

Upwardly mobile suburbs

A case for low-rise, family-friendly, accessible, suburban apartments

Australia's current housing crisis bears many similarities to previous housing crises; homelessness is on the rise as households are unable to secure affordable accommodation and supply of housing is an ongoing issue. Despite generous stimulus packages from both the Federal and State governments, the construction industry slowed during the Covid years, due to shortages of skilled labour and disruption of supply chains for building materials¹. Covid lockdowns accelerated the number of new households formed, in part due to relationship breakdowns and share house dissolutions; the supply of new housing has not kept up with this rise in demand. Between 2016 and 2021, household numbers increased by 11.9% and new residential dwellings increased by only 10.6%. Internal migration, international migration, and the short-term rental market have also affected demand in various locations².

The solution is, of course, to build more houses. However, available building land is fast-diminishing, increasing the pressure to expand the bounds of cities. This expansion destroys virgin bushland, imperils already-threatened native species³, reduces an already-meagre tree canopy⁴, and increases the pressure on current transport infrastructure. Urban infill with medium- and high-density housing promises a better solution to many of these issues compared to an increase of urban sprawl for low-density housing. However, issues remain, including the loss of tree canopy in existing suburbs and cultural resistance to denser housing typologies. Building detached dwellings via the current developer-volume builder model can result in houses that are poorly-orientated, expensive to heat and cool, and have nearly every habitable room overlooking a colorbond fence. Houses in these developments nearly always fail to design for solar orientation, and fail basic 'access to nature' tests, leaving residents

¹ Emmett, Tiffany, 2024, <https://www.turnerandtowntsend.com/insights/the-lasting-impact-of-covid-19-on-the-australian-construction-sector/>

² Australian Housing and Urban Research Institute, 2022, *Why does Australia have a rental crisis, and what can be done about it?*, <https://www.ahuri.edu.au/research/brief/why-does-australia-have-rental-crisis-and-what-can-be-done-about-it>

³ Cox, Lisa, 2026, *Property developers spark anger over plan to clear woodland home to Baudin's and Carnaby's black cockatoos*, The Guardian, <https://www.theguardian.com/environment/2026/feb/19/endangered-banksiaecosystem-in-perth-faces-destruction-with-no-adequate-offset-expert-says>

⁴ See for example:

Burgess, Annika, 2024, *Sydney and Melbourne among major cities failing 3-30-300 tree canopy goals*, <https://www.abc.net.au/news/2024-11-20/sydney-melbourne-cities-fail-tree-canopy-cover-study-green-space/104614210> and

Western Australian Tree Canopy Advocates, 2026, *30% Tree Canopy Target by 2040 for Perth*, <https://watca.org.au/pages/perth-tree-canopy-target>

more vulnerable to poorer physical and mental health outcomes, as well as more vulnerable to heatwaves⁵.



Image 1 and 2: Examples of developer-volume builder housing from Perth's eastern suburbs, showing lack of care regarding site orientation, established tree canopy on development fringes only, and very little vegetation within the development. Often the greenery shown in satellite images is artificial grass. Perth had 16% tree canopy coverage in 2020; this percentage has continued to decline⁶. The first image is in Eden Hill, the second in Dayton, images from Google Maps.

Low-rise, family-friendly, accessible, apartment buildings could provide a more appropriate alternative to this model of development. While medium-density housing can comprise many forms, including townhouses⁷ (which are well-suited to areas where streetscape is of import) this essay will focus on low-rise apartments. Of the medium-density housing options available, buildings with single-level apartments are best-suited to achieving accessibility and ageing-in-place goals, as well as providing the greatest opportunities for increasing tree canopy cover. Well-designed low-rise apartments can facilitate access to nature, good solar orientation, and diverse housing options within the one building. Local regulators could approve low-rise apartment developments in suburban areas if they met with the following criteria:

⁵ Burgess, Annika, *ibid*.

⁶ Western Australian Tree Canopy Advocates, *ibid*.

⁷ Petitt, Brad, 2026, *Has anyone seen housing's missing middle? WA used to be good at building townhouses, maisonettes, and walk-up apartments*, Facebook reel, <https://www.facebook.com/share/r/1C48i8jVav/>

1. Access to Nature
2. Good Solar Orientation
3. Adequate Storage
4. Flexible Parking
5. Universal Design
6. Diverse Housing Options

1. Access to Nature

Access to nature improves both mental and physical health outcomes for adults⁸, and tree canopy plays a vital and incommutable role in regulating neighbourhood temperatures in urban environments⁹. Access to green space and outdoor play areas is also paramount for childhood development¹⁰ and disease management¹¹.

Dutch urban forestry expert Professor Cecil Konijnendijk devised the “3-30-300 rule” to set a benchmark for the bare minimum of nature in cities. The rule envisages that: “every house, school and workplace should have a view of at least three trees, be in a neighbourhood with at least 30 per cent canopy cover, and be within 300 metres of high-quality public green space¹².” Given projections of rising global temperatures, with associated predictions of greater adverse public health outcomes as human heat tolerance is exceeded more regularly¹³, planning for greater tree canopy in our cities is of vital importance. If – in lieu of single-storey detached houses – apartment buildings of three- or four-storeys were built, roughly 30% of the landscape could be reserved for tree canopy, as shown below in *Figures 1 and 2*:

⁸ “Evidence from experimental studies suggested protective effects of exposure to natural environments on mental health outcomes and cognitive function. Cross-sectional observational studies provide evidence of positive associations between exposure to nature, higher levels of physical activity and lower levels of cardiovascular disease. Longitudinal observational studies are starting to assess the long-term effects of exposure to nature on depression, anxiety, cognitive function, and chronic disease.”

Jimenez MP, DeVille NV, Elliott EG, Schiff JE, Wilt GE, Hart JE, James P., 2021, *Associations between Nature Exposure and Health: A Review of the Evidence.*, Int J Environ Res Public Health. 18(9):4790. doi: 10.3390/ijerph18094790. PMID: 33946197; PMCID: PMC8125471, <https://pmc.ncbi.nlm.nih.gov/articles/PMC8125471/>

⁹ Zaerpour, M., Papalexiou, S.M. & Pietroniro, A., 2025, *Increasing tree canopy lowers urban air temperature by up to 1.5 °C in heat-prone areas*, npj Urban Sustain 5, 92, <https://doi.org/10.1038/s42949-025-00277-x>

¹⁰ Hodyl, Leanne, 2016, *Is highrise living bad for you?*, Landscape Australia, <https://landscapeaustralia.com/articles/is-highrise-living-bad-for-you/>

¹¹ Ferguson, Elena, 2025, *The history of rickets and the startling recurrence of the condition*, Archives of Disease in Childhood. https://adc.bmj.com/content/110/Suppl_1/A51.1

¹² Burgess, Annika, *ibid*.

¹³ Kong Q, Vecellio D, Huber M et al., 2026, *Exceeding human heat tolerance in a warming, ageing world: a global projection modelling study*, The Lancet Planetary Health, [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(26\)00067-7/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(26)00067-7/fulltext)

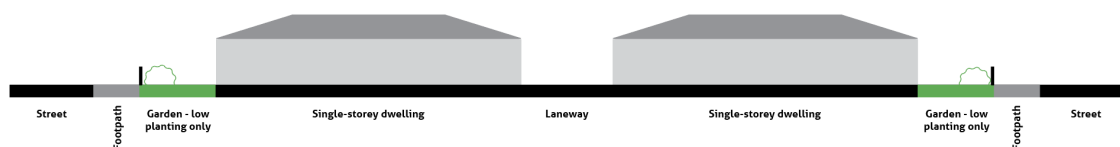


Figure 1: Section of a typical single-storey housing development, showing laneway access to garages, limited areas of green space, and limited view to green space (note that most habitable rooms will face the side boundary, typically a 1800mm high Colorbond fence). Image courtesy of author.

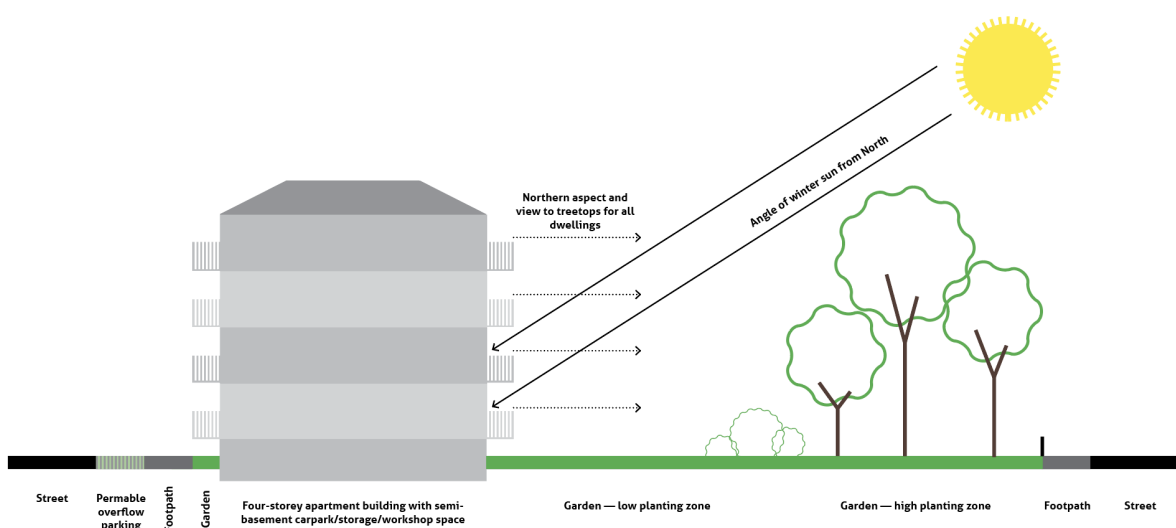


Figure 2: Section of the same land area developed as a four-storey apartment building. Note how each apartment has access to sunlight and treetop views. 25-30% of the area is dedicated to tree canopy, and areas of green space and permeable surfaces are significantly increased. Image courtesy of author.

2. Good Solar Orientation

Homes that are designed to optimise solar orientation can minimise utility bills and enhance resident comfort and amenity. Visitors to a home with a North-facing living room window may not understand the reason why the space feels great, but they will feel it, and they will want to live in a space like that too. Further, as heatwaves are predicted to increase in temperature, length and frequency¹⁴, the increase in extreme heat days will impact our communities unequally; it is the most vulnerable who will bear the greatest burden: “there is strong evidence showing that older people, people with less mobility, people who are socially isolated and people on lower incomes [who]

¹⁴ Steffen W, Hughes L, & Perkins Sarah, 2014, *Heatwaves: Hotter, Longer, More Often*. Climate Council of Australia Limited, <https://www.climatecouncil.org.au/uploads/9901f6614a2cac7b2b888f55b4dff9cc.pdf>

experience a disproportionate health risk [to heatwaves]¹⁵”. It is a matter of public health import to design new dwellings to exclude the hot, summer sun; this is most easily achieved by minimising (or excluding) East- and West-facing windows, and positioning living rooms to face North¹⁶.



Image 3: North-facing windows allow Winter sun to penetrate deep into the floorplan, providing residents with free heating and increased comfort on a Winter's day. Excluding Summer sun from the North is simple with a correctly-sized eave or horizontal shade. Image courtesy of author.

3. Adequate Storage

Apartments in Australia are often viewed as a compromised form of housing for those who cannot afford a detached house¹⁷. Compromises can include lack of storage and kitchen space. Occasionally compromises encompass a lack of amenities such as natural light and adequate ventilation, and basic occupant safety. Rhiannon Stevens, writing for the ABC, describes her family's experience living in an apartment in Melbourne: one of the two bedrooms is windowless (nicknamed the 'doom room'), there is no ability to cross-ventilate or move air around the apartment, there is no storage space (necessitating the second toilet be converted to storage for camping gear and pram), and the building is encased in flammable cladding material. She writes:

¹⁵ McLeod, Rob, 2021, *Feeling the Heat*, Sanctuary, Renew. Issue 57, pp.92-93.

¹⁶ Design guidelines will vary between climate zones and according to local conditions, including designing to capture prevailing breezes for cross ventilation.

¹⁷ Kelly, Jane-Frances, 2011, *The Housing We'd Choose*, GRATTAN Institute, https://grattan.edu.au/wp-content/uploads/2014/04/090_cities_report_housing_market.pdf

“Every day, we roast in a claustrophobic box surrounded by concrete, and we are terrified of fire.”¹⁸

In high-income countries, the average time spent cooking at home has decreased in parallel to an increase in diet-related non-communicable diseases such as obesity, Type II diabetes, and some cancers¹⁹. Further, apartment living (particularly high-rise apartment living) is associated with a greater expenditure on take-away and restaurant meals, compared to other dwelling types²⁰. In a recent study of Australian apartment kitchen design, Fiona Andrews *et al* identified typical apartment kitchen designs as directly constraining residents’ ability to cook meals at home. Issues identified in the study include poorly designed, inaccessible and inadequate storage, limited bench space, poor lighting, poor ventilation, and inadequate space for waste sorting²¹. Meagre kitchen and dining amenities in apartments are a barrier to home-cooking and family mealtimes²² and further, are a barrier to older Australians considering downsizing to an apartment²³.

In proposing an increase in low-rise suburban apartments, particular care must be given to the provision of generous, accessible kitchen storage and bench space, making home-cooking an attractive and attainable option for residents. In addition, adequate storage elsewhere in the apartment, for example linen cupboards and space for school bags, prams and shoes, will ensure the desirability and liveability of this dwelling type. A concept sketch of how an apartment layout could work is shown below:

¹⁸ Stevens, Rhiannon, 2026, *The Apartment Experiment*, ABC News, <https://www.abc.net.au/news/2026-03-29/apartment-living-with-children-housing-density-affordability/106496900>

¹⁹ Mills, Susanna & Wolfson, J. & Wrieden, Wendy & Brown, Heather & White, Martin & Adams, Jean, 2020, *Perceptions of ‘Home Cooking’: A Qualitative Analysis from the United Kingdom and United States*. *Nutrients*. 12. 198. 10.3390/nu12010198.

https://www.researchgate.net/publication/338553218_Perceptions_of_'Home_Cooking'_A_Qualitative_Analysis_from_the_United_Kingdom_and_United_States

²⁰ Oostenbach, Laura & Lamb, Karen & Dangerfield, Fiona & Poelman, Maartje & Kremers, Stef & Thornton, Lukar, 2020, *The role of dwelling type on food expenditure: a cross-sectional analysis of the 2015–2016 Australian Household Expenditure Survey*, *Public Health Nutrition*. 24. 2132-2143. 10.1017/S1368980020002785.

https://www.researchgate.net/publication/343836092_The_role_of_dwelling_type_on_food_expenditure_a_cross-sectional_analysis_of_the_2015-2016_Australian_Household_Expenditure_Survey

²¹ Andrews, F. J., Johnson, L. C., Horne, R., & Thornton, L. E., 2024, *The interrelationships between kitchen design and food practices for apartment dwellers in Melbourne, Australia: an exploratory study*. *Cities & Health*, 8(6), 991–1002. <https://doi.org/10.1080/23748834.2024.2333126>

²² Dunn, K., Andrews, F. J., & Warner, E. (2023). The cooking and eating experiences of Australian families with children, living in private, inner-city, high-rise apartments. *Housing and Society*, 50(1), 70–89. <https://doi.org/10.1080/08882746.2021.1989858>

²³ Insight, 2026, *Housing Boomers*, SBS, <https://www.sbs.com.au/ondemand/news-series/insight/insight-2026/insight-s2026-ep9/2495409219840>



Figure 3: An early concept layout of a small apartment building, comprising three apartments per floor; note generous kitchens, dining areas, and storage spaces. Image courtesy of author.

4. Flexible Parking

As the example from the movie *The Castle* (1997) below shows, Australian culture has a love affair with cars – especially Australian-made cars. However, in the nearly-three decades since *The Castle* was released, much has changed: fuel prices have more than doubled²⁴, the Australian car manufacturing sector no longer exists²⁵, consumers have embraced new technology such as electric cars²⁶, bikes and scooters²⁷, and State governments have introduced so-called ‘carrot’ policies to incentivise public transport use²⁸. However, studies show that private car usage is still significant; for example, a 2023 study published in the *Journal of Transport Geography*, of car parking requirements for apartment households in various Australian cities, found that the percentage of Perth apartment households with 0 cars is 4.5%²⁹.

²⁴ Australian Petrol Prices in 2026, 2026, GDP.com.au, <https://gdp.com.au/petrol-prices>

²⁵ Spinks, Jez, 2014, *End of Australian-made cars : what happened and what it means*, Drive, <https://www.drive.com.au/news/end-of-australian-made-cars-what-happened-and-what-it-means/>

²⁶ EV Ownership Survey 2024, 2024, Electric Vehicle Council, <https://electricvehiclecouncil.com.au/wp-content/uploads/2025/04/20250211-EV-Ownership-Survey.pdf>

²⁷ Largest-ever study on Australia’s cycling and e-scooter economy shows growing strength of micromobility industry, 2023, Beam, <https://www.ridebeam.com/newsroom/largest-ever-study-on-australias-cycling-and-e-scooter-economy-shows-growing-strength-of-micromobility-industry>

²⁸ Government News Team, *Innovation needed to drive public transport usage*, 2024, Government News, <https://www.governmentnews.com.au/innovation-needed-to-drive-public-transport-usage-says-peak/>

²⁹ De Gruyter C, Hooper P, Foster S, 2023, Do apartment residents have enough car parking? An empirical assessment of car parking adequacy in Australian cities, <https://www.sciencedirect.com/science/article/pii/S0966692323000145#s0045>



Oh Steve could you move the Camira I need to get the Torana out so I can get to the Commodore. Steve – I'll have to get the keys to the Cortina if I'm gonna move that Camira. Darryl – Yeah watch the boat mate.

by Darryl Kerrigan

Image 4: Quote from the movie *The Castle*,³⁰ which turns Australia's love affair with cars into a joke based on familiarity.

Arguably the most pressing requirement for parking is *flexibility*. A household comprising a retired couple may need one car-parking space, or perhaps none. A household with adult children working shifts may need 5 car-parking spaces. An individual living with long-Covid may need to drive to work, instead of cycling as they previously did. A parent who no longer needs to do the school run can now catch the bus to work. Instead of tying car-parking allocations to apartments, car-parking spaces could be leased separately through the strata management. This would allow for flexibility over time, and between different tenancies. Further flexibility includes secure storage for pushbikes and e-rideables, as well as incorporating a trafficable and water-permeable nature strip adjacent to the street for overflow and visitor parking.

5. Universal Design

Universal Design aims to create spaces that can be used by the greatest number of people possible³¹, and therefore designs for a wide range of end-users, including for different ages, sizes, impairments, and levels of mobility³². Given Australia's ageing population and the corresponding policy support for "ageing-in-place" strategies, building design that enables ageing-in-place, as well as supporting other life stages and

³⁰ <https://castlequotes.com/category/steve/>

³¹ Bringolf, Jane, 2020, *What is Universal Design*, Centre for Universal Design Australia, <https://universaldesignaustralia.net.au/what-is-universal-design/>

³² Lea, John, 2025, *Universal Design: Creating Homes For Aging In Place*, Lea Design Studio, <https://leadesign.com.au/architect/universal-design-creating-homes-for-aging-in-place/>

mobility requirements, is becoming of greater importance. 2018 figures showed that assistance for in-home care cost \$15,525 annually versus \$66,512 for residential care³³; supporting ageing-in-place makes financial sense, as well as supporting individuals to maintain independence and social networks.

Key features of universal design include step-free thresholds, slightly wider doorways (typically 870mm-920mm³⁴), accessible bathrooms (e.g. hobless shower and reinforced walls for future grab rails), and good lighting³⁵. These features can be difficult and expensive to retrofit, but can be incorporated into a new-build in a cost-effective manner. It is important to note that universal design makes daily life easier for everyone; a parent with a pram, a teenager on crutches, an older adult recovering from a stroke: everyone benefits from universal design.

A final note should be made here on the importance of safety features in multi-storey buildings. The risks of fire in high-rise buildings is a legitimate concern for some, particularly those waiting for flammable cladding to be replaced³⁶. The risk of falls is another concern, particularly for parents; research in Sydney has shown an increase in children presenting at the Children's Hospital with serious injuries from falling from apartment windows and balconies³⁷. Perhaps apartment balconies could be approached in the same way as back-yard pools, with safety features and heights designed to deter accidents for small children (and even intoxicated adults³⁸).

6. Diverse Housing Options

Research by the GRATTAN Institute suggests that there is a mismatch between the types of housing available, and the types of housing people desire to live in³⁹. In between the options of a detached family home and a high-rise apartment, there is a lack of well-located, well-designed, medium-density housing options, often referred to as the 'missing middle' of housing supply⁴⁰. The 'missing middle' includes townhouses, semi-detached houses, and low-rise apartments. While the number of households in

³³ Australian Housing and Urban Research Institute, 2019, *What's needed to make 'ageing in place' work for older Australians*, Australian Housing and Urban Research Institute,

<https://www.ahuri.edu.au/analysis/brief/whats-needed-make-ageing-place-work-older-australians>

³⁴ Larnec, 2026, *AS1428 Door Width Requirements*, Larnec, <https://www.larnec.com.au/resource-centre/as1428-door-width-requirements/>

³⁵ Lea, John, *ibid*

³⁶ Stevens, Rhiannon, *ibid*

³⁷ Andrews, Fiona, 2018, *More children are living in high-rise apartments, so designers should keep them in mind*, The Conversation, <https://theconversation.com/more-children-are-living-in-high-rise-apartments-so-designers-should-keep-them-in-mind-100756>

³⁸ Staszewska, Ewa, 2026, *Angus Taylor on the accident that changed his life*, ABC News, <https://www.abc.net.au/news/2026-07-28/angus-taylor-broken-back-kitchen-cabinet/106959902>

³⁹ Kelly, Jane-Frances, *ibid*.

⁴⁰ Ryan, Roberta, 2019, *People want and need more housing choice. It's about time governments stood up to deliver it*, The Conversation, <https://theconversation.com/people-want-and-need-more-housing-choice-its-about-time-governments-stood-up-to-deliver-it-122390>

Australia has increased⁴¹, household size has decreased, falling from over 3 at the beginning of the 1990's⁴² to 2.57 in 2021⁴³. Changing workforce participation patterns, and changing demographics – most notably an ageing population – require a change in housing typologies. Further, providing diversity in housing types and sizes within the one neighbourhood, can increase social cohesion (residents may not need to move away when housing needs change) and passive surveillance (diversity of residents means diversity of times when people are at home) can be expected. It is proposed that a well-designed low-rise apartment building could have a mix of one-, two- and three-bedroom apartments, as seen in *Figure 3* above.

In conclusion, low-rise apartment developments that meet this set of criteria could help reduce urban sprawl while increasing tree canopy cover and the benefits of access to nature from every home. Further, this criterion supports ageing-in-place, and health, lifestyle, and social cohesion goals. To enhance resident, community, and environmental amenity, it is suggested that planning authorities allow low-rise suburban apartment developments that meet the criteria set out in this essay.

⁴¹ Australian Housing and Urban Research Institute, *ibid*.

⁴² Ryan, Roberta, *ibid*.

⁴³ Australian Bureau of Statistics, 2024, *Household and Family Projections, Australia*, Australian Bureau of Statistics, <https://www.abs.gov.au/statistics/people/population/household-and-family-projections-australia/latest-release>