and other mobility aides, and dwellings that have or can be fitted with facilities to help those with specific health needs.

In addition, declining affordability of housing means reduced options and flexibility for people who need to change housing unexpectedly, including those who have lost or changed jobs, experienced a sudden medical condition, or have had a change in family circumstance. This may lead to additional difficulty for families who wish to keep kids in school or for those who wish to stay close to work. Young people, particularly young couples and families, may find that they need to leave Knox to find housing they can afford. This displacement could result in homelessness, living in inadequate housing, or moving out of Knox altogether. When people need to leave Knox to find affordable housing, it can disrupt social networks and increase travel time required for jobs, education, and day-to-day needs.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
Strategy 2.3: <i>Support the delivery of a range of housing that addresses housing and living affordability needs</i>	Objective 2: <i>Residential development better responds to the community's current and future needs, and allows people to 'age-in-place.'</i>

Existing Policy Tools

- Knox Planning Scheme (Residential Zones Schedules – Accessibility Triggers)
- Knox Housing Strategy 2015
- Rezoning Opportunities for Strategic Investigation Sites
- Use of Council Land and Assets

2018 Housing Monitoring Indicators

- Aspirational Housing Targets
- Housing Affordability
- Social Housing

Future Indicators Under Development

- Number and Capacity of Residential Aged Care Facilities

Housing that Delivers Environmentally Sustainable Design

Knox residents recognise the importance of achieving sustainability and quality in building design that contributes positively to neighbourhoods. With energy and water prices increasing and the cost of landfill disposal increasing every year, measures to address the efficient use of these resources will help with cost of living pressures.”

– Knox Community and Council Plan, 2017-2021

The Knox community recognises the close relationship between our built environment, our health, and our social wellbeing. Our homes are major contributors to the resources we consume and the impact we have on the wider environment. Prices for electricity and gas have risen in recent years, placing a strain on the ability of many to keep up. Knox households produce more garbage and divert more waste to recycling than the metropolitan average. Shifting weather patterns have produced extended heat waves and larger and more frequent rain events have altered the way we mitigate bushfire risk and approach water management.

Development that better responds to environmental issues can lead to more sustainable outcomes. Managing water, energy and gas in a more efficient way is an important goal for future housing development in Knox. Smaller dwellings generally require fewer resources to heat and cool, leading to lower operating costs and a smaller environmental footprint, and new development typologies are starting to provide greater choices for people interested in smaller homes. Water Sensitive Urban Design (WSUD) techniques can reduce demand for mains water by making better use of rainwater for uses inside and outside our homes. Finding ways to be more responsible about the amount of waste we produce and how we dispose of it is another key area of focus for the Knox community, and building houses that are more resource-efficient can help.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
Strategy 2.2: <i>Encourage high-quality sustainable design</i>	Objective 3: <i>Energy, water, and waste efficient design are increased in residential dwellings</i>

Existing Policy Tools

- Knox Planning Scheme
 - Clause 22.04 – Environmentally Sustainable Design Policy
 - Requirements Sustainable Design Assessments (SDA) for multi-dwelling developments in Residential Zone Schedules and some Design and Development Overlays (DDOs)

Future Indicators Under Development

- Household Water Use
- Household Energy Use
- Household Waste Generation
- Household Carbon Emissions

Housing that Contributes to a Strong Sense of Place

Our physical environment contributes to our individual and collective sense of place and community. We identify and strongly value Knox being made up of a network of villages with good access to urban facilities and services.

– Knox Community and Council Plan, 2017-2021

Knox is known for green and leafy neighbourhoods, quiet streets, and a mix of city and country feel. The low density pattern of residential development of Knox has provided the quiet streets and natural feel that have attracted people to the area for decades. However, this form of development has also led to a dependence on cars to get around, which in turn has resulted in increasing use of resources, air pollution and reduced amenity for Knox residents. As land values have increased over time, redevelopment has introduced new types and styles of housing into Knox’s neighbourhoods that are changing the look and feel of the city and placing additional strain on infrastructure networks.

Residents of Knox are concerned about the changes occurring in their neighbourhoods when medium and higher-density development replaces existing single houses. Some neighbourhoods have lost trees and open space as single-house lots are redeveloped with dual occupancies, villa units, townhouses, and in some cases apartments. The resulting increase in residential density is placing additional strain on physical infrastructure that was designed for lower-density neighbourhoods, including stormwater pipes and drains, roads, and on-street parking.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
<p>Strategy 1.3: <i>Ensure the Knox local character is protected and enhanced through the design and location of urban development and infrastructure</i></p>	<p>Objective 4: <i>Quality housing design in Knox is improved to better respond to neighbourhood identity and create a stronger sense of place.</i></p>

Existing Policy Tools

- Knox Planning Scheme
 - Residential Zone Schedules – Canopy Tree Controls
 - Design and Development Overlays (DDO)
 - Landscape Significance Overlays (LSO)
- Structure Plans and Local Area Strategic Plans

2018 Housing Monitoring Indicators

- Walkability

Future Indicators Under Development

- Neighbourhood Character
- Urban Design

Housing that Protects Areas of Natural Significance

Trees and green spaces provide numerous economic, environmental, and social benefits, including habitat for flora and fauna, enhancing neighbourhood aesthetics, providing shade, and lowering ambient temperature, which can contribute to reducing the effects of heatwaves.

– Knox Community and Council Plan, 2017-2021

The City of Knox enjoys a unique natural setting, located at the foot of the Dandenong Ranges. The City is crisscrossed by creeks and wetlands that provide a habitat for native animals and peaceful respite to local residents. These characteristics bring the feel of bushland and natural spaces into Knox’s neighbourhoods and key places.

The Dandenong Foothills enjoy particular significance in Knox, providing a unique bushland setting characterised by significant tree canopy and a rolling landscape. Council has well-established policy and planning controls that aim to protect and preserve the significant landscape and environmental values of the area through controls on vegetation and residential design. There are 118 ‘Sites of Biological Significance’ identified across the city that serve to protect areas of remnant and indigenous vegetation. These areas also have specific planning controls that restrict the removal of vegetation and residential design guidelines that include higher requirements for new canopy trees.

While Knox enjoys a spectacular natural setting, over half of the indigenous plant species found in Knox today are at risk of disappearing within 10-20 years. It will be increasingly important to ensure that new development does not erode Knox’s unique and significant sources of environmental value.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
Strategy 1.2: <i>Create a greener city with more large trees, indigenous flora and fauna</i>	Objective 5: <i>Protect and enhance landscape and environmental values of natural areas of significance within the municipality.</i>

Existing Policy Tools

- Knox Planning Scheme
 - Residential Zone Schedules – Canopy Tree Controls
 - Clause 22.01 – Dandenong Foothills Policy
 - Environmental Significance Overlays (ESO)
 - Vegetation Protection Overlays (VPO)
 - Design and Development Overlays (DDO)
- Sites of Biological Significance

Future Indicators Under Development

- Tree Canopy Cover
- Areas of Natural Significance

Housing that is Delivered by Sound, Integrated Decision-Making

We look to the leaders in our community to make informed, evidence-based decisions. This requires a level of trust in all levels of government and within the city.

– Knox Community and Council Plan, 2017-2021

Planning for the future housing needs of the city is a complicated and important job that requires input from community members, policy experts, design professionals, and local landowners. When making decisions related to planning and development, Councillors must weigh up a wide range of competing priorities.

The *Knox Community and Council Plan* provides overarching guidance on what the needs of the city are and Council's role in addressing them. That document supports a whole range of Council policies and strategies on issues ranging from infrastructure and open space to social and environmental issues. The Knox Planning Scheme spells out Council's specific goals and policies for the planning and development of the city. It is the official reference for all decisions related to planning made by Council, planning officers, and VCAT.

Knox City Council undertakes place-based planning initiatives in activity centres and other key places around the city. These include structure plans and other strategic plans developed through extensive consultation with the local to provide specific directions and guidance for future decisions.

Council Policy Directions

Knox Community and Council Plan 2017:	Knox Housing Strategy 2015:
Strategy 8.1: <i>Build, strengthen and promote good governance practices across government and community organisations.</i>	Objective 6: <i>Development responds to neighbourhoods in an integrated and balanced manner.</i>

Council Policy Tools

- Knox Planning Scheme
- Structure Plans and Local Area Strategic Plans

2018 Housing Monitoring Indicators

- Alignment with VCAT Decisions
- Integrated Place-Based Planning

5. Findings

Summary of Planning Application Approvals

Planning and Subdivision Permits Approved in 2018:	288
Total Number of New Dwellings Possible from Approved Permits:	1,165
Number of Proposed Demolitions Possible from Approved Permits:	210
Potential Net Increase in Dwellings Possible if All Approved Permits are Built:	955
Aspirational Dwellings Target for 2018 (from the <i>Knox Housing Statement 2005</i>)	555

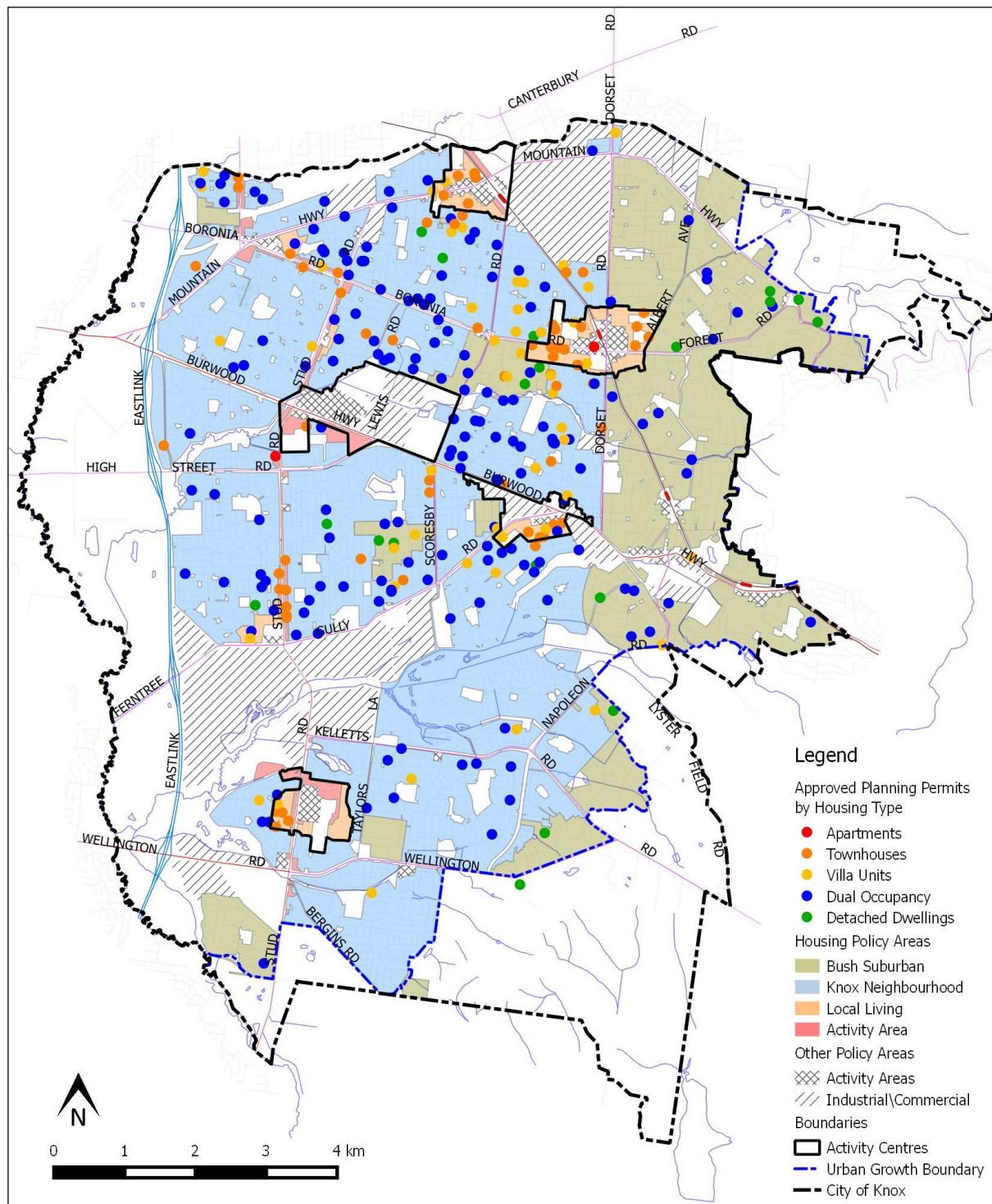


Figure 2: Approved Planning Applications by Dwelling Typology and Housing Policy Area, 2018

Aspirational Housing Targets

The number of new dwellings approved through the planning process each year are in the context of targets set in the Knox Housing Statement. The targets were set in five yearly periods from 2001 to 2030, and include figures for total numbers of new dwellings (Figure 3) and their locations across the city (Figure 4). The preferred locations described in the *Knox Housing Statement 2005* (Greenfield Sites, Activity Centres, Strategic Redevelopment Sites and along the PPTN, and Dispersed Development including the Dandenong Foothills) have been refined and replaced in the Knox Housing Strategy 2015 with the four housing policy areas (Activity Areas, Local Living, Knox Neighbourhood, and Bush Suburban). New dwelling approvals are compared against the current Housing Policy Areas in Table 2, but they are also compared against the previous location categories to show changes over time.

Current Snapshot

Key Statistics
955 new dwellings possible from 288 approvals is 172% of the aspirational target for Knox
210 new dwellings possible in Activity Centres is 55% of the estimated target for these areas
390 new dwellings possible in Strategic Sites and the PPTN is 390% of the estimated target
355 new dwellings possible in Dispersed Areas is 467% of the estimated target for these areas

Analysis

The number of net new dwellings approved in 2017 is the third highest since monitoring began in 2009. It is well above the aspirational target needed to meet estimated demand as defined in the previous *Knox Housing Statement 2005* (see Figure 3). Though this figure is down from 1,236 net new dwellings approved last year, it is consistent with a general upward trend since 2013.

The most relevant assessment of where new dwellings are being approved is the comparison to current Housing Policy Areas as defined in the *Knox Housing Strategy 2015* (Table 2 below). However it is useful to consider distribution of new dwelling approvals by the previous location definitions in order to understand change over time. The 2018 data shows that the number of new dwellings approved in Activity Centres (210) is well below the target (379), and the percentage of the all new dwellings approved (22%) is the lowest since monitoring began in 2009. There were many more dwelling approvals in dispersed areas (355) than is desirable relative to the target (76).

Only one Strategic Investigation Site identified as in the *Knox Housing Strategy 2015* had dwellings approved in 2018. These were the 294 townhouses on the site of the former Wantirna Caravan Park at 203 Mountain Highway. Because this site lies within the emerging Wantirna Health Precinct, the *Knox Housing Strategy 2015* describes a preference “primarily for health industry uses,” with an allowance for “some ancillary residential development, such as aged or disability care facilities.” The intensive residential land use as approved is not aligned with Council’s preferred future use of this site, and the planning permit was initially refused by Council and later approved at VCAT.

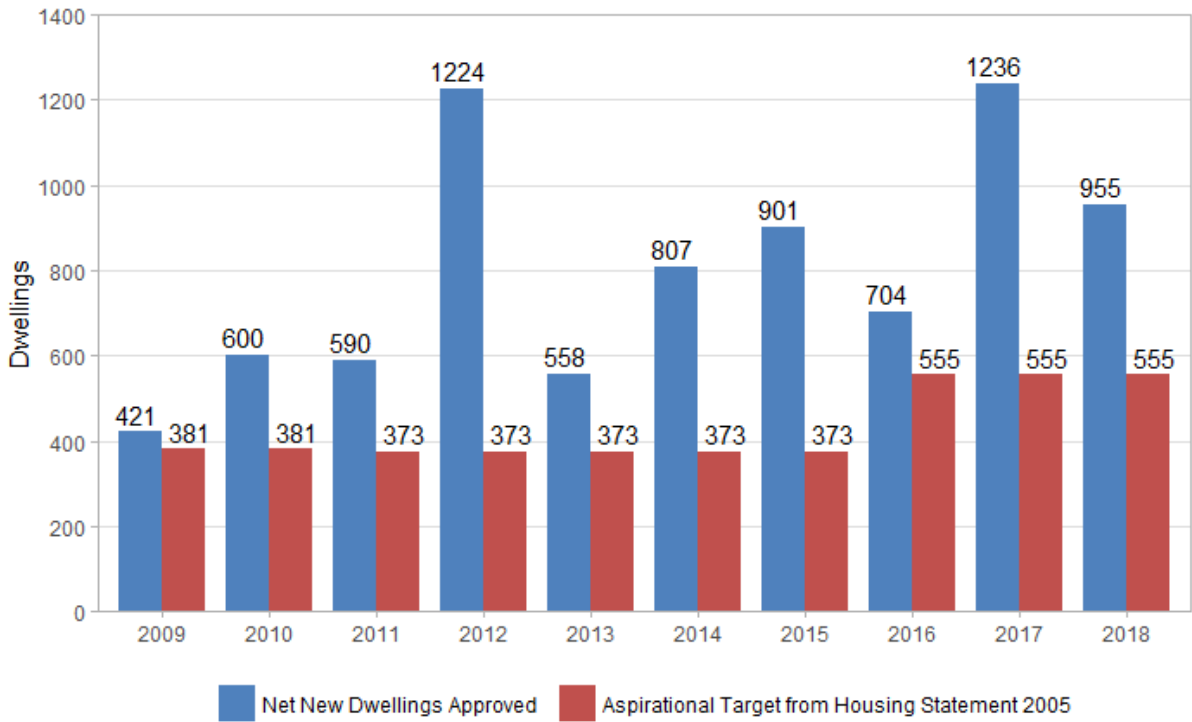


Figure 3: Number of net new dwellings from approvals and aspirational housing targets, 2009-2018

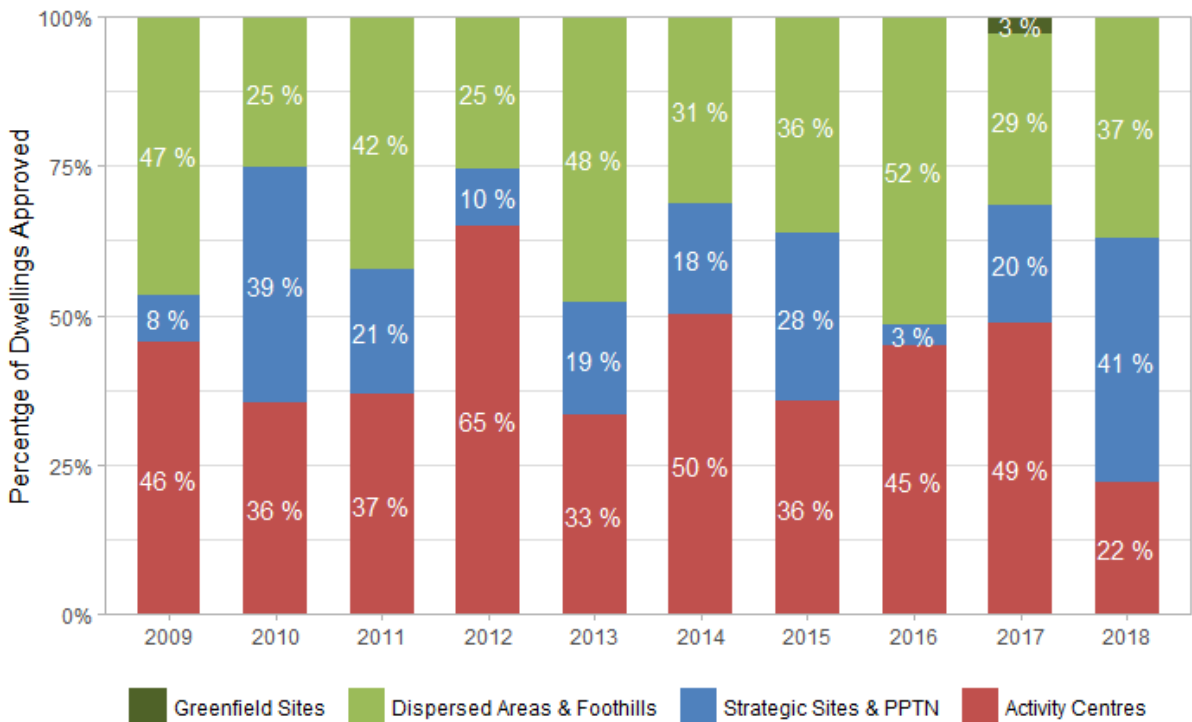


Figure 4: Percentage of net new dwellings approved by location category, 2006-2018

Alignment with Housing Policy Areas

The map and table on Page 19 of the *Knox Housing Strategy 2015* defines a scaled approach to delivering future housing in Knox. The residential areas of the city are divided into four policy areas, each with its own set of preferred housing types. Approvals for denser development like apartments and townhouses should be concentrated in Local Living and Activity Areas, while those for single houses and dual occupancies should fall mainly in Knox Neighbourhood and Bush Suburban Areas.

It is worth noting here that these typology definitions and areas of preferred development are broad policy guides only. The true determination of whether or not a development is “appropriate” is made according to the detailed controls in the planning scheme. The comparison below illustrates how well the outcomes delivered by the specific planning controls match the policy intent of the Knox Housing Strategy.

Current Snapshot

Key Statistics
58% of new approvals were for dwelling types consistent with their Housing Policy Area
40% of new approvals could be considered above preferred typology for their Housing Policy Area
2% of new approvals could be considered below preferred typology for their Housing Policy Area
33% of dwelling approvals were in higher-density areas: Local Living, Activity Areas, Commercial

Analysis

The percentage of new approvals that were for dwelling types consistent with their Housing Policy Area fell from 84% in 2017 to 57% in 2018. However, this is due in large part to the 294 townhouses approved on the site of the former Wantirna Caravan Park. Outside of this single approval, the percentage of dwellings consistent with their Housing Policy Area would be 83%, which is generally in line with previous years since the adoption of the *Knox Housing Strategy 2015*. This supports the notion that the new *Knox Housing Strategy 2015* and new residential zones have become well engrained in the assessment and development process in their third year of operation. However, the percentage of dwellings approved in higher-density areas fell from 74% in 2017 to 33% in 2018 (49% outside of the Wantirna Caravan Site), due in large part to the lowest number of apartment approvals (46) since monitoring began in 2009.

Most of the development classified as above preferred typology based on the Housing Strategy is related to the 294 townhouses approved at the site of the former Wantirna Caravan Park. However, it is worth considering other cases of villa units and townhouses approved in the lower density areas (Knox Neighbourhood and Bush Suburban).

- There were nine applications for villa units and townhouse approved in Bush Suburban areas in 2018, accounting 23 possible net new dwellings. Eight out of nine were on lots larger than 1,000 square metres and only two were within the Dandenong Foothills policy area.
- There were 20 applications for villa units and townhouses approved in Knox Neighbourhood areas on lots under 1,000 square metres, all of which were for three dwellings or less. The key distinguishing factor between villa units and townhouses is the presence of a shared living wall. Many of the approvals classified as townhouses had only two of the three dwellings with shared living walls.

- There were ten applications for townhouses approved in Knox Neighbourhood areas on lots of 1,000 square metres or larger. Six of these were smaller townhouse developments of four dwellings or fewer. The four larger approvals include:
 - The 294 townhouses on large 8.4 Ha lot at the former site of the Wantirna Caravan Park (203 Mountain Highway),
 - Five townhouses on a 1,280 square metre corner lot (23 Woodmason Road, Boronia),
 - Six townhouses across two lots totalling 1,680 square metres (26-28 Lewis Road, Wantirna South), and
 - Eight townhouses on a previously consolidated lot of 1,980 square metres (305 Boronia Road, Boronia).

Where these lots are large enough, they may still deliver outcomes related to open space and vegetation that these policy areas are set up to deliver. For example, corner lots or those that are just under the 1,000 square metre threshold may be able to accommodate villa units if they also meet the open space and tree canopy requirements in the planning scheme. The small townhouse developments of 3-4 units that have become increasingly common over the last few years may help developers deliver better neighbourhood character outcomes than traditional villa units, as their more compact built form could provide larger landscaped areas for trees and open space.

Table 2: Number of net new dwellings by typology and policy area as defined in the Knox Housing Strategy

RESIDENTIAL AREA TYPES		TOTAL NET NEW DWELLINGS	Detached Dwellings	Dual Occupancy	Villa Units	Townhouses	Apartments / Mixed Use
Outside the Urban Growth Boundary	ALL LOTS (Includes rural and other non-residential zones)	1	1	0	0	0	0
Bush Suburban	ALL LOTS (Minimum subdivision requirements apply)	76	23	30	20	3	0
Knox Neighbourhood	SMALL LOTS (Under 1,000sqm)	163	8	116	18	21	0
	LARGE LOTS (Over 1,000 sqm)	401	0	13	63	325	0
Local Living	ALL LOTS (Additional controls from local plans may apply)	166	0	4	22	140	0
Activity Areas	ALL LOTS (Additional controls from local plans may apply)	110	0	0	5	79	26
Commercial Areas	ALL LOTS (Additional controls from local plans may apply)	38	0	0	0	18	20



 PREFERRED HOUSING TYPE
  PERMISSIBLE BUT NOT PREFERRED

Table 3: Classification of planning approvals based on preferred typologies in the Knox Housing Strategy

	Below Preferred Typology	Preferred Typology	Above Preferred Typology
Outside UGB	*	100%	0%
Bush Suburban	*	70%	30%
Knox Neighbourhood (Lots under 1,000 sqm)	*	76%	24%
Knox Neighbourhood (Lots over 1,000 sqm)	0%	19%	81%
Local Living	0%	100%	0%
Activity Areas	0%	100%	**
Commercial Areas	47%	53%	**
Overall	2%	58%	40%

*Underdevelopment not possible in these areas as lower-density typologies are preferred

**Overdevelopment not possible in these areas as higher-density typologies are preferred

Dwelling Typology

One of the key aims of the Housing Strategy is to help address the growing imbalance between the type of dwellings available and the type of dwellings that are likely to be needed in the future. While the number and share of small households (two people or fewer) continues to increase, most of the housing stock across Knox remains large single-family homes.

There is a general trend toward denser housing types across metropolitan Melbourne, particularly in the inner suburbs but also near activity centres in the outer eastern region. Apartments and townhouses are increasingly attractive to younger and older residents seeking out lower-cost and lower-maintenance housing options. For some this represents a conscious choice to lower their carbon footprint or trade time and money on maintaining a garden for spending in other areas. And for others it is a practical matter of affordability.

The Knox Housing Strategy seeks to encourage denser forms of development in appropriate areas, including townhouses in Local Living areas and new apartments in Activity Areas and Commercial Areas, in order to provide more choice for residents seeking alternatives to large houses.

Current Snapshot

Key Statistic
66% of net new dwellings approved in 2016 were townhouses or apartment units

Analysis

For the fourth year in a row, more townhouse dwellings were approved (586) than any other type. As discussed above, 294 of the townhouses approved were in the single application on the former site of the Wantirna Caravan Park at 203 Mountain Highway. Outside of this application, 81% of the other townhouses approved were in higher density areas (Local Living, Activity Areas, and Commercial Areas). As discussed above, however, many of these were smaller townhouse developments of 2-4 units rather than the larger 5-8 unit development envisioned in the original *Knox Housing Strategy 2015* and associated *Residential Design Guidelines*.

Only two applications for apartments were approved in 2018, resulting in the lowest number of new apartment units (46) since monitoring began in 2009. These included a 26 unit development along the principal public transport network (PPTN) at 438 Stud Road, Wantirna South and at 20 unit development at 139 Boronia Road, in a Commercial 1 Zone inside the Boronia Activity Centre. Another application for 24 apartments across four lots in the Boronia Activity Centre was reduced to 18 townhouses during the assessment process, and was eventually approved in this form by VCAT.

Although this continues a general trend towards more compact development, it does not continue the general trend toward smaller dwellings, as discussed in the next section.

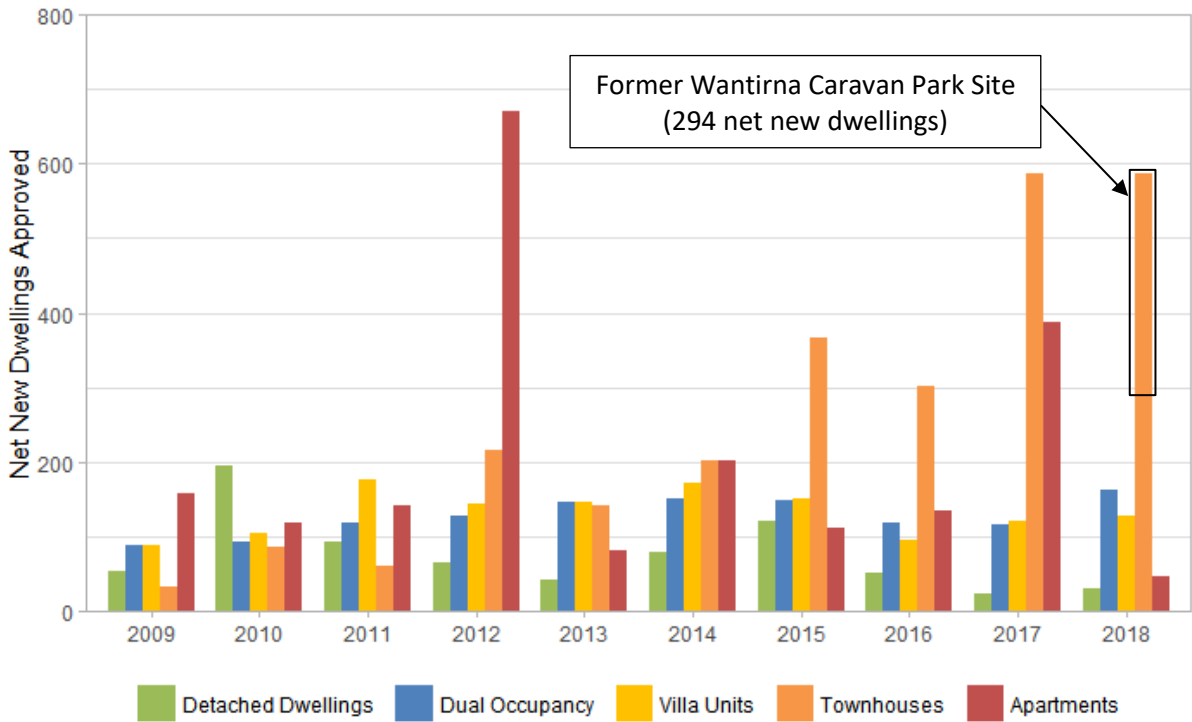
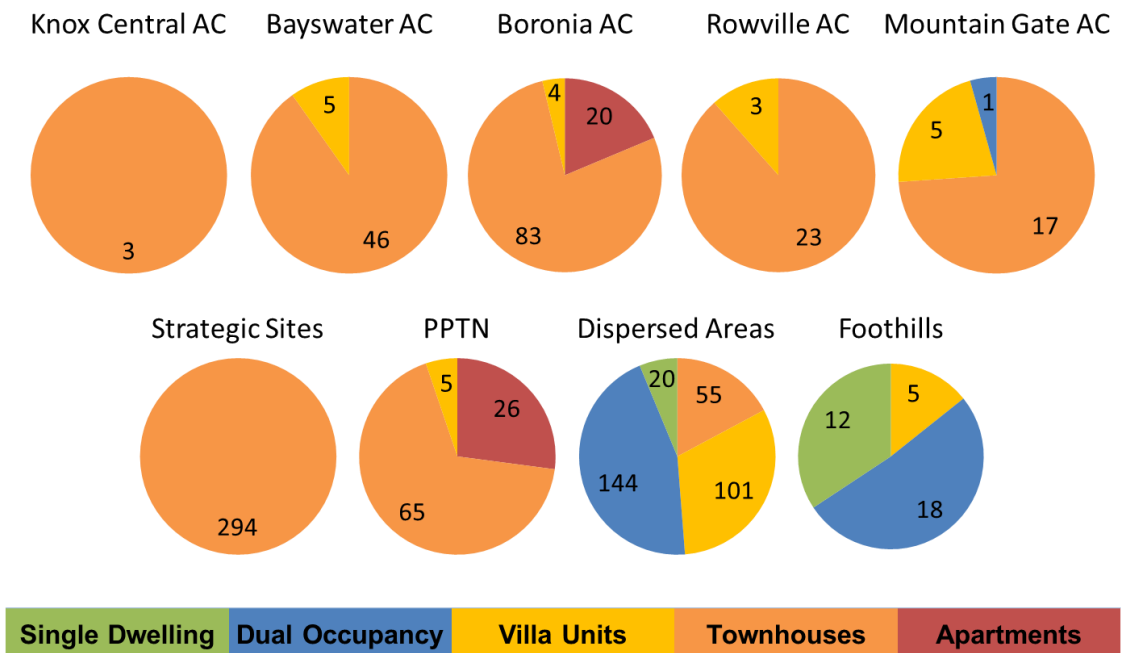


Figure 5: Number of net new dwellings approved by dwelling typology, 2009-2017

Typology by Location 2018



NOTE: Numbers on chart indicate net new dwellings for each typology

Figure 6: Mix of dwelling typologies across different location categories, 2018

Dwelling Size

Knox will need more small dwellings in the future to accommodate an increasing number of smaller households. This is particularly important in the context of increasing housing prices and decreasing affordability, as larger detached houses are becoming increasingly out of reach for a large percentage of new homebuyers. Smaller dwellings tend to be less expensive to buy and maintain, which provides more choices for young people looking to enter the housing market, ageing residents looking to downsize, and anyone else looking to reduce their cost of living.

Current Snapshot

Key Statistic
19% of net new dwellings approved in 2018 were for smaller dwellings (2 bedrooms or less)
50% of approvals in higher density areas were for smaller dwellings (2 bedrooms or less)
95% of approvals in lower density areas were for larger dwellings (3 bedrooms or more)

Analysis

Only 19% of dwellings approved in 2018 had two bedrooms or less, by far the lowest level since monitoring began in 2009. This is down from 47% in 2017 and 37% in 2016. Even though 289 of the 294 townhouses at the former site of the Wantirna Caravan Park were large dwellings (3 bedrooms or more), the overall percentage of large dwellings would still be only 25% without this application. Since the overall growth rate of Knox is relatively low, smaller dwellings need to represent a significant percentage of new approvals in order to keep up with the growth rate of smaller households. There had been a generally increasing trend in this indicator since 2013, suggesting positive signs for increased diversity in the housing market in Knox. The break in this trend suggests developers may be responding to a weaker housing market by increasing the size of dwellings they are seeking to build. While the share of preferred larger dwellings in low density areas (95%) improved after a dip (to 52%) in 2017, the share of preferred smaller dwellings in higher density areas (50%) continued to decrease for the second year in a row (from 55% in 2017 and 67% in 2016).

Table 4: Percentage of smaller and larger dwellings approved by Housing Policy Area, 2017

	Smaller Dwellings (2 BR or less)	Larger Dwellings (3 BR or more)
Outside the UGB	0%	100%
Bush Suburban	5%	95%
Knox Neighbourhood	5%	95%
Local Living	46%	54%
Activity Areas	42%	58%
Commercial Areas	100%	0%
Overall	19%	81%

Table 5: Number of net new dwellings by size and typology as defined in the Knox Housing Strategy

RESIDENTIAL AREA TYPES	TOTAL NEW DWELLINGS POSSIBLE	1 BR	2 BR	3 BR	4 BR+
Outside the Urban Growth Boundary	1	0	0	1	0
Bush Suburban	99	0	5	34	60
Knox Neighbourhood	692	0	34	285	373
Local Living	209	0	97	86	26
Activity Areas	126	0	53	54	19
Commercial Areas	38	6	32	0	0

PREFERRED HOUSING SIZE (NUMBER OF BEDROOMS)

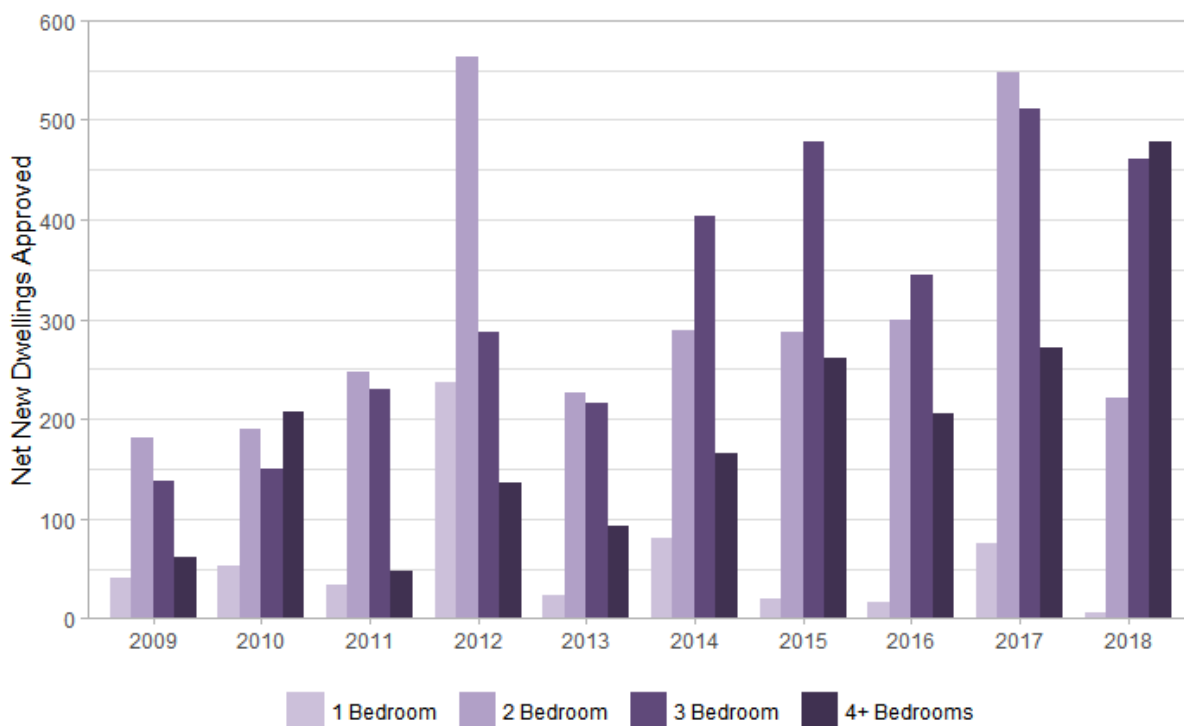


Figure 7: Number of net new dwellings approved by dwelling size (number of bedrooms), 2009-2018

Rental Options

While owning a home is an aspiration for many households, rental housing provides serves several important functions in the local housing market. Rental housing provides flexibility and affordability for people looking to enter the local market, including first-time homebuyers and new residents looking to establish in the area. It provides an important option for people with changing life circumstances who would like to stay in the area, including young families looking to upsize and older residents looking to downsize. And it can even serve as a safety net to help people experiencing hardship maintain local ties to their community. The Knox Housing Strategy seeks to increase rental options by encouraging smaller dwellings and apartments in appropriate areas.

Current Snapshot

Key Statistic
19.2% of Knox households rented their homes in 2016, compared to 28.8% of Greater Melbourne
2.9% of rental housing available in Knox was affordable for households in receipt of Centrelink in 2018 (September quarter), compared to 5.6% across metropolitan Melbourne.
26.5% of lower income households that rent were experiencing rental stress in 2016

Analysis

Between 1996 and 2011, the number of households renting in Knox increased from 6,478 (15%) to 9,150 (17%). By 2016, the number of households that rent had increased to 10,660 (19%). However rental options are not distributed evenly across Knox. Bayswater and Boronia together make up 24% of Knox's households but are home to 34% of renters (2016). These two denser suburbs have seen a number of new apartment developments in the last few years that have helped add rental options. At the same time, Rowville (13.3% of households renting), The Basin (10.2%), and Lysterfield (6.0%) were all underserved by rental options as of 2016.

The availability of affordable private rental housing has declined from an average of 5.7% in 2011 to 4.2% of rental stock in 2016 and 3% on average in 2018¹⁰. However these figures are well down from levels of over 40% in the first few years of the 2000s.

¹⁰ Averaged quarterly data by calendar year.

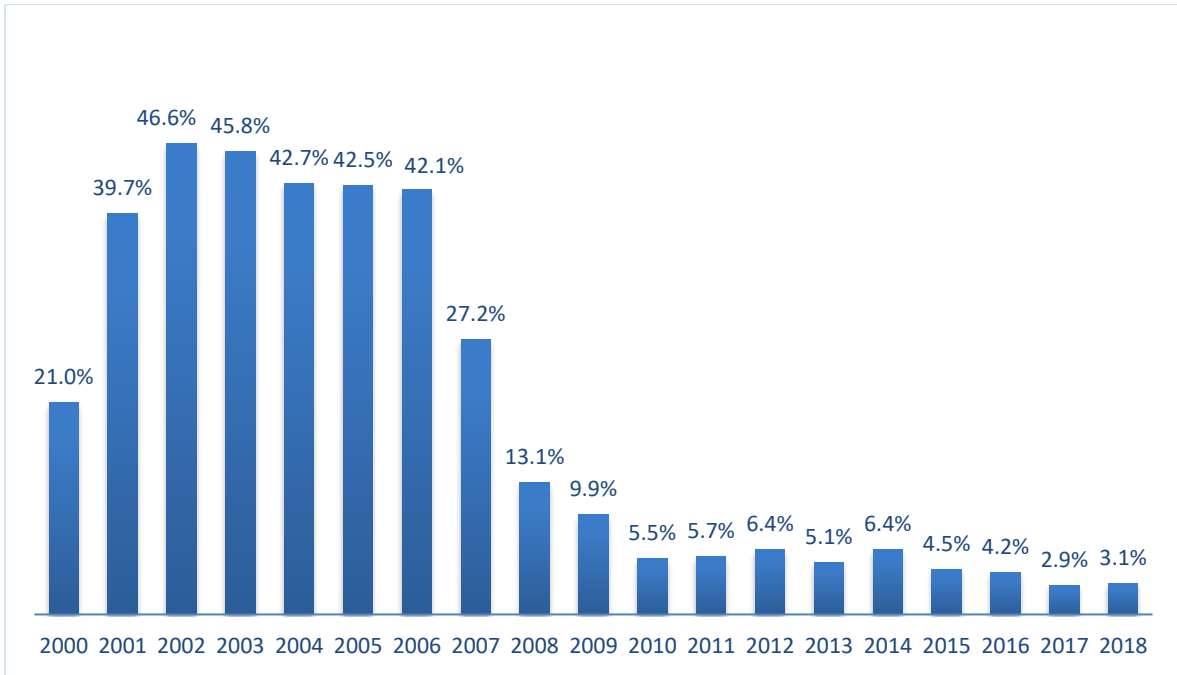


Figure 8: Percentage of private rentals in Knox considered affordable, 2000-2018

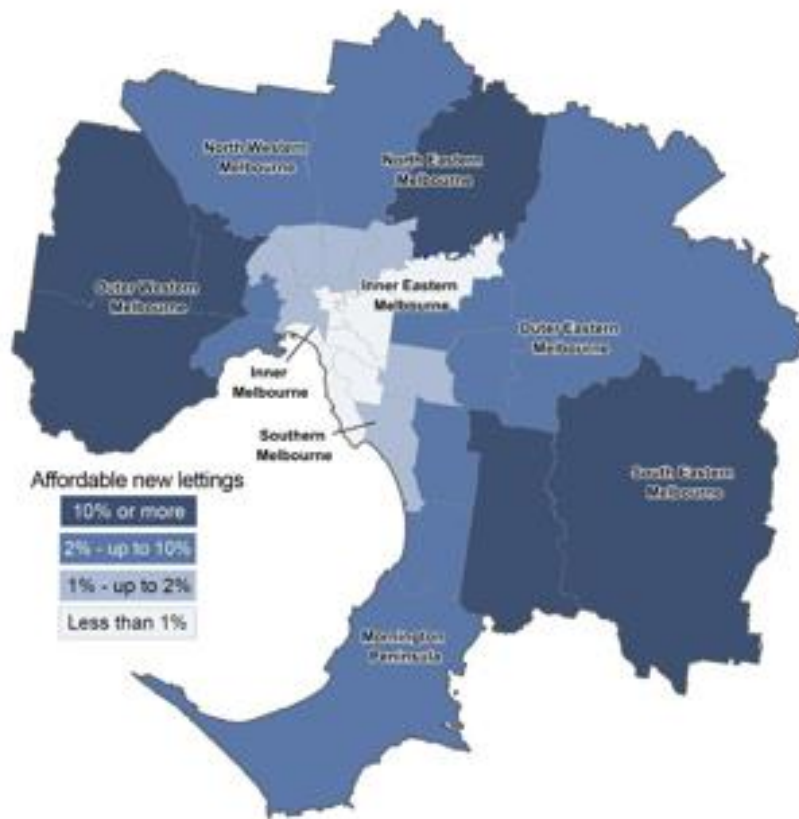


Figure 9: Affordable private rentals (December quarter, 2018)

Housing Affordability

Housing represents the largest share of household budgets, so housing affordability is a major determinant of both the cost of living and the standard of living. Housing affordability can be expressed more generally as a multiple of household incomes – how many median household incomes are needed to buy a median priced house in an area? This is a simple means of exploring shifts in housing affordability by relating change in house prices to change in people’s income. Higher median multiple incomes represent less affordable housing markets, with three median multiple incomes broadly defining the outer bounds of affordability¹¹.

Housing affordability can also be framed in terms of ‘housing stress,’ usually in relation to the number of lower income households (lowest 40% of the income distribution nationally) where mortgage or rent exceed 30% of household income. Housing stress is most likely to have major effect on lower income households, and lower rates of housing stress are indicative of better housing affordability. The figures below represent data from the 2016 Census, which are the same as reported last year unless otherwise noted.

Current Snapshot

Key Statistics
A typical home-buying household in Knox needed 8.8 times its annual income to purchase a median-price home in 2016
10.6 % of mortgaged households in Knox (2,400) were experiencing ‘mortgage stress’ in 2016
26.5% of rented households in Knox (2,800) were experiencing ‘rental stress’ in 2016
9.5% of all households in Knox (5,250) were in financial stress, either mortgage or rental, in 2016
28.7% of all low-income households in Knox (5,250) were experiencing ‘housing stress’ in 2016

Analysis

There is anecdotal evidence for an easing of housing prices across Greater Melbourne in 2018, including Knox. However this has not yet shown up in the five-yearly census data used in several benchmarks of affordability. Council is continuing to investigate new sources of data that will provide more frequent updates on local housing prices.

US-based research firm Demographia publishes a series of annual reports that compare housing affordability across the world. One measure these reports use is “median multiple incomes,” which compares local housing prices with local income levels. Areas where median housing prices are less than three times median incomes are considered ‘affordable’ by this measure. The number of median multiple incomes needed to purchase a median price home in Knox has steadily increased from 5.2 in 2006, to 6.5 in 2011, to 8.8 in 2016, rating Knox as ‘severely unaffordable’ by this measure.

Whilst rates of mortgage and rental stress were slightly below metropolitan averages as of 2016, this figure varies across Knox’s suburbs. The highest rates of housing stress overall (mortgage and rent) were in Bayswater and Boronia, largely a result of rental stress. Knox’s relatively large household base results in a significant number of stressed households overall (5,250 in 2016), representing a net increase of 500

¹¹ Methodology taken from annual Demographia International Housing Survey

households since 2011. While 9.5% of all households in Knox were experiencing financial stress from either mortgage or rent in 2016, this figure equates to nearly 30% of lower income households in Knox (those in the lowest 40% of the national income distribution).

The number of Knox households in mortgage stress declined to 2,420 in 2016 from 2,520 in 2011. In 2011, the highest rates of mortgage stress (higher than the metropolitan average) were in Bayswater and Wantirna South. By 2016, mortgage stress in those suburbs had fallen below Melbourne's average, while Wantirna and Scoresby were experiencing slightly higher than metropolitan average levels.

While Upper Ferntree Gully remained the suburb with the highest rate of rental stress in 2016, there was some change in the profile of suburbs with higher than average rates. In 2011, Upper Ferntree Gully, Lysterfield, Boronia, Ferntree Gully and Rowville all had rates of rental stress exceeding the Melbourne average. By 2016, only Upper Ferntree Gully and Bayswater exceeded or matched the metropolitan average, and rates of rental stress had declined in most Knox suburbs. Despite the decline in rates, a growing household base resulted in an increase of 600 households experiencing rental stress in 2016.

Figure 10: Percentage of households experiencing mortgage stress in Knox's suburbs, 2016

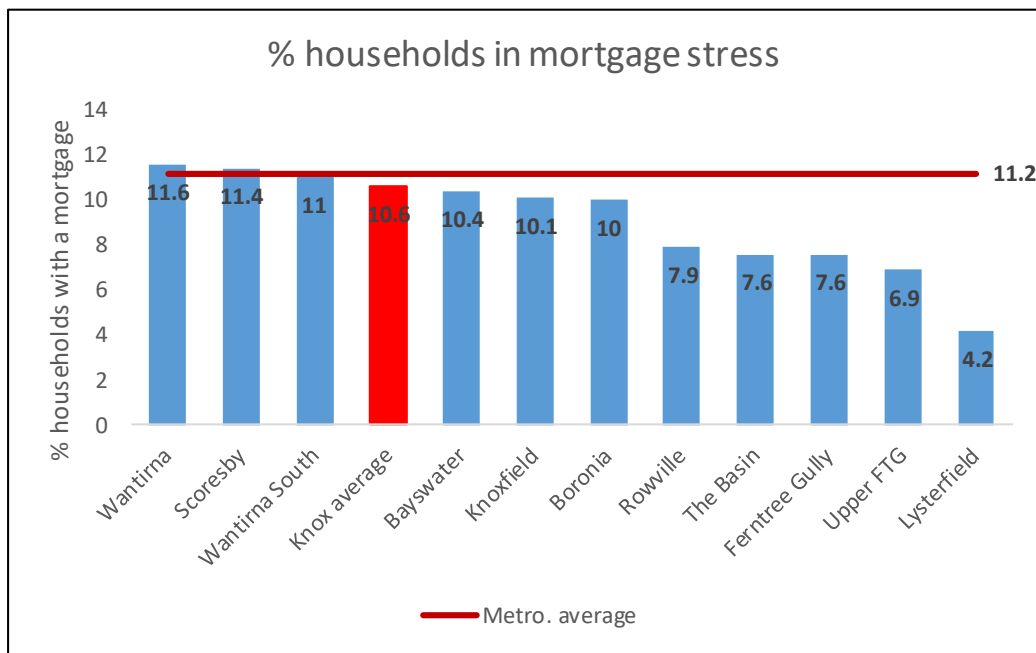
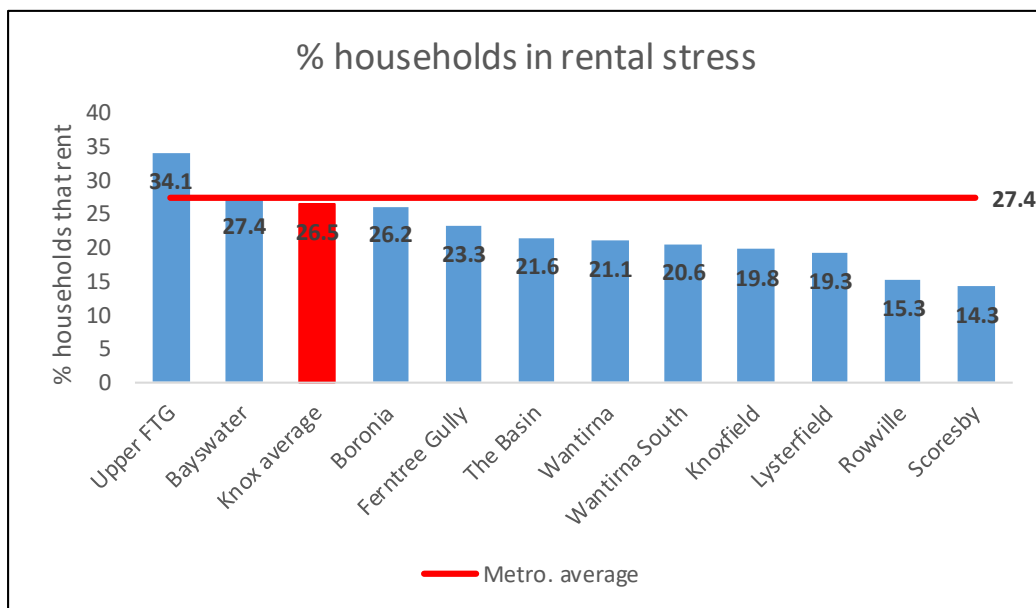


Figure 11: Percentage of households experiencing rental stress in Knox's suburbs, 2016



Social Housing

It is the policy of Knox City Council that shelter is a basic human right, as enshrined in international covenants and treaties¹². Social housing, in the form of community housing and public housing, plays an important role for providing shelter for those most in need. The *Knox Affordable Housing Action Plan*, first developed in 2007 and renewed in 2015, was developed to help increase the supply of social housing in Knox. Council has estimated that an additional 860 social housing dwellings will be needed in Knox by 2036 to accommodate forecast demand¹³.

Current Snapshot

Key Statistic
No new social housing developments were built in 2018, for the fifth consecutive year.

Analysis

For the fifth year in a row, there were no social housing developments built in Knox in 2018. However, through its partnership networks with social housing providers, Council is aware of development of new social housing underway in Bayswater that is expected to open in 2019. In addition, there are a number of Strategic Investigation Sites, as identified in the *Knox Housing Strategy 2015*, which are moving through rezoning processes which include potential provision for new social housing. These include the former Boronia Heights School, recently declared surplus by the Department of Education; the former Kingston Links Golf Course site, recently rezoned for residential development through Amendment C141; and the former Norvel Road Quarry and Boral Quarry, which are in the early stages of planning for redevelopment as residential areas.

Council is pursuing a number of other policy avenues and partnership opportunities under the framework set out by the *Knox Affordable Housing Action Plan* to facilitate the delivery of new social housing in Knox. They include:

- **Partnership with the Department of Health and Human Services (DHHS)** – Council meets regularly with DHHS to discuss public housing supply in Knox. Council and DHHS are currently developing a MOU between Council and the Director of Housing and Deputy Secretary (Finance and Infrastructure Division) to define the nature and approach to our partnership. Council has also identified a number of public housing sites in Knox, across a range of price points, which have tangible redevelopment potential.
- **Laying a Social Housing Pipeline in Knox Project** – Knox City Council is currently undertaking the Laying a Social Housing Pipeline in Knox project. The project is funded by a grant through the *Social Housing Investment Planning 2017-18 Grants for Local Government (SHIP Grant)* from the Victorian Department of Health and Human Services. The project comprises three major outputs:

¹² International Covenant on Civil and Political Rights, International Covenant on Economic, Social and Cultural Rights, Convention on the Rights of the Child etc.

¹³ Knox City Council, *Minimum Supply of Social Housing, Knox (2016-2036)*, 2017

1. **A Strategic and Surplus Sites Framework** – To scope and establish an internal working framework for the identification of strategic and surplus sites in Knox, and the delivery of social housing on these sites;
 2. **A Social Housing Futures Fund (and other options) Investigation** – To explore the establishment of a social housing fund (and other options) that levies and collects, and then invests and allocates developer and other contributions towards the delivery of social housing outcomes; and
 3. **Laying a Social Housing Pipeline in Knox Report** – to bring together the overarching framework and approach for laying a social housing pipeline in Knox, which includes recommendations and estimated costs and resource requirements for implementation.
- **Knox City Council Affordable and Social Housing Workshop Series** – Council is conducting a series of workshops with Swinburne University on affordable and social housing in Knox. The aims of the workshops are to:
 1. Inform the review and design of Knox City Council’s affordable and social housing policy framework;
 2. Achieve horizontal and vertical alignment of social and affordable housing policy and legislation in Knox;
 3. Identify emerging trends, opportunities and blockages in policy, legislation and delivery options;
 4. Identify tangible social and affordable housing delivery opportunities for Knox ;
 5. Build a common language that enables improved affordable and social housing communication; and
 6. Strengthen effective relationships with and between key affordable and social housing sector agents.

The workshop series will also build strategic relationships and partnerships between government, industry, academic and community sector stakeholders.

Walkability

Knox@50 was a large-scale community engagement project run by Knox Council in 2012, which was a key input into both the *Knox City Plan 2013-2017* and *Knox Housing Strategy 2015*. One of the main themes that emerged in conversations with residents, businesses, community groups, and other stakeholders was a desire for convenient access to services for day-to-day needs. This idea of ‘living locally’ aligns with the State government’s framework of Activity Centres as well as the scaled approach to housing in the *Knox Housing Strategy 2015*.

Walkscore is an index developed to estimate the ‘walkability’ of a place that has informed public policy and the real estate industry in the US, UK, Canada, and Australia. It examines the proximity of local shops, services, schools, entertainment, and jobs to develop a walkability score on a scale from 1 to 100. Areas that score under 50 are classed as “Car Dependent,” those with scores of 51-70 are classed as “Somewhat Walkable,” scores of 71-90 are considered “Very Walkable,” and places that score over 90 are deemed a “Walker’s Paradise.” The Walkscore website is searchable by individual address and provides scores for entire neighbourhoods and suburbs.

The Housing Monitoring Program looks at individual Walkscores for each planning permit approved, as well as how they stack up against the average for their suburb. High Walkscores are considered desirable, but so are new developments that are in the more walkable parts of Knox.

Current Snapshot

Key Statistics
28% of net new dwellings approved are classified as “Very Walkable” or “Walker’s Paradise”
41% of net new dwellings approved had a higher than average Walkscore for their suburb

Analysis

Although the activity centres of Bayswater, Boronia, and Ferntree Gully grew up around train stations and main streets lined with shops, much of Knox was built out during the 1970s, 1980s, and 1990s when suburbs were being designed for cars and driving. These areas are generally classified as “Very Walkable” overall, though there is a wide range of scores across each suburb. Much of Rowville, Lysterfield, and the upper Dandenong Foothills in particular are classified as “Car Dependent” overall by Walkscore.

Only 28% of dwellings approved in 2018 had Walkscores of 70 or above, down significantly from 46% in 2017 and 48% in 2016. Similarly, only 41% of approved dwellings were in areas that were considered more walkable than the average score for their suburb, down from 79% in 2017 and 65% in 2016. This reflects the fact that there were relatively few approvals in Activity Centres in 2018 compared to recent years.

While not as strong as recent years, the data nonetheless suggests that there is still a market for walkable neighbourhoods in Knox. For example, Bayswater has an average Walkscore of 61, which is classified as “Somewhat Walkable.” However, 84% of the net new dwellings approved this year in Bayswater had a Walkscore greater than 61, suggesting that most approvals in Bayswater are occurring in the most walkable parts of the suburb.

The percentage of approved dwellings in areas of Knox that are considered “Car Dependent” rose to 28% in 2018. This same figure was 12% in 2017 and 22% in 2016.

Table 6: Percentage of net new dwellings whose Walkscore is above the average Walkscore for the suburb

Suburb	Suburb Average Walkscore	% of Net New Dwellings whose Walkscore is above the Suburb Average
Bayswater	61	84%
Rowville	47	79%
Boronia	61	71%
Ferntree Gully	56	48%
Wantirna South	57	42%
Scoresby	59	39%
Knoxfield	57	29%
The Basin	44	11%
Wantirna	63	8%
Lysterfield	30	0%
Upper Ferntree Gully	48	0%
Overall		79%



Figure 12: Example Walkscore 'heat map' of Boronia and surrounding areas, 2018 (walkscore.com)¹⁴

¹⁴ Walkscore, <https://www.walkscore.com/AU-VIC/Melbourne/Boronia>, accessed March 2019.

Alignment with VCAT Decisions

Planning applications that are decided by Council can be appealed to VCAT, which hears the case and makes a final ruling on whether or not to issue a permit. These might be land owners appealing Council's refusal of a permit, neighbours objecting to Council's approval of a permit, or either party seeking variations to the original permit conditions. When making this determination, VCAT can only consider the content of the Knox Planning Scheme. The number of cases that go to VCAT and the percentage of decisions that are overturned are an indicator of the degree of consistency between Council policy, the Knox Planning Scheme, and Council decision-making process.

Current Snapshot

Key Statistics
43 planning and subdivision applications related to new dwellings were decided at VCAT in 2018
58% of the Council refusals that went to VCAT resulted in a permit being granted (overturned)
83% of the Council approvals that went to VCAT resulted in a permit being granted (upheld)

Analysis

There were 43 residential planning applications decided by VCAT in 2018, which is considerably higher than the 25 decisions in 2016 and the 24 in 2015. These figures suggest that the shift in housing policy from the previous *Knox Housing Statement 2005* to the *Knox Housing Strategy 2015* are filtering through to VCAT referrals. The *Knox Housing Strategy 2015* took effect in the Planning Scheme in March 2016, this was the first monitoring year that all of the applications decided on by VCAT were received after these changes took effect. It will be interested to see if this increase in VCAT cases represents a new trend or a temporary increase related to the implementation of the Knox Housing Strategy 2015.

There were 36 VCAT decisions on planning applications that were initially refused by Council in 2016, including those refused by Council directly and those refused by officers under delegation. This type of refusal is often the result of an appeal by the applicant (the developer). VCAT set aside the Council decision in 21 of these cases (58%), resulting in permits for 418 new dwellings. This included the proposal for 294 townhouses at the former site of the Wantirna Caravan Park; a 26 unit apartment building at 438 Stud Road, Wantirna; 18 townhouses at 3 James Street, Bayswater, and 14 townhouses at 202-206 Boronia Road, Boronia. The rate at which Council refusals were overturned at VCAT is similar to that of previous years: 63% in 2017, 67% in 2016, 61% in 2015, and 55% in 2014. It should be noted that some cases where a permit is issued after an initial refusal is due to changes by the applicant rather VCAT approving the original proposal, as was the case for the townhouse development at 202-206 Boronia Road that started as an application for 20 apartment units.

There were also seven VCAT referrals for applications that were initially approved by Council or given a Notice of Decision to issue a permit 2018. This type of VCAT referral is often the result of an appeal by neighbouring residents or other stakeholders opposed to a proposed development. VCAT affirmed the Council decision in six of these seven cases, five of which included variations to the original decision. These decisions resulted in permits for a total of 11 new dwellings. One Council approval of six dwellings at 6 Fordham Court, Rowville was set aside by VCAT after an appeal by objectors on neighbourhood character grounds.

Table 7: Outcomes of Planning Applications Referred to VCAT, 2018

VCAT Outcome	Number of 2018 VCAT Cases	Percentage of 2018 VCAT Cases
VCAT Upheld Council Refusal, No Permit Issued	14	33%
Appeal Withdrawn by Applicant, No Permit Issued	1	2%
VCAT Overturned Council Refusal, Permit Granted	21	49%
VCAT Upheld Council Approval, Permit Granted	6	14%
VCAT Overturned Council Approval, No Permit Granted	1	2%

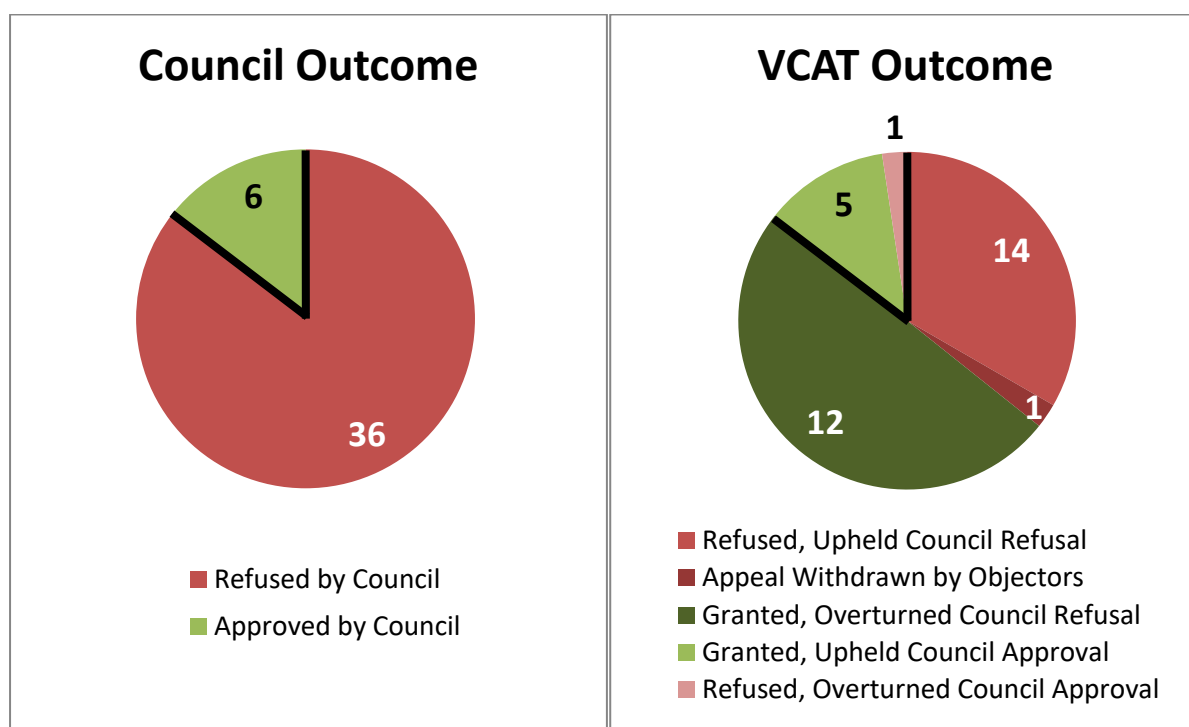


Figure 13: Summary of Planning Applications Referred to VCAT in 2018

Integrated Place-Based Plans

The previous State Government Planning framework *Melbourne 2030* set up an approach to planning across the metropolitan area that focused on activity centres, areas with good access to a wide range of shopping, schools, open space, and community facilities. The current Victorian Planning framework document *Plan Melbourne 2017-2050* continues this focus on activity centres through its emphasis on '20-minute cities'. Knox City Council has developed a series of structure plans and other strategic plans that have supported place-specific planning controls and rezonings, and provided guidance for decisions on infrastructure and community services. These documents are developed with extensive community consultation and stakeholder input to help identify aspirations and give guidance balance competing priorities for future decisions by Council, residents, businesses and community organisations.

Current Snapshot

Knox Activity Centres	Strategy Document	Status	Implementation Plan	Current Stage
Knox Central	Knox Central Structure Plan	Adopted 2017	Under Development	Implementation
Bayswater	Bayswater Activity Centre Structure Plan: "Bayswater 2020"	Adopted 2005	Yes	Implementation
Boronia	Boronia Structure Plan: "Your Life, Your Place, Our Future"	Adopted 2006, Amended 2012	Yes	Review Underway
Rowville	Rowville Plan 2015: "Rowville: NEXT"	Adopted 2015	Draft	Implementation
Ferntree Gully Village	Ferntree Gully Village Structure Plan: "The Future of our Village"	Adopted 2014	Yes	Implementation
Upper Ferntree Gully	Upper Gully Strategic Plan: "A Bright Future for Upper Gully"	Adopted 2016	Yes	Implementation

2017 Activity

Knox Council progressed two important strategic documents and related planning controls in 2018:

- **Knox Central** – the Knox Central Structure Plan, adopted by Council in October 2017 along with the associated Amendment C149, sets directions for the large precinct that includes the Westfield Shopping Centre, Knox Civic Centre, Lewis Reserve, and the highest levels of residential density in Knox. Amendment C149 was approved and gazetted by the Minister for Planning on 24 May 2018.
- **Boronia Renewal Project** – the Boronia Structure Plan, adopted by Council in 2006 and amended in 2012, has guided development in the activity centre for over a decade. Council commenced a review of the structure plan in 2017 as part of the Boronia Renewal Program, a comprehensive two-year project of community engagement and planning that will provide new direction and guidance for the area over the next 10 years. A draft of the Boronia Renewal Strategy is expected in May 2019.

6. Future Program Development

The Housing Monitoring Report will continue to be published annually as the program is further refined to align with the *Knox Housing Strategy 2015*, the *Knox Community and Council Plan*, and future *State of Knox Reports*. The future indicators mentioned in this report and others will be developed and refined as new data sources become available and are integrated into the monitoring program.

In addition to the main report, Council continues to develop a 'Housing Scorecard' to present some of the key insights in a format that can be distributed widely and shared easily. The scorecard will be designed to be visually engaging and easily understood by a wide range of audiences, from Councillors and policy makers to Knox residents and developers. This may take the form of printed document, an interactive website, or a combination of formats. The shape and content of the Housing Scorecard will be tested with key stakeholders and is expected to evolve along with the main Housing Monitoring Report to reflect key issues and housing priorities from year to year.

The following is a list of potential future indicators that are currently under development as part of the Knox Housing Monitoring and Review Program. These indicators seek to introduce new data sources and new methodologies as they become available.

Residential Construction Activity

One of the longstanding goals of the Knox Housing Monitoring Program has been to monitor new building construction in addition to new planning permit approvals. Planning permits are important milestones in the process of delivering new housing, and can provide important information about the type, size, and location of future housing in Knox. Residential planning permits are valid for two years and can be extended to four. But the decision to build under a permit is completely up to the landowner and developer, and is subject to market forces beyond the control of Council and the local planning scheme. This means that not all planning permits result in new housing. Looking at planning approvals tells us what might be built, not what has been built.

The State Government has been developing information about new constructions in the Housing Development Data (HDD) program that is helping to close that gap. The HDD uses automated analysis of aerial photography to determine where new construction and demolitions of existing housing is happening across the Melbourne metropolitan area. So far, the HDD includes data from 2004-2014, with additional years of analysis under development now. While it is not as up to date as planning approvals, Knox City Council has compared HDD data with recent planning approvals data to learn more about which permits are likely to lead to new construction and which are more likely to be speculative in nature.

This examination is ongoing, but early analysis indicates that from 2008-2014 roughly 75% of planning permits led to new construction within the four-year permit window. If that percentage holds for permits issued in 2016, the 955 possible new dwellings would lead to 716 new dwellings. This is an area of analysis that will continue to be developed as part of the Housing Monitoring Program as more HDD estimates become available.

Residential Aged Care Facilities

Demographic factors and increases in life expectancy have led to increasing numbers of older residents in Knox recently, a trend which is expected to continue over the next few decades. This population has different housing and health care needs from the rest of the population, and Knox will need an increasingly diverse range of housing and care facilities to meet the needs these residents in the future. This ranges from smaller and more accessible dwellings to retirement villages and assisted living facilities to aged care facilities offering hospital-grade services for specific health care needs.

The sector is also undergoing rapid innovation in the areas of home-based care and mixed models of residential care that promise new ways to address the needs of a population that is ageing across the country. The Housing Monitoring Program is developing ways to measure the range of aged care offerings across the city to track changes over time that can help adjust policy for housing.

Household Water and Energy Use, Household Waste and Carbon Emissions

Knox City Council uses the Sustainable Design Assessment in the Planning Process (SDAPP) developed by Victorian councils with the Municipal Association of Victoria (MAV) to provide “a streamlined and consistent methodology for requesting build environment sustainability outcomes through the planning process.”¹⁵ The *Knox Planning Scheme* requires that proposed residential developments of three or more dwellings in Activity Areas and Local Living Areas submit an environmental sustainable design assessment (SDA) as part of the planning application process. This SDA must demonstrate “how a development includes design features to respond to issues such as energy use and peak energy demand, water use, stormwater and waste management, transport and responsible use of building materials.”¹⁶

In previous years, Council has used an interactive web-based tool based on the Sustainable Tools for Environmental Performance Strategy (STEPS) project developed by Moreland City Council. The STEPS tool results from individual applications in Knox were compiled in a report called *Environmentally Sustainable Design in the City Planning Department* produced for Council by Organica Engineering, which has been used as the basis for assessing water and carbon dioxide savings in previous versions of the *Knox Housing Monitoring Report*.

Knox Council is currently transitioning to a new SDA tool developed by the MAV as a replacement STEPS and other SDA tools used by individual Councils. The Built Environment Sustainability Scorecard (BESS) assesses the energy and water efficiency, thermal comfort, and overall environmental sustainable performance of new buildings.¹⁷ New indicators will be developed in future versions of the *Knox Housing Monitoring Report* to report on the estimates savings in water and energy use as well as estimated reductions in household waste and carbon emissions from new residential planning approvals.

¹⁵ Municipal Association of Victoria, www.mav.asn.au/policy-services/planning-building/sustainable-buildings/, accessed July 2017.

¹⁶ Knox City Council, *Knox Housing Strategy 2015*, page 41

¹⁷ Municipal Association of Victoria, bess.net.au/about/, Version 1.5.0, accessed July 2017.

Tree Canopy Cover

One key outcome of the Knox@50 community engagement project from 2012 was a confirmation of the community's appreciation of Knox's natural character, with trees representing an important characteristic of the identity of local neighbourhoods. The State Government's new residential zones provided an opportunity to create customised planning controls, and the *Knox Housing Strategy 2015* introduced new requirements for canopy trees into the planning scheme in 2016.

Direction 6.4 of *Plan Melbourne*¹⁸ seeks to "Make Melbourne cooler and greener." The Department of Environment, Land, Water and Planning (DELWP), is leading Action 91 of the *Five-Year Implementation Plan*¹⁹, which seeks to create "urban forests" through a comprehensive program of data collection, targets, strategies, and policies. A key component of this is a metropolitan-scale vegetation, heat, and land use data, which DELWP is producing in partnership organisations like RMIT, CSIRO, Melbourne Water, and the Clean Air and Urban Landscapes Hub (CAUL Hub).

This data will help Councils track and understand how tree cover changes from year to year, to identify areas where the city is losing trees due to redevelopment. It will help measure the effectiveness of planning controls that require trees to be planted along the street and in the back gardens of new residential development. Understanding where controls are working and where they are not will help Council adjust its planning controls to ensure they deliver the right outcomes for the Knox community.

Neighbourhood Character and Urban Design

Neighbourhood character is an important part of community identity in Knox and represented a strong theme represented the local community processes during the engagement for *Knox@50*, the *Knox Housing Strategy 2015*, and the *Knox Community and Council Plan 2017-2021*. Each of these engagement efforts highlighted a level of concern in some parts of Knox that changes the city is at risk of losing its identity due to rapid changes in the look and feel of neighbourhoods. The quality of urban design and the look and feel of streets are difficult to quantify, since they are aesthetic judgements that differ widely within every community. Not everyone has the same tastes and sensibilities. Where a new house with a modern design aesthetic maybe viewed as exciting and fresh by some people, while at the same time seeming undesirable and out of place and by others. Knox Council seeks out professional urban design advice for some large and important planning applications, but even the option of third-party experts is ultimately subjective.

One of the ways the Knox Housing Monitoring Program is exploring as a way to measure these issues related to identity and changes is to measure the perceptions and preferences related to neighbourhood character and urban design. The *Knox Community and Council Plan* was informed by a broad survey of community sentiment and focused engagement with residents and stakeholders to understand and unpack the range of opinions held by the community. Future surveys related to specific issues, such as housing and development, could help address questions about how people view the changes happening across Knox and help understand how well Council's housing policy is with community identity and perceptions.

¹⁸ Victoria State Government, *Plan Melbourne 2017-2050: Metropolitan Planning Strategy*, <http://www.planmelbourne.vic.gov.au/the-plan>, accessed April 2018.

¹⁹ Victoria State Government, *Plan Melbourne 2017-2015: Five-Year Implementation Plan*, <http://www.planmelbourne.vic.gov.au/implementation>, accessed April 2018.