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Knox Housing Monitoring Program 2022

Annual Report



Knox Housing Monitoring Program

Annual Report for 2022

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Executive Summary

The Knox Housing Monitoring Program annual report for 2022 aimed to measure progress against the six objectives in the *Knox Housing Strategy 2015* by examining data related to planning approvals, housing construction and population demographics. This analysis was framed around a set of indicators that sought to measure different aspects of housing in Knox, particularly new dwellings that had been approved through the planning system in 2022.

Key Highlights

The following were the key findings in the report:

- Taking into consideration demolitions, the planning and subdivision permits approved in 2022 were 177. If enacted, this could potentially result in 373 additional new dwellings in Knox. These figures were a little above the 2021 figure (334), but were still generally lower than the housing approvals in the last seven years before 2021.
- The overall percentage of new dwellings approved in 2022 whose typology was consistent with their Housing Strategy Area was 69%. This was a slight decline from the 2021 figure of 74%. This was however a significant improvement over the 2018 figure of 58%. This suggests that the *Knox Housing Strategy 2015* is continuing to deliver positive results by encouraging appropriate development across the municipality.
- The approved planning permits by Housing Strategy Area in 2022, shows that the Bush Suburban area has 12 dwellings per hectare and 67 dwellings per hectare in the Activity Areas. These outcomes were in line with the *Knox Housing Strategy 2015*.
- Approved planning permits in 2022 did not result in a single apartment or a residential aged care facility. These figures were down from 4 apartments and 214 beds in residential aged care facilities, in 2021.
- Building permits issued in 2022 were lower than in the previous five years, with the exception of 2021.
- Rising housing costs, very low availability of affordable rental options, and an identified shortfall in social housing remain key policy concerns in 2022. Only four social housing projects were delivered in Knox during 2022. To increase the provision of social housing, Council continues to pursue policies and partnership opportunities to help facilitate solutions that can help address the identified shortfall.
- VCAT decided 14 residential planning applications for Knox in 2022, similar to the 2021 figure, but fewer than any other year since 2012.

Summary of Key Findings

Objective 1: A diversity of housing is provided in appropriate locations

Planning and subdivision permits approved in 2022 could result in a net loss of 124 detached dwellings and a net increase of 497 townhouses, villa units and dual occupancies. This could yield a net gain of 373 total dwellings. Overall, 69% of new dwellings approved in 2022 were the preferred type for their Housing Strategy Area, and 31% were of a type that was denser than the preferred dwellings for the residential land on which they were located. In each case of these non-preferred dwellings, the unique

characteristics of the site and/or proposed development, meant that the required neighbourhood character outcomes could still be achieved.

Objective 2: Residential development responds to community needs, and allows people to age-in-place

The number of small dwellings (dwellings less than three bedrooms) approved by Council in 2022, fell below the forecast growth for small households, as it has in other recent years. This outcome could limit the housing choice for ageing residents in Knox looking to downsize, first homebuyers, or anyone keen to reduce their cost of living; since housing represents the biggest share of household budgets.

The limited number of affordable housing opportunities continued in Knox during 2021-2022. Only 58 (14%) of the 421 dwellings sold in Knox were considered affordable to very low and low income households. Similarly, 38% of the rental properties in Knox were affordable to very low and low income families. Social housing options were also limited, as the substantial gap between demand and supply of social and affordable housing in Knox, continued to widen.

Objective 3: Energy, water, and waste efficient design are increased in residential dwellings

The Environmental Sustainability Design (ESD) assessments that must accompany planning permit applications for two or more new additional dwellings, indicated that all buildings assessed in 2021-2022 met the best practice target reduction for potable water consumption (25%) and greenhouse gas emissions (50%).

Objective 4: Housing design in Knox better responds to neighbourhood identity and creates a stronger sense of place

With respect to the walkability measure, 32% of net new dwellings approved in planning permits in 2022, were in walkable locations in Knox. These dwellings had Walkscores of above 70, that is, in “Very Walkable” locations. This was a marginal improvement over the 2021 figure of 31%. Permits approved in 2022 recorded the fourth highest number of approved net dwellings located in “Very Walkable” areas of Knox. The highest was 48% in 2016 and 2019. Also, 67% of approved net dwellings in 2022 were in areas that were considered more walkable than the average score for their suburb. This was an improvement of 59%, compared to the 2021 figure.

Objective 5: Protect and enhance the landscape and environmental values of natural areas of significance

As Knox’s population continues to grow, it will be increasingly important to ensure that residential development does not erode Knox’s unique and most cherished environmental values. The planning permits approved in 2022, demonstrated that the number of dwellings per hectare in the Housing Strategy Areas, produced fewer dwellings per hectare in Bush Suburban and Knox Neighbourhood areas. This aligned with the *Knox Housing Strategy 2015*, resulting in higher density dwellings in the Local Living and Activity Areas, and lower density development in Bush Suburban and Knox Neighbourhood areas. This respects the neighbourhood character of these areas.

Tree canopy data captured by the then Department of Environment, Land, Water and Planning (DELWP) in 2018 puts Knox’s overall tree canopy coverage at 18%, and the urban areas at 16.3%. The data also showed a 6% decline in native vegetation cover in Knox since the late 1980s.

Objective 6: Development responds to neighbourhoods in an integrated and balanced manner

The alignment between Council’s planning application decisions and Victorian Civil and Administrative Tribunal’s (VCAT) decisions is important in gauging the coherence of planning application decisions with the Knox Planning Scheme.

VCAT affirmed all Council approvals in 2022, that would yield at least one net new dwelling. This result was consistent with previous VCAT outcomes on Council approvals. Overall, 14 residential cases (same figure as for 2021) were decided by VCAT in 2022, and in most of the cases, VCAT overturned Council’s refusals. This outcome was in line with past rulings on Council refusals (with the exception of 2021). Under the *Knox Housing Strategy 2015*, the years 2021 and 2022 have witnessed the lowest number of residential cases lodged at VCAT from Knox.

Summary of Progress Towards Housing Strategy Objectives

Council Initiative is on Track/Achieved	Further Improvement Required	<i>Result does not Indicate a Definite Direction</i>
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Indicative Results of Council’s Housing Related Action	Achievement Rating
<i>177 approved permits could result in a net of 373 additional new dwellings in Knox</i>	
<i>Dwelling diversity: Small dwellings (1-2 bedrooms) 18%, 3 bedrooms 20%, 4+ bedrooms 62%</i>	
<i>69% of dwellings approved were consistent with their Housing Strategy Area</i>	
<i>Dwelling density per hectare: Bush Suburban 12, Knox Neighbourhood 20, Local Living 39, and Activity Areas 67</i>	
<i>32% of net new dwellings approved in 2022 were in very walkable locations in Knox</i>	
<i>No apartment or residential aged care facility was approved in 2022</i>	
<i>Residential aged care places in Knox were above the national minimum benchmark</i>	
<i>Rising housing costs, very low availability of affordable rental options, and a shortfall in social housing remain key policy concerns</i>	
<i>VCAT decided 14 residential planning applications for Knox in 2022</i>	
<i>100% of approved development of two or more dwellings met Environmentally Sustainable Design targets in water reduction and greenhouse gas emissions in 2022</i>	
<i>Tree canopy cover was 18% in Knox, and 16.3% in Knox urbanised areas¹</i>	

¹It is important to note that while Knox endorsed the [Living Melbourne: Our Metropolitan Urban Forest \(2019\)](#) target of achieving 30% tree canopy coverage by 2050 , there was no current data to accurately assess this target. For a more reliable assessment of this Action, current tree canopy data was required. This explains why the Tree Canopy Assessment Rating has remained grey.

1. This Document

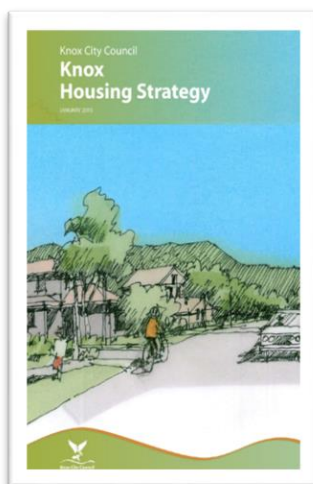
This is the 15th annual Knox Housing Monitoring Program report. It presents measures of progress against the six objectives of the *Knox Housing Strategy 2015* for the 2022 calendar year.

2. Policy Context



Plan Melbourne 2017-2050 seeks to integrate long-term land use, infrastructure and transport planning, so as to meet the city's future environmental, population, housing and employment needs. It is the Victorian Government's strategy for supporting jobs, housing and transport, while building on Melbourne's distinctiveness, liveability and sustainability. One of the key goals of this policy is to direct new housing toward areas with existing services, jobs and public transport. This Plan has two important 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 from overdevelopment.

The Knox Housing Strategy 2015 is consistent with Outcome 2 of the *Plan Melbourne 2017-2050* by promoting and supporting a scaled, balanced and responsive approach to residential development to accommodate population growth and the community's changing housing needs. The adoption of this balanced approach recognises that some parts of Knox will need to accommodate change, and in other areas change should be gradual and limited in order to protect and enhance Knox's green and leafy character and areas of environmental significance. The overall vision of the *Knox Housing Strategy 2015* is expected to be achieved through six interrelated objectives:



Objective 1: A diversity of housing is provided in appropriate locations.

Objective 2: Residential development better responds to the community's current and future needs, and allows people to age-in-place.

Objective 3: Energy, water, and waste efficient design is increased in dwellings.

Objective 4: Housing design better responds to neighbourhood identity and creates a stronger sense of place.

Objective 5: Protect and enhance the landscape and environmental values of natural areas of significance.

Objective 6: Development responds to neighbourhoods in an integrated and balanced manner.

The *Knox Housing Strategy 2015* divides Knox into four Housing Strategy areas – Bush Suburban, Knox Neighbourhood, Local Living, and Activity Areas (See Map 1) – and provides clear guidance on what types of dwellings are preferred and permissible in each area. Each area has different levels of change anticipated and different types of dwelling preferred:

-
- **Bush Suburban** and **Knox Neighbourhood** areas are expected to undergo less change, preserving areas of environmental significance (including native vegetation and wildlife habitat), landscape value and neighbourhood character.
 - **Local Living** and **Activity Areas** are expected to see more change, accommodating medium and higher density development to provide additional housing capacity and choice, to serve the Council's changing needs.

In 2021, Council adopted a new Community Plan and a new Council Plan which both highlight the continuing importance of housing as a critical focus for Council. A key direction of the *Community Plan 2021-2031* and the *Council Plan 2021-2025* is "Neighbourhoods, housing and infrastructure". This key direction focuses attention on supporting a greater diversity in the housing mix within Knox, and ensuring better access to public transport among others, as important outcomes. The *Council Plan 2021-2025* commits Council to several actions to achieve positive housing outcomes for the community, including commencing a review of the *Knox Housing Strategy 2015* (this is currently underway), and Council's adoption of the *Knox Social and Affordable Housing Strategy and Action Plan 2023 – 2027* to increase the supply of social and affordable housing, as a key step towards addressing homelessness in Knox.

3. A Note on Net vs. Total Dwelling Change

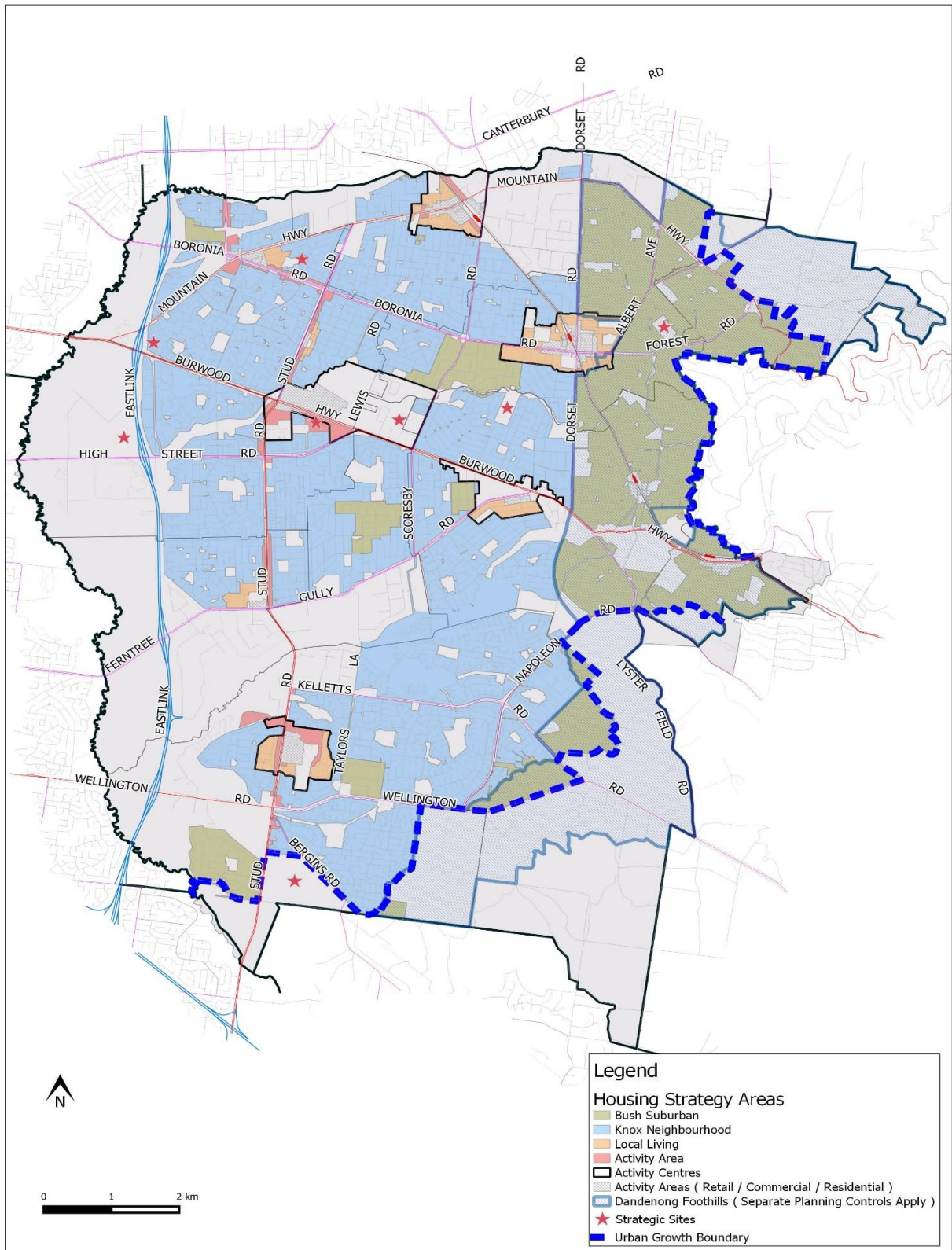
Approved planning permits for subdivisions and additional dwellings (not including planning permits for one new dwelling) are used in this report as an indicator of what dwellings are likely to be built, and where². Two approaches for counting the number of dwellings approved in planning permits are used in this report:

- **Total new dwellings** are all new dwellings possible from approved planning permits. This measure does not account for demolitions and provides the best information about the size and type of dwellings being approved. Total new dwellings are used to demonstrate how permit approvals align with the objectives of the *Knox Housing Strategy 2015*.
- **Net new dwellings** are the increase in dwellings possible from approved planning permits, beyond what exists in Knox already. It subtracts demolitions from total new dwellings. Net new dwellings is a measure of growth in Knox's housing supply.

For example, an approved planning permit to replace a detached house with five new townhouses would be counted as five total new townhouses and an increase of four net new dwellings.

² Approved planning permits are indicative of what may be built, but not all planning permits are enacted. Planning permits usually expire after two years (if not commenced), although extensions can be granted for an additional two years.

Map 1: Residential Areas as defined in the Knox Housing Strategy 2015



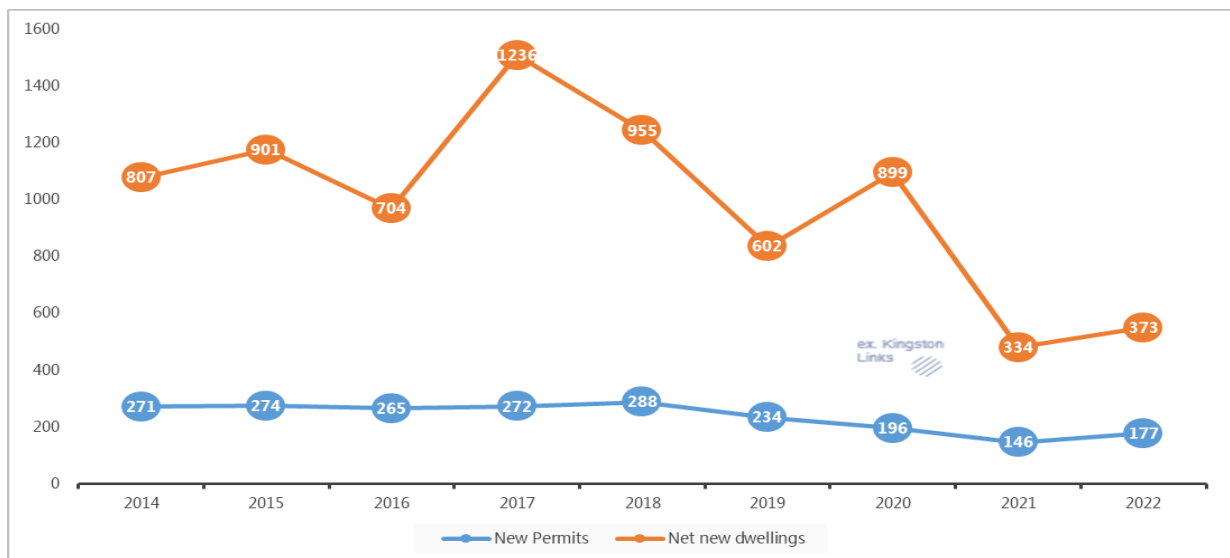
4. Overview: Planning Permits Approved in 2022

177	planning permits resulting in at least one additional dwelling were approved in 2022. This is the second lowest number since the years following the global financial crisis (2009 and 2010). This decline could probably be attributable to the COVID-19 Pandemic.
373	net new dwellings are possible from the planning permits approved in 2022, slightly above the 2021 figure.
133	proposed demolitions possible from approved permits.
0	beds in residential aged care facilities approved in planning permits in 2022.
50%	of net new dwellings possible from approved planning permits were in Boronia, Ferntree Gully and Bayswater.

The potential net increase in dwellings from planning permits approved³ in 2022 was comparatively low, and largely in line with the relatively low number of permits (see Figure 1).

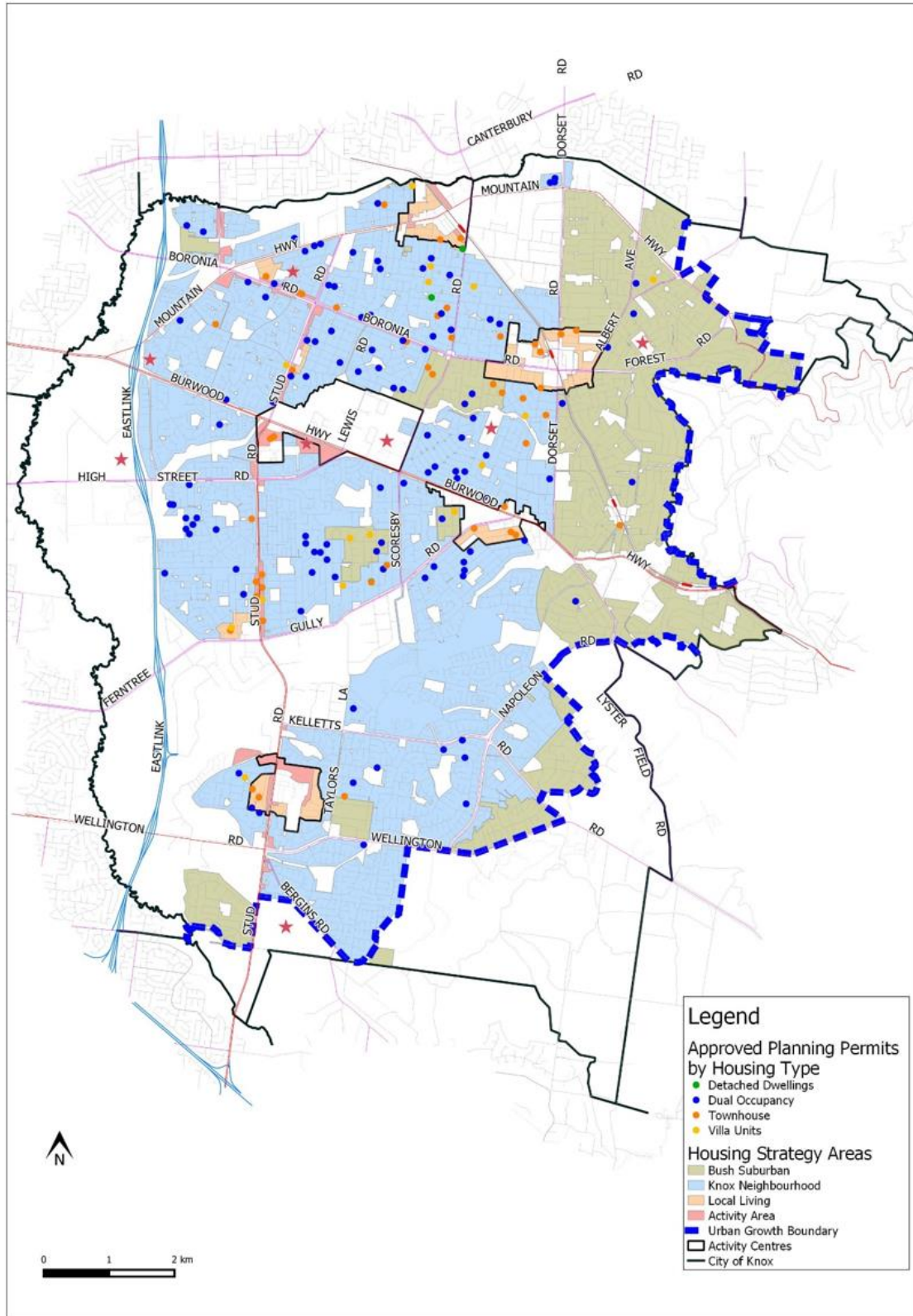
Figure 1. Approved Planning Permits and possible Net Growth in Dwellings

The number of approved planning permits yielding at least one new dwelling, and possible net growth in dwellings from these permits were the second lowest in a decade



³ This includes planning permits approved by Council at the direction of VCAT

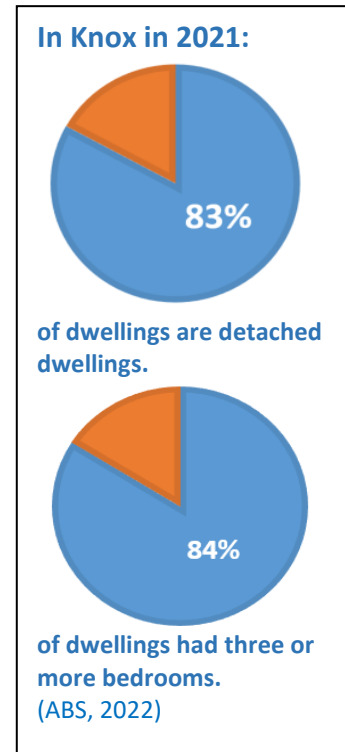
Map 2: Planning Permits Approved in 2022
These permits will yield at least one net dwelling if executed.



5. A diversity of housing is provided in appropriate locations (Objective 1)

5.1 Why is this important?

A diversity of housing is needed to respond to the changes in household size and structure Knox is experiencing. Within Knox, 83% of dwellings are detached dwellings with 84% being houses of three bedrooms or more (ABS, 2022). The *Knox Housing Strategy 2015* and the *Council Plan 2021-2025* are addressing this by encouraging the development of diverse types and sizes of dwellings to meet the changing needs of the Knox community. Although the demand for larger detached houses in Knox is likely to continue, having a mix of housing options ensures Council caters to the needs of present and future residents at all stages of life and of diverse socio-economic status. Council also seeks to protect and improve the “green and leafy” character of Knox that the community values. This requires encouraging the development of diverse housing with increased densities in Activity Areas and Local Living areas (close to transport, shops and services) to provide more housing choices, while discouraging intensive development in Bush Suburban and Knox Neighbourhood areas, to preserve these neighbourhoods’ green and leafy character and areas of environmental significance. In other words, the different types of housing development need to align with the character of the different neighbourhoods. Whilst housing diversity is critically important, the provision of diverse dwelling types should not unduly compromise the character of the neighbourhoods.



5.2 How are we tracking?

In 2022, townhouses⁴ accounted for 55% of the total new dwellings approved (see Figure 2). With the exception of 2020, townhouses have been the dominant housing typology in Knox since 2015. The breakdown shows that, out of the 53 townhouse developments approved in planning permits, 28 permits were approved for four dwellings or less, and 25 were five dwellings or more.

The proposed location of approved dwellings gives an indication of whether the preferred sites for the different housing typology is being followed. This report gives a detailed account of this. Table 1 (See p. 8) shows the number of dwellings in approved planning permits, and the preferred dwelling typology for each of the four Housing Strategy Areas, as well as areas outside the Urban Growth Boundary. Some townhouses and villa units were approved in the Bush Suburban and Knox Neighbourhoods areas (Lots under 1,000m²) although these were not the preferred dwelling type in those areas. This report investigates the possible reasons for the approval.

⁴ See Attachment 1 for the definition of dwelling type.

The proportion of total new dwellings that were the preferred dwelling type is shown in Figure 3. Also, Figure 4 shows the total number of new dwellings approved per hectare in each of the four Housing Strategy Areas. See Attachment 2 for the trend in net growth in dwellings, by type, over the past eight years.

Figure 2. Total New Dwellings and Demolitions by Approved Planning Permits

Townhouses accounted for more than half of total new dwellings in approved planning permits than any other dwelling type in 2022. All but six demolitions in approved planning permits were dual occupancy

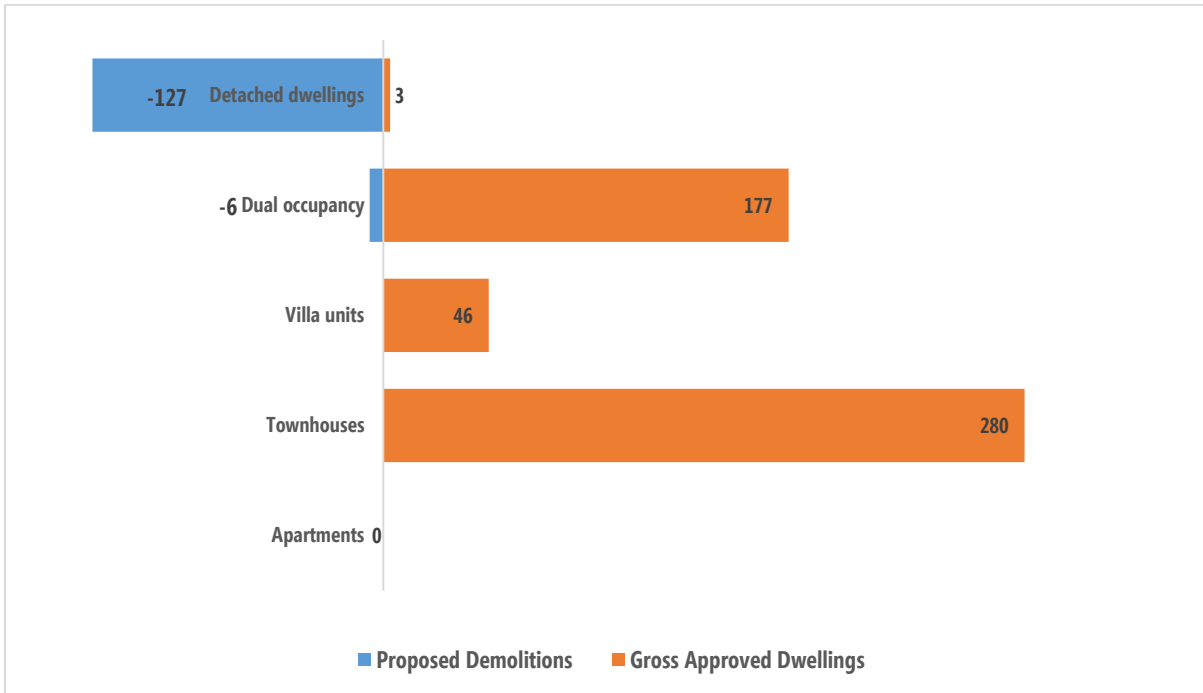


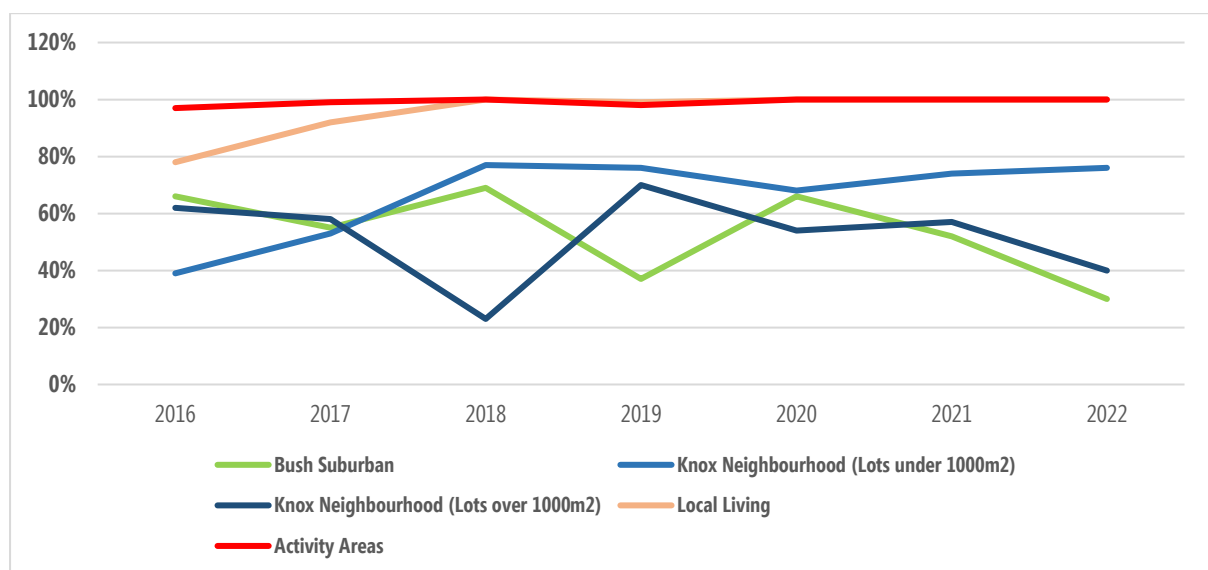
Table 1. Number of new Dwellings by Typology in Knox Housing Strategy Areas

Area Type		Net New dwellings	Total new dwellings	Detached dwellings	Dual Occupancy	Villa units	Townhouses	Apartments /Mixed used
Outside the Urban Growth Boundary	All lots - includes rural and other zones	0	0	0	0	0	0	0
Bush Suburban	All lots - min. subdivision	39	47	0	14	11	22	0
Knox Neighbourhood	Lots under 1000m ²	124	201	3	149	9	40	0
	Lots over 1000m ²	56	67	0	7	20	40	0
Local Living	All lots - additional controls	61	81	0	5	0	76	0
Activity Areas	All lots - additional controls from local plans may apply	86	102	0	2	6	94	0
Commercial Areas	All lots - additional controls from local plans may apply	7	8	0	0	0	8	0

PREFERRED HOUSING TYPE
 PERMISSIBLE BUT NOT PREFERRED
 NON-PREFERRED HOUSING TYPE

Figure 3. Preferred Dwellings in Housing Strategy Areas

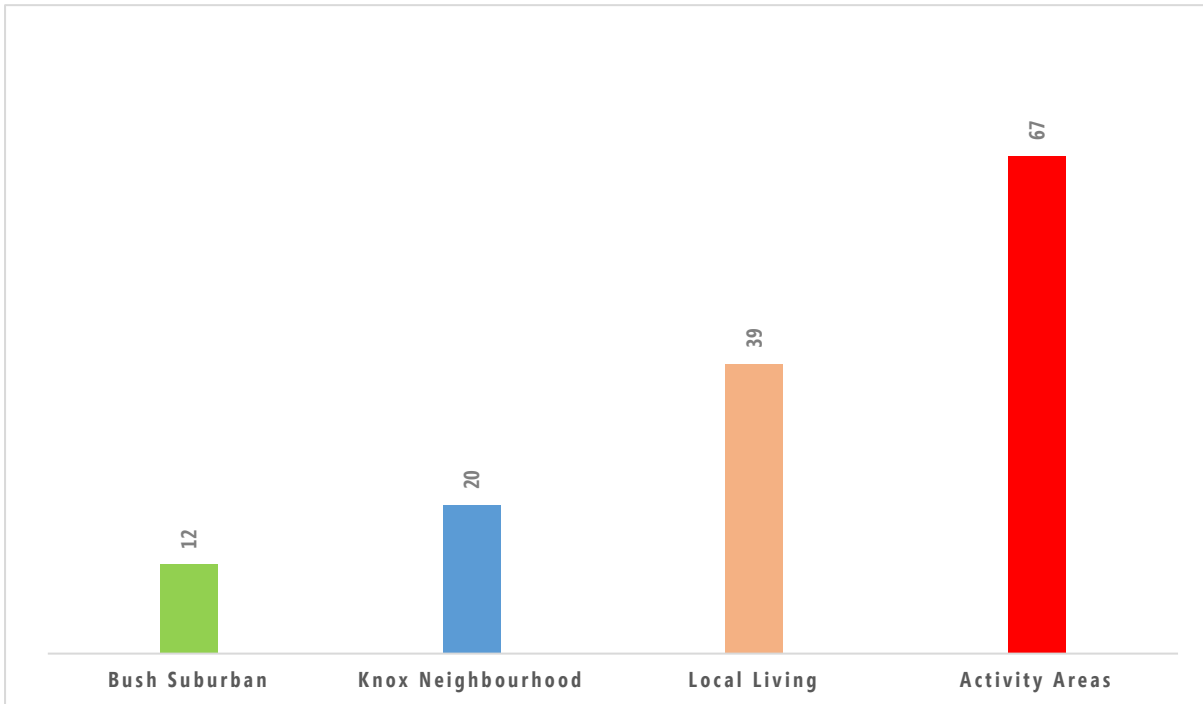
Almost all new dwellings approved in **Local Living** and **Activity Areas** since 2018 have been the preferred type for the Housing Strategy Areas in which they are located.



It is important to note that the unusually low 2018 figure for large Knox Neighbourhood lots was influenced by a single application for 294 townhouses at the site of the former Wantirna Caravan Park that is inconsistent with the preferred character type for Knox Neighbourhood approved at VCAT after being refused by Council.

Figure 4. Dwellings per Hectare in Housing Strategy Areas

The number of total new dwellings per hectare approved in 2022 was much higher in **Local Living** and **Activity Areas** than **Bush Suburban** area.



The trend in Figure 4 above is consistent with the approach to housing development described in the *Knox Housing Strategy 2015*.

5.3 Analysis

- Since 2017, Townhouses have been the most dominant dwelling typology in Knox. In fact, 55% of the total new dwellings approved in planning permits in 2022 were townhouses. The only break in this trend was in 2020 where the approved subdivision of the former Kingston Links Golf Club site, resulted in approximately 500 new detached dwellings, which essentially put detached dwellings ahead of townhouses for that year⁵.
- The analysis of the planning permits approved in 2022 shows a net loss in detached dwellings. This pattern has continued since 2017, with the exception of 2020 (see Attachment 2 for a time series graph).

⁵ Development at Kingston Link is shown in Figure 1. These dwellings are not counted among the 899 approved dwellings in 2020.

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- In 2022, a total of 20 planning permits were approved in the Bush Suburban area, with 30% of the approved permits being the preferred dwelling types (detached dwellings and dual occupancy). Whereas 70% of the approved permits yielded non-preferred dwellings (villa units and townhouses). Due to the relatively low planning permit approvals in the Bush Suburban area, a few non-preferred dwelling types have resulted in a significant impact on the proportions shown in Figure 3; where 30% of the approved dwellings were the preferred typology (in 2019 this was 37%). What is however important to note is that the average lot size per dwelling in the Bush Suburban area in 2022 is 817m². In this regard, although villa units and townhouses were not the preferred dwelling types, where the lots are large enough, they may still deliver outcomes related to open space and vegetation expectations that the Bush Suburban strategy area is to deliver.
 - The proportion of dwellings approved for large Knox Neighbourhood lots that were of the preferred typology, was below 50% in 2022, after a peak of 70% in 2019. The average lot size of a dwelling in the large Knox Neighbourhood area is 589m². As shown in Figure 3 above, 2018 recorded 23% preferred dwelling typology – the lowest. In 2022 for example, of the 20 planning permits approved in large Knox Neighbourhood lots, nine of the approved developments produced non-preferred dwelling types i.e. townhouses.
 - Developments of more than two dwellings that include at least one pair of dwellings with shared living walls are categorised as townhouses in this report, even if the other dwellings would otherwise be classified as villa units. In this situation, developments of townhouses with only a few dwelling units, could actually result in better outcomes with respect to vegetation and open space than traditional villa units. This was the case in 2022, where five of the nine townhouses developments were small, containing 3-4 units.
 - The small townhouse developments of 3-4 units, have become increasingly common over the last few years, often assisting developers deliver better neighbourhood character outcomes than traditional villa units, as their more compact built form provides a larger landscaped area for trees and open space.
 - On a large Knox Neighbourhood lot, a six-unit townhouse development (i.e. 30 Murray Crescent, Rowville) was approved by VCAT. The Tribunal disagreed with Council’s concerns with respect to the sense of spaciousness and loss of landscape with this development.
 - The dwelling development in Local Living and Activity Areas shows a trend that almost all dwellings were the preferred typology. Small lots in Knox Neighbourhood have recorded some improvement in the preferred dwelling type, over the previous years. However, Bush Suburban and large Knox Neighbourhood areas trended downward slightly.
 - The planning permits approved in 2022 demonstrate that the number of dwellings per hectare in the housing strategy areas will produce fewer dwellings per hectare in Bush Suburban and Knox Neighbourhood. This aligns with the *Knox Housing Strategy 2015* resulting in higher density dwellings in the Local Living and Activity Areas, and lower density development in Bush Suburban areas and Knox Neighbourhood areas, which respects the neighbourhood character of these areas.
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6. Residential development better responds to the community's needs, and allows people to age-in-place (Objective 2)

6.1 Why is this important?

Knox will need more small dwellings in the future to accommodate an increasing number of smaller households. This is because almost 50% of households in Knox will be couple only and lone person household by 2031 ([Forecast.id](#), 2022). This projection means that couple only and lone person households will surpass households with children. In response to this, the *Knox Housing Strategy 2015* seeks to align the mix of available dwellings with the future housing needs of the community – by specifically encouraging the development of more small dwellings that can cater for the housing needs of small households and improve affordability. Affordability is particularly critical 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.



If a larger number of smaller dwellings are provided in Knox, the housing needs of many residents will be met. It is particularly important that Knox residents can remain part of their community as they age, rather than be forced to relocate to find suitable and affordable accommodation. The provision of aged care homes and smaller dwellings, contribute to making housing available for the elderly in particular, and other categories of homebuyers.

6.2 How are we tracking?

It is important to understand Knox's capacity for more dwellings in the future. In this regard, the *Knox Housing Strategy 2015* estimated that Knox had capacity for 36,362 additional dwellings (in addition to the existing dwellings in Knox as of 2015, giving a total of 92,500 dwellings) if each lot were developed to its full capacity within the limits of the provisions of the Knox Planning Scheme as of 2015. Based on the Victorian Government's *Victoria in Future* (VIF) projections⁶ ([DELWP](#), 2019a), future housing growth can be accommodated within the estimated capacity in the *Knox Housing Strategy 2015* until 2036, and possibly beyond (see Figure 5). These capacity estimates are based on broad assumptions made within the policy context of the *Knox Housing Strategy 2015*, the *Knox Residential Design Guidelines 2015* and other relevant Council plans. Therefore, these estimates could change if any of the documents that informed the projections were to be revised. As the *Knox Housing Strategy 2015* is being reviewed, some changes may occur.

⁶ VIF dwelling projections are applied here as they are calculated using a top-down approach. In contrast to the forecasting method employed by id Consulting Pty Ltd (abbreviated as .id in some sections of this report) on behalf of Council, in which only local factors are taken into account, the VIF projections include assumptions about state level growth and allocate this to local government areas.

Figure 5. Forecast Dwelling Capacity in Knox

The current VIF forecast dwelling capacity in Knox can be accommodated within applicable planning provisions based on the estimated capacity in the Knox Housing Strategy 2015.



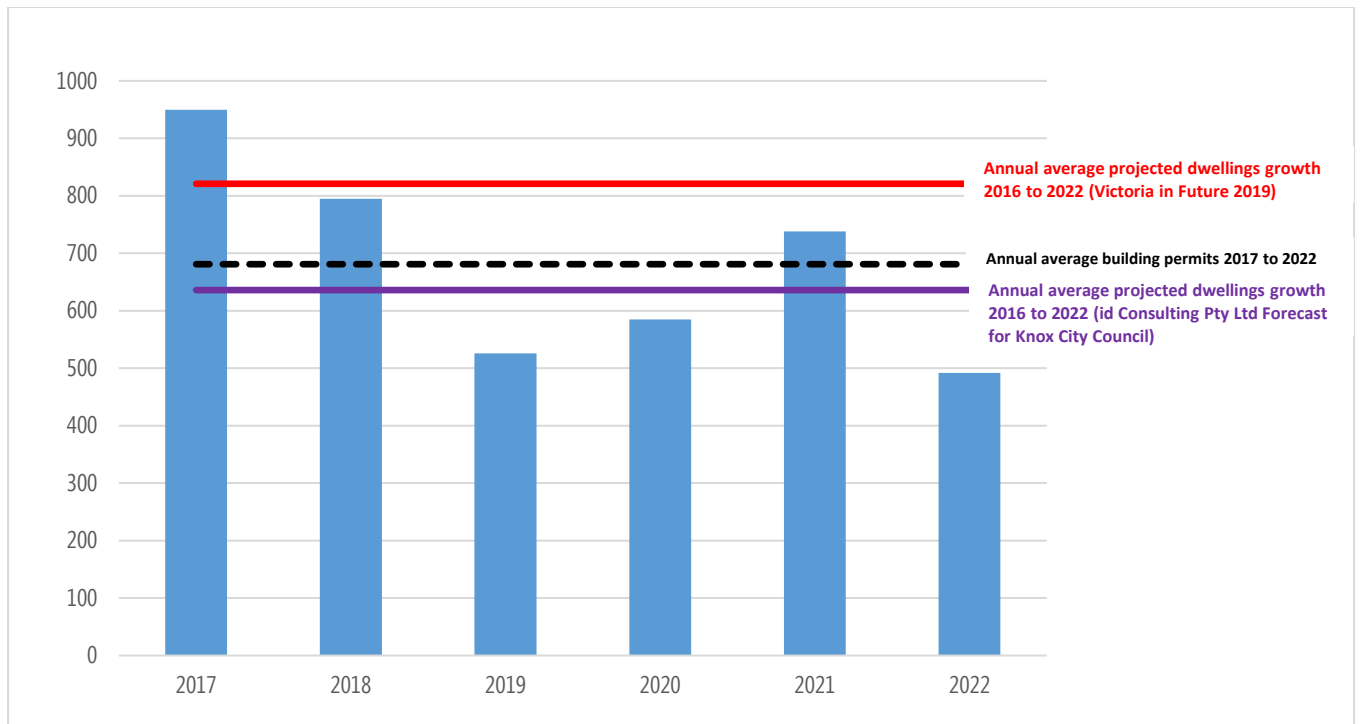
Forecast dwelling growth needs to be looked at against actual housing development data, to ascertain the closeness of the projections to reality. In this regard, one approach of assessing the actual number of new dwellings built in Knox against the forecast housing figures, is to analyse the data on building permits. Building permits affirm that housing development plans and specifications fully comply with building regulations, and allow onsite building work to commence. In this regard, building permits are therefore a more suitable indicator of actual dwelling growth than planning permits. This is because planning permits mainly show what could possibly be built in the next two to four years if approved plans are enacted. The following paragraphs analyse the building permits data over the past six years.

The data from the Australian Bureau of Statistics (ABS) show that building permits were granted for the construction of 4,887 dwellings in Knox between 2017 and 2022 (ABS, 2023). This figure is equivalent to an annual average of 815 dwellings. However, this figure is misleading as it overestimates the actual increase in dwellings because the ABS building permit data does not take into account demolitions⁷. It is therefore important to estimate the number of dwellings that were demolished within the period under consideration. To estimate the number of dwellings that were demolished to make way for the new dwellings in building permits, the relationship between new dwellings and demolitions in approved planning permits has been used as a proxy in this report.

⁷ But from the planning permit we know that some existing dwellings are demolished for the construction of new ones.

Over the last six years, that is 2017 to 2022, there was one dwelling demolished for every 6.1 dwellings approved in planning permits in Knox. Applying that rate to building permits yields an annual average of 681 new dwellings constructed within Knox between 2017 and 2022. It is worthy to point out that, this figure falls between the forecast of 821 new dwellings annually by the Victorian Government in the *Victoria in Future* projections and the forecast of 636 new dwellings per year calculated by id Consulting Pty Ltd⁸ on the Council’s behalf (See Figure 6)⁹.

Figure 6. Annual Average Building Permits Growth versus Projected Dwellings Growth in Knox
The number of new dwellings based on building permits (adjusted to account for demolitions) in Knox remains broadly in line with dwelling growth projected by the Victorian Government and an independent forecast projection derived on behalf of Council.



Lone person and couple only households are almost half of all households in Knox. Yet, over the past five years, dwellings of four or more bedrooms were more prevalent in approved planning permits than other dwelling sizes. In 2022, over 80% of approved net new dwellings were large dwellings – three or more bedrooms (See Figure 7). A net total of 66 small dwellings (two bedrooms or less) were approved in Knox in 2022. This constitute only 18% of approved net new dwellings. Compared to previous years, this is the lowest figure thus far (Figure 8 depicts this).

⁸ id Consulting Pty Ltd is abbreviated as .id in some sections of this report.

⁹ The significant alignment between building permit data and the dwelling forecasts prepared by the Victorian Government on behalf of Council is anticipated because building approvals are taken into consideration in computing these forecasts.

Figure 7. Net Growth in Dwellings by Bedrooms

The planning permits approved in 2022 would see over 60% of net growth, being dwellings with four bedrooms or more.

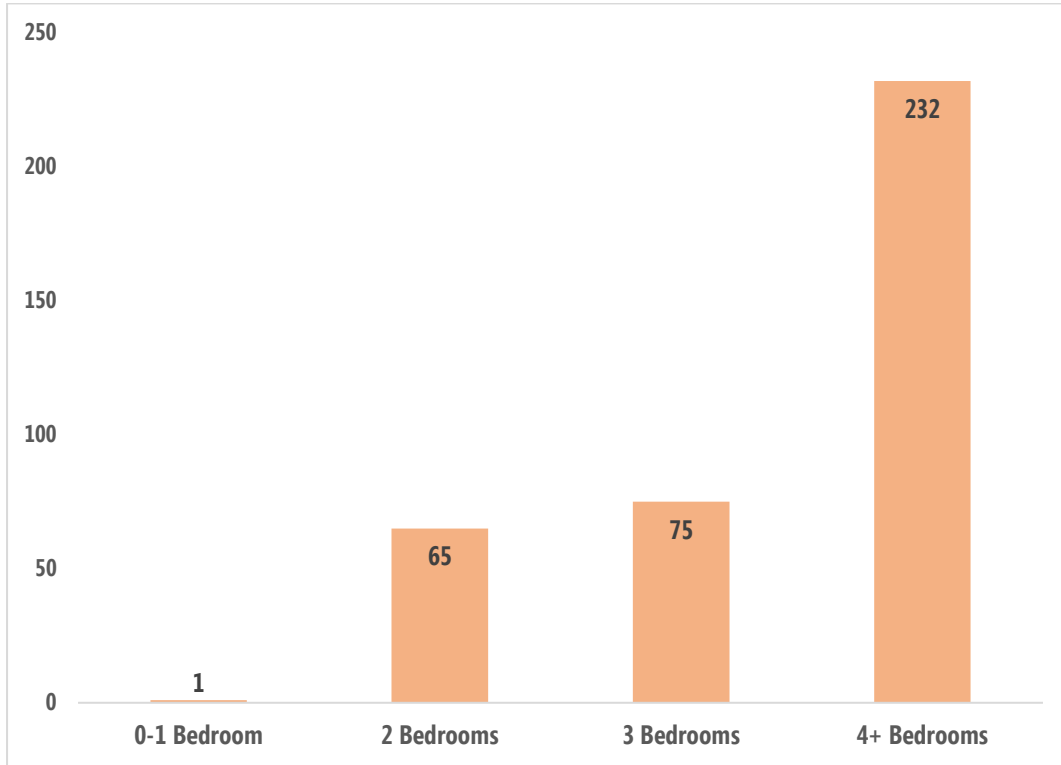
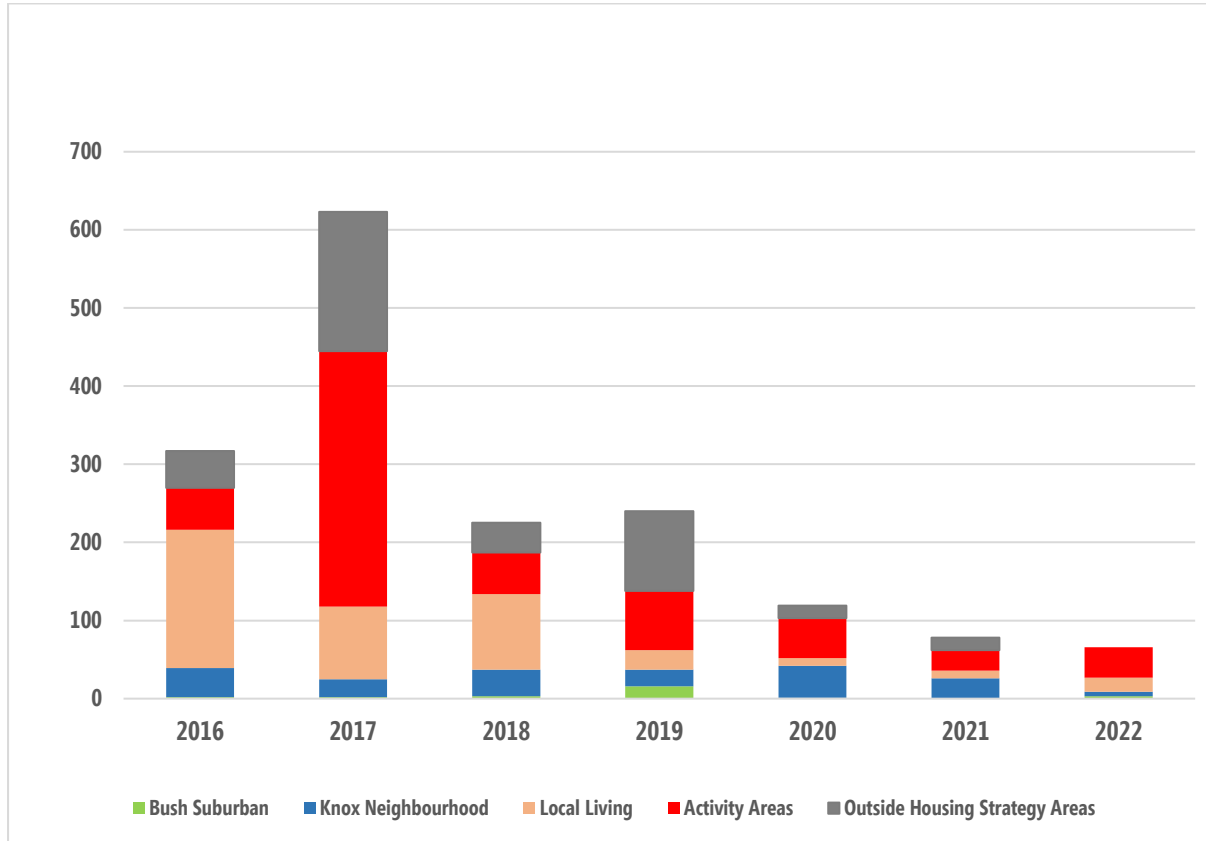


Figure 8. Net Growth in Small Dwellings

In comparative terms, approved planning permits in 2022 produced the lowest number of net new small dwellings (two bedrooms or fewer) – Apart from 2017, the net growth in small dwellings has consistently been lower than forecast growth for small households

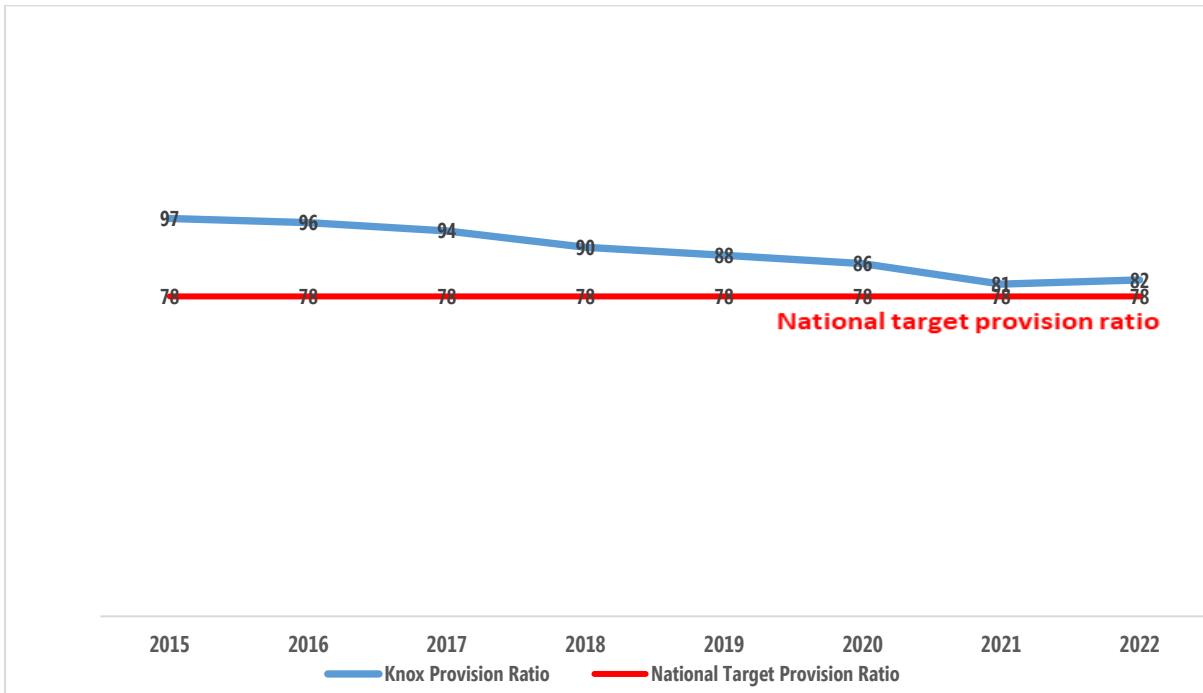


As Knox’s population continues to age, the provision of residential aged care facilities to accommodate the increasing population of senior citizens will be important. The data shows that as of June 2022, Knox had 1,682 places, usually a single room with an ensuite (AIHW, 2023). This means 76 places were added since June 2021. In 2022, the number of people aged 70 years and over in Knox was estimated to be 20,543 (Knox Forecast .id). This gives a ratio of 82 places in residential aged care facilities per 1,000 residents aged 70 and above (See Figure 9). While the 2022 ratio is slightly higher than that of 2021, it is lower than all the other previous years since 2015. The Australian Government target provision for operational residential aged care places is 78 places per 1,000 people 70 years and over (ACFA, 2021, p iv, 17)¹⁰. This implies that Knox has exceeded this target in 2022 by 4 residential aged care places (See Figure 9). In fact, the target has been exceeded since 2015. This is a positive outcome.

¹⁰ The national target for home care is 45 per 1,000 residents 70 years and over. However, the home care target ratio has already been exceeded, reaching 53.6 mainstream home care packages available for every 1,000 people aged 70 and over as of 30 June 2020 (ACFA, 2021). The residential aged care places per 1,000 people aged 70 years and over was reduced from 86 places per 1,000 residents aged 70 and over to the current 78 places per 1,000 people 70 years and over. This report has cited the most current [ACFA report](#).

Figure 9. Residential Aged Care Places in Knox in 2022

There were approximately 82 residential aged care places in Knox per 1,000 residents aged 70+ in 2022

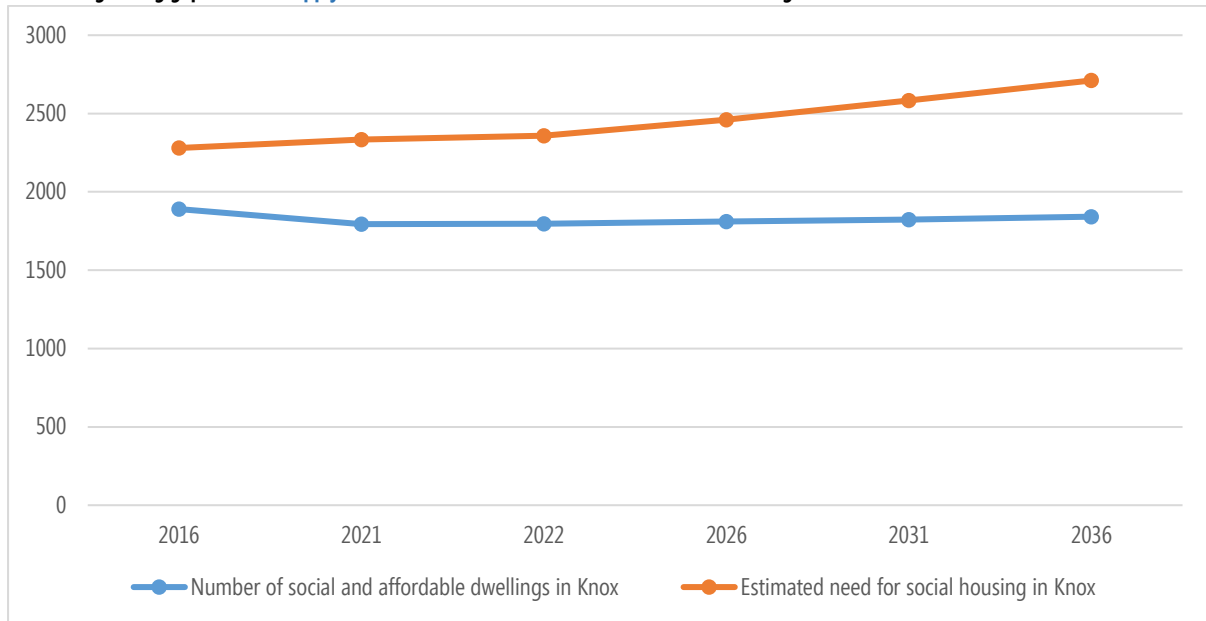


Knox has 1,503 social housing dwellings as of June 2022 (DFFH, 2022). The social housing dwelling count increased by six dwellings between June 2020 and June 2021, but the number of the social housing in Knox increased by only four dwellings between July 2021 and 30 June 2022¹¹. Using the available data on social housing and affordable housing lettings (from DFFH), the deficit in social and affordable dwellings in Knox was estimated to be 558 in 2022. In comparison to the 2021 provision gap, this is an increase of 18 dwellings. This rising trend is expected to continue without significant interventions in the provision of social and affordable housing (See Figure 10).

¹¹ The Department of Families, Fairness and Housing (DFFH) notes that more than 6,300 social housing dwellings are being completed or are under way across Victoria. If these homes are completed the social housing stock in Knox will increase. This is because 159 dwellings funded by Homes Victoria is being built in Knox (KCC, 2023).

Figure 10. Gap between Supply and estimated Need for Social and Affordable Housing in Knox

There is a growing gap between **supply** and **estimated need** for social and affordable housing in Knox.



The affordability of housing is largely determined by rental and house prices. As of December 2022, the median house price was \$930,500, and the median unit price was \$645,000 within the same period ([Knox Housing .id](#)). This means that only 58 (14%) of the 421 dwelling sold in Knox were considered affordable (to very low and low income households)¹². Similarly, 38% of the rental properties in Knox were affordable to very low and low income families (See Figure 11).

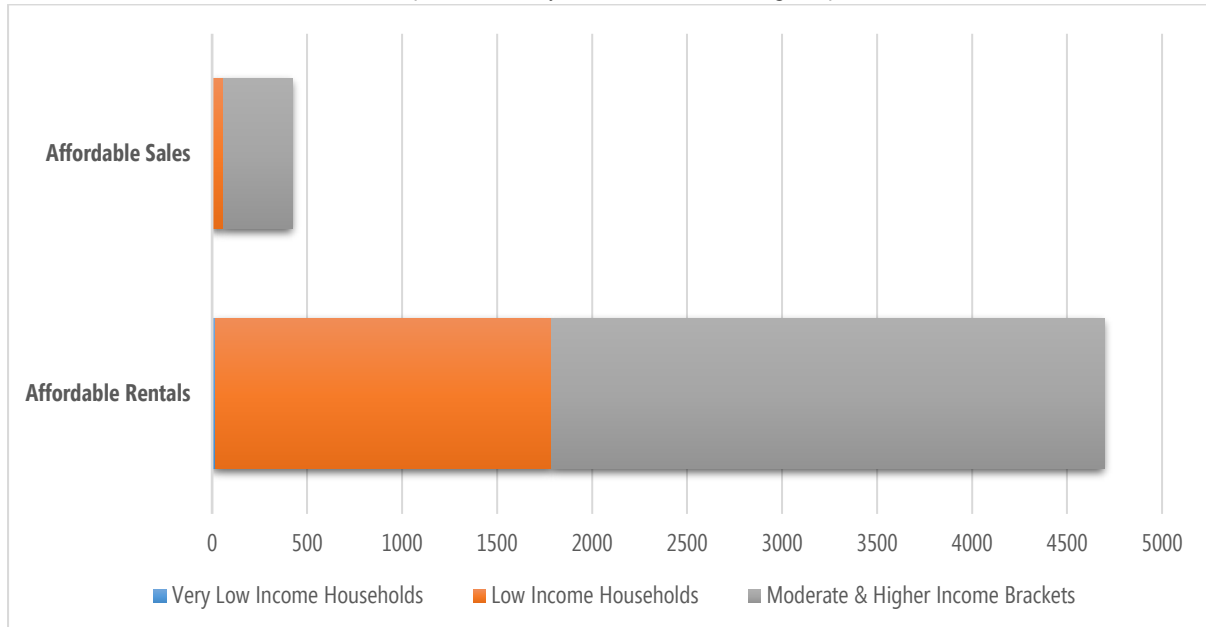
¹² Affordable Housing is defined as “Well-located housing, appropriate to the needs of a given household, where the cost (whether mortgage repayment or rent) is no more than 30% of that household’s income. Exceeding the mark places one under ‘housing stress’, particularly in the lower 40% of the income distribution scale” (Department of Infrastructure, 2002, p.182; Knox City Council, 2015, p.6).

In this report, very low income is household income of below \$52,379 per annum. And low income is a household income of \$52,380 to \$83,806 per annum.

Figure 11. Affordable Sales and Rentals in Knox in 2022

In the year preceding December 2022, only 2 sales and 20 rentals were affordable to households on a **very low-income**.

Low-income households had more rental options, but very few affordable dwellings to purchase.



6.3 Analysis

- The Victorian Government’s population projections in 2019 (*Victoria in Future*) shows that it is possible for Knox to accommodate more population and dwellings until at least 2036. The dwelling projections in the *Knox Housing Strategy 2015* seems to be consistent with the Victorian Government’s forecast. Although there have been some shifts in population in some suburbs in Melbourne as a result of the COVID-19 Pandemic, the updated population forecast by id Consulting Pty Ltd (December, [2022](#)) in Knox for the next decade and beyond, did not depart significantly from the Victorian Government’s forecast.
- The residential development activity in Knox is likely to reduce, as 2022 recorded the lowest building permit approvals, compared to the previous five years. The Victorian Building Authority – VBA (2022) observed that although building approvals increased during the 2021-2022 financial year for other building activity, residential building approvals reduced, compared to the 2020-2021 financial year across Victoria. Therefore, the reduced building permit approvals in Knox, could be part of a State-wide scenario. VBA observed that while permits for new buildings declined, permits for re-erection and demolition rose within the same period.
- Lone person and couple only households will constitute nearly 50% of the Knox population by 2031. However, growth in small dwellings, that is dwellings of two bedrooms or less seems not to be matching with the growth in small households. From the planning permits approved in 2022, only 18% (66 dwellings) of the dwellings approved were two bedrooms or less. There was a 6% decline in the small dwellings approved in 2022 as compared to 2021. A trend analysis shows that in years where larger subdivisions were approved in planning permits, smaller dwellings tended to be higher. When apartments are approved in planning permits in

a particular year (2019 and 2020 are typical cases of this), it increases the number of smaller dwellings. But in 2022, no apartments were approved in the planning permits. This is likely the reason for the decline in small dwellings. If this trend continues, there will be a huge gap between supply and demand for small dwellings in Knox.

- The Bush Suburban area has the lowest share of small dwellings in Knox in 2022. This is typical of most years. Over 85% of small dwellings are located in the Activity Areas and Local Living areas. These areas have nearly an equal number of small dwellings and usually have greater proximity to shops and public transport. This makes these locations ideal for the elderly and lone person households.
- Provision of residential aged care facilities in Knox has exceeded the Australian national target. Although Knox is currently above the Australian Government minimum target provision of residential aged care places; with the exception of 2022, aged care places in Knox have been declining gradually toward the minimum target since 2015. Within the next decade, Knox could fall below the minimum target provision ratio of 78 residential aged care places per 1,000 people aged 70 and over if the current level of provision of aged care places remain unchanged. This is because people aged 70 and over in Knox are increasing faster. For instance, in Knox, people aged 70 and over increased from 10.2% in 2016 to 12.4% in 2021 (ABS, 2022). However, the positive news for Knox is that a few residential aged care facilities were approved (in planning permits) in recent years. These are a 214 bed residential aged care facility approved in 2021, and three other residential aged care facilities approved in 2019 and 2020. If these facilities are developed soon, Knox would still be in a good position in terms of aged care places.
- There were approximately 82 residential aged care places in Knox per 1,000 residents aged 70 and above in 2022. Although some residential aged care facilities were approved in recent years, no aged care facility was approved in planning permits in 2022. To ensure that Knox does not fall below the Australian Government minimum provision threshold for residential aged care places within the next decade, Council may need to work with private developers of aged care facilities to address the landscape and environmental concerns that the previous proposed residential aged care facilities posed.
- Housing represents the biggest share of household budgets, so housing affordability is a major determinant of both the cost of living and the standard of living. In Knox, very few dwellings and units were affordable to households in the very low income brackets (below \$52,379 per annum). Only 20 rentals and 2 property sales were affordable to very low income households in 2022 ([Knox Housing .id](#)). Low income households (\$52,380 to \$83,806 per annum) could have more rentals options, however only a limited number of dwelling options are available for them to purchase. For instance, in 2022, low income households could only purchase about 58 of the 421 dwellings for sale ([Knox housing.id](#)). As of December 2022, the Victorian Housing Register recorded 4,009 applicants who were on the waiting list for social housing within Knox¹³ (DFFH, 2023). This number had increased by 107 applicants, from 3,902 in June

¹³ It is important to note that as applicants can select up to five location preferences; a single applicant can therefore be counted anywhere from one to five times in the data set. On average, an applicant selects 2 to 3 location preferences.

2022. The rising list of applicants for social housing is a testament to the housing affordability challenge (Pawson, 2022).

- The key focus of the *Knox Social and Affordable Housing Strategy and Action Plan 2023-2027* is to increase the supply of social housing¹⁴. The provision of more social housing could partly address the housing affordability challenge. However, the gap between social housing demand and supply is continuing to widen in Knox (see Figure 10). The *Knox Housing Strategy 2015* has highlighted that Council could influence the social housing market through partnership with social housing providers. It also signals that although it is difficult to influence the private housing market, opportunities could be explored by Council to define a minimum supply of social or affordable housing by private developers. In fact, a 5% voluntary contribution to social housing by private developers, has been proposed in the *Knox Social and Affordable Housing Strategy and Action Plan 2023-2027*. If these proposals are fully explored and implemented, the provision of social and affordable housing could improve in Knox in the future.
- The social housing count in Knox increased by only four dwellings between 2021 and 2022. Interestingly, the Department of Families, Fairness and Housing suggests that over 6,000 social housing projects are either completed or being completed in Victoria (DFFH, 2022). It has been stated in the *Knox Social and Affordable Housing Strategy and Action Plan 2023-2027* that 159 homes funded through Homes Victoria are in development in the Knox local government area¹⁵. If these dwellings are completed, the social housing stock in Knox will increase appreciably. Other opportunities equally exist for new social housing development in Knox. These include among others, a proposal to negotiate with developers for a voluntary contribution of social housing in private land developments. Also, as part of planning applications, negotiating with permit applicants whose applications would yield large dwellings to contribute to social and/or affordable housing outcomes in Knox.

¹⁴ The *Knox Affordable Housing Action Plan 2015-2020* equally highlighted the need to increase social and affordable housing in Knox: <https://tinyurl.com/mr3haub5>

¹⁵ The 159 homes are likely to be Knox's share of the 6,300 social housing projects under development across Victoria.

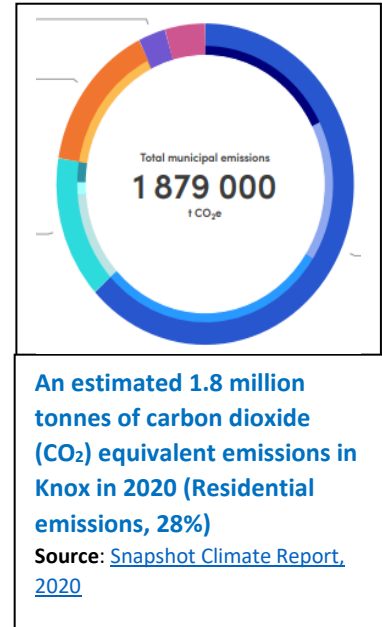
7. Energy, water, and waste efficient design are increased in dwellings (Objective 3)

7.1 Why is this important?

More sustainable and efficient housing is needed in Knox to improve the comfort for residents, reduce the impacts on the environment and minimise living costs. The adoption of acceptable Environmentally Sustainable Design (ESD) in new residential buildings would improve efficiency in energy and water usage, plus ensure that dwelling designs are waste efficient. This will deliver better quality, more sustainable and more accessible housing in Knox. These actions will directly reduce the negative impact on the environment and mitigate the effects of residential development on the changing climate. The Knox *Climate Response Plan 2021–2031* provides some strategies to making dwellings in Knox more environmentally friendly, climate responsive and sustainable.

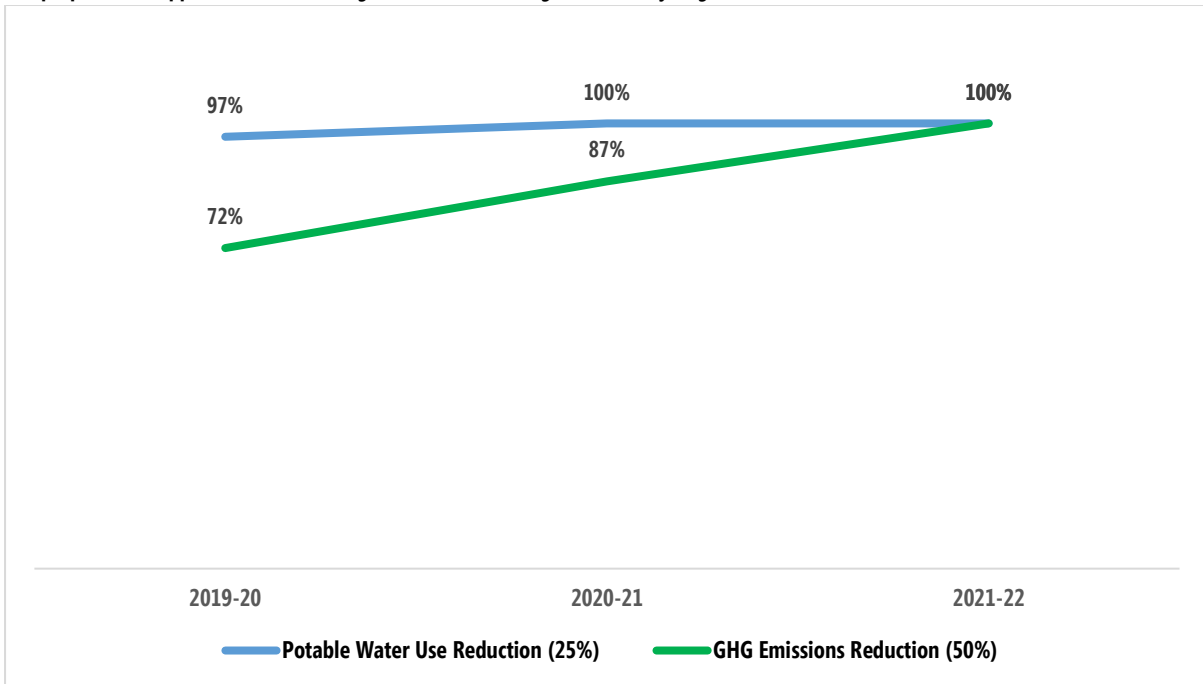
7.2 How are we tracking?

Through the *Knox Housing Strategy 2015*, Council is encouraging all residential developments to utilise sustainable design features, including water sensitive urban design. In fact, Council requires that all developments of two or more dwellings, undergo a Sustainable Design Assessment (SDA) before a planning permit is issued. This measure is to ensure that new residential buildings meet the satisfactory environmental performance and efficiency standards, in terms of water usage, greenhouse gas emissions, among other important sustainability benchmarks. In specific terms, the SDA report must capture two key indicators of sustainability, these being measures for reducing potable water consumption and greenhouse gas (GHG) emissions. From Knox’s internal ESD data, the best practice target of a 25% reduction in potable water consumption for the 2021-2022 financial year was achieved in all cases (100%) and the greenhouse gas emissions target of a 50% reduction, was also achieved in all cases¹⁶ (100%)(See Figure 12).



¹⁶ It is worthy to note that application for elevated ESD requirements has been submitted to the Minister for Planning. When the new ESD requirements are approved they will be tracked and reported in future Housing Monitoring Program Annual reports.

Figure 12. Applicable new Buildings Assessed as meeting Sustainability Targets
The proportion of applicable* new buildings assessed as meeting sustainability targets.



*includes permit applications for two or more new additional dwellings

7.3 Analysis

- Council revised its approach to ESD permit conditions and the endorsement of sustainability measures on developments in 2019-2020. This was to ensure that ESD commitments on approved development plans were actually delivered upon construction. This means that the ESD data for the 2019-2020 (reported in Figure 12 above) are not comparable with the ESD data of 2020-2021 and 2021-2022 presented in Figure 12.

The 2020-2021 and 2021-2022 ESD data are comparable. In 2020-2021, the ESD outcomes suggested that approved permits of two or more dwellings in Knox had attained 100% of the best practice target of 25% reduction in potable water consumption. While for the same year, 87% of approved planning permits of two or more dwellings had achieved the 50% target reduction in greenhouse gas (GHG) emissions. In 2021-2022, both ESD targets on potable water consumption and GHG emissions attained 100%. This means that all permits for applicable dwellings in 2021-2022 met both targets.

- The ESD data for 2021-2022 demonstrates that in practice an average of 41.3% of potable water consumption will be reduced. Similarly, the average greenhouse gas reduction would be 60.4%, for planning applications approved in 2021-2022¹⁷.
- As the years go by, a time series analysis would show more explicitly how Knox is tracking on these two ESD targets. What may probably interfere with the time series analysis is that the “best practice” definition is not fixed, rather, it varies as standards shift. Hence, an approved development that meets the best practice target in potable water consumption and

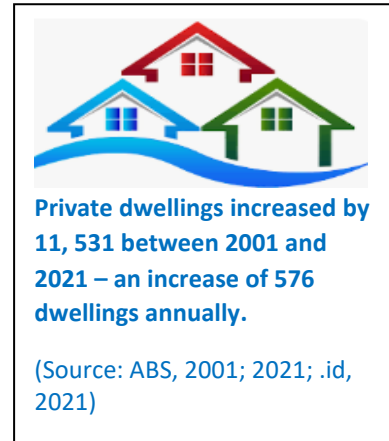
¹⁷ Knox ESD officials sourced this calculation from the Built Environment Sustainability Scorecard (BESS)

greenhouse gas emissions in 2021-2022 may miss the best practice benchmark in subsequent years. In fact, an application for elevated ESD requirements has already been submitted to the Minister for Planning. This will make it infeasible to consistently track ESD targets and compare progress, if the “best practice” benchmark varies.

8. Housing design is improved to better respond to neighbourhood identity and create a stronger sense of place (Objective 4)

8.1 Why is this important?

Over the years, Knox has been known for its green and leafy neighbourhoods, quiet streets, and a mix of city and country feel. The low density residential development patterns in Knox is responsible for the quiet streets and natural feel that have attracted people to the Knox municipality. However, this form of development has largely made Knox a car dependent city, leading to increasing air pollution and reduced amenity for the residents. As land values have increased over the years, redevelopment has introduced new housing types into Knox’s neighbourhoods that are changing the look and feel of the municipality.



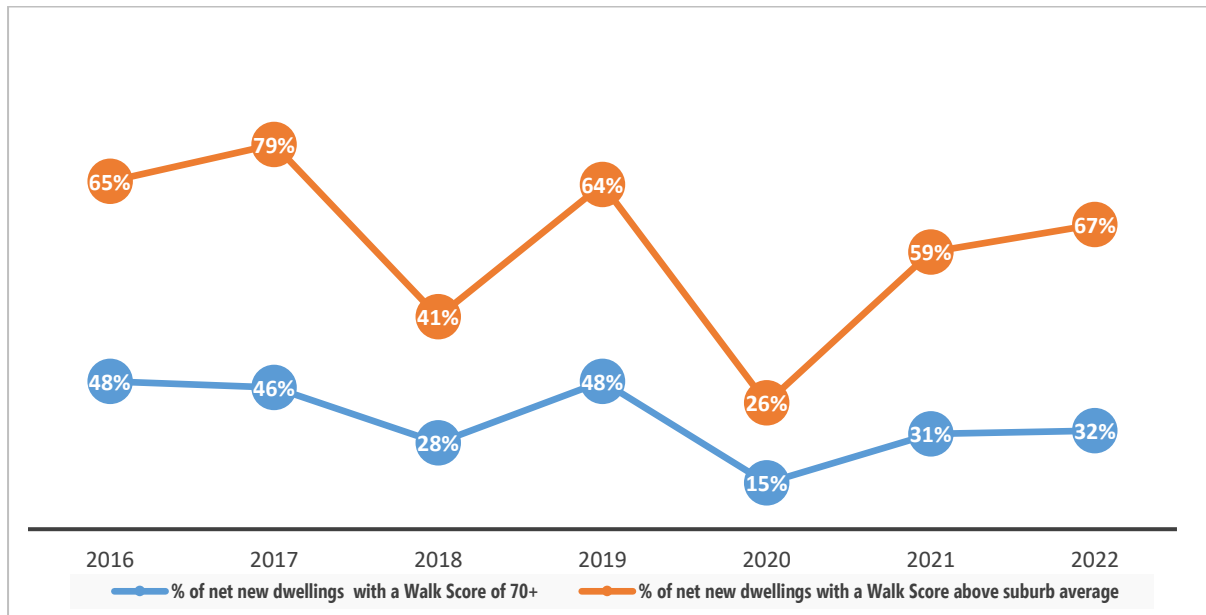
8.2 How are we tracking?

Walkscore is an index developed to estimate the ‘walkability’ of a place. It examines the proximity of local shops, services, schools, entertainment and jobs, to develop a walkability score on a scale of 1 to 100. Areas that score below 50 are categorized as “Car Dependent”, those with scores of 51-70 are classified as “Somewhat Walkable”, scores of 71-90 are seen as “Very Walkable”, and places that score over 90 are considered a “Walker’s Paradise”.

Interestingly, the Walkscore website can determine a score from individual addresses and by suburbs or neighbourhoods. Therefore, the Housing Monitoring Program examines the individual Walkscores for each of the planning permits approved, as well as how they compare against their suburb’s average score. New residential developments in high Walkscore areas of Knox are more desirable.

Figure 13. Proportion of Dwellings Approved in Walkable Areas of Knox

The proportion of net new dwellings approved in the more walkable areas of Knox, improved over the last two years' score.



A key measure the *Knox Housing Strategy 2015* outlined, under the objective related to neighbourhood identity, is loss of trees and backyard space in Bush Suburban and Knox Neighbourhood areas. Tree canopy data published by the Department of Environment, Land, Water and Planning in 2022 (DELWP now known as DEECA – Department of Energy, Environment and Climate Action) suggests that there were around 250,000 trees on residential zoned land in Bush Suburban and Knox Neighbourhood areas (for more details see DELWP 2022). It is expected that future releases (if any) of this data may offer an indicative measure of change over time.

It is important to note that the results presented in Figure 4 that confirmed that low numbers of new dwellings per hectare were approved in Bush Suburban and Knox Neighbourhood areas in comparison to the Local Living and Activity areas, demonstrates the responsiveness of Council’s decision-making to minimising tree loss, thus maintaining a natural environment.

8.3 Analysis

- From Figure 13, only 32% of net new dwellings approved in 2022 in Knox had Walkscores of above 70, that is, in “Very Walkable” locations. This was a marginal improvement over the 2021 figure of 31%. It is also worth noting that permits approved in 2022 recorded the fourth highest number of approved net dwellings located in “Very Walkable” areas of Knox. The highest was 48% in 2016 as well as 2019. Interestingly, 67% of approved net dwellings in 2022 were in areas that were considered more walkable than the average score for their suburb. This is an improvement over the 2021 figure of 59%. Since 2016, approved planning permits in 2022, achieved a commendable second place where new dwellings were located in more walkable areas than the average score for their suburb. This suggests that there were relatively more permit approvals in areas closer to an activity centre in 2022.

-
- Although no apartments were approved in 2022, the walkability of approved dwellings was relatively higher than that of their suburbs. Apartment buildings usually accommodate a large number of dwellings as compared to other dwelling typologies, and are mostly located in or near activity centres where walkability tends to be high. So each approved apartment development, often contributes significantly to increasing the number of very walkable dwellings approved. It is therefore unexpected to have approved dwellings in 2022, recorded to have the second highest walkability score compared to their suburbs, in a year where no apartments were approved for development. This suggests that while apartments usually improve Walkscores, other dwelling typologies can equally improve walkability if they are located closer to services, such as shops, schools, etc.
 - The majority of the net dwellings approved in 2022 are in “Somewhat Walkable” locations. And almost one-third (32%) of net approved developments are in “Very Walkable” areas of Knox. Comparatively fewer (24%) proposed dwellings will be sited in “Car Dependent” areas of the Council. This is a positive change, and responds to the *Knox Housing Strategy’s (2015)* focus on locating more dwellings closer to services, shops, schools and thus improve accessibility.
 - Lysterfield, The Basin, Rowville, and Upper Ferntree Gully are primarily categorized as “Car Dependent” suburbs by Walkscore. However, there is still room to locate dwellings in “Somewhat Walkable” areas in these suburbs. This is because some parts of these suburbs are not car dependent. For example, more than half of the proposed dwellings located in Rowville in 2022 were in “Somewhat Walkable” or “Very Walkable” areas, although Rowville is categorised as a “Car Dependent” suburb.

9. Protect and enhance the landscape and environmental value of natural areas of significance (Objective 5)

9.1 Why is this important?

Knox enjoys a unique natural setting, located at the foot of the Dandenong Ranges, traversed by creeks and wetlands which provide a habitat for native animals and a serene ambiance for local residents. These characteristics bring the feel of bushland and natural spaces into Knox’s neighbourhoods, which is highly valued by Knox residents. This green and leafy character of Knox is seen to be under threat from development. As the Knox population grows, residential development is likely to increase as well. Therefore, it will be critically important to ensure that new development does not erode Knox’s unique and most cherished sources of environmental value over time.

There are 118 sites of biological significance identified across the Council that serve to protect areas of remnant and indigenous vegetation. While Knox enjoys a spectacular natural setting; native vegetation covers under 5% of Knox’s municipality (Lorimer, 2010). Unfortunately, over a quarter of the native plant species found in Knox are at risk of extinction within one to two decades if effective preventative measures are not taken. To protect the green and leafy character of Knox and respond to endangered species, Council has a well-established policy, plus planning controls on vegetation and residential design, to protect and preserve the significant landscape and environmental values of the area.

9.2 How are we tracking?

Bush Suburban areas have distinctive and significant biological and landscape values, consisting of flora and fauna that is crucially important to both Knox and Greater Melbourne. As a result, the *Knox Housing Strategy 2015* prioritises the protection of the natural environment over urban development. This accounted for the approval of 12 dwellings per hectare in the Bush Suburban areas in 2022 (See Figure 4). This represents the lowest number of dwellings per hectare, compared to the other housing strategy areas.

Bush Suburban areas encompass the Dandenong Foothills area, which has long held an important place in Knox. The Foothills has had its own special set of planning controls since 2006. This has effectively preserved the unique nature of the area. The *Knox Housing Strategy 2015* particularly highlights the need to maintain a very low scale of change in the Dandenong Foothills (see Map 1). The dwellings per hectare in the Bush Suburban areas also applies to the Dandenong Foothills. Therefore, this experiences a lower degree of change compared to all of the other housing strategy areas.



The *Knox Housing Strategy 2015* encourages the planting of native and indigenous vegetation. This is important as it is difficult to maintain native and indigenous vegetation and tree canopy, during urban redevelopment. This usually leads to the removal of large canopy trees to make way for multi-dwelling developments. The associated reduction in private open space tends to limit tree planting prospects and suppresses good tree health. Outside of the urban and built-up areas, Knox's native tree cover has declined by an estimated 6% (about 112 hectares) since the late 1980s (DELWP, 2019c).

With respect to tree canopy in Knox's urban areas, there was an overall loss of 115 hectares between 2014 and 2018, equivalent to a reduction of 6.5%. Within the same period the urban areas of the Eastern Region witnessed a loss of 9.2% of its canopy trees (DELWP, 2020).

The Department of Environment, Land, Water and Planning's (DELWP, now the Department of Energy, Environment and Climate Action DEECA) most current tree canopy data was published in 2021¹⁸. Tree canopy is defined in that dataset as "woody vegetation over approximately two metres in height"¹⁹. This relatively new dataset has revealed that about 16% of Knox's housing strategy areas are covered by tree canopy. Map 3 gives a graphical representation of the distribution of the tree canopy. A trend analysis is not feasible, as it is the first publication of the data. Future releases of this data will be monitored, however this is deemed unlikely.²⁰

¹⁸ This data was captured mainly in early 2020.

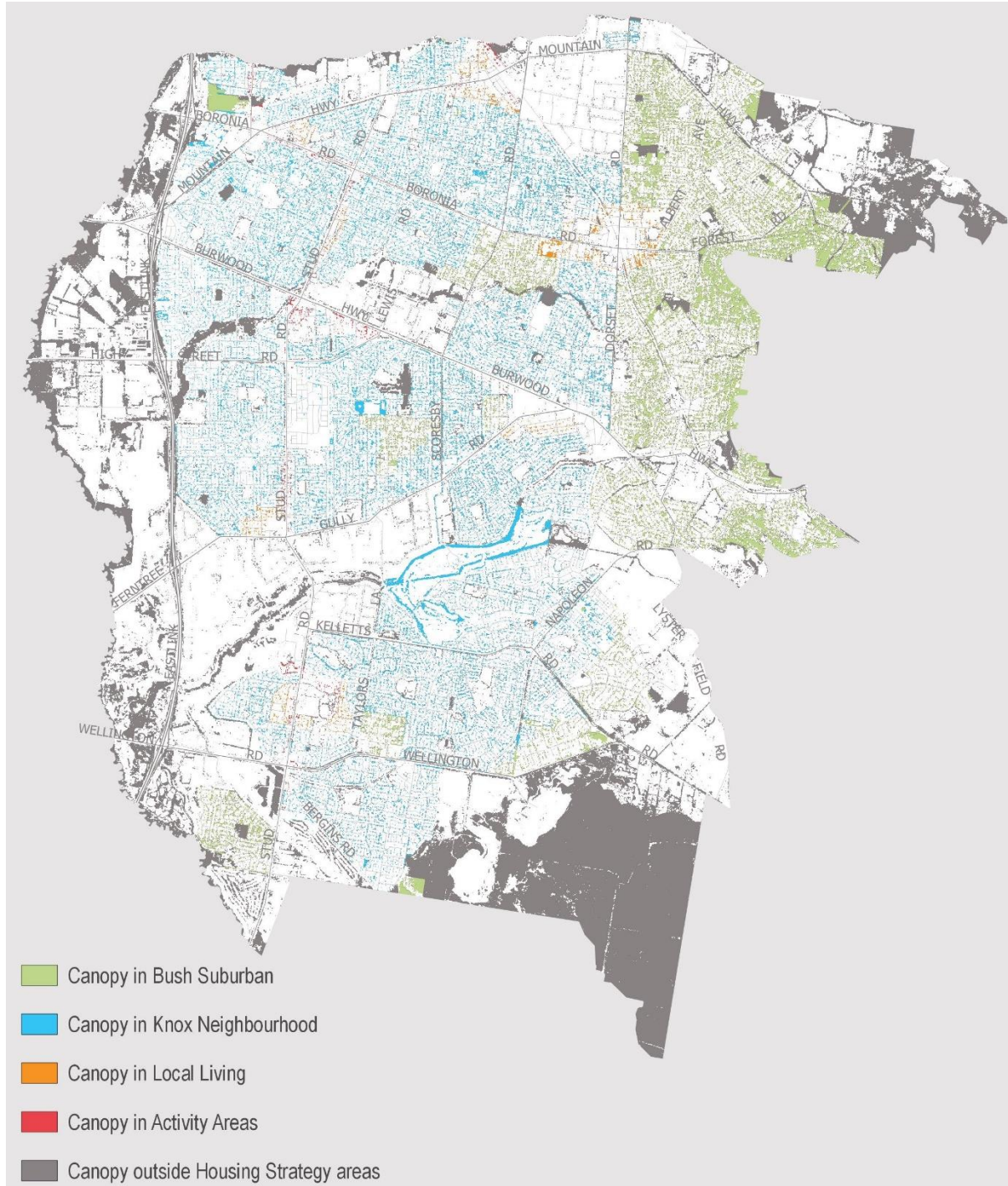
¹⁹ It is important to note that this data is not comparable to the tree canopy data that DELWP published in 2019 (DELWP 2019b), which was reported on in previous Housing Monitoring Reports.

This data (2021) was also reported on in a previous Housing Monitoring report.

²⁰ DEECA suggests that a regular update of the data is unlikely as the data published 2021 was ad hoc.

Map 3: Tree Canopy Cover in Knox

Although Bush Suburban and Knox Neighbourhood areas have a similar amount of tree canopy cover, the canopy in Knox Neighbourhood is dispersed over a greater area. Exceptions to this include sections of Corhanwarrabul and Monbulk creeks.



Source: This tree canopy data is part of the Vicmap Vegetation – Tree Extent dataset produced by the Victorian Department of Environment, Land, Water and Planning in 2021 (<https://www.land.vic.gov.au/maps-and-spatial/spatial-data/vicmap-catalogue/vicmap-vegetation>).

9.3 Analysis

- The Bush Suburban areas which include the Dandenong Foothills has the lowest number of dwellings per hectare in 2022. This resulted from the *Knox Housing Strategy 2015* which focussed on directing development away from Bush Suburban areas, particularly the Dandenong Foothills, with the view to maintaining the green and leafy character of this housing strategy area. If this is sustained the Dandenong Foothills will experience a low scale of change.
- The *Knox Housing Strategy 2015* encourages the planting of native and indigenous vegetation. However, DELWP's tree canopy data published in 2019 points to a decline in native tree cover in Knox by about 6%²¹. To reverse the declining trend, more effective efforts and strategies would be needed, to ensure more native and indigenous vegetation was planted. For a better outcome, Council may require stronger regulations in the permit approval regime.
- Tree canopy data published by DELWP in 2019 puts Knox's overall tree canopy coverage at 18%, and the urban areas at 16.3% (DELWP 2019b). The data published in 2021 also cited (above) in this report is not directly comparable with the data published in 2019, due to the differences in the height of the canopy trees used, and a range of other factors including different data creation methods and different geographical aggregations²².
- While Knox City Council has over the years implemented policies and plans to protect the green and leafy character of Knox's neighbourhoods using various policy tools including the *Knox Housing Strategy 2015* and the Knox Planning Scheme (Residential Zone Schedules – Tree Canopy Controls, Vegetation Protection Overlays, the Dandenong Foothills Policy, and others), Council's ability to control canopy loss on private property is only indirect. Despite this, Council is still focused on exploring measures to increase tree canopy cover. The *Knox Community Plan 2021 – 2031* considers an increase of tree canopy cover as one of the indicators of success on the natural environment and sustainability key direction.

²¹ This data was captured in 2018.

²² In the data published in 2019, a tree of 3+ metres was captured as a canopy tree by DELWP, but in 2020 data, a tree of 2 metres was categorized/used as a canopy tree. The heights used by DELWP fell short of the *Knox Housing Strategy 2015* definition of a Canopy Tree as "a perennial woody plant that reaches more than five (5) metres in height." (KCC, 2015, p.4).

10. Development responds to neighbourhoods in an integrated and balanced manner (Objective 6)

10.1 Why is this important?

An integrated approach to planning and delivery of development, infrastructure, services and activities for local areas and neighbourhoods promotes better outcomes. This approach considers not only the physical and economic determinants of neighbourhoods, but also the social, cultural, community, and health and wellbeing attributes that help define a place and contribute to its liveability. To attain an integrated and balanced development, Council, through the Knox Planning Scheme has outlined explicit policies, goals and strategies for the development of the municipality. The Knox Planning Scheme is the official instrument for all decisions regarding planning made by Council, planning officers, and the Victorian Civil and Administrative Tribunal (VCAT). Consistency between Council policy, the Knox Planning Scheme, and Council's decision-making processes is critically important to ensure effective planning decisions and quality outcomes are delivered to the residents of Knox.



VCAT decided 14 residential planning applications for Knox in 2022 (just like 2021). A reduction from 26 in 2020; 32 in 2019; and 43 in 2018.

10.2 How are we tracking?

The alignment between Council's planning application decisions and VCAT decisions is important in gauging the coherence with the Knox Planning Scheme. Planning applications that are decided by Council can be appealed to VCAT, which hears the case and makes a final ruling on whether a permit should be issued or not, based on the Knox Planning Scheme. Appellants could 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. In making the ruling, VCAT can only consider the provisions in the Knox Planning Scheme. It is important to note that 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's decision-making process.

Figure 15 and Figure 16 relate to VCAT decisions on planning permits that would produce at least one net new dwelling in Knox. Figure 15 shows that VCAT overturned more Council refusals than it upheld in 2022. This has been the usual trend since 2018, with the exception of the 2021 calendar year. Whereas, Figure 16 shows that VCAT upheld all Council approvals in 2022 – a trend consistent with most previous years.

Figure 14. VCAT Decisions on Residential Planning Applications
In 2022 VCAT Overturned more Council Refusals than it Upheld

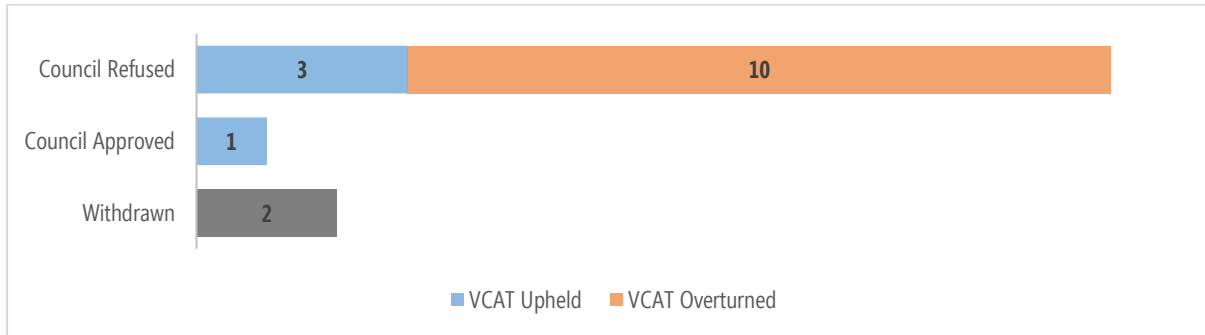
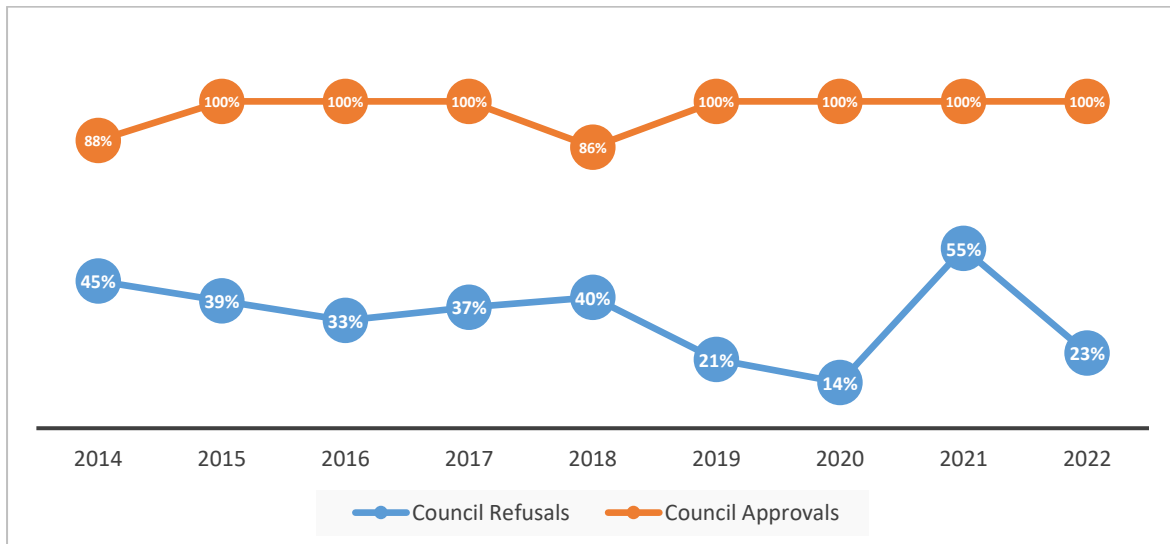
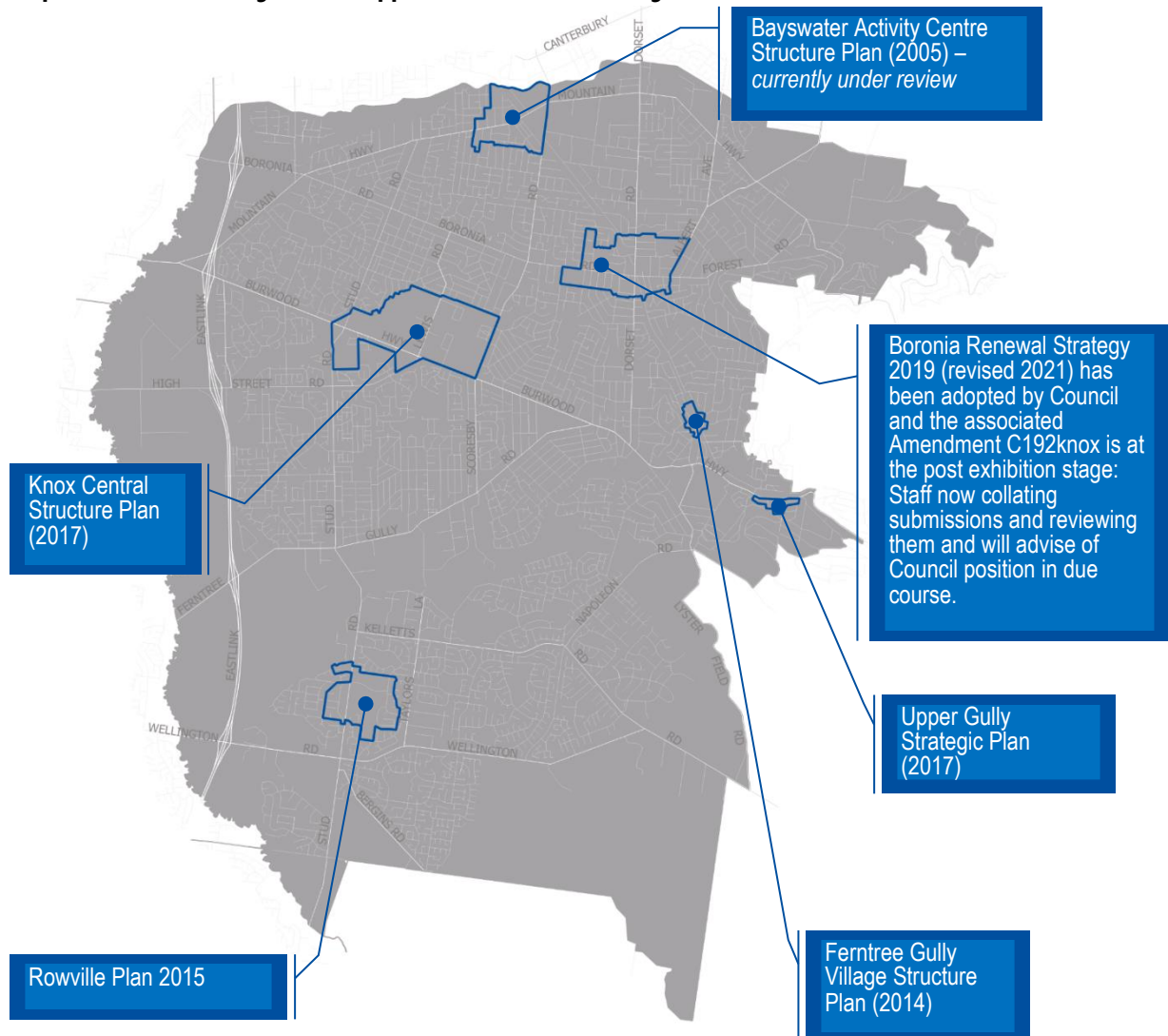


Figure 15. Trend Analysis of VCAT Decisions on Residential Planning Applications
VCAT upheld all Council approvals but not more than 23% of Council refusals in 2022



Knox City Council undertakes integrated place-based planning initiatives in activity centres and other key places across the municipality. These include structure plans and other local strategic plans developed through extensive consultation with the local communities to provide specific directions and guidance for future decisions on planning controls, infrastructure provision and delivery of community services (See Map 4). The place-based planning approach empowers stakeholders by fostering partnerships between Council and the community, local businesses and other key stakeholders. This improves the understanding and ownership of place-specific plans within the community, thereby facilitating outcomes that meet community aspirations.

Map 4: Plans and Strategies that Support Place-based Planning Controls



Place-based planning initiatives by Council resulted in six activity centres in Knox, giving residents of the municipality easy access to a broad range of major retail, community, government, entertainment, cultural and transport services. The activity centres also provide local employment opportunities and supported local economic development. These activity centres aid the growth of high density housing and align with the *Plan Melbourne 2017-2050* goal of developing 20-minute neighbourhoods (DELWP, 2017).

10.3 Analysis

- Overall, 14 residential cases were decided by VCAT in 2022, and in most of the cases, VCAT overturned Council refusals. This outcome is in line with past rulings on Council refusals (with the exception of 2021). On the contrary, VCAT affirmed all Council approvals in 2022 – a situation that is consistent with previous VCAT outcomes on Council approvals (see Figure 16).

-
- Under the *Knox Housing Strategy 2015*, 2021 and 2022 have witnessed the lowest number of residential cases lodged at VCAT from Knox²³. If this trend of fewer appeals submitted to VCAT continues, it could be assumed that either planning permit applicants and neighbours are increasingly becoming satisfied with Council's decisions on planning permits or community members have limited capacity to engage in planning appeal processes. The time and efficacy of third party appeals process could also be one of the reasons for the low VCAT cases in 2021 and 2022.
 - There were 13 VCAT decisions on planning applications that were initially refused by Council in 2022. Council's refusal was upheld in 3 of these cases. In 10 of the cases VCAT overruled Council's refusal and directed that permits be granted for the 10 proposed developments. These permits will yield at least 37 net new dwellings²⁴. In 5 of the cases set aside by VCAT, Council was supportive of VCAT's ruling. For the remaining 5 of the 10 proposed developments set aside by VCAT upon appeal, some amendments were made to the original plans. Council was supportive of the amended plans in 2 cases. In 1 case, Council was not satisfied as the amendments did not resolve all the concerns raised by Council. Council remains opposed to the remaining 2 cases, despite some amendments having been applied to the plans.
 - Council's refusal of 3 permit applications was affirmed by VCAT. One application proposed the development of a residential aged care facility to accommodate 108 residential suites within a two storey building, and the removal of vegetation. Another application proposed the removal of existing buildings and the construction of a three story and four storey retirement village on the land. In both cases VCAT upheld Council's decision that the proposals did not respect the landscape character of the area, or that the proposed vegetation removal was excessive (in one case). VCAT affirmed the third case on similar grounds (application not being respectful of the neighbourhood character of the area).
 - In 2022 one Council approval was affirmed by VCAT. Council approved the application subject to two amendments to be made on the design. The applicant lodged an appeal with VCAT, and while the tribunal affirmed Council's approval it varied the two conditions/amendments that Council's approval was subject to.

²³ The highest was in 2018 where 43 VCAT cases were recorded.

²⁴ One VCAT ruling that required that a permit be issued by Council relates to lot subdivision.

11 Action Areas and Advocacy Opportunities for Council

The findings in this report – the 2022 Annual Report of the Knox Housing Monitoring Program presents some possible Action areas for Council as well as advocacy opportunities in the sphere of residential development, and matters related to satisfying the diverse housing needs of the various segments of the Knox Community.

11.1 Action Areas

Action areas that the findings in this report might trigger are as follows:

- A review of the *Knox Housing Strategy 2015*. The findings and data in this report could provide critically important foundational data that would inform and enrich the data that would guide the review of the Knox Housing Strategy. In fact, key findings and data that emanated from the seven Annual reports of the Housing Monitoring Program that monitored the current *Knox Housing Strategy 2015* will serve as important background information that would possibly inform the key focus areas of the next Knox Housing Strategy.
- The findings in this report might also lead to revisions of some of the actions of the *Knox Community Plan 2021–2031*. Although the community plan is for a 10-year period, it is monitored to ascertain how the key targets and benchmarks are tracking. In this respect, the data in the housing monitoring report could be used to track the progress of the objectives under the *'Neighbourhoods, housing and infrastructure'* Key Direction.
- The findings in this report will also reinforce some of the findings in the *Knox Social and Affordable Housing Strategy and Action Plan 2023–2027*. This report has also highlighted that a key policy concern in Knox remains the rising housing cost, coupled with very low availability of affordable rental options, and a widening shortfall in social housing. A potential action in response to this finding might be that, Council may be further prompted to re-look at its policy options and their effectiveness in the social and affordable housing domain going forward.
- The findings in this report could also inform decisions that may go into the future review of the Strategic Investigation Sites in Knox. For instance, some Strategic Investigation Sites may be available for future residential development. If Council is persuaded by the findings in the 2022 Annual report and previous reports of the Housing Monitoring Program that flagged the limited availability of some dwellings types in Knox, Council could create residential land banks for some dwellings that are needed but are in short supply. This would encourage the diversification of the housing stock within the municipality, particularly, one and two bedroom dwellings and social and affordable housing.
- The findings in this report will also provide useful data for the next State of Knox Report. Similarly, the 2022 Annual Report of the Knox Housing Monitoring Program would provide inputs into the next Knox Municipal Survey. Some of the findings will inform the kind of questions to be asked in the survey instrument in relation to housing, and the extent to which communities' needs are being met with respect to housing.

11.2 Advocacy Opportunities

In addition to providing action areas, the findings in the 2022 Annual Report of the Housing Monitoring Program present some opportunities for advocacy regarding housing related matters. Some of these include:

- Council could leverage on the findings on social and affordable housing in this report to partner with their counterparts – the Eastern Affordable Housing Alliance (EAHA) to advocate for more State and Federal Government’s support with resources in the affordable housing realm, with the view to progressively increasing the provision of social and affordable housing across the Eastern Region.
- The 2022 Annual Report of the Housing Monitoring Program highlights that by 2031 couple only and lone person households will be nearly 50% of households in Knox, and yet, only 18% of the approved net dwellings in planning permits in 2022 were small dwellings (dwellings of two bedrooms or less). Council could use this finding for advocacy campaigns with the aim of making private developers aware that the market for small dwellings in Knox is likely to grow quite strongly in the near future. If this is effectively done, private developers could be swayed specifically into developing small dwellings in Knox.
- This report has also highlighted that most dwellings were not approved in ‘very walkable’ locations in Knox. Since 2017 an average of 35% of approved dwellings in planning permits were located in ‘very walkable’ areas of Knox. When this happens, it normally signals that critical socio-economic infrastructure and services are not in close proximity to many residents. Council could use this finding to advocate for State Government’s support in the provision of essential social and economic infrastructure and services such as public transport, local shopping centres, health facilities and services, local schools among others in under-served suburbs in Knox. If this succeeds, it could advance the *Plan Melbourne 2017-2050* vision of creating 20-minute neighbourhoods in Melbourne.
- This report has reported old (published in 2019) tree canopy data. That data puts Knox at 18% tree canopy coverage²⁵. However, Council aims to increase the tree canopy coverage in Knox to 30% by 2050. Measures to improve tree canopy coverage is in line with a key direction of *Plan Melbourne 2017-2050* that is, ‘*make Melbourne cooler and greener*’. However, this goal cannot be achieved if Council cannot regularly measure/monitor Knox’s tree canopy coverage. This report (in addition to other reports) could provide an entry point for Knox Council to collaborate with the Municipal Association of Victoria (MAV) and some environmentally conscious organisations to advocate for State Government’s (through the Department of Energy, Environment and Climate Action) support/funding of Councils across Victoria to regularly capture tree canopy data.
- This report has hinted that Knox is almost on the margin in terms of the availability of aged care places as compared to the national benchmark. Yet, the share of Knox residents of 70 years and above is growing quite fast. Council could use this finding as the basis to strongly advocate for and possibly attract aged care facilities providers from the public sector, and the not-for-profit and

²⁵ A new tree canopy data published by DELWP in 2021 only covered Knox Housing Strategy areas and not the entire Knox. Also, the 2019 data and 2021 data were not comparable. In the 2019 data, a tree of 3+ metres was defined as a canopy tree by DELWP, but in 2021 data, a tree of two metres was categorized as a canopy tree.

private sectors. If this happens, Council's interventions will address the housing needs of one of the vulnerable segments of the Knox community.

12 Summary of Key Findings

This report seeks to provide a measured progress against the six objectives in the *Knox Housing Strategy 2015* by examining data related to planning approvals, housing construction, and population demographics. This analysis is framed around a set of indicators that seeks to measure different aspects of housing in Knox, particularly new dwellings that have been approved through the planning system in 2022.

The following are the highlights of the key findings in this report:

- Taking into consideration demolitions, the planning and subdivision permits approved in 2022 were 177. If enacted, this could potentially result in a net yield of 373 additional new dwellings in Knox. These figures are a little above the 2021 figure (334), but are still generally lower than the housing approvals in the last seven years before 2021.
- The overall percentage of new dwellings approved in 2022 whose typology was consistent with their Housing Strategy Area was 69%. This was a slight decline from the 2021 figure of 74%. This is however a significant improvement over the 2018 figure of 58%. This suggests that the *Knox Housing Strategy 2015* is continuing to deliver positive results by encouraging appropriate development across the municipality.
- The approved planning permits by Housing Strategy Area in 2022 shows that Bush Suburban area has 12 dwellings per hectare and 67 dwelling per hectare in Activity Areas. These outcomes are in line with the *Knox Housing Strategy 2015*.
- Approved planning permits in 2022 did not result in a single apartment or a residential aged care facility. These figures are down from 4 apartments and 214 beds in residential aged-care facilities, in 2021.
- Building permits issued in 2022 were lower than in the previous five years, with the exception of 2021.
- Rising housing costs, very low availability of affordable rental options, and an identified shortfall in social housing remain key policy concerns in 2022. Only four social housing projects were delivered in Knox during 2022. To increase the provision of social housing, Council continues to pursue policies and partnership opportunities to help facilitate solutions that can help address the identified shortfall.
- VCAT decided 14 residential planning applications for Knox in 2022, similar to the 2021 number, but fewer than any other year since at least 2012.

13 Next Steps: Future Housing Monitoring Program

The Housing Monitoring Report will continue to be published annually.

Looking at planning approvals tells us what might be built. This means that not all planning permits result in new housing. Building permit data has been reported in the 2022 Housing Monitoring report and in the previous ones as well. This gives a better picture of the dwellings that are built, than the planning permits. However, unlike the planning permit data, the building permit data does not identify the number of bedrooms. This makes it not feasible to ascertain the dwelling sizes of residential development from the building permits.

Council is exploring various means of accessing consistent, comparable and reliable data sources for tree canopy measures. In the meantime, some tree canopy data from the Department of Environment, Land, Water and Planning (DELWP, now the Department of Energy, Environment and Climate Action DEECA) have been presented in this report. Although DEECA has not made firm commitments regarding the release of tree canopy data in the subsequent years, it is hoped that if DEECA publishes future tranches of tree canopy data it would enable future Housing Monitoring Reports to examine changes in tree canopy cover in Knox over time.

The release of the 2021 census data might also trigger new projections into the future with respect to both dwellings and population/households growth in Victoria and Knox. The Victorian Government's projections – *Victoria in Future* (VIF) was published in 2019. Based on the release of the 2021 census data and changes in other factors, id Consulting Pty Ltd has made some adjustments to the Knox Population and Household Forecast that was published in 2018. It is anticipated that the Victorian Government will also update its projections in the near future. If these population/household projections are updated, it would provide more current and reliable data for future housing monitoring reports.

Finally, Council will explore ways of creating an interactive dashboard to support timely, more efficient and real-time reporting on the key targets and indicators of the *Knox Housing Strategy 2015*. While the Housing Monitoring Program report will still be published annually, an interactive dashboard may provide regular updates on important housing related data in the near future. As the data used in this report was derived through manual data collection methods, any future dashboards produced reflecting on the 2022 data, may vary slightly to the data published in this report.

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Attachment 1: Definition of Housing Types

Table 2. Housing types as defined in the Knox Housing Strategy

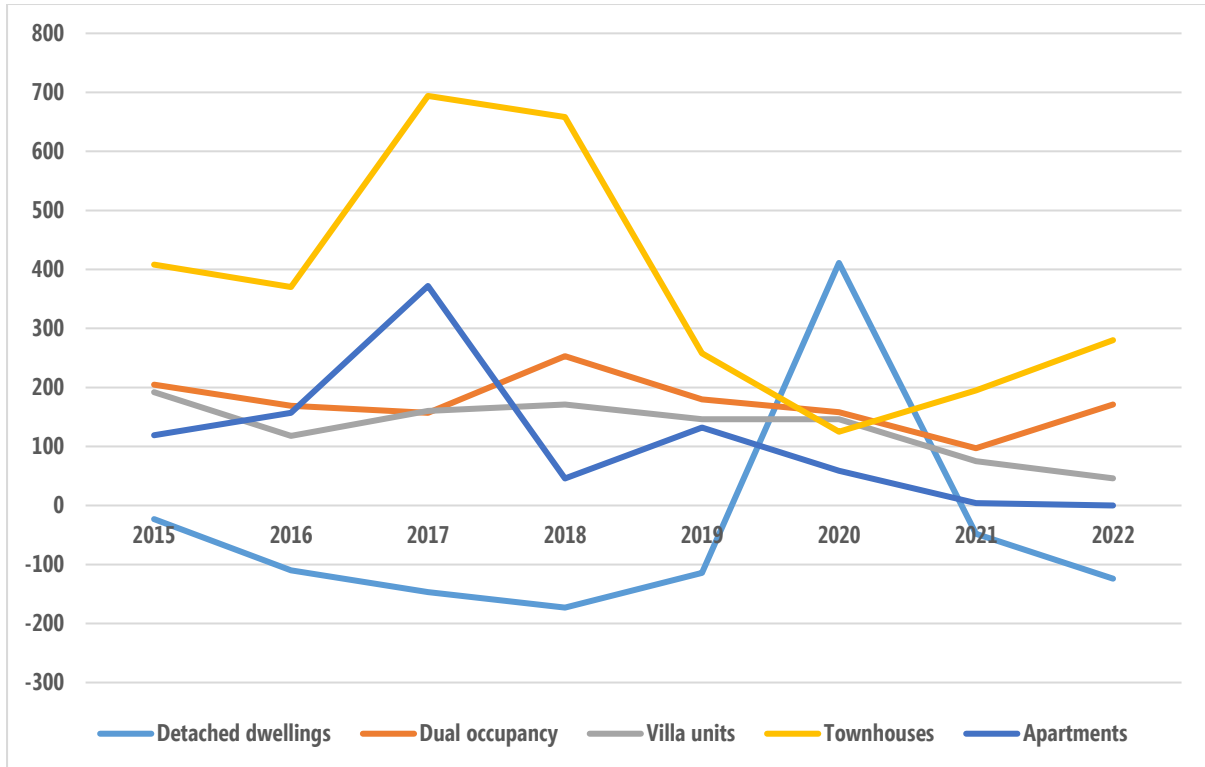
Housing Type Definition	Indicative Lot Layout: Perspective View
<p>Detached dwelling: one dwelling on a lot.</p>	<p>Minimise the dwelling and outbuildings footprint and other hard surfaces such as driveways, paths and paving.</p> <p>Provide open front gardens with no, low or transparent front fencing.</p> <p>Design buildings to be nestled and tucked into the landscape.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p>
<p>Dual occupancy: two dwellings on a lot (can include retention of an existing dwelling).</p>	<p>Minimise the dwelling and outbuildings footprint and other hard surfaces such as driveways, paths and paving.</p> <p>Provide open front gardens with no, low or transparent front fencing.</p> <p>Provide a single crossover for driveways.</p> <p>Significantly set back the first floor level from the ground floor level.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p> <p>Include Water Sensitive Urban Design (WSUD) features (e.g. rain gardens) as part of the landscaping.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p>
<p>Villa units: three or more dwellings on a lot with no shared walls.</p>	<p>Minimise the dwelling and outbuildings footprint and other hard surfaces such as driveways, paths and paving.</p> <p>Provide open front gardens with no, low or transparent front fencing.</p> <p>Provide a single crossover for driveways.</p> <p>Significantly set back first and second levels from the ground floor level.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p> <p>Include Water Sensitive Urban Design (WSUD) features (e.g. rain gardens) as part of the landscaping.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p>
<p>Townhouses: three or more dwellings on a lot sharing a wall or roof.</p>	<p>Minimise the dwelling and outbuildings footprint and other hard surfaces such as driveways, paths and paving.</p> <p>Provide open front gardens with no, low or transparent front fencing.</p> <p>Provide a single crossover for driveways.</p> <p>Significantly set back first and second levels from the ground floor level.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p> <p>Include Water Sensitive Urban Design (WSUD) features (e.g. rain gardens) as part of the landscaping.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p>
<p>Apartments: development of three or more stories in a single mass or multi-unit dwelling, usually with a common entrance.</p>	<p>Minimise the dwelling and outbuildings footprint and other hard surfaces such as driveways, paths and paving.</p> <p>Provide open front gardens with no, low or transparent front fencing.</p> <p>Provide a single crossover for driveways.</p> <p>Significantly set back first and second levels from the ground floor level.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p> <p>Include Water Sensitive Urban Design (WSUD) features (e.g. rain gardens) as part of the landscaping.</p> <p>Include accessible design features (e.g. a clear path from the street to the front door, wide and sheltered step-free entrance, wide hallways & doorways). For more information on how to design for universal access, refer to the Federal Government's supported <i>Usable Housing Design Guidelines, 2019</i> (www.housing.gov.au/usable-housing-design-guidelines) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014).</p> <p>For further advice on Knox Planning & Planning Scheme Ordinance 22 (2014) and Knox Residential Planning & Planning Scheme Ordinance 22 (2014), contact the Knox Council Planning & Planning Scheme Unit.</p>

For further details, see the [Knox Residential Design Guidelines 2015 – revised 2019](#) (p.24-28).

Attachment 2: Net growth in dwellings by Typology from 2015 to 2022

Figure 16. Net Growth in Dwellings by Typology

Townhouses remain the predominant dwelling type in terms of net growth since 2016²⁶



The only exception to this trend was in 2020, where detached dwellings was the dominant typology.

²⁶ From 2015 to 2018, calculations of net growth by type are based on an assumption that all demolished dwellings were detached dwellings. Analysis of demolitions data from 2019 to 2022 suggests that this was accurate of 96.5% of demolitions.