Promoting diverse housing choices in Ku-ring-gai Local Council

Introduction

Ku-ring-gai, located in Sydney's North Shore, is an affluent local government area marked by expensive housing and a dominance of detached houses. While its heavily forested landscape and low-density housing are often seen as desirable, they also contribute to broader challenges such as housing inaccessibility and limited urban diversity. The area is known for its resistance to medium- and high-density development proposals by the NSW state government, taking the state government to court over its Transport-Oriented Development (TOD) policy [1].

The Ku-ring-gai council area is served by a main train line, with T1 and T9 trains running along it and various local bus routes are present throughout the area. Beside this train line, the Pacific Highway runs through the council. Most main centres in Ku-ring-gai council are along the train line, and this is a main ridgeline of the area in a hilly area. St Ives is a major centre notably not served by heavy rail and its centre is along the Mona Vale Rd main arterial.

Ku-ring-gai's Local Housing Strategy focuses on three priorities: managing housing supply (H1), promoting diverse housing options (H2), and improving liveability and design quality (H3) [2]. Of these, this report recommends an extension of H2—diversity and choice—with a focus on increasing medium density housing.

Ku-ring-gai's current predominance of detached housing is increasingly mismatched with the needs of two growing demographic groups: younger people who are often priced out of this luxury form of housing, and older residents who are seeking smaller, more manageable dwellings as they downsize.

To achieve this priority, this report recommends altering zoning restrictions to enable more medium-density housing, as well as advocating for the state government to provide improved public transport infrastructure.

Local Housing Context

The New South Wales planning system is governed by the Environmental Planning and Assessment Act 1979, which sets out responsibilities for planning authorities and enables the creation of instruments such as Local Environmental Plans (LEPs), Development Control Plans (DCPs), and State Environmental Planning Policies (SEPPs) [3]. At the metropolitan level, the Greater Sydney Region Plan, A Metropolis of Three Cities, provides long-term strategic direction [4].

There are two main SEPPs that have been recently introduced to help combat the state's ongoing housing crisis. The Transit Oriented Development (TOD) SEPP supports higher-density housing near transport hubs, with four TOD precincts identified in Ku-ring-gai: Roseville, Lindfield, Killara, and Gordon [5]. Additionally, the Low and Mid-Rise Housing (LMR) Policy, expands permissions for dual occupancy and allows for denser housing within 800 metres of particular train stations and centres [6]. In Ku-ring-gai, Pymble, Turramurra, Wahroonga, and St Ives areas fall subject to the LMR SEPP. However, heritage areas are notably exempt from these SEPPs, and Ku-ring-gai Council's extensive heritage overlays exclude much of the most well-located areas in the LGA [7].

Another relevant state incentive is the housing targets set in 2024, the NSW government also set five-year housing targets under the National Housing Accord, with Ku-ring-gai expected to deliver 7,600 new homes by 2029 [8].

Locally, councils implement zoning through LEPs and guide design through DCPs [9] [10]. Ku-ring-gai Council has historically resisted increased density, favouring alternative planning visions with limited growth, and the council area is dominated by the low-rise R2 zone [1] [7]. This local opposition reflects broader tensions in the NSW planning system between state-led initiatives to increase housing supply and local preferences for preserving neighbourhood character [11].

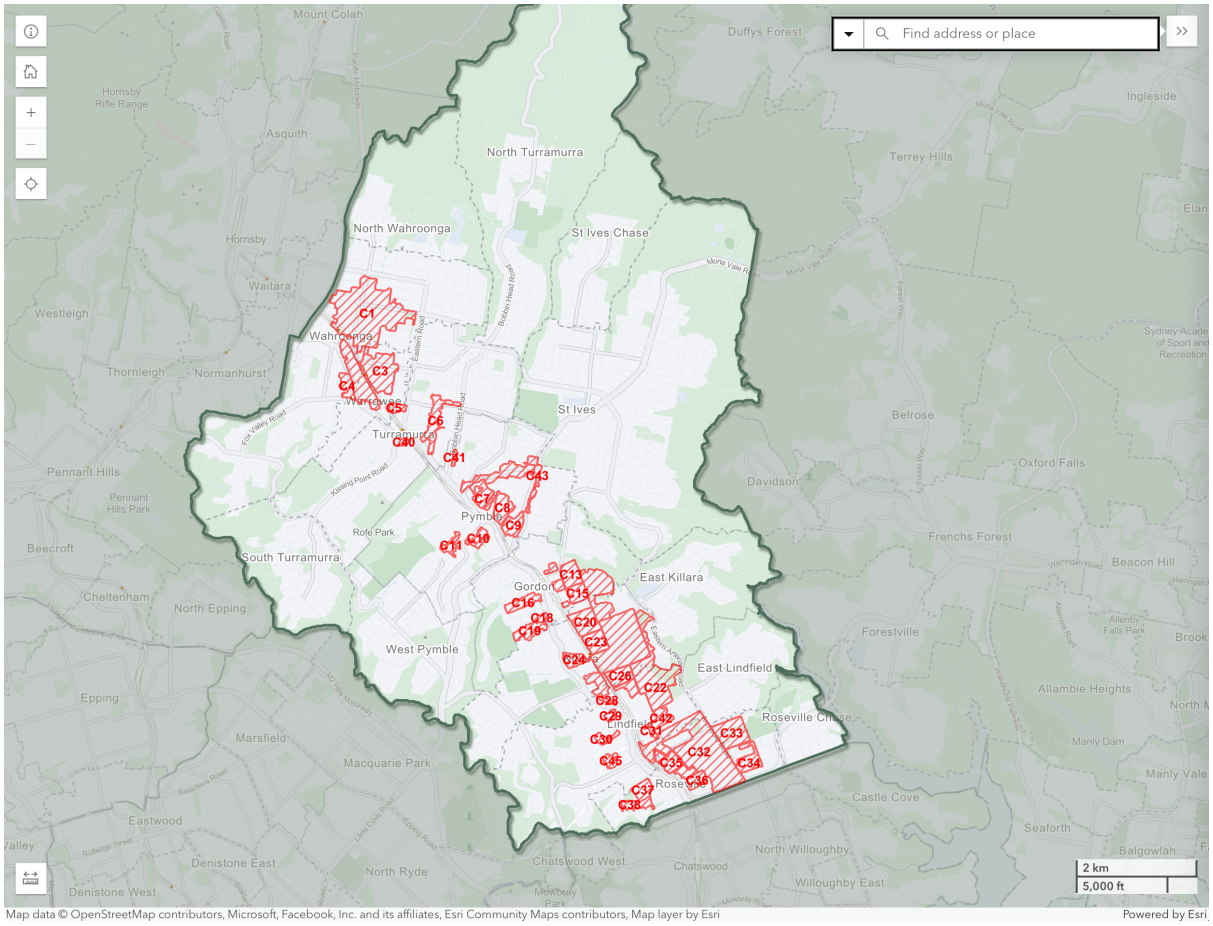

Figure 1: Heritage restricted areas given in Ku-ring-gai council LEP [7]. These are mainly present along the highly accessible areas around the train line. Heritage will not be in the scope of this report but represents a major blockage for encouraging diverse housing in the local government area.

Housing Needs and Market Analysis

State and National Needs

New South Wales is lagging significantly behind other major states in housing approvals. At a rate of just 5.00 approvals per 1,000 people per year, NSW ranks the lowest among the larger states behind Victoria (7.39), South Australia (6.00), Queensland (5.87) and Western Australia (5.8) [12] [A5].

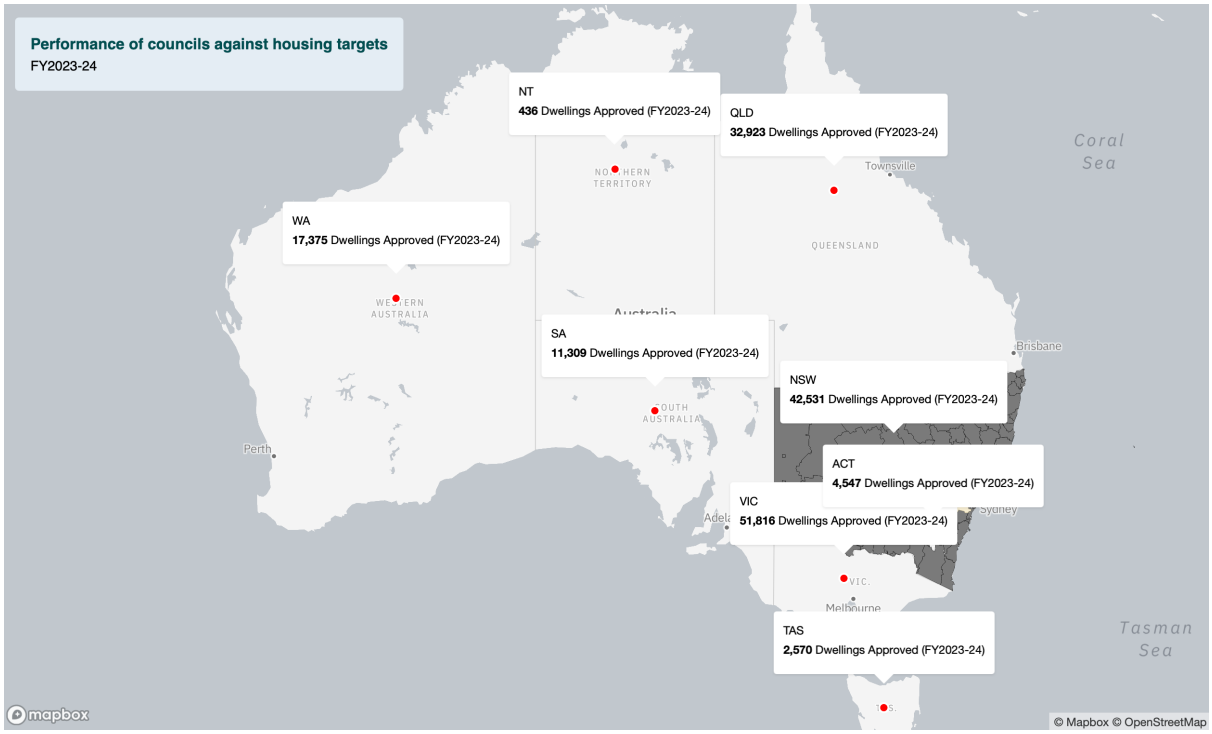

Figure 2: Dwellings approved in each Australian state and territory in the 2023-24 financial year [12]. NSW falls significantly behind Victoria despite a larger population

This underperformance in approvals is contributing to broader demographic and economic challenges, particularly in Sydney. The city is experiencing notable population losses through internal migration, as people seek relief from high housing costs [13]. Sydney is now losing population to every other state and territory in Australia, with overall growth sustained only through international migration [14] [A2].

Table 1: Net internal migration to Sydney from 2016 to 2021 [15]. Negative numbers represent people leaving Sydney. Sydney is losing population to every other location in Australia, and its population is only sustained through overseas migration

Origin	Net Internal Migration to Sydney
Greater Adelaide	-2545
Greater Brisbane	-16469
Greater Darwin	-536
Greater Hobart	-4084
Greater Melbourne	-11238
Greater Perth	-490
Australian Capital Territory	-9630
Rest of NSW	-78186
Rest of NT	-281
Rest of QLD	-25298
Rest of SA	-450
Rest of TAS	-2943
Rest of VIC	-2477
Rest of WA	-356
Total	**-154983**

In response, the NSW Government has introduced housing targets for every local government area (LGA) across the state, aiming to boost housing supply and improve affordability [8]. However, the vast majority of LGAs are not building fast enough to meet these targets. Ku-ring-gai Council delivered only 25% of the required housing approvals in the 2023–24 financial year [12] [A5].

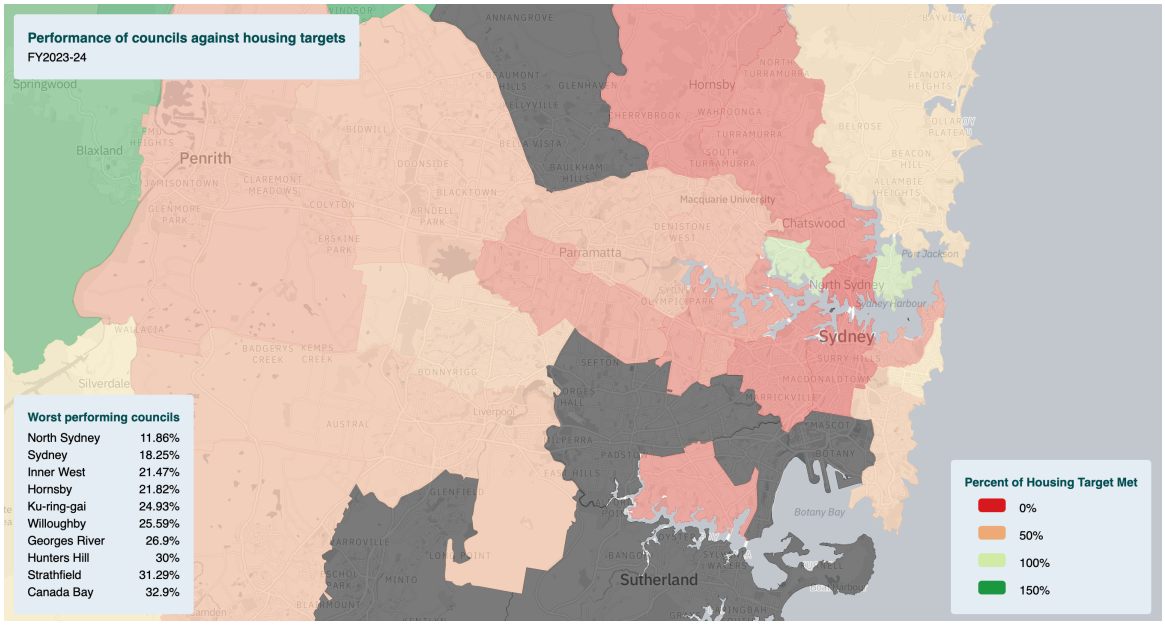

Figure 3: Performance of various local council's against the state government's set local housing targets [A5]

Local Profile

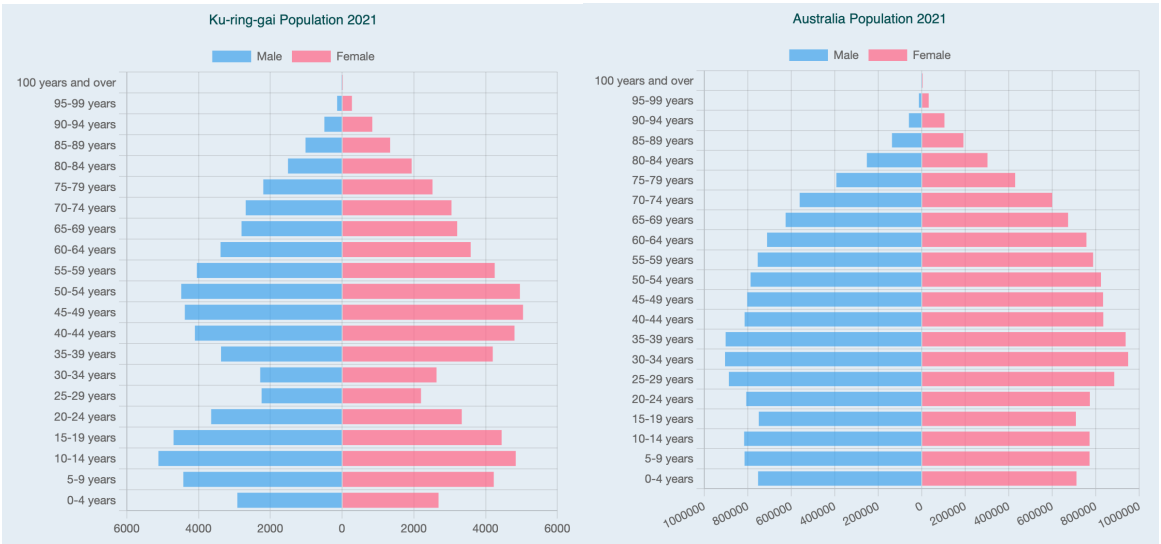

Figure 4: Ku-ring-gai population pyramid (left) compared to the Australian population pyramid (right) [16] [17] [A3]

Ku-ring-gai's demographic profile reveals a distinct absence of residents aged 25 to 35, indicating that younger adults are leaving or avoiding the area - limited housing options and high costs are likely a key factor (Figure 4). The population is also aging, with the most significant growth occurring among people aged over 50 (Figure 5). Meanwhile, the number of children and young adults has remained largely stagnant, highlighting long-term challenges in population renewal and community diversity. The large amount of 10–14-year-olds, and decreasing 0-10 groups, also suggests the area could see these people move out in the next 10 years without being replaced and result in further decreasing household sizes.

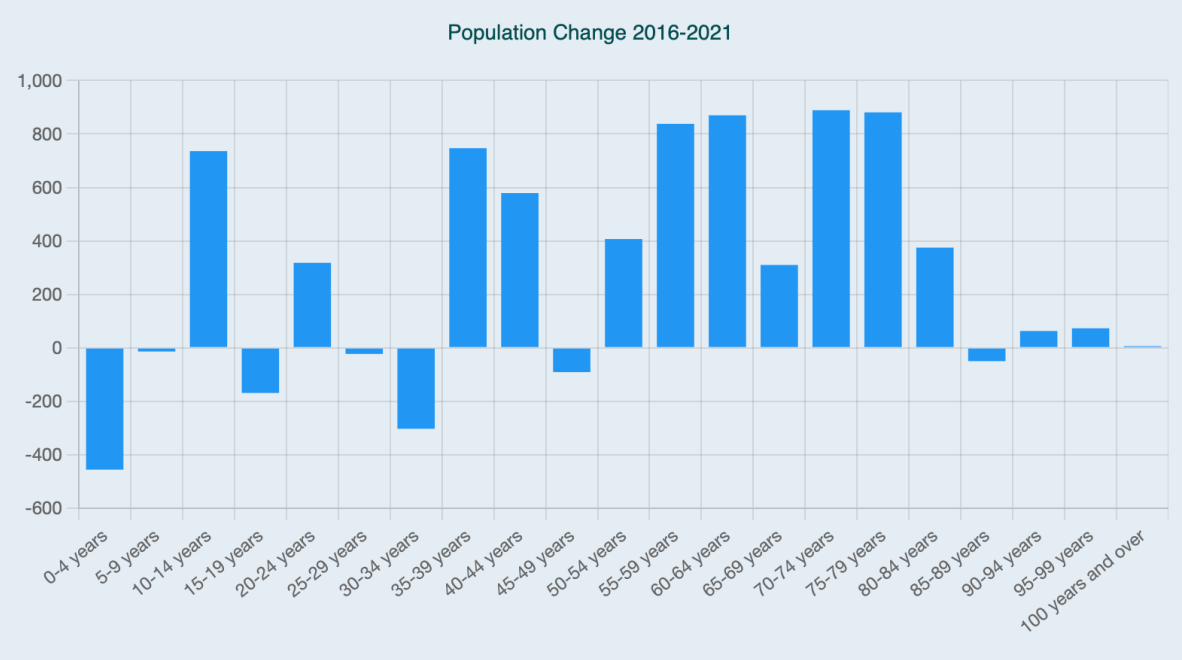

Figure 5: Ku-ring-gai population change by age from 2016 to 2021 [16] [18] [A3]

Economically, Ku-ring-gai is one of Greater Sydney's most affluent areas, with median incomes significantly above city and national averages. A high proportion of residents earn over $100,000, and a notably higher percentage above $180,000, reflecting a high-earning population and a level of exclusivity in housing affordability [19] [20] [A4].

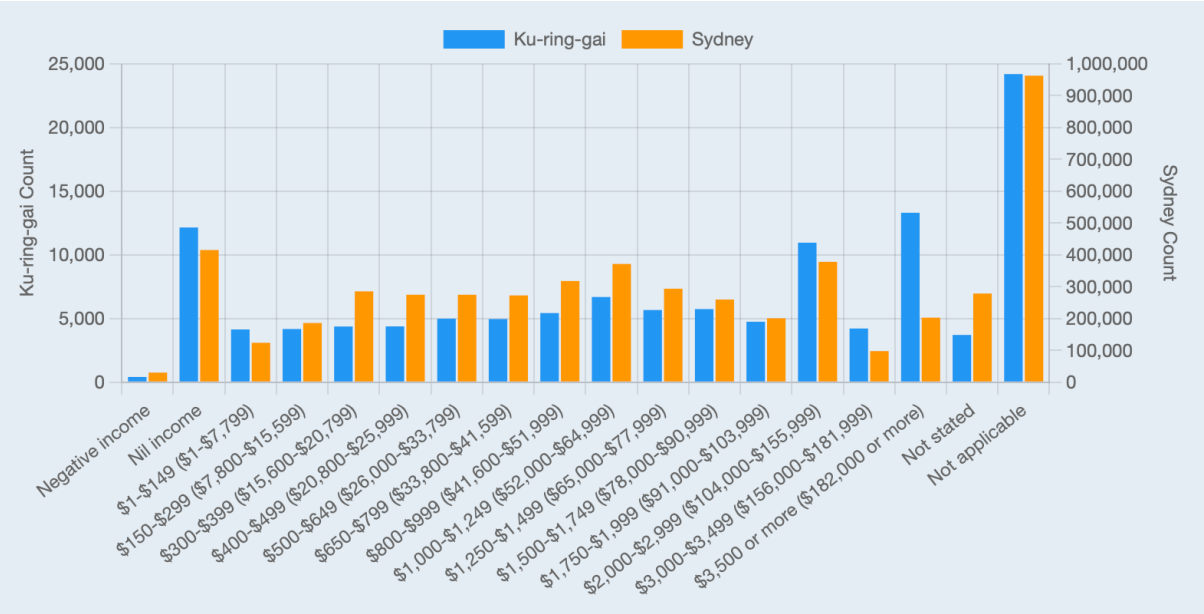

Figure 6: Income distribution of Ku-ring-gai vs Greater Sydney. Scales for each data source are altered for better comparison of the distribution [20] [19] [A4]

A critical consequence of this housing imbalance is the displacement of essential workers. 71.6% of essential workers—including teachers, nurses, and emergency service personnel—live outside the Ku-ring-gai area, facing significant commute times and affecting the outcomes of the area [21].

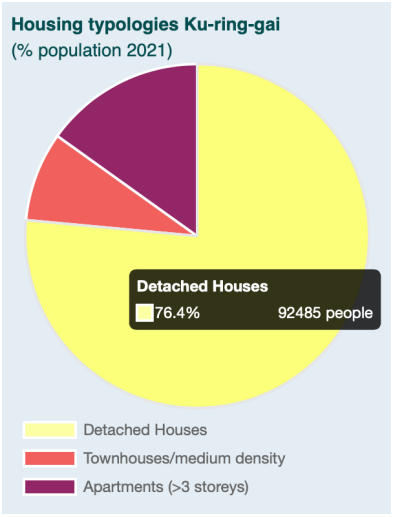

Figure 7: No. of people living in each housing typology within Ku-ring-gai [A6]

The housing stock further reinforces this exclusivity. Ku-ring-gai is dominated by detached houses on large blocks, with very little medium-density housing. Over 75% of Ku-ring-gai residents living in detached housing, a housing typology characterised by large land areas, and high cost [22]. The median detached house cost in Ku-ring-gai $3.3M [23].

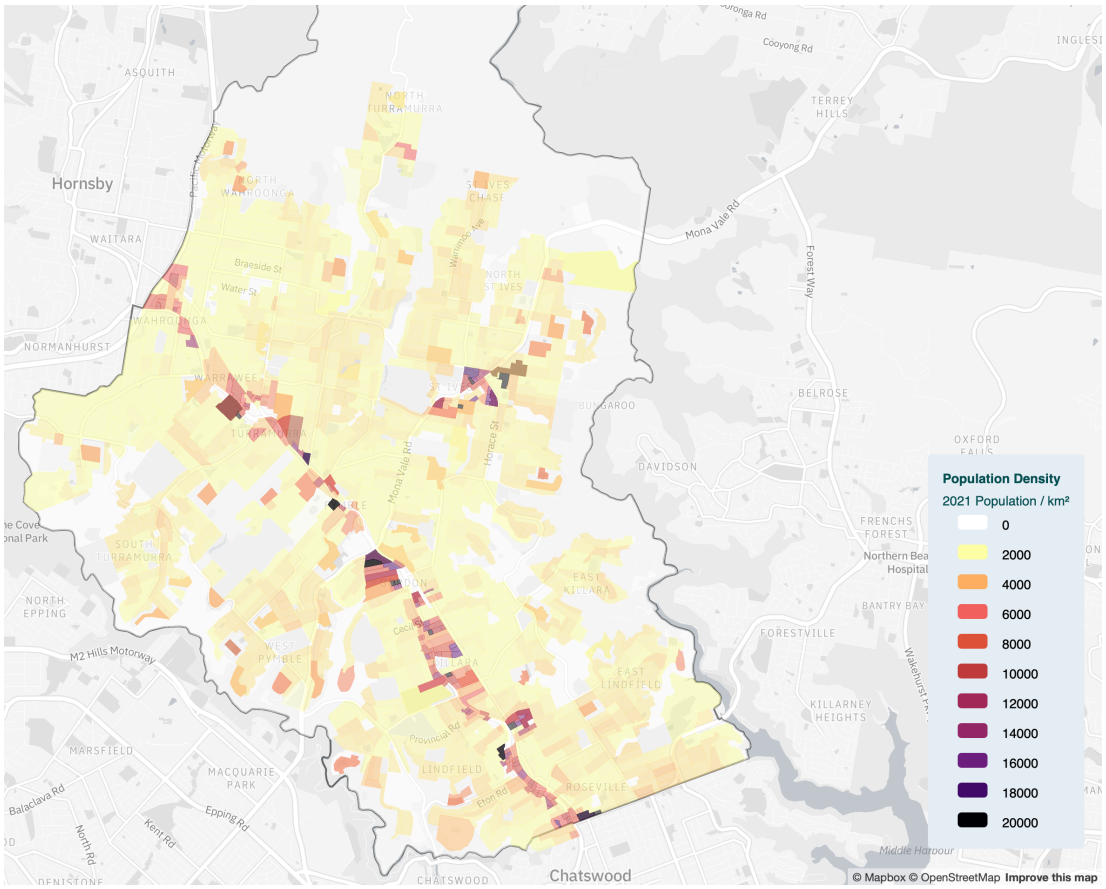

Figure 8: Population density of Ku-ring-gai LGA. The council is mainly low-density detached dwellings, with some high-density areas along the train line and at St Ives [24] [A1]

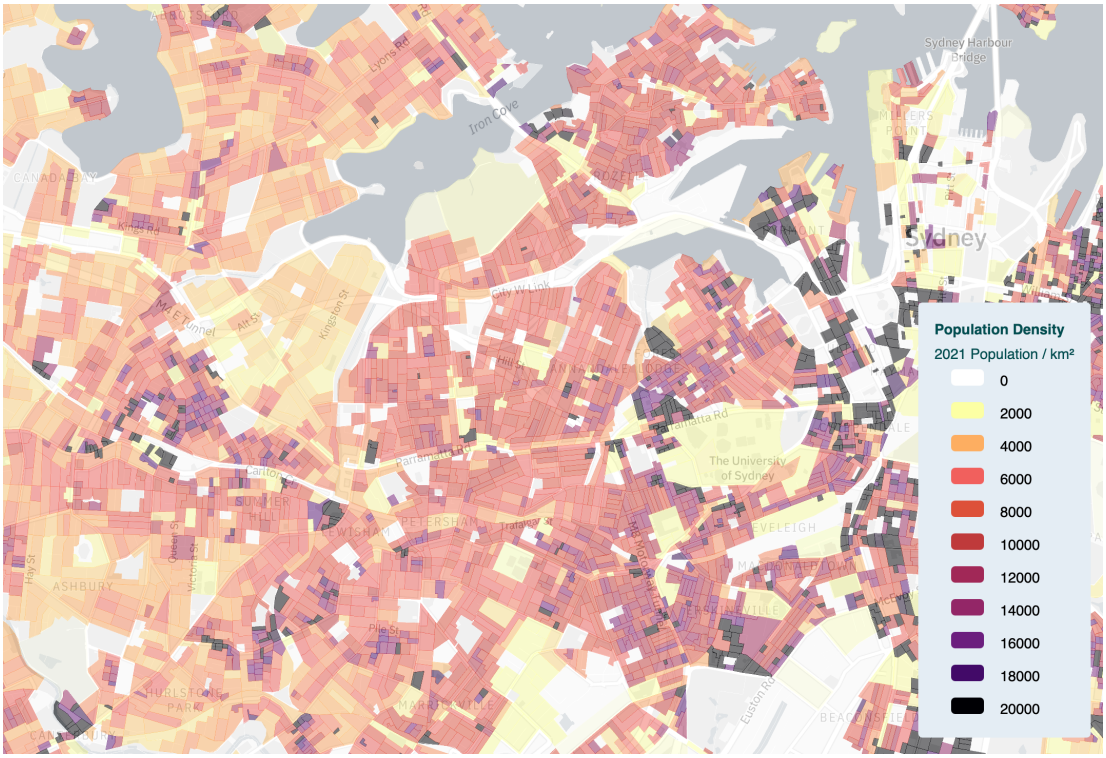

Figure 9: For comparison, the population density of the Inner West LGA, showing a much higher prevalence of medium-density housing in the area [A1]

Additionally, Ku-ring-gai's population growth contained within the high-density areas around the train line and at St Ives, with minimal changes in lower-density areas.

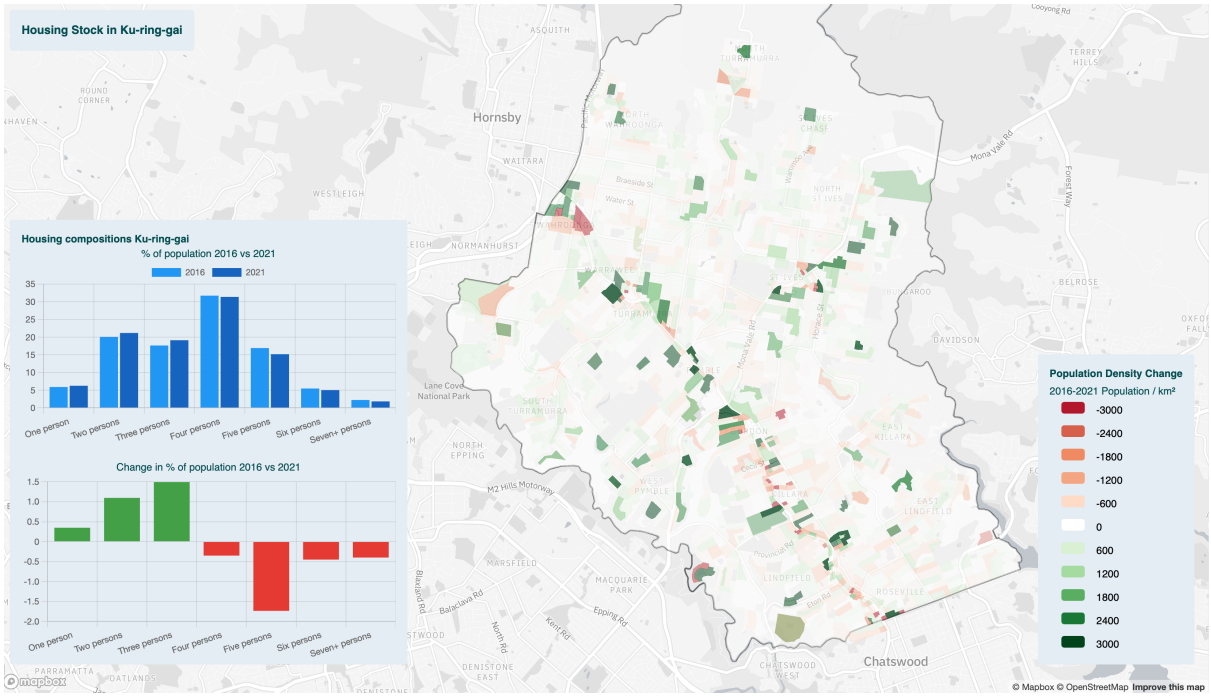

Figure 10: Changes in dwelling compositions and spatial distribution of population changes in Ku-ring-gai [25] [26] [A1] [A7]

Summary of Local Housing Context

This housing analysis has identified two main demographic groups whose housing preferences are not well represented by the existing housing stock:

- **People aged 60 and over** – a growing population that typically do not have large household sizes
- **People aged 25-35** – a population locked out by housing costs, that also prefer smaller household sizes

Additionally, a major gap in housing typologies has been identified, with limited medium-density housing stock available in the local council area.

Strategic Assessment and Recommendations

Review of current local housing policies

Ku-ring-gai's LHS sets a target to **increase housing supply by 10,700 dwellings** and highlights demographic trends, including an **ageing population** and a **rise in single-person households** [2].

The strategy also reflects community preferences for a greater variety of housing types, with a particular **preference for townhouses, villas, and other attached dwellings.** It emphasizes the importance of locating new housing near public transport, services, and community facilities.

A lot of **focus in the strategy is on monitoring and investigating things in the future**, such as preparing a local version of the medium density SEPP and monitoring how much of zoned capacity is taken up. It outlines the need to develop and investigate policy improvements but suggests little substantial action to be taken to meet housing needs.

The LHS proposes to accommodate the planned increase of 10,700 dwellings through a mix of medium- and high-density housing types, specifically:

- **5,700 apartments** (high-density)
- **5,000 townhouses** (medium-density)

This housing growth is intended to be delivered over a 20-year period, divided into three stages:

- **Years 0–5**
  - **Target:** 4,000 dwellings
  - **Delivery Method:** Existing planning controls
- **Years 5–10**
  - **Target:** 3,000–3,500 dwellings
  - **Delivery Method:** Utilisation of residual zoned capacity
- **Years 10–20**
  - **Target:** Not explicitly stated (approximately 3,500 inferred)
  - **Delivery Method:** Combination of residual capacity, seniors housing, and alternative dwelling projects

A significant component of the strategy includes the provision of **Alternative Dwellings**, which are defined as secondary dwellings, group homes, boarding houses, aged care, and nursing home facilities.

Despite the focus on alternative housing types, uptake has been limited. Between 2016 and 2020, **3,179 dwellings were completed**, of which only **114** were alternative dwellings [2].

The LHS also notes that residual zoned capacity in key residential and mixed-use zones (R3, R4, B2, and B4) is limited to **2,700 dwellings**, indicating a potential shortfall in capacity without further planning intervention. It is noted that high-density development is required to meet this zoned capacity, leaving even less room for medium-density housing typologies.

Assessment of housing typologies and the need for change

Ku-ring-gai is predominantly low-density, with 76% of residents living in detached houses, as well as one of the lowest urban densities in Sydney. High land values have made this housing type increasingly unaffordable, exhibiting more of an attribute of financialization than providing housing, with land values greatly exceeding the dwelling prices [27] [28]. Additionally, large dwelling sizes of existing stock make it increasingly inappropriate for future needs. As the area is fully developed with no room for greenfield expansion, there are no plans to increase low-density housing.

At the other end, high-density development going forward will be guided by either the state's Transit Oriented Development (TOD) SEPP or Ku-ring-gai's Preferred Scenario [29]. Both strategies focus on increasing housing near transport hubs, providing more of the needed smaller-size, well located homes for the area. Current policies are expected to meet high-density housing needs without requiring further changes.

Medium-density development

Medium density housing should be a key focus in addressing housing needs within the Ku-ring-gai area. This housing typology is suitable two key identified demographics, and the Council's LHS expresses that residents have a clear preference for this. Despite this, Ku-ring-gai currently has a very limited supply of medium density dwellings, and existing council policies have proven largely ineffective in supporting this form of development. As such, increasing the prevalence of medium density housing throughout Ku-ring-gai is identified as a key local lousing priority for the council to implement.

Affordability context in Ku-ring-gai

Housing unaffordability is driven by the combined pressures of land price, dwelling cost, and transportation cost [30]. Ku-ring-gai's high land prices make the provision of affordable housing difficult without widespread supply increases capable of shifting the market rate. This kind of change is likely to be politically untenable in Ku-ring-gai. Still, even with more restrictive medium-density policies (i.e. excluding low-rise apartments), medium-density housing typologies are likely to be commercially viable and able to provide significant medium housing stock [B1]. These are also likely to contribute to affordability long-term, and in other areas of Sydney, through the filtering effect [31] [32] [33].

Transportation costs also play a key role, especially when housing is located far from public and active transport infrastructure. Car ownership and parking provisions can incur high costs even where a house might otherwise be affordable [30].

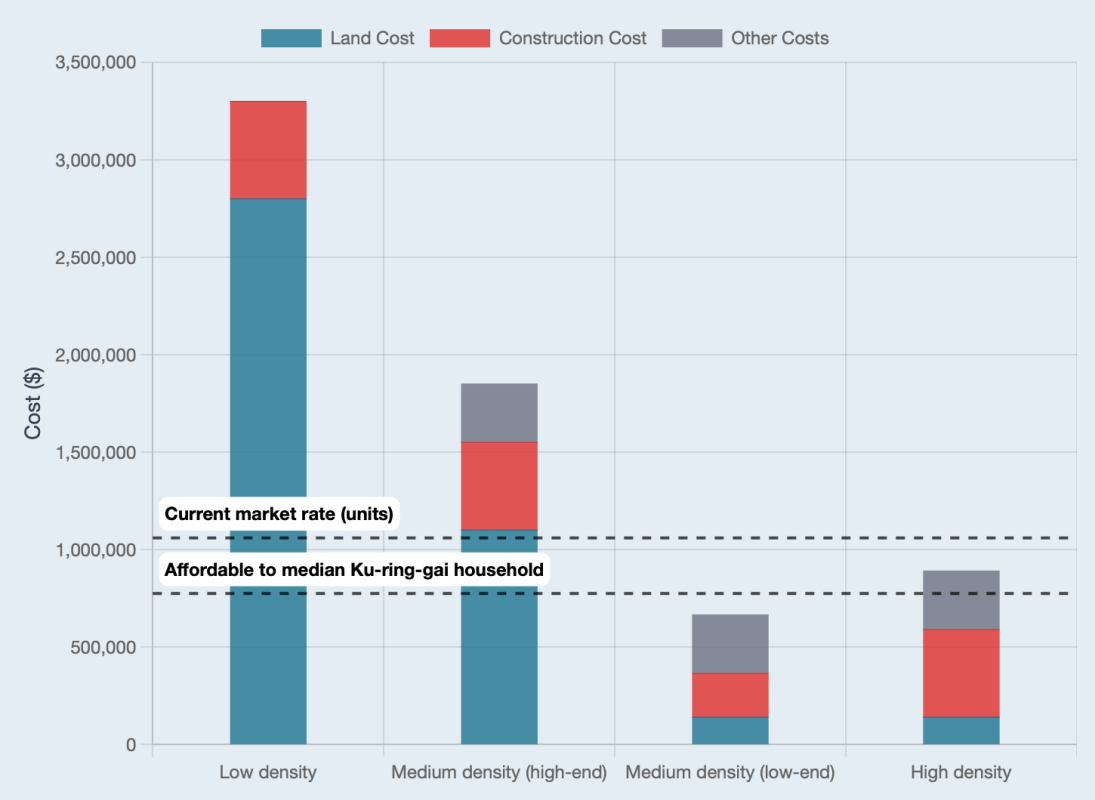

Figure 11: Cost of housing compared against different housing densities. Depending on implementation, medium density housing has the potential to be both commercially viable and affordable to Ku-ring-gai residents.
Other costs is as estimate of margin, taxes, financing, fees, sales and marketing. Calculations for this data is given in Appendix B1

Actions to promote medium density housing in Ku-ring-gai

Action 1: Allow low rise housing to be built in anywhere in R2 zones

To increase medium-density housing in Ku-ring-gai, submission of a planning proposal to alter zoning restrictions is recommended. This is suggested to allow low-rise housing across the LGA and align with the state government's LMR SEPP.

Comparison of Missing Middle housing policies

A number of cities have announced similar policies to help combat there housing crises, some notable examples of broad upzoning include Auckland (upzoned 2016), Portland (2020), and Canberra's recent announcement of changes (2025) [34] [35] [36]. Auckland and Portland have results showing the positive impact of these policies while Canberra has many similarities to Ku-ring-gai, having a wealthy population and extensive natural environment throughout its suburbs.

Taking a broad spatial approach can help better meet the needs existing older residents, who typically wish to remain close to their existing communities [37]. At the same time, this approach encourages construction close to transport corridors (Portland saw 86% located in these areas), and helps reduce land banking opportunities for developers [38] [39].

A summary of some key planning instruments changed with these is given below. These consider the allowed medium-density housing typologies available on the dominant residential zone in each city (Mixed Use Housing Suburban Zone in Auckland, R5 in Portland and RZ1 in Canberra) [40] [41] [42].

Table 2: Comparison of missing middle reforms used to encourage the prominence and affordability of medium-density housing typologies. Successful policies of Auckland and Portland are included as well as recently announced reforms in Canberra for context

	Auckland	Portland	Canberra
Units per lot	Up to 3. [43]	Up to 4 (6 in some cases) [44]	Varies [45]
Permitted housing typologies	Not defined, typically terraces, townhouses [46]	accessory dwelling units (ADUs), duplexes, triplexes, fourplexes, cottage clusters [44]	granny flats, duplexes, triplexes, townhouses, terraces, and low-rise apartments [45]
Minimum Lot Size	400m2 [43]	3000 sq. ft. (~275m2) [47]	600m2 [45]
Setback requirements	Front: 1.5m Side: 1m Rear: 1m [43]	Front: 10 ft (3m) Side: 5 ft (1.5m) Rear: 5 ft (1.5m) [47]	Front: 4-6m Side: 0-6m Rear: 0-6m [45]
Maximum building coverage	50% [43]	50% for <275m2 lots, decreases as lot size increases [47]	45% [45]
Parking requirements	None [48]	None [49]	1 per dwelling. Additional requirements for multiple larger houses on a lot. [45]

The reforms in Canberra have yet to be implemented, so no results are available. However, those in Portland and Auckland have been successful in increasing the diversity of housing and improving affordability.

In Portland, reforms have increased the amount of dwelling construction, improved the diversity of typologies in the region and brought down the price of missing middle typologies [50].

In Auckland, medium-density housing typologies are the dominant form of housing growth in the city, and these are being are being built with lower floor areas [46] [51]. Additionally, rents have been found to be 28% lower than they otherwise would have been [52] [53].

As such the following is recommended to be implemented across Ku-ring-gai council. The LMR SEPP provides a framework for medium density that gives similar provisions to these reforms. Aligning with this will help simplify planning processes and show benefits to the state government. Particularly, Part 3 of the LMR SEPP [54], outlines similar development controls to the above discussed upzoning and would be appropriate to be places across the entire LGA.

Amendment to the LEP to align the R2 zone with Part 3 of LMR SEPP

- Floor space ratio
    - Change all areas within R2 (typically categorised J2 (0.3 FSR)) to 0.7 FSR (align with LMR SEPP Part 3)

- No change to building heights (typically 9.5m) (already aligned with LMR SEPP Part 3)

- Minimum lot sizes
    - Change the minimum lot size to 500m (from typical 790 (R), 840 (S) or 930 (T) m2 minimum)

Amendment to the LEP to align the R2 zone with components of the R1 zone

- Add the objective
    - "To provide for a variety of housing types and densities"
- Include the following typologies to be permitted with consent
    - Attached dwellings, Multi dwelling housing, Shop top housing, Residential flat buildings, Seniors housing
    - Dual occupancies, Semi-detached dwellings (already allowed by the LMR SEPP)

Changes to DCP

- Site coverage
    - To retain greenspace, the site coverage of 40% should be retained

- Setback requirements
    - Side setback reduced to 1m (from 3m)
    - Rear setback reduced to 1m
- Street setback reduced to 5 m (from 10m)

- Remove parking requirements

These changes would help create a comprehensive missing middle housing policy, in an attempt to emulate the success of Portland and Auckland in providing more affordable, smaller scale low-density housing typologies in Ku-ring-gai.

Resident Concerns

The proposed implementation would provide capacity well above what Ku-ring-gai needs to meet its housing targets; this in-built flexibility will better allow for locations and typologies to be more adequately provided. Due to residents' concerns with excessive development taking place, the council could create limits such as a maximum of 20% of lots could be developed in this way or have an annual release quota above its housing targets. These would enable Ku-ring-gai to meet or exceed state-set housing targets, while respecting residents' concerns about radical change. However, with little interstate and international experience with a method like this, a preferred approach would be to monitor and react to housing approvals as needed.

Survey results from Strathfield LGA, suggests residents are mostly supportive of dual occupancies, townhouses and terraces (55-60%), but less supportive of low-rise apartments (41%) [55]. The FSR ratio of 0.7 will likely result in less low-rise apartments than the other medium-density typologies, helping mitigate this reduced support.

Action 2: Medium density transport for medium density housing

In exchange for the increases in housing capacity outlined in Action 1, Ku-ring-gai Council should advocate for the state government to deliver complementary improvements in public transport. Bus routes improvements provide a low-cost way to provide significant public transport improvements. These could be particularly useful in Ku-ring-gai to provide connections to nearby metro stations in Chatswood and Macquarie Park.

Suggested improvements to bus services:

- Improve service frequency
- Align routes to nearby Chatswood and Macquarie Park metro stations
- Implement small-scale improvements such as transit-signal priority and stop-consolidation

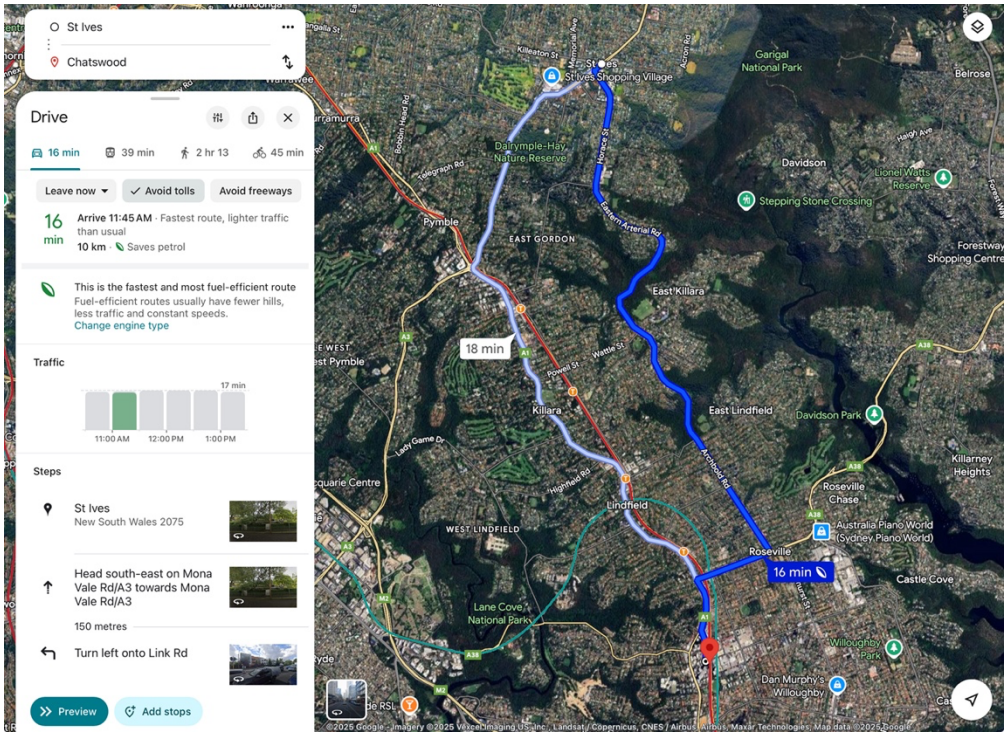

Figure 12: An example bus route connecting to Chatswood metro station, enabling travel times from St Ives to the city of around 30 minutes [56]

Key benefits of improving these transport routes:

- Enhances affordability by reducing transport costs associated with car ownership and usage
- Reduces the need for costly parking and garage infrastructure
- Supports the development of a mixed-use main street style development, boosting local amenity
- Preserve green spaces by minimizing demand for new parking areas
- Enable traffic to be reduced as the area's population grows
- Enable housing to be located close to public transport, while avoiding the heritage areas around train stations

Improved public transport helps improve outcomes for our two key groups, younger demographics who are less likely to drive, and preserve autonomy in older demographics who face difficulties with driving with age.

Monitoring and Evaluation

To measure whether these metrics are achieving the goal of meeting the needs of the two demographic groups identified, the following set of key metrics has been developed.

Indicator	Type	KPI	Measurement Frequency
Housing completion rates	Output	Number of attached housing units built in R2 residential zones (#/year)	Short-term (Annually)
Average construction prices	Output	Cost to construct new attached housing units ($, $/m2)	Short-term (Annually)
Mode share	Output	Share of all trips taken by private vehicle (%)	Short- to medium-term (2 years)
Housing satisfaction	Outcome	Residents' perceptions of how well their housing meets their needs	Medium to long term (3 years)
Affordability	Outcome	(1) Proportion of households under housing stress (%) (2) Travel time for essential workers	Long term (5 years)

Housing Completion Rates
Tracking the number of attached dwellings built in R2 zones helps determine whether planning policies are successfully enabling more diverse housing development. This is essential for meeting growth targets and providing more housing options within established suburbs.

Average Construction Prices
Monitoring the cost of building new attached dwellings reveals how efficiently the market is delivering smaller housing types. Identifying cost trends or inefficiencies can inform future planning or design changes to improve affordability and viability.

Mode Share
Understanding how many trips are made by private vehicle helps assess whether transport policies are effectively reducing car dependency. This can be used to re-evaluate parking requirements in future.

Housing Satisfaction
Surveying residents about whether their housing meets their needs provides insight into the quality and suitability of new housing supply. It ensures planning efforts are not just increasing quantity but also improving liveability and appropriateness.

Affordability
Measuring mortgage stress and commute times for essential workers provides a broad view of housing accessibility in high-cost areas like Ku-ring-gai. It helps assess whether housing remains within reach for a diverse range of households, especially those providing essential services.

Conclusion

Promoting diverse housing choices in Ku-ring-gai is essential to ensuring the area evolves in a way that meets the needs of both current and future residents. While, the council's Local Housing Strategy, existing housing stock and the applicable SEPPs outline adequate supply for low- and high-density development, a clear shortfall remains in the provision of medium-density housing. Medium-density housing also represents a key housing typology that can help meet the needs of two key demographic groups in the regions, those aged 25-35 and 65+. Addressing this gap through targeted transport improvements and the broader application of the LMR SEPP present an important opportunity to meeting these group's housing needs. By enabling more varied housing options, Ku-ring-gai can help reduce affordability pressures, retain essential workers, and support a more balanced, intergenerational community.

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Technical Appendix

A Data sources used

1. Population Analysis

1.1 ABS 2021 Census – Mesh Block Counts

- **Source:** ABS, *Census Mesh Block Counts*
- **Website:** ABS Website
- **Accessed:** 18 May 2025
- **Relevance:** Provides context on the total population and the spatial distribution throughout Ku-ring-gai and Sydney. Used in conjunction with the spatial profiles to view population densities.

1.2 ABS 2016 Census – Mesh Block Counts

- **Source:** Australian Bureau of Statistics (ABS), *Census of Population and Housing: Mesh Block Counts, Australia, 2016*
- **Website:** ABS Website
- **Accessed:** 18 May 2025
- **Relevance:** Provides a comparison point for changes in population distribution

1.3 ABS 2021 Census – Digital Boundary Files

- **Source:** ABS Digital Boundary Files
- **Website:** https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/access-and-downloads/digital-boundary-files
- **Accessed:** 18 May 2025
- **Relevance:** Spatial data for population distribution

1.4 ABS 2016 Census – Digital Boundary Files

- **Source:** 1270.0.55.001 - Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas, July 2016
  Website: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.001~July%202016~Main%20Features~Mesh%20Blocks%20(MB)~10012
- **Accessed:** 18 May 2025
- **Relevance:** Spatial data for population distribution

2. Internal Migration Analysis

2.1 ABS 2021 Census – GSCCA (UR) by SA4 (5YR) and AGE10P Age in Ten Year Groups

- **Source:** ABS TableBuilder
- **Accessed:** 18 May 2025
- **Relevance:** Provides insights into the impacts of Sydney's housing crisis

3. Demographic Analysis

3.1 ABS 2021 Census – SA3 (UR) and SEXP Sex by AGE5P Age in Five Year Groups

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025

- **Relevance:** Used to gain an understanding of the demographics in Ku-ring-gai LGA. The SA3 is sufficiently similar to the LGA to be comparable, and is chosen to enable consistency between data sources and time periods

3.2 ABS 2016 Census – SA3 (UR) and SEXP Sex by AGE5P - Age in Five Year Groups

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025
- **Relevance:** Age and sex breakdown at the SA3 level supports regional demographic profiling.

3.3 ABS 2021 Census – GCCSA (UR) and SEXP Sex by AGE5P - Age in Five Year Groups

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025
- **Relevance:** Enables a point of comparison to the Sydney area.

3.4 ABS 2021 Census – SEXP Sex and Australia (UR) by AGE5P Age in Five Year Groups

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025
- **Relevance:** Enables a point of comparison to the Australia.

4. Income Analysis

4.1 ABS 2021 Census – SA3 (UR) by INCP Total Personal Income (weekly)

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025
- **Relevance:** Gains insights into the ecomonic status of the Ku-ring-gai region

4.2 ABS 2021 Census – GCCSA (UR) by INCP Total Personal Income (weekly)

- **Source:** ABS TableBuilder
- **Accessed:** 31 May 2025
- **Relevance:** Provides income distribution data for Sydney, giving context to the Ku-ring-gai's numbers.

5. Building Approvals

5.1 ABS 2024 – Building Approvals, Australia

- **Source:** ABS, *Building Approvals, Australia*
- **Website:** ABS Website
- **Accessed:** 18 May 2025
- **Relevance:** Characterises the progress of councils against there housing targets

5.2 ABS 2024 – National, State and Territory Population

- **Source:** ABS, *National, State and Territory Population*
- **Website:** ABS Website
- **Accessed:** 18 May 2025
- **Relevance:** Used to compare approvals by state on a per-capita basis

5.3 NSW Government 2024 – Housing Targets for Local Councils

- **Source:** NSW Housing Targets

- **Website:** https://www.planning.nsw.gov.au/policy-and-legislation/housing/housing-targets
- **Accessed:** 18 May 2025
- **Relevance:** Used to measure the performance of councils against their targets

6. Housing Typologies Analysis

6.1 ABS 2021 Census – LGA (EN) by STRD Dwelling Structure

- **Source:** ABS TableBuilder
- **Accessed:** 10 May 2025
- **Relevance:** Gives the number of residents living in each different housing typology in the Ku-ring-gai council

7. Housing Composition Analysis

7.1 ABS 2016 Census – SA3 by NPRD Number of Persons Usually Resident in Dwelling

- **Source:** ABS TableBuilder
- **Website:** ABS TableBuilder
- **Accessed:** 18 May 2025
- **Relevance:** Indicates household sizes and occupancy patterns at the SA3 level.

7.2 ABS 2021 Census – SA3 (EN) by NPRD Number of Persons Usually Resident in Dwelling

- **Source:** ABS TableBuilder
- **Website:** ABS TableBuilder
- **Accessed:** 18 May 2025
- **Relevance:** Offers updated data on household occupancy patterns at the SA3 level.

B Detailed Analysis

B1 Economic Feasibility Estimates

These provide estimates using basic calculations from existing market and construction data. Land and construction costs are considered for commercial viability and transport costs for a more holistic estimate of costs.

Land cost calculations:
The NSW valuer-general provides land cost estimates for many properties. However, for infill development, the market rate for the structure and land is more relevant. The median house price in Ku-ring-gai council is $3.3M [23]. This is much expensive than the median Sydney house price of $1.65M [57].

For medium density housing in high land cost environments, the land price greatly effects costs.

- 3 units on a lot: $1.1M land cost*
- 6 units on a lot: $550k land cost
- 12 units on a lot: $275k land cost
- 16 units on a lot: $140k land cost

**Note: this analysis does not consider the zoning effect of these prices and assumes no increase in land value with the ability to subdivide a lot*

Construction cost calculations:

Medium density costs per square meter are estimated at ~$3,000 per square metre [58] [59].

This gives the following calculations for different size houses:

- 50m2: $150,000
- 75m2: $225,000
- 100m2: $300,000
- 150m2: $450,000

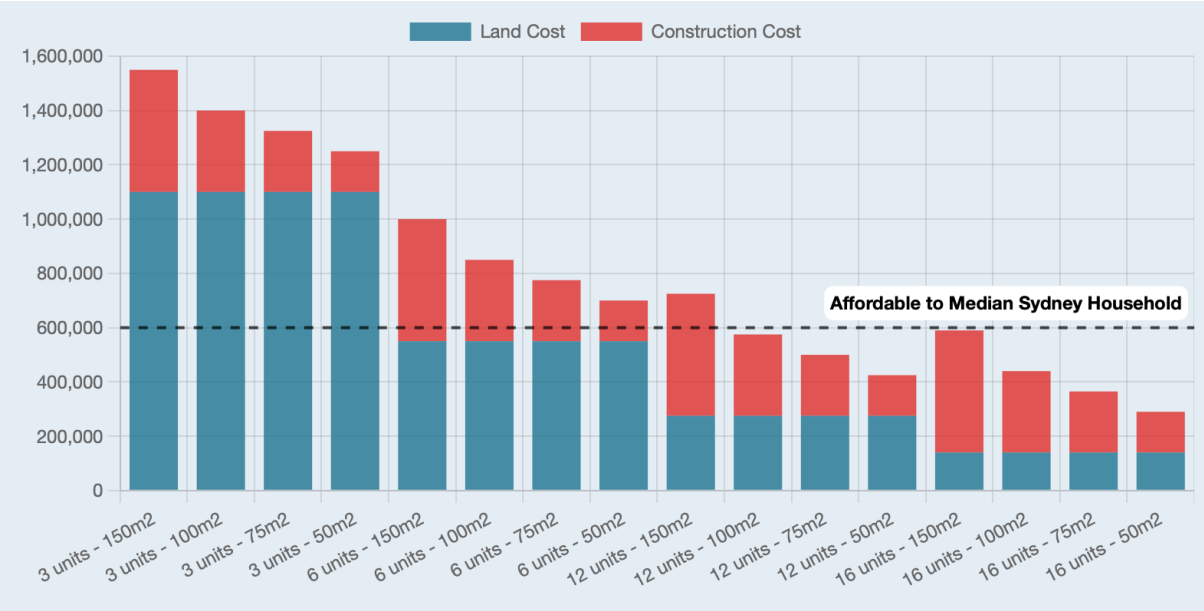

Figure 13: The effect of different medium density housing options on affordability, where cost ($) is considered to only be land and construction. Affordability is defined as 30% of household income here

Median Sydney Household calculation

Housing stress in commonly defined as being in the bottom 40% of households and spending more than 30% of your income on housing [60]. For simplicity of calculations, this analysis will use median income.

The median household income for Greater Sydney is ~$108,000/year [61].

Assuming two incomes, dividing by two and applying the tax rate before combining gives an after-tax income of ~$92,000/year.

30% of this is ~$27,500. Assuming a 20% deposit and an interest rate of 6%, this gives an affordable house as $575,000. Use $600,000 for simplicity.

Similar calculations using the median household income for Ku-ring-gai ($156,000/year) give a median affordability price of $775,000 [62].

Market rate
The median unit sale price for Ku-ring-gai council is $1.06M [23].

Excluding other costs, building 6 units or more on an average existing Ku-ring-gai lot is likely to be commercially viable. To achieve affordability, 12 or more units are likely needed.

Transport cost calculations:

Assume SUV 2022 prices from RACV. ~$15000/year [63].

Using the mortgage serving cost to as an equivalent to annual vehicle cost. With annual interest rate of 6% => $300,000/car

For public transport - weekly cap is $50 => $2600/year => ~$50000

Resulting estimates:
- 2 car: $600,000
- 1 car + transit: $350,000
- Transit only: $50,000
- Transit only 2 people: $100,000

Mode share data from 2021 is not helpful due to the covid restrictions at the time.

<u>Comparison to high- and low-density options</u>

Low-density (detached house)
Land + construction = $3.3M (land ~$2.8M, construction ~$500,000)
Transport (2 cars equivalent total cost) = $600,000

Medium-density high-end – (large townhouses, car)
Scenario of 3 units - 150m2 house.
Land + construction = $1.5M (land ~$1.1M, construction ~$450,000)
Transport (1 car + public transport) = $350,000

Medium-density low-end – (small low-rise apartments, no cars)
Scenario of 16 units – 75m2 house

Land + construction = $365,000 (land ~$140,000, construction ~$225,000)
Transport (2 people public transport) = $100,000

High-density - (mid-rise apartment)
Land + construction = $590,000 (land ~$140,000, construction ~$450,000) (cost's from TheCIE report)
Transport (2 people public transport) = $100,000

Other costs consist of profit margin, taxes, financing, fees, sales and marketing. TheCIE outlines other costs of ~$300,000 for a mid-rise apartment, this will be applied as a flat rate to all scenarios requiring construction [64].

Figure 14: Comparison of housing costs across the options. With small lots, floor area and high public transportation usage, affordability can be achieved

LMR SEPP Expectations
For the LMR SEPP, a floor space ratio of 0.7 would allow for 700m2 of housing to be built on a lot. This could take the form of 6 units at 100m2 or 12 units at around 50m2. This would lead to total costs around the middle of the medium-density cost range. Spreading across the Ku-ring-gai council, these are initially unlikely to have high public transport usage.

Estimation: Land + Construction: $600,000. Other costs: $300,000. Transport equivalent cost $350,000.

This gives a total cost of $900,000, outside the Ku-ring-gai affordability measure of $775,000, and still requiring high additional costs for transport.

C. Data Analysis and Visualisation

Data analysis in this report was done using python (using pandas and geopandas libraries), and data visualisation using Angular (using Mapbox and chart.js libraries).

The repository containing these calculations, transformations and visualisations can be found here.