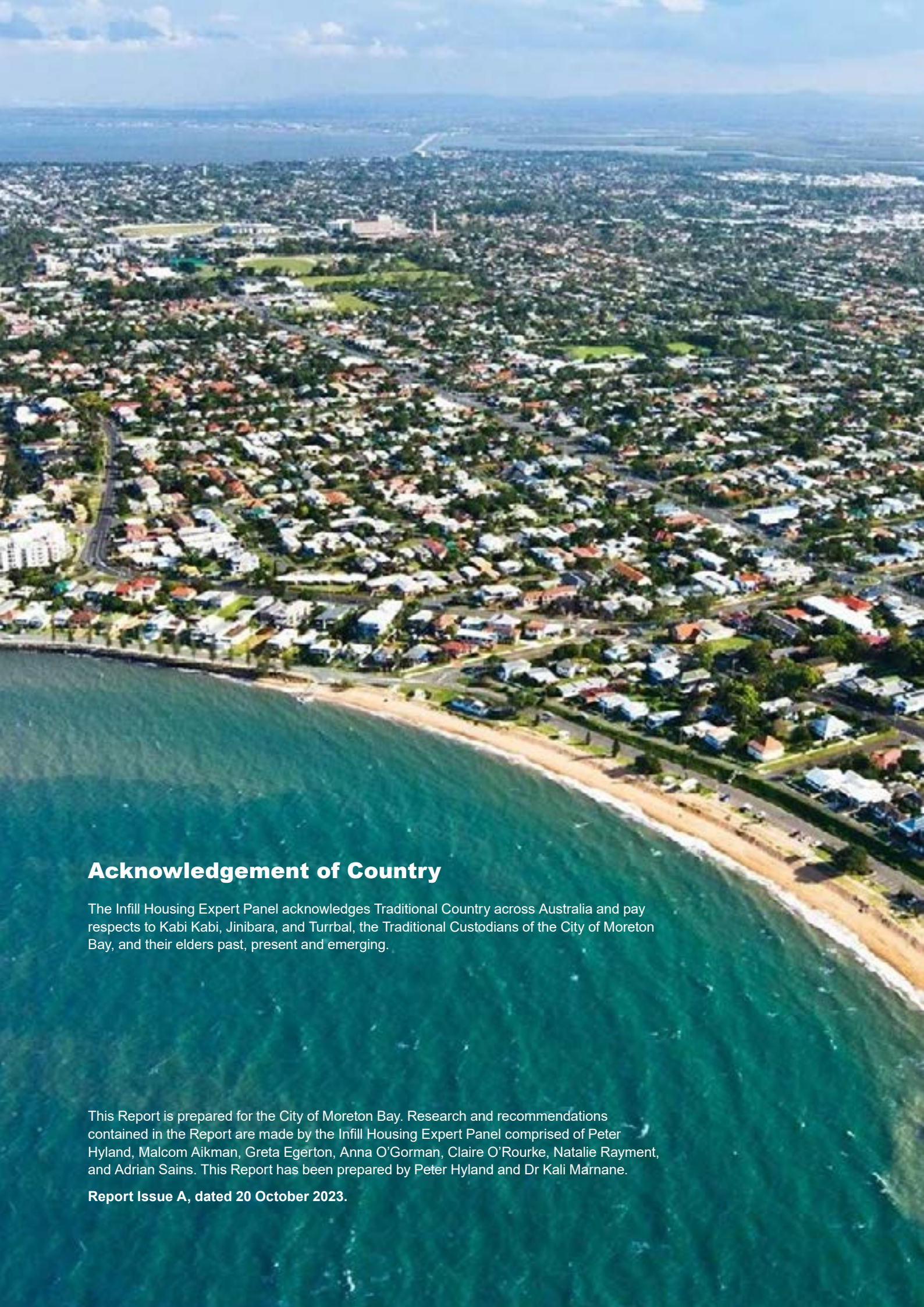
Infill Housing Expert Panel

Recommendations Report

Prepared for the City of Moreton Bay, 20 October 2023



Acknowledgement of Country

The Infill Housing Expert Panel acknowledges Traditional Country across Australia and pay respects to Kabi Kabi, Jinibara, and Turrbal, the Traditional Custodians of the City of Moreton Bay, and their elders past, present and emerging.

This Report is prepared for the City of Moreton Bay. Research and recommendations contained in the Report are made by the Infill Housing Expert Panel comprised of Peter Hyland, Malcom Aikman, Greta Egerton, Anna O'Gorman, Claire O'Rourke, Natalie Rayment, and Adrian Sains. This Report has been prepared by Peter Hyland and Dr Kali Marnane.

Report Issue A, dated 20 October 2023.

Contents

Recommendations

01.

Champion infill housing by creating an Infill Housing Taskforce from within the Council team responsible for overseeing the implementation of recommendations.

02.

Educate and engage with community, industry, and government, including within Council, to build awareness and readiness for change.

03.

Review and revise the planning scheme to better facilitate infill housing.

04.

Catalyse infill housing development by identifying and investing in key precincts that are ready to accommodate growth.

05.

Incentivise and reward high quality and cost effective design outcomes that reflect the aspirations of the City of Moreton Bay.

06.

Facilitate infill housing demonstration projects and innovative construction for high quality outcomes to influence future planning scheme amendments.

Background

Queensland's population is growing, and quickly. The recent release of the *Draft Shaping SEQ: South East Queensland Regional Plan 2023 Update* confirms that, with the population in South East Queensland (SEQ) to grow by over 2.16 million to 6 million people, over 900,000 new homes need to be delivered in the region by 2046.[1]

The Moreton Bay Local Government Area (LGA) is planning to accommodate an additional 201,300 to 311,900 people by 2041 to bring their population to approximately 700,000.[2] Residents now and into the future are anticipated to live in households predominantly comprised of couples with children (33%), couples (27%), and lone person households (21%).[3] These numbers indicate that the traditional household model of a nuclear family, on which the form of many suburbs has been based, no longer caters to the prevalent household type.

Moreton Bay residents show an increasing demand for diverse infill housing at medium and high-density.[4] This is supported by the *Draft Shaping SEQ Regional Plan* requires a shift toward greater consolidation in urban areas with a focus on new homes in centres, high amenity areas, high density residential zones, and through "gentle density," particularly infill housing.

The merits of diverse infill housing are broadly understood and agreed both within government and the research community. Diverse housing allows people to access homes that meet their needs, life stage, budget, family size and structure, while also facilitating diverse and inclusive communities. Furthermore, infill housing promotes equitable access to employment, services, and transport, while also promoting efficient use of infrastructure and sustainable land use.

As a result, the City of Moreton Bay's Growth Management Strategy proposes to maintain 75% of the region as rural and natural landscapes, constraining urban development to 25% of the region to retain productive rural areas, landscapes and habitat for wildlife.[5] Despite this, research from the *Housing Needs (Choice, Diversity and Affordable Living) Investigation* reveals that most new housing in the City of Moreton Bay is in new greenfield areas rather than in existing well-located urban areas.[6]

The Infill Housing Expert Panel (IHEP) was established in early 2023 in response to the demand for diverse infill housing in Moreton Bay to better inform how Council may influence these matters.

The IHEP's role was to identify opportunities and barriers for infill housing with the purpose of:

- Advising on planning and non-planning impediments to infill housing, and what to do about these impediments;
- Advising on opportunities for small scale infill housing in locations that fit with local character and scale;
- Commissioning independent research/analysis where needed;
- Advising on the desirability/opportunities for Council to facilitate pilot development programs or model projects; and
- Advising on the form and timing of engagement with stakeholders, e.g. private investors and local communities.

This report draws together results and recommendations from IHEP's activities across three phases from January to October 2023 as outlined on the following page.

The following sections of this report first describe the impediments to achieving a greater quantity and variety of infill housing in Moreton Bay, then outline recommendations for Council to address the impediments, before concluding with a summary of actions that the panel believes will lead to a greater diversity and proportion of infill housing.

IHEP undertook three phases of work:

1 Phase 1: Issues Identification

What are the impediments to achieving a greater diversity and proportion of infill housing in Moreton Bay?

Activities in Phase 1 included expert and peak body presentations and six three-hour meetings to prioritise issues.

At the IHEP's inception meeting on 9 February 2023, interest was expressed in commissioning specialist research to understand, from an economic perspective, which parts of Moreton Bay are feasible for infill development, and which are not yet. The IHEP sought this information to help direct their focus and understand where potential infill incentivisation may be most effective. An independent report was commissioned by the IHEP and the findings of this report were delivered on 31 March 2023.

Phase 1 concluded with the preparation of an interim report. The interim report synthesised the findings of the independent report, expert interviews, and IHEP's discussions into four key barriers with numerous sub-issues preventing infill housing in Moreton Bay. Barriers are outlined in the following section.

2 Phase 2: Options Identification

What could Council do to address the impediments to achieving a greater diversity and proportion of infill housing?

Two key meetings in Phase 2 identified, evaluated, and prioritised options to address the core issues articulated in the Interim Report. An options identification and analysis workshop summarised core issues, outstanding questions and identified any specific research needs. An options evaluation meeting considered, evaluated, and prioritised options to identify opportunities for increasing infill housing in Moreton Bay.

3 Phase 3: Reporting

What are the recommended actions that will lead to a greater diversity and proportion of infill housing?

Two key meetings in Phase 3 considered and refined recommendations into this final report.

Key Barriers for Infill Housing in Moreton Bay

The delivery of infill housing is a complex issue with multi-faceted constraints. In 2023 the key constraints relate to commercial feasibility under current market conditions, but also include community concerns and planning parameters, with opportunities for improvement in and greater emphasis on design. Table 1 outlines key concerns and opportunities for infill development in Moreton Bay.

High construction costs, driven by supply chain issues and labour shortages in a post-covid environment, coupled with the rising cost of finance, Moreton Bay's maturing market and high price of underlying land values, have rendered higher density infill development in some parts of Moreton Bay unfeasible under current market conditions. Furthermore, forthcoming changes to the Queensland Development Code (to improve dwelling accessibility and energy efficiency including minimum start rating), notwithstanding their public interest benefits, may present additional challenges for an already struggling infill development sector.

Marginal development feasibility challenges could be aided by planning amendments to allow for increased yield (and therefore profit). In the current economic climate however, these amendments may not aide development feasibility for higher density infill development, and, in some cases, may worsen feasibility. For example, it is likely that any planning amendments to increase site yields would be absorbed into increased property prices as landowners seek to capitalise on their investment and recognise the increased value of their property because of the amendments.

An independent report was commissioned to assess the feasibility of micro-lot, townhouse, and apartment development at various heights in 20 suburbs throughout the region with zoning to support these forms of housing. The study found that, under current market conditions, conventional higher density infill development may not be financially feasible in some parts of Moreton Bay. These feasibility findings are primarily driven by macroeconomic factors, local market conditions, market maturity, constructions costs, and availability of labour. As such, findings that higher density infill development may not currently be feasible in some parts of Moreton Bay should not be interpreted as a critique of current planning. Rather, these findings reflect current market conditions, which are likely to change within the life of a planning scheme. Notwithstanding, lower density infill development, innovative construction methods, development with alternate funding models, or housing built by builder-developers may be more feasible.

While the pressures currently being experienced in Moreton Bay may cause concern for higher density infill development in the current market, it is important to remember that local governments must also plan for the highest and best use of land on a long-term planning horizon. There is a need to consider how short term actions can convert into longer-term uplift. Opportunities exist to facilitate lower density infill development such as townhouses, micro lots, and terraces (which may be more feasible in the near-term). To facilitate this requires educating the community, improving neighbourhood amenity and design outcomes, incentivising and streamlining the planning process, and de-risking development. By realising these opportunities there is potential to unlock opportunities for lower density infill housing sooner, and ensure Moreton Bay's planning and community landscapes are ready to embrace higher density infill development when market conditions normalise.

Table 1: Barriers and opportunities for infill development

Feasibility Constraints		
Construction challenges	Building costs and labour shortages	Significant increases in building construction costs and labour shortages (post-covid) have made many forms of development unfeasible.
	Costs & returns	Smaller homes may not be economically attractive for developers to build because the cost of building an extra bedroom is less than the value it adds (e.g. while it may cost a developer $20k to add an extra bedroom to a home, they may be able to sell that home for $50k more - discouraging the development of small homes).
	Increasing building standards	Changes to building standards (e.g. for fire safety and accessibility) have increased the cost of building attached product.
Economic considerations	Financing	Bank valuations may not be favourable for innovative development (without direct comparison) or apartments.
	Interest rates	Increases in interest rates have limited the ability for some marginal projects to proceed.
	Greenfield supply	The extent of greenfield land available in Moreton Bay may be detracting from demand for infill housing.
	Finance	Obtaining finance for innovative development without direct recent or comparable sales may be difficult.
	Development site price expectations and rising land costs	Seller price expectations for development sites, especially on the Redcliffe Peninsula, may have been inflated by historic approvals which are not being acted on.
	Better financial returns	Greenfield sites may be able to achieve better economies of scale and may be more attractive to developers. As such, developers may favour a greenfield site where they can build 50 townhouses, over a smaller infill site where they can only build 5 townhouses. However, the high cost of capital investment of catalyst infrastructure to unlock new greenfield areas is not always factored into cost comparison of infill housing.
	Project trust accounts	Changes to the project trust account framework (from March 2025) may present challenges for some smaller developers.
	Various markets	Moreton Bay has highly varied markets. I.e. while some development may be feasible in coastal areas or bordering Brisbane, it may not be feasible in northern or inland Moreton Bay.
	Key worker accommodation	A lack of diverse, affordable infill housing around centres limits the ability of key workers to find suitable accommodation near their place of employment.

Fesibility constraints		
Physical constraints	Existing housing age	Existing housing in some infill areas is quite new (e.g. along the Kippa Ring Rail Line), and not yet ready to be re-developed.
	Topography	Dominant developers in Moreton Bay favour ‘slab on ground’ product and may not consider sites with challenging topography.
	Lot size and configuration	Lot sizes and frontage widths may limit what can physically be developed on a site.
	Environmental constraints and overlays	Environmental constraints and overlays may inhibit the developability of otherwise well-located infill land.
Infrastructure constraints	Sewerage pipe locations	There are challenges with building some basement car parks (affected by historical sewerage pipes in the Redcliffe Peninsula) - noting that podium-level car parking would take away from otherwise saleable GFA.
	Access to sewer	Access to sewer through adjoining properties can be challenging.
	Services space	Services (water meters, drainage, bin stores etc.) can be difficult to fit on smaller infill sites.
	Future rail station locations	It is unclear where Queensland Rail will locate future train stations - inhibiting planning.
	Bus opportunities	There may be opportunities to advocate for improved bus services, to improve the attractiveness of some infill locations.
	Aged infrastructure	Aged cast iron pipes in older areas (e.g. Redcliffe) can add extra cost especially to service fire flows. Opportunity to advocate to Unitywater.
	Infrastructure capacity	Related to the above, infrastructure capacity (particularly water infrastructure) may be lacking in certain areas such as the Redcliffe Peninsular.
Community Concerns		
Social considerations	Market maturity	There is a view that, due to their similar price-points, detached houses may be more attractive to buyers than higher density homes in Moreton Bay.
	DA Tracker and Development.i platforms	In high-interest areas residents are commenting on Code Assessable DA’s and using social media to object to development - which may be affecting developers’ appetite to develop in those areas.
	Adjoining impacts	Greenfield sites may be more attractive to developers as there are fewer adjoining landowners and less potential for objections.
	Changing demographics	While Moreton Bay has an ageing population and decreasing family sizes (which should, theoretically lend themselves to smaller infill homes), it can be difficult to promote downsizing outside high-amenity areas.
	Education	There is an opportunity to educate communities about the need for and benefit of diverse, infill development, and what the scope for submissions is.
Amenity and character	Scenic amenity drivers	Amenity drivers may be lacking away from waterfront areas. However, there may be opportunities elsewhere (e.g. parkfront and riverfront land).
	Centre improvements	There is an opportunity to enhance some of Moreton Bay’s centres to increase incentive for infill development. Curating catalysts can help to facilitate the emergence of new high amenity locations, that in turn will encourage and incentivise infill housing. Furthermore, it should be noted that infill development, itself, can create improved amenity or streetscapes.
	Landscaping	There is an opportunity to improve the maintenance of Council landscaping, which could improve the perception of some infill areas.

Design opportunities		
Incentives	Gentle density	An opportunity exists to facilitate ‘gentle density’ development in low density residential (Suburban Neighbourhood) areas - e.g. duplexes, triplexes and micro lots.
	Amalgamation	There may be an opportunity to encourage or provide incentives for amalgamation of lots, which may be more supportive of infill development.
	Incentives	There may be an opportunity to offer incentives for architect-led projects - offering good, sustainable design.
	Corner lots	There is an opportunity to encourage infill development on corner lots, given their favourable frontage lengths.
	Good design	Good design can de-risk development - presenting an opportunity to provide guidance material to developers, explaining what Council’s expectations are.
Planning parameters		
Scheme-related considerations	Minimum and maximum building heights	Certain building heights may not be considered feasible. This applies for both minimum heights (which may be considered too high) and maximum heights (which may be considered too low) in some circumstances.
	Undergrounding	Council’s planning scheme currently requires infill developers to underground overhead powerlines, which adds a significant cost to developing which may not be recouped in a higher sale price.
	Development parameters	Development parameters such as car parking rates, minimum lot sizes, minimum and maximum densities and landscaping may impact development feasibility.
	Road standards	There is an opportunity to review Council’s road standards for rear laneways - to make terrace development more feasible (noting that primary streets need to allow for emergency vehicles and car parking).
	Long-term aspirations	Planning schemes may identify density provisions that reflect the long-term highest and best use of a site, but may not be viable in the short term - which may restrict opportunities and stifle short-term housing development in key locations. There may be an opportunity to investigate interim uses on these sites.
	Scheme design / simplification	There is an opportunity to streamline the number of overlays in Moreton Bay, and realign zone and precinct names to be more consistent with the approach in other planning schemes in SEQ.
	Driveway separation	Council’s driveway separation provisions may need to be reviewed against other local government approaches, to encourage redevelopment of corner lots with terrace houses and micro lots where appropriate.
	Innovation	There may be an opportunity to offer more flexibility for innovative development.
Non-scheme considerations	Infrastructure charges	Infrastructure charges don’t currently encourage smaller product, because the same charge applies to a 4-bedroom home as a 2-bedroom home.
	Scheme application	Council has a good understanding of commercial realities and there is an opportunity to further increase consistency of how provisions are applied, to improve certainty (noting that the Queensland planning system is performance based).
	Flexibility	There is a desire for Council to consider innovative or affordable proposals with greater flexibility.
	Open source information	An opportunity may exist to offer open source information (e.g. infrastructure capacity), to support, de-risk and streamline developer’s due diligence research on project feasibility.
	Approval risk and cost	The time, cost and risk of obtaining development approval (including the risk of third-party appeals) may be causing concern in some circumstances.

Recommendations of the Infill Housing Expert Panel

The panel recommends six overarching actions for Moreton Bay Council to support infill housing across the region. Each recommendation is articulated by a number of detailed recommendations the Council may wish to action.

Example 1: Moreton Bay Houses

Moreton Bay Houses designed by Andresen O'Gorman (constructed in 2001 by Greg Thornton Constructions) on Quandamooka, Turrbul and Yugerra Country were conceived as a pair of single-occupancy dwellings with the potential for future use as four self-contained apartments, separated and anchored by courtyards.[7]

01. CHAMPION

Champion infill housing by creating an Infill Housing Taskforce from within the Council team responsible for overseeing the implementation of recommendations.

1.1 Establish an Infill Housing Taskforce to champion the recommendations

Immediate Prioritisation

Create an Infill Housing Taskforce within Council to lead initiatives and carry out recommendations. This should also include monitoring and review of how successful implementation has been. Consider whether the team should be involved in both strategic planning for infill housing and to support existing development approval teams. Explore the potential for capacity building funding under the Housing Support Program.[8]

Why? Building a specialist team with expertise in infill housing from existing Council staff aims to ensure that the housing growth aspirations of Moreton Bay are achieved. A dedicated team can help to coordinate action, oversee delivery, and build capacity within Council and monitor outcomes. Setting up a dedicated team has the additional benefit of building community confidence by coordinating the message on infill housing and delivering the recommendations with one voice.

Alignment? Recommendation 1.1 is in line with the *Housing Needs Investigation*, which suggests to "Add data about the diversity (typology), location and density of building completions to Council's development monitoring reports, to improve oversight of housing being delivered."[9]

1.2 Advocate for appropriate infrastructure charges

Medium term

Advocate to the State Government to properly reflect the costs associated with delivering greenfield housing in greenfield infrastructure capped charges.

Why? A recent study by the New South Wales Productivity Commission found that infill housing can save up to $75,000 per dwelling compared to greenfield housing.[10] When greenfield infrastructure charges do not reflect the true cost of development, brownfield development and infill housing are left at a disadvantage.

Alignment? Recommendation 2.5 is in line with the *Housing Needs Investigation*, which suggests to "Advocate to the State Government during the review of ShapingSEQ to better support housing choice and diversity."[11]

Example 2: Minneapolis 2040 Plan

In the United States on Dakhóta and Ojibwe Country, the Minneapolis 2040 Plan aims to increase opportunities for infill housing and density. The plan was implemented in 2019 after three years of community engagement, which deliberately sought out community members who would not normally participate to encourage broad and diverse perspectives and improved community readiness for change.[12] Strong leadership from a core team within the Council ensured changes were carried out, despite periodic community criticism.

3824 Grand Avenue South (pictured right) is a 'missing middle' exemplar[13] in the Minneapolis 2040 Plan containing four units within a three-storey building located in an existing suburb of single family dwellings. Constructed in 2013, each unit features 2-bedrooms and 2-bathrooms. The building includes a 4-car garage.

What is the 'missing middle'?

The term 'missing middle' refers to housing typologies that exist between detached, free-standing suburban dwellings and high-density, high-rise living —such as Fonzie flats, duplexes and terrace housing— that have not been encouraged in previous regional plans and are therefore missing.[14]

02. EDUCATE

Educate and engage with community, industry, and government, including within Council, to build awareness and readiness for change.

2.1 Design and implement an infill housing education program

Short term development, long term implementation

Develop a broad education program on the importance and benefits of infill development as a more inclusive and environmentally sound strategy for housing delivery and growth. The program should be targeted to address the community, developers, industry, and Government (including Council). The intent would be to bring everyone together and along for the change journey through initiatives such as information booklets, workshops, forums, online information, videos, and other programs.

Consider partnerships to develop and enhance the education program such as:

- Organisations already responsible for education and engagement, such as local TAFEs and universities.
- Local primary and high schools, the State Library of Queensland, Planning Institute, Institute of Architects, and other peak bodies to develop targeted education and engagement with young people.
- The Australian Conservation Council and Queensland Conservation Council to communicate how the strategies protect remnant habitat and the natural values of the City of Moreton Bay.

Explore the potential for State Government funding under the Community Engagement and Awareness Campaign on growth and housing[15] out of the Housing Summit.[16]

Why? Inherent tension exists between housing developed for profit and housing as a human need. Personalising the conversation around what housing is (e.g. ask the big questions to focus on housing quality and availability, and neighbourhood amenity), who it is for (e.g. your children, friends, extended family, your nurses and carers, etc.), and why we need it (housing is a human need critical for every citizen's health and wellbeing so that they can fully participate in society and the economy) can help shift the conversation around housing away from personal financial value and to an understanding of how housing impacts the broader neighbourhood community and region, and the many benefits of infill housing.

Alignment? Recommendation 2.1 is in line with the *Housing Needs Investigation*, which suggests to "Consider opportunities to engage with the community around housing choice, diversity and affordable living through the Neighbourhood Planning process"[17] and to "Engage with development industry representatives regularly."[18]

Example 3: ULI's UrbanPlan Program

The UrbanPlan program by global nonprofit research, education and networking organisation Urban Land Institute (ULI) uses experiential learning to demystify land-use dynamics and the complexities of real estate development. Exercises use engaging board-game-style simulations and negotiations to teach participants—high school students, university students, or public officials—about the fundamental forces that affect real estate development. Teams are required to produce a regeneration scheme and placemaking vision for a declining urban neighbourhood. Multi-disciplinary role-play ensures critical issues are discussed from diverse perspectives and solutions are socially desirable and economically viable.[19]

2.2 Produce an 'Infill Housing Good Design' Booklet

Short term

Produce an 'Infill Housing Good Design' booklet to contribute to the 'Your Home and living guidelines' series[20] and outline Council's expectations for good infill housing design with an affordable living lens, key design principles, and exemplar projects. Develop the booklet in consultation to set market expectation on all sides, including developers and community. It may also be used to set the criteria for an Infill Housing Design Award (see recommendation 5.2).

Why? An Infill Housing Good Design booklet is an easy win that develops Council's existing program of communication and education.

Alignment? Recommendation 2.2 is in line with the *Housing Needs Investigation*, which suggests to "Create a suite of case study reference materials, to showcase and define successful 'salt and pepper' infill development" and "affordable living, affordable housing and affordable by design housing outcomes."[21]

Exemplars? The Government Architect NSW (GANSW) is currently calling for designers and planners to submit examples of completed and well-executed medium-density housing projects, particularly those that are urban infill, as part of their "Finding the Missing Middle" initiative that will be published as a publicly accessible online interactive map.[22]

2.3 Communicate expected change

Short term development, long term implementation

Provide clarity around areas that are expected to witness growth so everyone knows and understands exactly where and how Moreton Bay will be accommodating additional population. Communicate the changes in the South-East Queensland Regional Plan to the community more broadly so that the requirements for, benefits, and definitions of elements such as diverse housing typologies and housing affordability versus affordable housing are understood.

Explore the potential for State Government funding under the Community Engagement and Awareness Campaign on growth and housing[23] out of the Housing Summit.[24]

Why? Communities unprepared or surprised can be resistant to change. Taking them along for the journey and explaining complex planning and legal terms in easily accessible language demonstrates respect and their importance. With the housing crisis front of mind, now is a good time to begin the conversation as the community may be more open to change.

Alignment? Recommendation 2.3 is in line with the *Housing Needs Investigation*, which suggests to "clarify expected development typologies throughout Moreton Bay (e.g. through revised zone cards/information sheets, an interactive tool, or amendments to zone/precinct names, codes, or planning scheme structure and strategic framework)"[25] and to "Advocate for clear urban growth boundaries."[26]

Exemplars? Studio THI's Step-change Cities Partnership seeks to explore ways to better equip practitioners and stakeholders to lead change and prepare communities for urban transformation.[27] Studio THI's Urban Change Readiness Index has been carried out in Carins, Ballarat, Penrith, and Hume after a community survey of 780 residents.

2.4 Advocate for suitable financing

Medium term

Advocate to financers of housing to demonstrate the viability of infill and smaller housing, and discuss how they can play a role in facilitating infill development. Explore potential partnerships with peak industry bodies and associations, for example, PCA, UDIA, HIA, and Master Builders.

Why? In the past, small, infill and other innovative housing projects have been delayed or were not viable because financing could not be secured.

Example 4: Two Pavilion House

Two Pavilion House designed by Toussaint & Volz (constructed in 2014) is an affordable dwelling for a small family of three located in Brisbane on Jagera and Turrball Country on a leftover parcel of land adjacent to a railway. Although the family only needed two bedrooms, the bank would not provide financing for anything smaller than a three bedroom house.[28] In response, owner-designer-builders Kirsty Volz and David Toussaint split the house, allowing for an office or spare bedroom at the front, joined to the 2-bedroom family home by a courtyard. The house's tall, skinny form gives it a striking street presence that adapts traditional screen elements from adjacent cottages and is designed for passive cooling, ventilation, and to prevent mould build-up.

Example 5: Speed Date an Architect event

The Museum of Brisbane and Australian Institute of Architects partnered to deliver a Speed Date an Architect event, held during the 2019 Asia Pacific Architecture Festival. The event offered a series of twenty-minute consultations with Brisbane-based architects. Prospective clients were invited to bring photos, plans, and questions to help get them started.

2.5 Host an “ask the planner” hotline or event series

Medium term

Provide a dedicated hotline or regular event series for community members to talk directly to Council planning staff about how to develop their property in order to de-mystify the planning process for non-planners interested in undertaking infill development and explain the opportunities and benefits available to them under the planning scheme.

Why? Planning schemes are difficult to understand for most people in the general community. Providing specific support for residents to explain the possibilities of infill housing development under the planning scheme can help to unlock infill housing development in the region.

2.6 Open demonstration projects to the public

Long term

Once infill housing demonstration projects are constructed (see recommendation 5.5 and 6.1), open them for tours with the public to showcase good design. Video tours can be made available on Council’s website and video interviews with occupants can showcase the benefits of living in smaller, infill housing to ensure the opportunity to experience infill housing demonstration projects is equitable.

Why? Allowing the community to experience examples of high-quality infill housing may support their desire to live in different types of housing and open possibilities beyond detached single family dwellings.

Example 6: Middle House

Middle House, designed by Nobel Carter Architects (constructed by Carter Gibbs in 2022), is a multi-generational infill housing project in Brisbane on Jagera and Turrball Country. With grandparents living on either side in street-level houses, Middle House is occupied by a young family and forms a link between three generations and two families. Middle House contains three bedrooms, one bathroom, a roof terrace, and covered outdoor living area adjacent to the open, ground-level courtyard.

In 2022, Middle House was opened for a full day of guided tours as part of the Brisbane Open House program as a model infill housing project.[29]

03. REVIEW

Review and revise the planning scheme, particularly the residential provisions, to better facilitate infill housing in more or all neighbourhoods, more quickly and without unnecessary cost.

3.1 Explore opportunities to facilitate invisible and gentle density

Short to long term

Review the planning scheme to identify how to facilitate good outcomes for higher densities without unnecessary costs (for example, requirements for car parking and infrastructure investment). Options to increase density can be explored in multiple ways including invisible density in low density areas (for example, dual or multiple occupancy of a single family detached dwelling and renting out accessory dwelling units), gentle density in areas appropriate for 3 storey development, distinct from Next Generation areas (for example, townhouses, duplexes, triplexes, 2-3 storey apartment buildings), and density done well in areas allowing taller building heights. Consider allowing dual occupancy dwellings to include both a primary and secondary dwelling. These actions may be undertaken as part of an expression of interest program to test innovative ideas (see recommendation 6.1).

Why? This aims to optimise land use and offer a variety of housing typologies without changing the neighbourhood's character and feel. While on the surface it looks like there is plenty of opportunity in the planning scheme for housing diversity, there are also impediments. For example, dual occupancies are consistent in the low-density zone but only on lots greater than double the lot size that has subdivision potential, so dual occupancy is not feasible in comparison to subdivision.

Alignment? Recommendation 3.1 is in line with the *Housing Needs Investigation*, which suggests to revise "the densities permitted in the Next generation neighbourhood precinct, to align with the densities assumed in Council's October 2019 Planning Assumptions and the 'Moderate density scenario'".[30]

Exemplars? In the United States on Multnomah, Kathlamet, Clackamas, Chinook, Tualatin Kalapuya, and Molalla Country, Portland City Council adopted changes to the city plan in August 2021 to address housing shortages and economic and racial segregation caused by zoning restrictions.[31] Changes included:

- Removing exclusionary zoning and allowing up to six units per lot and removing the requirement for off-street parking in all single-dwelling zones,
- Creating a new "narrow lot" code for attached houses that removes the requirement for off-street parking, allows for 50% maximum building coverage, requires front landscaping and alley access,
- Creating a new development type called "cottage clusters" to allow for groups of 3-16 small homes oriented around a shared common space,
- The "z" overlay map shows where infill housing is not allowed (areas subject to flooding, landslide, wildfire, or other environmental hazards).

Example 7: Habitat Live/Work

The prevalence of self-employment in Byron Shire and absence of affordable housing often sees people living illegally in mezzanines over their businesses in industrial units. Habitat Live/Work designed by DFJ Architects (constructed in 2017 by AG Corp) on Bunjalung Country was developed to provide better amenity and affordable accommodation for self-employed residents.[33]

24x 80m^2 1-bedroom apartments are provided above 60m^2 workspaces. Common areas include a pool, BBQ, garden and open car parking behind, one per apartment.

What is 'gentle' density?

Gentle density in an urban development context slightly increases the number and variety of homes in existing single detached-home neighbourhoods.[34] Gentle density may include multiplexes such as triplexes and fourplexes, infill row houses, or 'manor houses,' which typically contain 3-4 dwellings within a two storey building.[35]

3.2 Analyse gaps between density zoning and transport, employment, and education hubs

Short term

Review planning scheme mapping, particularly zoning mapping, to ensure appropriate opportunities for density in the right locations starting with a gaps analysis of high amenity areas, locations supported by high frequency transit, areas with high levels of employment, and education hot spots against their proximity to opportunities for higher density housing. This may result in the identification of catalyst precincts that are ready to unlock infill housing development (see recommendation 4.1). Alignment should be reviewed within five years against property economics viability.

Why? Analysing the gaps between transport, employment, and education hot spots and opportunities for high density housing aims to ensure alignment of amenity and density across the City of Moreton Bay.

Alignment? Recommendation 3.2 is in line with the *Housing Needs Investigation*, which suggests to "investigate the opportunity, benefits and feasibility of facilitating higher density residential development in high amenity areas" and "well-located development in the Suburban neighbourhood precinct".[32]

3.3 Investigate infrastructure measures to encourage infill development

Short to long term

Consider deploying infrastructure charges to stimulate infill development by, for example, reducing charges for infill housing, and/or charging per bedroom, rather than by dwelling. Review the infrastructure standards and timeframes required for infill housing to assist with project feasibility, such as requirements to underground power, have a garbage truck to enter the site, and for wide transition kerbs for large trucks (see also recommendation 5.1). Consider partnering with infrastructure services such as Energex and Unity Water to advocate for infill development.

Why? Current infrastructure charges are calculated per dwelling which disincentivises 1-bedroom and studio dwellings, despite 48% of households in Moreton Bay now consisting of 1-2 adults.[37]

Alignment? Recommendation 3.3 is in line with the *Housing Needs Investigation*, which suggests to "investigate and compare measures (e.g. infrastructure charge reductions, or application fee waivers) to encourage infill development."[38]

Exemplars? Brisbane City Council's infrastructure incentive for rooming accommodation significantly increased the supply of student accommodation, which had been identified as a gap and priority.

Example 8: Gen Y Demonstration Housing Project

The Gen Y Demonstration Housing project designed by Cast Studio - formerly David Barr Architects - on Noongar Country resulted from a 2013 design competition in association with the City of Fremantle, the Institute of Architects, and the Office of the Government Architect in Western Australia.[36] Constructed in 2017, the project aimed to provide affordable housing for a generation being priced out of home ownership. The manor house typology provides 3x 1-bedroom strata titled apartments over 2 storeys on one 250m^2 lot. Two of the apartments have their own open car port. Each dwelling has its own outdoor space and share bike parking, a common garden, and dining area between the street and building.

3.4 Reduce minimum size requirements for dual occupancy or secondary dwelling complying development

Short term

Review lot and dwelling size requirements to increase opportunity for housing diversity and greater affordability. Reduce or remove the minimum lot size requirements for code-assessable dual occupancy or secondary dwellings development (450sqm is too large). Review caps on the size of secondary dwellings to allow for greater diversity in households (for example, 1x 4-bedroom and 1x 2-bedroom dwelling to accommodate a large multi-generational family). Control quality by maintaining merit-based planning controls such as overshadowing and landscaped open space requirements as guided by the Infill Housing Good Design booklet (see recommendation 2.2).

Why? To ensure that infill housing can be undertaken as code-assessable development and ensure the planning scheme reflects changing household structures.

Alignment? Recommendation 3.4 is in line with the *Housing Needs Investigation*, which suggests to "reduce the minimum site area and separation distances for dual occupancy [in the] Suburban neighbourhood precinct."[39]

Exemplars? In New Zealand, the Auckland Plan permits up to 3 storeys and 3 dwellings on all existing residential parcels of land without requiring consent.[40] Five years after zoning regulations were relaxed, research has found the changes have resulted in more than 20,000 additional homes across the city as well as stabilising house prices.[41]

3.5 Explore the potential of form based zoning

Medium term

Rethink how the suburban neighbourhood precinct could transition from use-based to form-based planning. Removing tenure and use from this zone may allow, for example, a single-family dwelling to be converted into 4x 1-bedroom dwellings as-of-right or 3x 1-bedroom dwellings and a small office. Allowing for non-exclusive land-uses with form and tolerance (not use of building) also allows for mixed-use development, which supports changing demographics and working arrangements. Ensure design guidance is incorporated into the planning framework because design becomes more critical as density is increased (see recommendation 5).

Why? Acknowledging that continuing to build single family homes will not solve the housing crisis, exploring the potential of form-based zoning aims to look for simple changes to the planning framework that can increase opportunities for housing supply and diversity in existing neighbourhoods.

Alignment? Recommendation 3.6 is in line with the *Housing Needs Investigation*, which suggests to "investigate … allowing well-located development in the Suburban neighbourhood precinct … to develop at higher densities."[42]

Exemplars? Zoning in Japan defines 12 different form-based zones with no differentiation between types of residential uses, meaning there is no regulatory distinction between apartments and single-family homes other than in low-, medium-, or high-rise form. In the low-rise residential zone, for example, one 4-bedroom dwelling may house one family of five and an adjacent 4-bedroom dwelling may house five residents in four separate apartments.

3.6 Move towards a reduced reliance on cars

Medium term

Revise and reduce car parking requirements in stages over time and zone to allow residents to make behavioural changes. Explore incentives for car sharing and active transport (e.g. e-bike subsidies), reduced car parking requirements for smaller numbers of bedrooms, as well as clearly expressing performance solution suggestions for reduced car parking to demonstrate willingness for alternative solutions.

Why? Carparking calculations based on dwellings, rather than bedrooms, do not match real population densities and disincentivise building smaller dwellings.

Exemplars? In July 2023, Gold Coast City Council released City Plan Version 10 to allow for various modes of travel to reduce dependency on private vehicle usage. This aims to facilitate car parking offsets where active and public transport outcomes are advanced. Potential further reductions are planned in future for areas along the Light Rail corridor.

3.7 Support freehold micro-lot development

Medium term

Review the planning scheme for changes that can facilitate and increase viability of micro lots and terrace houses, such as moving towards performance-based controls and allowing for shared infrastructure.

Why? Freehold 'micro lots' and small terraces are commercially attractive, appealing to both buyers and developers, and could provide density in certain infill situations across all zones. Minimum height limits can be counter-intuitive when density can be achieved through low-rise development.

3.8 Review the potential to mandate minimum greenspace areas rather than building site cover

Medium term

Review the potential of mandating minimum green space areas in place of minimum site cover to ensure green space is usable and not wasted. This may include minimum garden area sizes based on lot size, allowing for building on the boundary, and/or setbacks a minimum of 3 metres away from the boundary so that green space amenity is maintained whilst density is increased.

Why? Detached housing uses adjacent space inefficiently and 900mm side boundary setbacks do not provide privacy, direct light, or greenery. Mandating minimum green space areas rather than building site cover may support better design by ensuring all green spaces are usable. Minimum green space areas may also help to decouple the car from the dwelling, thereby reducing costs, improving social amenity, and helping to meet Queensland Development Code Liveable Housing Design Standard[43] in a way that does not increase construction costs, noting that there is a limit to the distance cars can be from the home for safety reasons.

Exemplars? In Victoria, minimum garden areas and courtyard sizes helped to provide for greater quality design of shared spaces in higher density developments, better ground floor accessibility, and townhouse diversity.[44] Minimum garden area sizes are:

- 400-500sqm lots require 25% garden area
- 500-650sqm lots require 30% garden area
- Above 650sqm lots require 35% garden area

Example 9: ENVI Micro Village

ENVI Micro Village designed by degenhartSHEDD (constructed in 2021) converted an existing 673m^2 lot that formerly contained one single-family dwelling into 10x freehold house-and-land packages.[45] Three house typologies were developed: micro-terrace (2-bedrooms, 1-bathroom, no car); urban pod (2-bedrooms, 2-bathrooms, 1 car); and a village home (3-bedrooms, 2.5-bathrooms, 2 cars). The smallest micro-terrace, 61m^2 on a 38m^2 lot, sold for just over $300,000 to a first home buyer. Affordability was delivered by the small size of dwellings. Residents bought off the plan and were able to choose finishes and opt out of a car space to maximise affordability.

Example 10: Habitat on Juers

Habitat on Juers designed by REFRESH* Studio for Architecture (constructed in 2023) in Logan on Yuggera Country is a social housing project consisting of 16x adaptable and accessible units. The project was one of 20 affordable home demonstrations that were built as a partnership between the Housing Partnerships Office, Building Asset Services and the Office of the Queensland Government Architect. The project provides 12x 1- and 2-bedroom apartments and 4x townhouses with either 2 or 3 bedrooms joined by a central open space with gardens, playground and shared space for entertaining or relaxation. A communal carport is located along the western edge of the site, which allows for both shared and private courtyard spaces, front and back doors for all units, and access to northern light and cross ventilation.

04. CATALYSE

Catalyse infill housing development by identifying and investing in key precincts that are ready to accommodate growth

4.1 Identify catalyst precincts that can easily accommodate major infill growth

Immediate term

Map infrastructure network capacity and constraints to identify areas that can most readily be unlocked for infill development without major infrastructure upgrades. Clearly articulate and communicate these areas to community, industry, and developers. Explore the potential for funding density targets in "well located areas close to existing public transport connections, amenities and employment" under the National Planning Reform Blueprint.[46] Review amalgamation incentives in well-serviced areas (such as around train stations) to support higher density housing.

Why? Capitalising on existing infrastructure capacity can help to unlock infill housing in the shorter term without a large investment in infrastructure required. Furthermore, catalyst precincts can enhance the unique diversity of Moreton Bay by consolidating urban areas, business precincts, coastal villages, and rural townships as distinct from but adjacent to highly valued natural landscape and ecological systems.

Alignment? Recommendation 4.1 is in line with the *Housing Needs Investigation*, which suggests to "identify catalyst sites and opportunities for greater intensity residential infill".[47]

4.2 Commit to placemaking in catalyst areas

Short to long term

Stimulate development by committing to placemaking in catalyst precincts. This may include the provision of pocket parks, regular community events and activation, connecting walking and cycling infrastructure, supporting mixed use development, and improving public transport such as investment in bus services that link to train stations or innovative bus stop designs that create a new community destination (see also recommendation 4.3). Explore the potential to fund critical infrastructure through the National Housing Finance and Investment Corporation (NHFIC).[48]

Why? Improving catalyst precincts with services and facilities can help to create confidence for private sector investment. Furthermore, as households and dwellings decrease in size, it is critical for higher density neighbourhoods to provide high quality shared amenity to alleviate the size of smaller dwellings and maintain liveability. Improving walking and cycling infrastructure can support a shift from car to active transport, ease congestion, and improve the health and wellbeing of Moreton Bay's residents.

Alignment? Recommendation 4.2 is in line with the *Housing Needs Investigation*, which suggests to "consider local amenity improvements through Neighbourhood Planning processes, which could improve the attractiveness of centres and promote infill housing."[49]

Example 11: Barcelona's Superblocks

The Spanish city of Barcelona is pioneering an innovative approach to wellbeing, greening, cooling, and traffic management through the *Superilla* - Superblock - program. Nine residential blocks are linked to ban or restrict cars to 20km/hr inside the superblock, prioritising pedestrians and cyclists, and accommodate normal city traffic on the outskirts of the superblock.

Superblocks are transformed in three stages: First, basic functional changes to prohibit certain kinds of vehicles and introduce parking restrictions; Second, tactical, low-cost, temporary pilots such as painting the road and adding furniture; Third, converting lessons learned into more permanent transformations of street space.[50]

Recent research has shown that this concept could work in Australian cities where densities are increasing if more frequent public transport services are supported.[51]

Example 12: Jurong Smart Bus Station

The Jurong Smart Bus Station in Singapore designed by DP Architects (constructed in 2016) includes built-in WiFi, mobile phone charging points, interactive smart boards that provide bus info content, e-books, journey planners, a green roof with a 3-metre mature Cratoxylon cochinchinensis tree, solar panels, bicycle parking, a book exchange corner, artwork by local illustrator Lee Xin Li, and even a swing. Singapore's Architecture & Urban Design Excellence (AUDE) programme facilitated a multi-agency partnership comprising the Infocomm Development Authority of Singapore, Land Transport Authority, National Environment Agency, National Library Board, National Parks Board, Singapore Land Authority, and Urban Redevelopment Authority to undertake the project.[52]

4.3 Advocate for improved bus services in catalyst precincts

Medium term

Advocate for the State Government to introduce bus services in key precincts identified as having capacity for infill housing and link these to the Active Transport Strategy. Explore the potential for bus stops co-located with services to create a community destination (see also recommendation 4.2). Bus stops could form part of a design competition.[53]

Why? Most car journeys in Australian cities are short, meaning two-thirds of trips could be completed by local rapid bus transport or bike in 15 minutes or less.[54] In Queensland, bus services are typically implemented only where a critical mass of residential population has formed, creating a “chicken or egg” situation for unlocking development. As key neighbourhoods shift away from cars as a primary mode of transport, convenient public and active transport networks are critical. If bus stops are treated as nodes to cluster neighbourhood amenity, they can transform from boring and isolated waiting places to critical social infrastructure: exciting, useful, a place to take care of your errands, access businesses and services, meet neighbours and enjoy the day.

05. INCENTIVISE

Incentivise and reward high quality and cost effective design outcomes that reflect the aspirations of the City of Moreton Bay.

5.1 Establish incentives to encourage the use of architects

Short term

Explore potential incentives and processes that encourage the use of architects and raise the standard of infill housing design, such as faster development approvals and lower development application fees. Provide simple pathways for alternative solutions that demonstrate added value and ensure design professionals are involved in the application assessment process. A streamlined development approval process may be explored to ensure infill development is given appropriate attention and expertise (see recommendation 1.1).

Why? Reduction in development application fees if an architect is engaged can help allay concerns about the expense of engaging an architect. Providing simplified pathways for alternative solutions aims to reduce barriers to good design, regulation and include design professionals in helping Council shape regulation.

Exemplars? In New South Wales, the Low Rise Medium Density Housing Code allows complying development designed by an architect to combine the planning and building approval into one application.[55] Approvals can be issued within 20 days if the proposal complies with the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

5.2 Create a recommended infill housing design consultant panel

Short term

Hold an open application process for architects and building designers with infill housing expertise to join a City of Moreton Bay Infill Housing Design Services Panel. Development approval applicants using a designer from the panel may trigger a fast-tracked approvals process (recommendation 5.1). The requirements to join the panel may be set alongside the design award (recommendation 5.3) and 'Infill Housing Good Design' booklet (recommendation 2.2), without a limit on membership numbers. The Panel may also be drawn on for design reviews of projects that may significantly impact local neighbourhoods.

Why? A panel or directory of architects and building designers with experience in infill housing may give the community confidence and convenience to use an experienced designer, thereby incentivising high quality design outcomes. Additionally, this panel may be drawn on by Council where needed to help review and set regulation.

Exemplars? The City of Stirling,[56] and the City of Rockingham,[57] and Inner West (Sydney)[58] all have design review panels to provide expert advice to their local Councils.

5.3 Award good design

Short term

Create an award for good infill housing design as part of the Moreton Bay awards program. The brief may be written as part of the consultation process for the 'Infill Housing Good Design' booklet (see recommendation 2.2) for alignment on core aspirations.

Why? Awards benchmark excellence and honour, generate public recognition, and increase exposure for the kind of infill housing development Moreton Bay wishes to see.

5.4 Advocate for good design

Short to long term

Explore partnerships with organisations such as Australian Institute of Architects and Open House to run joint events and advocacy programs to promote good infill housing design, such as public lectures, speed dating events, exhibitions, news reports, and advertising campaigns. These may align with the actions arising from recommendation 2.

Why? The aspirations of the City of Moreton Bay are aligned with the advocacy initiatives of other peak bodies and organisations.

Example 13: Clyde Street Mews

Clyde Street Mews designed by Six Degrees (constructed in 2018) in Victoria on Wurundjeri Woi Wurrung Country consists of 8 dwellings ranging from 1- to 3-bedrooms on a double lot: 6x 2-storey townhouses and 2x apartments located over consolidated car parking. Cars are moved to the edges of the site, mostly off the side lane, to liberate the interior for pedestrian access and a shared garden.[59]

06. FACILITATE

Facilitate infill housing demonstration projects and innovative construction for high quality outcomes to influence future planning scheme amendments.

6.1 Create a demonstration infill housing project expression of interest program

Short term with long term implemetnation

Explore the possibility of an open expression of interest program to facilitate innovative infill housing demonstration projects not currently permissible but in line with desired outcomes for infill housing in Moreton Bay. Incentives to support these projects, such as land offers, funding, or loans, could be explored as relevant to projects with a site or without a site. Facilitate the construction of winning projects by working with the design, community, and development teams to amend the planning scheme on a site-by-site basis after a post-occupancy evaluation, community review and open house (see recommendation 2.6). Transfer key findings and good outcomes into planning pathways that inform future planning scheme amendments.

Investigate the potential to fund potential demonstration projects through the Queensland Housing Investment Fund (HIF)[60] and National Housing Finance and Investment Corporation (NHFIC),[61] including the possibility of enabling Community Housing Providers (CHP) to deliver affordable infill housing. This may unlock potential for the City of Moreton Bay to exceed National Housing Accord targets under the New Home Bonus.[62] Explore the potential for demonstration projects without a site to use State Government land as part of the building and land audit for residential use that emerged from the Housing Summit.[63]

Why? An open expression of interest program with clear criteria may help support ideas and innovations that exist within the community but do not currently have an avenue to develop, thereby revealing areas to review and improve the planning scheme for better outcomes more aligned with Moreton Bay's vision. The aim of this process is to create opportunities for innovation, test the planning scheme and ensure it does not block innovation.

Example 14: ACT Demonstration Housing Projects

The ACT Demonstration Housing Project aims to test and showcase how the Australian Capital Territory (ACT) can deliver a compact and active city through innovative planning, design, and delivery on Ngunnawal Country.[64] The first project to be delivered, Stellulata co-housing designed by architect Brett Lowe (pictured above), started construction in September 2023.

Stellulata co-housing reflects a growing demographic shift from single family households to 1- and 2-person households. The development does not change the number of people or cars typical in a suburban lot of 1090m^2, but does change the household structure. Stellulata Co-Housing is comprised of three households (two couples and one single all aged over forty without children) who have come together to propose an affordable housing model with shared amenity. It contains 3x 2-bedroom, 1-bathroom attached dwellings of 100m^2 with private courtyards and garden of 100m^2. Shared areas include 1x common house with visitor bedroom, bathroom, shared laundry and kitchen, a garden and garage with two shared electric vehicles.

The ACT Demonstration Housing Project responds to an ACT Legislative Assembly resolution passed in June 2017, which asked the ACT Government to engage with the community and industry stakeholders on how to deliver demonstration housing proposals. In response, an open Expression of Interest program was held. For projects without a site, suitable ACT Government owned land was identified and sold to project teams at market rate. The ACT government then facilitated winning projects by amending the planning scheme on a site-by-site basis as part of the development approval process. Upon completion, each project will be evaluated and an 'open house' session will be organised so that members of the public can see the final product and feedback can be captured. The lessons learnt from the Demonstration Housing Project will help inform future government policy and Territory Plan changes, which is hoped will encourage and support improved housing choice and housing quality in Canberra.

Example 15: Missing Middle Design Competition

Periscope House designed by Youssofzay and Hart is a prototype design that uses the NSW R3 zoned "Dual Occupancy" housing type to extend an existing dwelling and build an inter-generational family home. This project was the winner of a planning competition run by the NSW Government Architects' Office and Department of Planning in 2017.[65]

The 2017 Missing Middle Design Competition asked the design industry to test government policy in the form of the draft design guide for complying development for medium density housing. The competition demonstrated how application of the draft design guide by skilled designers can support good design results across a range of medium density housing types including dual occupancy, multi-dwelling (terraces) and manor houses.[66]

6.2 Lead an infill housing design competition

Short term with long term implementation

Investigate the potential of leading an infill housing design ideas competition, or partnering with a university to deliver a design studio on infill housing. As part of an advocacy and awareness campaign, exhibit the entries to the public and school groups as part of a community engagement program (see recommendation 2.1). Ideas may have the potential to be constructed if the competition is linked to the program for infill housing demonstration projects (see recommendation 6.1).

Why? Exhibiting competition results provides a significant education and engagement initiative to discuss and promote the benefits of medium, gentle density and infill development. It provides an opportunity for local design businesses to explore ideas for Moreton Bay and demonstrate to the community what is possible.

Alignment? Recommendation 6.2 is in line with the *Housing Needs Investigation*, which suggests to "Conduct an 'affordable living done well' ideas competition to generate collateral, which could be used when educating people and advertising contemporary best practice for affordable living."[67]

6.3 Advocate for the development of local building expertise

Medium term

Explore opportunities to promote education and training to take up a trade, such as partnerships with TAFE and Construction Skills Queensland (CSQ). This may also include accommodation subsidies and transitional or temporary housing linked with supporting local manufacturing and innovative construction methods (see recommendation 6.2). Explore the possibility of working with Council's Economic Development team and partnering with the Queensland Government Architect, referring to precedents such as QBuild's Modern Methods of Construction training centre.[68]

Why? To ensure expected growth can be accommodated, Moreton Bay needs skilled local construction workers. Attracting skilled workers to the region requires clear education pathways and secure housing options.

6.4 Support local manufacturing and innovative construction methods

Long term

Explore avenues to support local manufacturing and innovative construction (faster, cheaper, and/or higher quality) through partnerships with local industry and research institutions investigating prefabrication, modular or industrialised house-building programs.

Why? All phases of housing delivery must be explored for opportunities to innovate and address the housing crisis.[69]

Example 16: City Vista

City Vista, located in Everton Park on Jagera and Turrball Country, was designed and constructed by Nova Deko Modular for developer Kerdic as one of Brisbane's first multi-level residential modular apartment complexes.[70] Apartments each have 2-bedrooms and 2-bathrooms. Using 28 modules to construct the four-storey apartment building ensured the core was completed in only three days.

Conclusion

There is no simple solution to meeting the housing needs of the City of Moreton Bay's growing population into the future. Multi-faceted responses over long periods of time, adjusted after periodic review are required. The first challenge, as recognised by Council, is to articulate the problem and commit to doing something about it. The Infill Housing Expert Panel (IHEP) established by Council brought together experts across the housing sector, including planning, design, development, infrastructure, housing economy, and not-for-profit housing to articulate the impediments to achieving infill housing and what to do about them.

With informed engagement from Council and Councillors, the IHEP has identified a range of actions, activities, and initiatives —contained in this report— to champion, educate, review, catalyse, incentivise, and facilitate infill housing in the City of Moreton Bay. The IHEP recognises that implementing some of the recommendations proposed may cause initial concern within sections of the community. This is a reality of the changing actions needed to respond to current and future housing needs of the evolving City of Moreton Bay.

Critically, after targets have been set in alignment with the South East Queensland Regional Plan, initiatives should be reviewed annually to ensure that actions continue to be directed at the overarching goal to increase opportunity and viability of infill housing. Ultimately, this goal aims to provide more diverse, affordable, resilient, and well-designed housing in high-amenity neighbourhoods and maintain the valued lifestyle and biodiversity of the City of Moreton Bay.

Infill Housing Expert Panel Membership

The Infill Housing Expert Panel is comprised of seven members, observed by two Councillors and Council CEO, and supported by several Officers who performed the role of secretariat.

Peter Hyland, IHEP Chair

Peter Hyland is one of the Asia-Pacific's most respected urban land-use strategists. Peter has led large multidisciplinary teams on projects including inner city renewal and new city developments, major port and airport master plans, and resort and shopping centre developments. Peter's experience spans Australia, the Asia-Pacific, Europe, and the Middle East. Peter has led many projects to successful outcomes, including the Greater Springfield new city development.

Malcom Aikman, Economic Expert

Malcom Aikman is Director at Innovociti Pty Ltd. Malcolm is a highly regarded economist and regular speaker and commentator on housing and property market topics for the property industry. Malcolm has a wealth of knowledge and economic insight into Australia's housing and property market with over 30 years' experience in the property, economic development, and professional services consulting sectors.

Greta Egerton, Not-for-profit Housing Expert

Greta Egerton is Projects Director at Brisbane Housing Company. Greta is an experienced property executive with over 20 years' experience in real estate Business Development including strategy, transactions (acquisitions and disposals), advisory, due diligence, negotiation, and risk assessment. Greta has highly developed skills in managing transactions from identification through to acquisition including financial modelling, planning approval strategy and the negotiation of complex property transactions.

Anna O'Gorman, Urban Design / Architecture Expert

Anna O'Gorman is founder of Anna O'Gorman Architect. Anna is an acclaimed architect with experience assisting private and public sector clients. Anna became a registered architect in 2008, and worked with Donovan Hill Architects, Richard Kirk Architect, Shane Thompson Architects and Kieron Gait Architect, before starting her own practice. Anna also teaches architecture at the University of Queensland. Notable projects include the 'Anne Street Garden Villas' (a series of seven social housing dwellings in Southport), delivered via a collaborative partnership between Housing Partnerships Office, Building Asset Services and the Office of the Queensland Government Architect.

Claire O’Rourke, Housing Expert

Claire O’Rourke is co-founder and Partner at Bluebird. Claire is a specialist in residential and mixed-use developments, providing end-to-end property development services. Claire has expertise in acquisition and due diligence advice, feasibility assessments, building design & consultant management, town planning and statutory approvals, sales and marketing campaigns, as well as construction and project management. Prior to starting Bluebird in 2018, Claire spent 15 years working as a Development Manager for some of the world’s largest property developers, including Lendlease, Mirvac and Barratt London. She delivered residential and mixed-use projects in Brisbane, Perth, and London, which ranged in scale from $20m to $700m.

Natalie Rayment, Development Industry Expert

Natalie Rayment is Executive Director at Wolter Consulting Group and Co-founder of YIMBY Qld. Natalie has 25 years of public- and private-sector planning experience, culminating in her joining the Wolter Consulting Group’s Board of Directors as Executive Director in 2005, and Co-Chair from 2022. Natalie is a recognised expert town planning witness to the Court and specialises in statutory planning and development facilitation. Natalie’s passion for planning and how it impacts the quality of life in our cities and regions led her to co-found YIMBY Qld in 2016, a not-for-profit public interest organisation, saying ‘yes in my back yard’ to good development that makes for better living.

Adrian Sains, Infrastructure Expert

Adrian Sains is Director at ACS Consult. Adrian has been in leadership and governance roles throughout his 28-year career in engineering and infrastructure planning. His experience includes 10 years in operational and general management for a major UK waterways public corporation and 10 years with Cardno in a senior leadership position developing the engineering business and providing strategic advice on public and private infrastructure projects throughout Queensland. Adrian’s infrastructure skills range across due diligence at acquisition, development of structure and neighbourhood plans, and technical advice in the project delivery phase for both Greenfield and Brownfield infrastructure servicing assessment. He is experienced in the development of infrastructure agreements and has a broad knowledge of local government infrastructure requirements, including Local Government Infrastructure Plan (LGIP) reviews.

Observers

Cr Mick Gillam (City of Moreton Bay Councillor Division 8)

Cr Karl Winchester (City of Moreton Bay Councillor Division 6)

Greg Chemello (City of Moreton Bay Former Council CEO)

Scott Waters (City of Moreton Bay Council CEO)

Supporting officers and invited guests

David Corkill, City of Moreton Bay Director Planning

David Hood, City of Moreton Bay Manager Strategic Planning and Place Making

Matthew Stevenson, City of Moreton Bay Coordinator Regional Planning

Matthew Leman, City of Moreton Bay Senior Strategic Planner, Regional Planning

Amy Grey, City of Moreton Bay Coordinator Urban Design and Heritage

Colin Wade, City of Moreton Bay Coordinator New Urban Growth Model

Dan Staley, City of Moreton Bay Manager Development Services

Mitchell Stoter, City of Moreton Bay Senior Strategic Planner, Regional Planning

Mick McMillian, AR Developments

Scott Searle, Fairland

Brent Fletcher, Ausbuild

Damion Beilby, Beilby and Associate

Charlie Daud and Brett Robinson, Traders in Purple

Sam Heckle, HIA

Keith Cairns and Marianne Hocking, UDIA

Jen Williams, PCA

Karen Haworth, Master Builders Queensland

James Brown, REIQ

Tom Milne, Unitywater

Marcus Brown and Mikah McCarthy, Bull + Bear Economics Pty Ltd.

Martin Garred, Civity

Andy Fergus, Assemble

Dr Kali Marnane, Urbis

Example 19: Kensington House

Kensington House designed by Fowler and Ward (constructed by BCT Group) is an infill subdivision development at the rear of a 330m^2 lot on Wurundjeri Woi-wurrung and Bunurong Boon Wurrung Country.[71] With children moved out of home, the owners no longer needed a large 4-bedroom house. Although they wanted to downsize, they also wanted to maintain ties with neighbours and friends, remain walking distance from work, and age-in-place. The site was subdivided from the backyard of their original house to build a 113m^2 2-bedroom, 2-bathroom dwelling over three levels around a small courtyard with access from a rear lane.

Example 20: The Paddock Castlemaine

The Paddock Eco Village 1.4km from Castlemaine is a cluster housing development in a landscape setting in regional Victoria on Dja Dja Wurrung Country.[72] Containing 26 dwellings ranging in size from 2- to 4-bedrooms (85-125m^2 internal floor space), the project aims to create a new standard for sustainable living that fosters a sense of community and closer connection to nature. Up to 60% of the site is dedicated to shared food gardens, planted wetlands, chickens, native gardens, and orchards. A community centre includes a community kitchen and event space on the ground level with an apartment on the second floor that can be rented by guests. Car parking is limited to the perimeter near the back of each house, creating a central shared and safe garden area. A walking track connects the property with nearby bushland walks, the town centre, train station and nearby schools. Day-to-day maintenance for shared facilities is managed by residents and a gardener employed casually. Income from solar export and rental apartment reduce the running costs.

References

Image Credits

Front and back cover: Anne Street Garden Villas designed by Anna O'Gorman Architects, photograph by Christopher Frederick Jones available at: https://www.annaogorman.com/anne-street

Page 2: Moreton Bay from the air, photograph available at: https://inqld.com.au/news/2023/04/28/no-longer-a-bush-region-moreton-gets-tick-to-be-a-city/

Page 12: Moreton Bay Houses designed by Andresen O'Gorman, photograph by Patrick Bingham Hall available at: https://architectureau.com/articles/moreton-bay-houses/#

Page 13: Manor House in Minneapolis (USA), photograph available at: https://www.realtor.com/realestateandhomes-detail/3824-Grand-Ave-S_Minneapolis_MN_55409_M81561-92531

Page 16: ULI's UrbanPlan volunteer in-person training, photograph available at: https://la.uli.org/events/detail/3F67B1A8-4AFB-4AD2-99E8-FFB1C3E3990F/

Page 18: Two Pavilion House designed by Toussaint and Volz, photograph by Scott Burrows available at: https://www.toussaintvolz.com/two-pavilion-house

Page 20: APAF "Speed Date an Architect" event, photograph available at: https://asiapacificarchitecturefestival.com/2019/event/micro-histories-speed-date-an-architect

Page 21: Middle House designed by Nobel Carter Architects, photograph by Andrew Carter available at: https://housesawards.com.au/gallery/2022/emerging-architecture-practice/YLPOF4W6R16

Page 23: Habitat Live/Work designed by DFJ architects, photograph by Christopher Frederick Jones available at: https://www.archdaily.com/933859/habitat-live-work-dfj-architects

Page 25: Gen Y Multi-Residential Housing Project designed by Cast Studio, photograph by Robert Frith available at: https://caststudio.com.au/multi-residential/gen-y-step-house

Page 27: ENVI Micro Urban Village designed by Amy Degenhart, photograph by Tom Anthony available at: https://www.degenhartshedd.com.au/envi

Page 27: Habitat on Juers designed by REFRESH* Studio for Architecture photograph by Scott Burrows available at: https://www.architecture.com.au/archives/awards/habitat-on-juers-refresh-studio-for-architecture

Page 29: Road painting and furniture installed as part of Barcelona's Superblock program, photograph by JOSEP LAGO / AFP available at: https://www.insidehook.com/article/news-opinion/superblocks-barcelona

Page 30-31: Jurong Smart Bus Station in Singapore designed by DP Architects photograph available at: https://citygreen.com/case-studies/jurong-smart-bus-station-singapore/

Page 33: Clyde Street Mews designed by Six Degrees Architects, photograph by Alice Hutchison available at: https://www.sixdegrees.com.au/projects/clyde-street-mews/

Page 35: Architect Brett Lowe pointing to a site model explaining the design for Stellulata co-housing, photograph available at: https://www.stellulata.com.au/design

Page 36: Artists rendering of Periscope House designed by Youssofzay and Hart, visualisation by Darcstudio available at: https://www.youssofzayhart.com.au/periscope-house

Page 37: City Vista by Nova Deko Modular, photograph available at: https://novadekomodular.com/portfolio/australia-everton-park/

Page 43: Kensington House designed by Fower and Ward, photograph by Tom Ross available at: https://thelocalproject.com.au/articles/kensington-house-by-fowler-and-ward-project-feature-the-local-project/

Page 44-45: The Paddock Eco Village at Castlemaine, photograph available at: https://sustainablehouseday.com/listing/the-paddock-eco-village/

Endnotes

1 Queensland Government (2023) Draft ShapingSEQ 2023 Update https://shapingseq.statedevelopment.qld.gov.au/

2 City of Moreton Bay (2023) Growth Management Strategy https://www.moretonbay.qld.gov.au/files/assets/public/v/1/services/policies/growth-management-strategy.pdf

3 SGS Economics and Planning (2022) *Housing Needs (Choice, Diversity and Affordable Living) Investigation*, page 33-38. https://www.moretonbay.qld.gov.au/files/assets/public/council/meetings/2022/housing-needs-choice-diversity-and-affordable-living-investigation.pdf

4 City of Moreton Bay (2022) General Meeting Minutes, page 25. https://www.moretonbay.qld.gov.au/files/assets/public/council/meetings/2022/gm20221102-agenda.pdf

5 City of Moreton Bay (2023) Draft Growth Management Strategy. https://hdp-au-prod-app-mbay-yoursay-files.s3.ap-southeast-2.amazonaws.com/3816/7641/8181/Our_Moreton_Growth_Management_Strategy_-_DRAFT.pdf

6 SGS Economics and Planning (2022) *Housing Needs (Choice, Diversity and Affordable Living) Investigation*. https://www.moretonbay.qld.gov.au/files/assets/public/council/meetings/2022/housing-needs-choice-diversity-and-affordable-living-investigation.pdf

7 Brit Andresen (2016) "Moreton Bay Houses" ArchitectureAU https://architectureau.com/articles/moreton-bay-houses/#

8 Prime Minister of Australia (2023) Meeting of National Cabinet – working together to deliver better housing outcomes https://www.pm.gov.au/media/meeting-national-cabinet-working-together-deliver-better-housing-outcomes

9 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 174.

10 NSW Productivity Commission (2023) "Building more homes where infrastructure costs less" https://www.productivity.nsw.gov.au/building-more-homes-where-infrastructure-costs-less

11 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

12 City of Minneapolis (2023) "Planning Process: Civic Engagement" Minneapolis 2040 https://minneapolis2040.com/1165

13 City of Minneapolis (2023) "Implementation: The Missing Middle" Minneapolis 2040 https://minneapolis2040.com/implementation/the-missing-middle/

14 Queensland Governmnet Department of Energy and Public Works (2019) "Density Diversity Done Well Social Housing Demonstration Projects" https://www.epw.qld.gov.au/about/initiatives/density-diversity-projects

15 Queensland Government (2023) "Budge Measures 2023-24" Page 86 https://budget.qld.gov.au/files/Budget_2023-24_BP4_Expense_measures.pdf

16 Queensland Government (2022) "Queensland Housing Summit Outcomes Report" Page 3 https://documents.parliament.qld.gov.au/tp/2022/5722T2037-82B9.pdf

17 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

18 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 174.

19 ULI Asia Pacific (2023) "Programmes: UrbanPlan" https://asia.uli.org/programs/urbanplan/

20 Moreton Bay "Your Home and Living Guidelines" https://www.moretonbay.qld.gov.au/Services/Building-Development/Your-Home-And-Living

21 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 173.

22 Adair Winder (2023) "GANSW seeks 'missing middle' exemplars" ArchitectureAU https://architectureau.com/articles/gansw-seeks-missing-middle-exemplars/?utm_source=ArchitectureAU&utm_campaign=cc263ad0ca-AAU_2023_09_21&utm_medium=email&utm_term=0_e3604e2a4a-cc263ad0ca-46211260&mc_cid=cc263ad0ca&mc_eid=6123d3a2c4

23 Queensland Government (2023) "Budge Measures 2023-24" Page 86 https://budget.qld.gov.au/files/Budget_2023-24_BP4_Expense_measures.pdf

24 Queensland Government (2022) “Queensland Housing Summit Outcomes Report” Page 3 https://documents.parliament.qld.gov.au/tp/2022/5722T2037-82B9.pdf

25 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

26 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 14.

27 Studio THI (2023) “Step-change Cities Partnership” https://www.wearethi.org/sccp-cri

28 Linda Cheng (2019) “Future proofing the suburbs: Toussaint and Volz” ArchitectureAU https://architectureau.com/articles/toussaint-and-volz/

29 BNE Open House (2022) “Middle House” https://brisbaneopenhouse.com.au/building/middle-house/

30 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 174.

31 City of Portland (2023) “Residential infill Project” https://www.portland.gov/bps/planning/rip

32 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 171.

33 DFJ Architects (2017) “Habitat Live/Work” https://dfj.com.au/project/habitat-live-work/

34 Queensland Government State Development, Infrastructure, Local Government and Planning (2023) “What is gentle density?” https://www.statedevelopment.qld.gov.au/news/what-is-gentle-density#:~:text=An%20urban%20development%20term%2C%20gentle,underutilisation%20of%20valuable%20land%20resources

35 NSW Government (2020) “Low-Rise Housing Diversity Design Guide for complying development” page 22, https://www.planning.nsw.gov.au/sites/default/files/2023-03/low-rise-housing-diversity-design-guide-for-complying-development.pdf

36 Development WA (2023) “GenYProject” https://developmentwa.com.au/our-work/innovation-through-demonstration/InnovationWGV/GenYProject

37 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 33-38.

38 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 171.

39 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

40 Our Auckland (2023) “Resource Consents: New rules for developing your property” https://ourauckland.aucklandcouncil.govt.nz/news/2022/07/resource-consents-new-rules-for-developing-your-property/

41 Emily Clark (2023) “NZ’s housing density experiment saw approvals for new builds in Auckland ‘skyrocket’ while house prices kept climbing” ABC News https://www.abc.net.au/news/2023-09-25/nz-auckland-house-supply-experiment-results-in-dramatic-change/102846126

42 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

43 Queensland Government Department of Energy and Public Works (2023) “Livable Housing Design Standard” https://www.epw.qld.gov.au/about/strategy/building-plan/areas-of-reform/livable-housing-design

44 Victoria State Government (2023) “PPN84: Applying the minimum garden area requirement” https://www.planning.vic.gov.au/guides-and-resources/guides/planning-practice-notes/applying-the-minimum-garden-area-requirement

45 degenhartSHEDD architecture and urban design (2023) “ENVI” https://www.degenhartshedd.com.au/envi

46 Prime Minister of Australia (2023) Meeting of National Cabinet – working together to deliver better housing outcomes https://www.pm.gov.au/media/meeting-national-cabinet-working-together-deliver-better-housing-outcomes

47 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 169.

48 Australian Government (2023) “National Housing Infrastructure Facility Critical Infrastructure” https://www.nhfic.gov.au/national-housing-infrastructure-facility-critical-infrastructure-nhif-ci

49 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 12

50 World Health Organisation (2021) “Barcelona: Using urban design to improve urban health.” https://www.who.int/news-room/feature-stories/detail/barcelona-using-urban-design-to-improve-urban-health

51 Patrick Love and Mark Stevenson (2019) "Superblocks are transforming Barcelona. They might work in Australian cities too." The Conversation. https://theconversation.com/superblocks-are-transforming-barcelona-they-might-work-in-australian-cities-too-123354

52 CityGreen (2023) "Jurong Smart Bus Station - Singapore" https://citygreen.com/case-studies/jurong-smart-bus-station-singapore/

53 See, for example, the Kenilworth public toilet competition Architecture and Design (2016) https://www.architectureanddesign.com.au/news/wicker-basket-inspired-public-toilet-design-wins-d

54 Matthew Mclaughlin and Peter McCue (2023) "Fewer of us are cycling – here's how we can reverse the decline" The Conversation https://theconversation.com/fewer-of-us-are-cycling-heres-how-we-can-reverse-the-decline-212260

55 NSW Government Planning (2023) "Low-Rise Housing Diversity Code" https://www.planning.nsw.gov.au/policy-and-legislation/housing/low-rise-housing-diversity/low-rise-housing-diversity-code

56 City of Stirling (2023) "Design Review Panel" https://www.stirling.wa.gov.au/planning-and-building/design-review-panel

57 City of Rockingham (2023) "Design Review Panel" https://rockingham.wa.gov.au/planning-and-building/development/design-review-panel

58 Inner West (2023) "Architectural Excellence and Design Review Panel" https://www.innerwest.nsw.gov.au/develop/development-applications/architectural-excellence-and-design-review-panel

59 Six Degrees Architects (2023) "Clyde Street Mews" https://www.sixdegrees.com.au/projects/clyde-street-mews/

60 Queensland Government Department of Housing (2023) "Housing Investment Fund" https://www.housing.qld.gov.au/about/initiatives/housing-investment/housing-investment-fund

61 Australian Government (2023) "National Housing Infrastructure Facility Social and Affordable Housing" https://www.nhfic.gov.au/national-housing-infrastructure-facility-social-and-affordable-housing-nhif-sah

62 Prime Minister of Australia (2023) Meeting of National Cabinet – working together to deliver better housing outcomes https://www.pm.gov.au/media/meeting-national-cabinet-working-together-deliver-better-housing-outcomes

63 Queensland Government (2022) "Queensland Housing Summit Outcomes Report" Page 3 https://documents.parliament.qld.gov.au/tp/2022/5722T2037-82B9.pdf

64 ACT Government (2023) "Demonstration Housing Project" https://www.planning.act.gov.au/urban-renewal/demonstration-housing-project

65 Youssofzay and Hart (2023) "Periscope House" https://www.youssofzayhart.com.au/periscope-house

66 GA NSW (2023) "Missing Middle Design Competition" https://www.governmentarchitect.nsw.gov.au/projects/missing-middle-design-competition

67 SGS Economics and Planning (2022) *Housing Needs Investigation*, page 173.

68 Queensland Government Department of Energy and Public Works (2023) "Modern Methods of Construction training centre showcase" https://www.epw.qld.gov.au/about/department/business-areas/building-policy-asset-management/qbuild/modern-methods-construction-program/training-centre

69 Matthew Aitchison (2023) "Building in the same old ways won't end the housing crisis. We need innovation to boost productivity" The Conversation https://theconversation.com/building-in-the-same-old-ways-wont-end-the-housing-crisis-we-need-innovation-to-boost-productivity-206862

70 Novo Deko Modular (2023) "Australia: Everton Park" https://novadekomodular.com/portfolio/australia-everton-park/

71 Green Magazine (2023) "No Small Feat" https://greenmagazine.com.au/article/no-small-feat/

72 The Paddock (2023) "The Paddock Eco Village Castlemaine" https://www.thepaddockcastlemaine.com.au/