

Density Done Well in our Capital:

The Importance of Design!

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The NEW ZEALAND CENTRE for

Sustainable Cities

Te pokapū rōnaki tāone-nui



WELLINGTON

**Absolutely Positively
Wellington City Council**

Me Heke Ki Pōneke

(Mt Victoria Lookout, Wellington – photo supplied by Wellington City Council)

What we'll talk about today

Density... what it's responding to, why it matters, and the importance of design to do it well

- The wider context in Aotearoa New Zealand
- Wellington is densifying
- Being at 'home' in our city as it densifies
- The neighbourhood as an extension of home
- What matters in the design of a neighbourhood... of housing?

Wellington City Council's Proposed District Plan Design Guides

- Population growth and change
- Principles
- Good design outcomes and regulations
- Mana whenua, climate change and density
- Some examples

The wider context in Aotearoa New Zealand

Aotearoa New Zealand is grappling with significant challenges as it grows and develops:

- rising land, house and rental prices;
- pressure on infrastructure and rising sea levels;
- declining availability of developable land;
- the need to significantly reduce carbon emissions and prioritise environmental sustainability; and
- the shift into a new era of addressing systemic inequities stemming from the country's colonial history.

These challenges are contextual...

but they are not unlike those faced elsewhere globally.



The wider context in Aotearoa New Zealand

Severely unaffordable

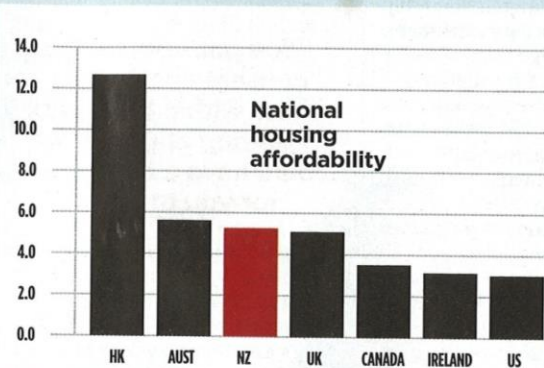
Hong Kong is out on its own as the least affordable place to buy a house, but New Zealand and Australia had all their markets ranked as either Seriously Unaffordable or Severely Unaffordable in the latest Demographia International Housing Affordability Survey.

The survey ranks Hong Kong and cities in Australia, Canada, Ireland, New Zealand, the United Kingdom and United States by comparing the median house price of "metropolitan markets" against the national median income for each country.

A city is assigned a ranking of Affordable if the median house price is three times the median income or less, Moderately Affordable (3.1-4 times), Seriously Unaffordable (4.1-5 times) or Severely Unaffordable (5.1 times or more).

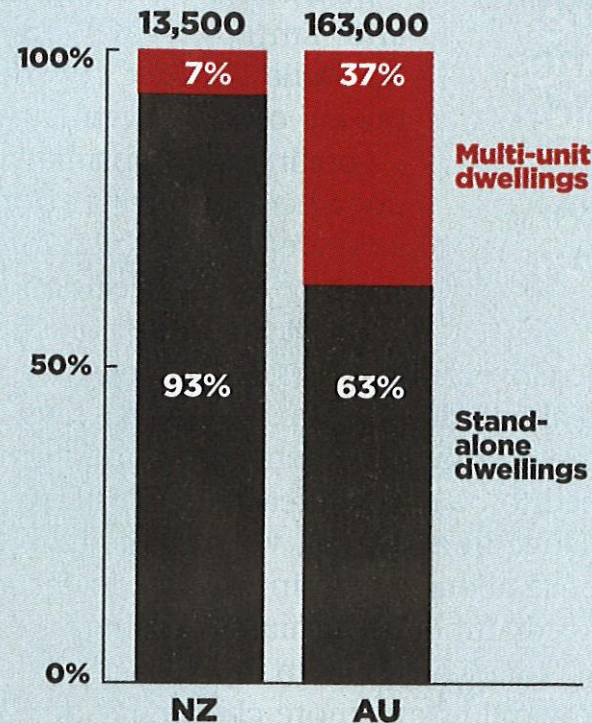
In the 2012 survey, using data from the third quarter of 2011, Auckland was the least affordable city in New Zealand, with a median house price 6.4 times the median income (the same as London). Christchurch (6.3), Tauranga (5.9), Dunedin (5.2) and Wellington (5.1) were all Severely Unaffordable, and Palmerston North, Napier-Hastings and Hamilton were Seriously Unaffordable.

Demographia observed that with a median multiple of 5.4, New Zealand as a whole was considered Severely Unaffordable, yet in the early 1990s it was Affordable, with a median multiple at that time of 3. The story for the UK was very similar, which Demographia says is consistent with that country's long history of restrictive national land-use policies.



Comparisons of median house prices divided by the median income of each country.

Types of dwellings built: NZ vs Australia



New Zealand cities are unusual for their preponderance of bespoke, stand-alone homes.



"The effect of monetary and macro-prudential policy on house prices has also increasingly been put under the spotlight. Upon the onset of the COVID-19 pandemic, the country's central bank dropped interest rates to all-time lows and removed macro-prudential restrictions on mortgage credit, fueling a further 20% to 40% increase in house prices in different regions across the country."

[New Zealand's bipartisan housing reforms offer a model to other countries \(brookings.edu\)](https://www.brookings.edu/research/new-zealands-bipartisan-housing-reforms-offer-a-model-to-other-countries/)

The wider context in Aotearoa New Zealand

Housing is one of the NZ Government's top priorities.

Significant resource is allocated to address the lack of housing affordability and availability in recent years, including the following:

- **2020 National Policy Statement on Urban Development (NPS-UD)** to remove development barriers, allowing growth where there is good access to existing services, public transport and infrastructure.
- **2021 Government Policy Statement on Housing and Urban Development (GPS-HUD)** to strategically direct and align housing and urban development work, aiming to achieve “wellbeing through housing”.
- **2021 MAIHI Ka Ora (and Implementation Plan)** developed in partnership with Māori, for Māori, setting out the vision for Māori housing for the next 30 years and what needs to happen over the next 3-4 years.
- **2021 Housing Acceleration Fund (HAF) of \$3.8b** to increase pace and scale of delivering affordable housing.
- **2022 Medium Density Residential Standards (MDRS) / RMA Amendment Act** to enable the development of three homes up to three storeys on each site, without the need for resource consent.

quality



The wider context in Aotearoa New Zealand

MEDIUM-DENSITY HOUSING

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WHAT IS MDH? CONSENTS DESIGN REGIONAL RULES & GUIDES CONSTRUCTION FINANCY RESOURCES CASE STUDIES


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What is MDH?


With increasing pressure on New Zealand's building stock, medium-density housing (MDH) is considered as an attractive option to meet our changing housing needs. The ability of MDH to diversify demographics and accommodate urban growth within existing city limits, while aiming to maintain residents' quality of life, makes it a viable form of neighbourhood intensification.

“Transform the Kiwi dream from the quarter-acre lot into the quarter-hour city!”
(Jo Miller, Hutt City Council CE)

The wider context in Aotearoa New Zealand

**MEDIUM-DENSITY HOUSING**

Housing density rules latest insult to local decision-making
Mike Yardley • 05:00, Aug 16 2022




Rules allowing three houses, three storeys high, to be built on one section come into force on August 20.

Mike Yardley is a Christchurch-based writer on current affairs and travel, who has written a column for Stuff for 15 years.

OPINION: An uncharted new era of tree-felling, character-killing, sunlight-blocking and privacy-destroying housing rules may be set to be foisted on your suburb.

In this regulatory journey into the unknown, no homeowner can be sure that a 12-metre high multi-level monstrosity (or three of them on the one section) won't be rearing up next door.


Stuff
Fears new housing rules cost sun, privacy, older homes
Iz McDonald • 05:00, Aug 13 2022



Feedback on Christchurch's planned building density rules residents fear losing sunshine and privacy, and the city's ability to build affordable housing.

Under the new rules, the city council will enact changes as required, allowing three residential buildings, each up to 12 storeys high, to go up in most parts of the city without resource consent.

RNZ
More strategic approach needed for intensification
From *Nine To Noon*, 9:30 am on 16 March 2022



New Zealand's housing intensification plan could create something akin to the slums of the UK in the early 18th century, says an Auckland architect.

Auckland-based architect Rob Guild is sounding the alarm about the way New Zealand is approaching housing intensification; which risks poor design and a lack of amenity.



He says while the need for more housing is urgent, New Zealand is at a crossroads; with a boom in medium-density housing developments expected once some resource consent requirements are dropped in August this year.

[Listen to the full interview 14'28"](#)
[Add to playlist](#) | [Download](#)

Guild says New Zealand, and Auckland in particular, needs a more coordinated strategy for how density occurs to ensure proper amenities which serve the community.

He suggests New Zealand look to Australia for guidance in how planning is managed. Australia has a network of Government Architects, which set best practice for the design of good quality buildings and public spaces.

Last year, the state of Victoria also established the Central Melbourne Design Guide to revitalise the city, including requirements for inner city design projects to be people-centred, with a special focus on street-level design.



The wider context in Aotearoa New Zealand

External Research ER57 [2020]
Report

Community Acceptance of Medium Density Housing Development

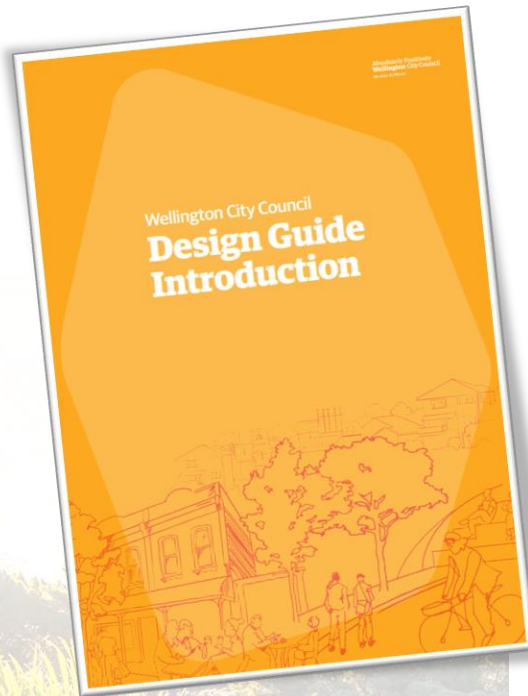
Simon Opit, Penelope Carroll, and Karen Witten
Project LR11153
Massey University, funded by the Building
Research Levy



Findings indicate that while New Zealanders remain apprehensive about the development of MDH in their neighbourhoods, there is increasing acceptance.

- Examples of MDH situated, designed and built well, lead to greater acceptance.
- 'Neighbourliness' from developers/construction workers can temper opposition.
- A disconnect between designs that minimise space for cars and insufficient access to good public transit options needs to be addressed for greater acceptance of MDH.

Wellington is densifying



Wellington's population is expected to grow by 50,000 – 80,000 people over the next 30 years. To accommodate this population growth, a significant amount of new housing will be required. This densification needs to be done well, and requires a collaborative approach between Wellington City Council, local communities, developers, planners, designers, businesses and private landowners.

Change is ongoing, and it can be done well

Wellington and other cities across Aotearoa New Zealand – as well as cities across the globe – are experiencing change. Populations are growing, and we are experiencing greater social and cultural diversity. We are also experiencing greater sustainability challenges than ever before. The buildings, streets and spaces of Wellington need to be “fit for purpose” to support this change now and into the future. This means that some parts of our city may start to look and feel different in coming years.

We have an important opportunity to ensure that this change is done well, and that Wellington moves from strength to strength as it grows. Mana whenua stories and our heritage places enrich Wellington's built and natural environment and its future identity, remind us of our past, and provide a connection between people and generations. By creating a sense of place, identity and wellbeing, they provide stability and continuity in a rapidly changing world.



Being at 'home' in our city as it densifies

“Home as a place of belonging, safety, connection and acceptance [....] to people and communities... [not simply to] a physical location or dwelling”, a place of “spiritual safety” and connection with tipuna.

(Amohia Boulton et al. 2022)

Being at 'home' in our city as it densifies

'Sense of place', 'genius loci', or 'place attachment', refers to the connection that forms (or fails to form) between people and place.

- Important for many reasons, including community empowerment and kaitiakitanga (Lewicka 2011).
- Enhanced by mobility within good quality environments – e.g., streets as 'Third Places' (Ivory et al., 2015; Jones et al. 2020).
- A positive predictor of wellbeing (Maricchiolo et al. 2021).

Quality social relationships are fundamental to thriving.

- **Social isolation / loneliness** – significant public health factor associated with risk for psychological and physical wellbeing (Holt-Lunstad 2017).
- **Physical isolation** – living alone, working alone – can amplify social isolation / loneliness (Heu et al. 2020).

The neighbourhood as an extension of home

Understandings and experiences of home extend beyond the individual dwelling into “everyday experiences at the local scale”, so the “notion of home space” can be used “to embrace the idea of both housing and the neighbourhood” or area (Phillips, 2009, 23).

To understand home as extending into a neighbourhood or area underscores the importance of our collective environments and how urbanisation occurs (Boulton et al., 2022; Olin et al. 2022).

**Each neighbourhood
makes various
lifestyles and realities
possible.**

(photo from gehlpeople.com)



What matters in the design of a neighbourhood?

Neighbourhoods (our collective environments) must be designed to not only address affordability and capacity issues, but also to:

- **Respond to environmental challenges, and**
- **Be meaningful and effective in responding to diverse cultural and contextual sensitivities at scale.**

Different types of neighbourhood design are possible, but they must:

- **Support connectivity with place (te taiao), and**
- **Support connectivity between people (te ao tangata)**

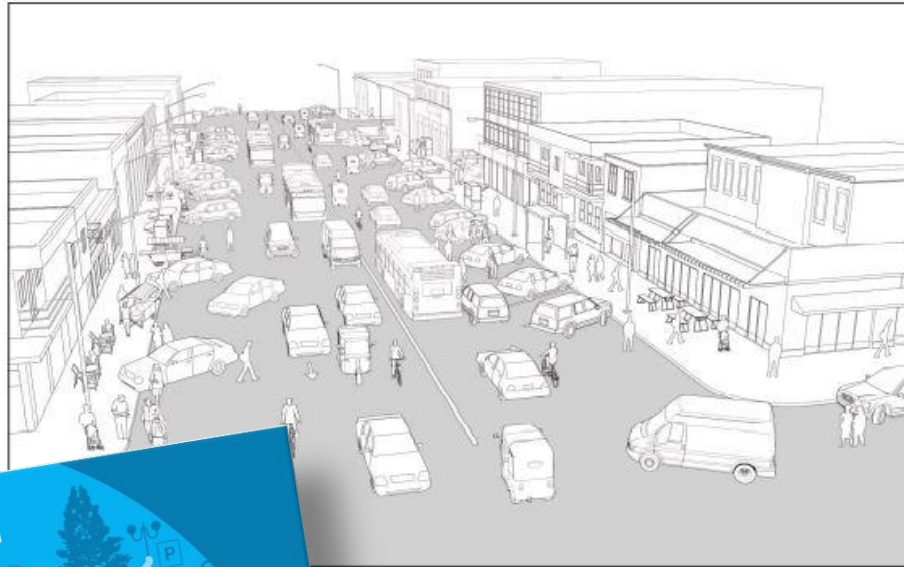
So, neighbourhood design must be coordinated with and/or incorporate equitable access/connection to:

- **Transport infrastructure (walking, cycling, public, etc.)**
- **Community infrastructure (public space, education, etc.)**
- **Environmental infrastructure (green, water, etc.)**
- **Other essential infrastructure (energy, food, etc.)**

Olin, C.V., Berghan, J., Thompson-Fawcett, M., Ivory, V., Witten, K., Howden-Chapman, P., Duncan, S., Ka'ai, T., Yates, A., O'Sullivan, K.C., Keall, M., Ombler, J., and Hinckson, E. (2022). Inclusive and collective urban home spaces: the future of housing in Aotearoa New Zealand. *Wellbeing, Space & Society*. DOI: <https://doi.org/10.1016/j.wss.2022.100080>



Neighborhood Main Streets | Example 3: 30 m



Ababa, Ethiopia

Moving in and out of parking spaces, travel lanes and create dangerous conditions for cyclists. This is also a cause of rear-end collisions.

Users are forced to disembark on the road because parked cars block access to the bus stop.



Charleston, USA

Sidewalks are inaccessible and often blocked or interrupted by parked cars, utility poles, street vendors, and other furnishings.

Some ground floor uses, such as loading, spill out onto the sidewalk, obstructing the clear path.



Redesign | 30 m | 40 km/h

Design Guidance

Redesign the street to better serve the needs of all users. Protected cycle tracks, curb extensions, transit stops, and widened sidewalks distribute the space more equitably to encourage walking, cycling, and transit use.

Reduce the roadbed to one travel lane in each direction and convert angled parking into parallel parking.

1 Allow transit vehicles to share the travel lanes with cars and provide island stops for fast, accessible boarding.

2 Mark protected cycle tracks at conflict zones such as mid-block crossings, curb cuts, and through intersections.

3 Alternate parking spaces with other services and uses such as refuge islands, sheltered transit stops, cycle-share stations, rain gardens, and wider loading bays for trucks.

Add a raised, mid-block crossing to increase permeability and support a safer pedestrian environment.

4 Widen sidewalks to allow multiple activities to take place on the street without obstructing the clear path. Plant trees, install street furniture, and create an improved public realm that supports local businesses.

Install ramps and tactile strips to make sidewalks and crossings accessible.

5 Adopt green infrastructure strategies, including rain gardens and permeable paving, to improve water management and reduce water stagnation in low-lying areas. See 7.2: Green Infrastructure.



Copenhagen, Denmark

7.1 | Utilities

Design streets in coordination with basic utilities such as water, storm, and sanitary sewers, electricity, communication, gas, and lighting. Consider adopting energy-saving and efficient utilities and green infrastructure such as bioswales, pervious strips and porous pavements, reclaimed water systems, district cooling and heating, and automated waste collection systems.



Electricity and Communication

Electricity supply and communication infrastructure are vital to both streets and the city as a whole. Electricity and communication cables serve street lighting and signals, and services for businesses along the street. Digital service to support social and economic investment in the area. Lay house infrastructure to create sustainable communities such as public WiFi hotspots.

Water Supply and Firefighting

Clean and potable water should be distributed throughout the city by a comprehensive network of water supply pipes. Typically, these pipes work on the principles of gravity and should be aligned with street grids. Water used for firefighting can be carried through dedicated or shared pipes connected to fire hydrants.

Green Infrastructure

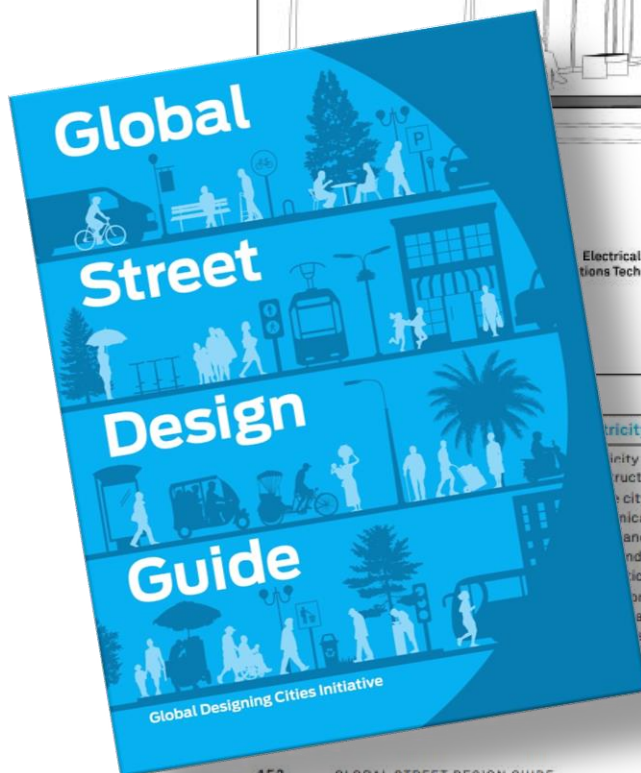
Green infrastructure strategies complement stormwater and wastewater infrastructure. Green infrastructure reduces strain on stormwater systems through infiltration or evaporation, which also improves the quality of the street environment. See 7.2: Green Infrastructure.

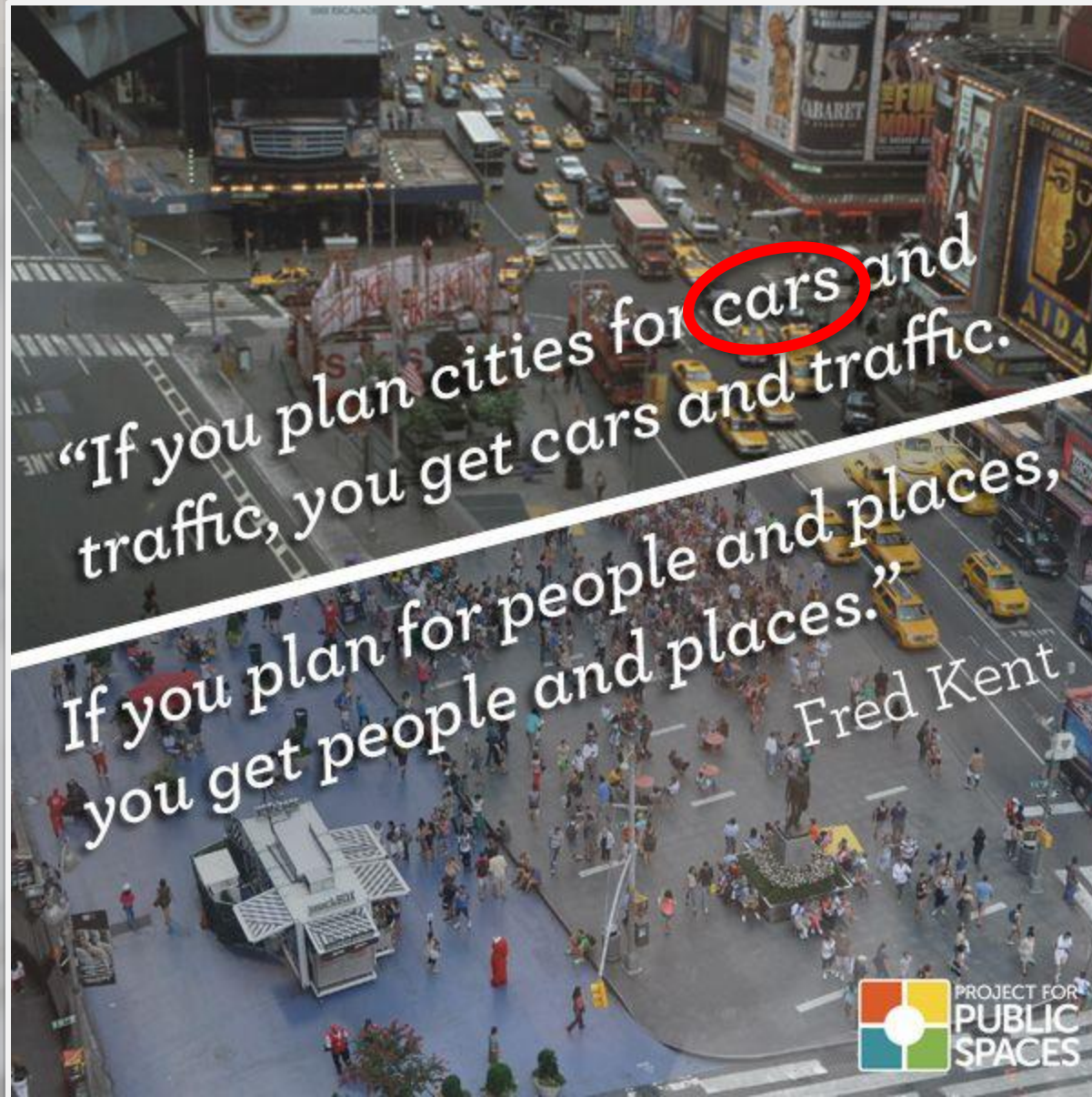
Lighting

Ensure safe, continuously illuminated streets for all users, particularly in pedestrian areas and conflict zones such as pedestrian or bike crossings and intersections. Power street lights through underground electric cables or built-in solar panels. See 7.3: Lighting and Technology.

Public Toilets

Provide public toilet infrastructure along major street corridors and in underserved or poorer neighborhoods, improving quality of life by maintaining access to clean sanitation facilities for all.





capital gain
efficiencies
status
politics

out of fear

for short-term 'wins'

What matters in the design of housing?

“I should say: the house shelters day-dreaming, the house protects the dreamer, the house allows one to dream in peace.”

(Bachelard 1958 – *The Poetics of Space*)

What matters in the design of a dwelling?



The ways in which people understand and experience home are “both lived and imagined” (Phillips, 2009, p. 23); and are influenced by cultural, social and political contexts.

(“True love waits”, painting by Aaron Waghorn)

Not only do we need to supply a greater quantity of affordable, public and community housing in Aotearoa, but we have a responsibility to increase the **quality** of housing design. Everyone deserves to live somewhere that is secure, connected, accessible, warm, dry, functional, safe, dignified and beautiful.

VARIOUS IMPORTANT QUALITY CONSIDERATIONS:

- **Ambient indoor environment**
 - Temperature
 - Air quality
 - Humidity
- **Architecture / physical structure**
 - Materials / methods of construction
 - Interior layout / functionality
 - Safety / injury hazards mitigation
 - Access / public-private interface
 - Aesthetics / visual ‘language’ or ‘style’



lived
experiences




What matters in the design of housing?



Introduction OVERVIEW KEY		Parts CHAPTERS	
1	Why MDHP	PLAN	DESIGN
2	Issues		
3	Height and Size		
4	Community		
5	Circulation		
6	Living		
7	Construction Materials	BUILD	BUILT
8	Inter-tenancy Floors		
9	Inter-tenancy Walls		
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11	Roofs		
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16	Case Study 4		
17	Summary & Conclusions		

<p>Forward</p> <p>Tessa Hale Pennington Chief Executive Te Kaiti Whānanga New Zealand Institute of Architects</p> <p>Introduction</p> <p>Duncan Joiner PhD (London) BArch(Hons)(Auckland)</p> <p>Why MDHP</p> <p>What is Medium Density Housing (MDH)? Why do we need MDH? Why do we need a book on MDH? What is 'The Missing Middle'? Is there a Housing Crisis and what can we do to make it stop? The need for a low carbon future, why we made a guide to building better than the Code, and, what has the Government done?</p> <p>Issues</p> <p>The issues with Medium density, as seen by architects, residents and academics, includes site planning, security, defensible space, privacy and many more. We can't solve the problem till we know exactly what the problems are.</p>	<p>Variety</p> <p>The need for variety and livability in MDH design. How high can MDH cities be and how to best get there. How to decarbonize the cities. What exactly is the Missing Middle and what types of MDH are there? From townhouses to mansion blocks, apartment buildings to courtyard housing and urban infill, we discuss them all.</p> <p>Community</p> <p>Creating a community by working aspects of the boundary, circulation, recreation, and social spaces. Landscape, topography, hydrology and vegetation – landscape is a complex relationship, but worth getting right to start. Car parking, transit-oriented development and how to avoid low quality outcomes.</p> <p>Circulation</p> <p>The importance of planning and orientation to the sun, access, lobbies, entrances, stairs, lifts, and corridors. Flexibility, storage and garage design.</p> <p>Living</p> <p>The design of key living spaces; living room, kitchen, dining room, bedrooms, bathrooms, balconies and decks</p>	<p>Construction Materials 72</p> <p>Performance Traditional construction or cutting edge? Discussing structure and prefabrication. Discussing inter-tenancy floors (ITF) and inter-tenancy walls (ITW)</p> <p>Materiality The major materials that we can build with, including timber frame, steel frame, brick, block, precast concrete, cross-laminated timber and autoclaved aerated concrete</p> <p>Industry solutions</p> <p>7A Simpson Strong-Rod ATS 7B Axle Steel framing 7C XLam GLT</p> <p>Inter-tenancy Floors 72</p> <p>Performance Acoustics, the Science of Sound, Muffling and Isolation</p> <p>Materiality Inter-tenancy floors using timber framing, cross laminated timber, concrete and multi-layered construction systems</p> <p>Industry solutions</p> <p>8A Batten & Cradle floating floor 8B Laminex flooring system 8C Woodspan PLT 8D LVL with Timber-concrete composite 8E ComFlor for concrete floors 8F Rondo suspended ceiling system</p> <p>Inter-tenancy Walls 72</p> <p>Performance Acoustic success and failure</p> <p>Materiality Twin wall timber or steel framing, concrete panels, cross laminated timber, multi-layered construction systems and prefabricated structural systems</p> <p>Industry solutions</p> <p>9A AFS LogicWall 9B KOROK 9C GIB Barrierline 9D Integra AAC</p>	<p>External Façade Walls 72</p> <p>Performance Cladding systems and structure, full width glazing or punched hole windows. Window design, insulation, weatherproofing, drained and ventilated cavities, control layers in construction, and building underlays.</p> <p>Materiality SFS and other systems.</p> <p>Industry solutions</p> <p>10A Window Systems Metro 10B Knauf insulation 10C Proclima Intello 10D Hardies RAB 10E GIB Weatherline 10F Terral 10G Outright Rockwool 10H Cemintal Frontier 10I Equitone 10J Clay brick 10K Nuwall weatherboard</p> <p>Roofs 92</p> <p>Performance Cold roof vs warm roof. Skillion roof, flat roof, membrane roof</p> <p>Materiality Roof gutters, waterproof decks, roof penetrations and party wall junctions</p> <p>Industry solutions</p> <p>11A Dridex roof & Drivent 11B Nura Warm roof system 11C NuraJack 11D Viking roof garden</p> <p>Services 92</p> <p>Performance Lighting, plumbing and drainage, stormwater, and gas. Heating, cooling and ventilation</p> <p>Materiality Selecting the right ventilation system for MDH</p> <p>Industry solutions</p> <p>12.1 oBlue plumbing 12.2 Optim DWV 12.3 Under 6 storey ventilation</p>	<p>Bernoulli Gardens Case Study 150</p> <p>An Ockham development in Hobsonville Point that features five blocks of apartments assembled around a pleasant courtyard.</p> <p>340 Onehunga Case Study 162</p> <p>An NZ Living development in Onehunga with strong design features from one big long simple roof and long life material selection.</p> <p>Altair Case Study 170</p> <p>An infill project in Newtown, Wellington, with several small blocks of townhouses, woven around two small green courtyards.</p> <p>Latimer Terraces Case Study 182</p> <p>Lorpresit eum volo voluptaped que nostis sunt assimus maximam, sintesto inusdan dition nobit as aut iscupum</p> <p>Summary & Conclusions 182</p> <p>Lorpresit eum volo voluptaped que nostis sunt assimus maximam, sintesto inusdan dition nobit as aut iscupum</p>
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What matters in the design of housing?

 **MEDIUM-DENSITY HOUSING**


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Design

The quality of a medium-density housing development depends on its detailed design. A good MDH design is highly subjective. It depends a great deal on the nature of the site and its surroundings, the build budget (or the developer's expected return) and the intended occupants of the building. However, there are several general guidelines that may be useful to consider when designing MDH.



What matters in the design of housing?

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WHAT IS MDH? CONSENTS **DESIGN**

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Design

The quality of a medium-density development depends on its design. Good MDH design is highly subjective and depends on a great deal on the nature of the site, the surrounding environment, the build budget, the expected return) and the intended use of the building. However, there are several design guidelines that may be useful to guide the design of MDH.

Special character areas →

Some local authorities have additional rules and controls in place to maintain the sense of history and place.

Form and location →

Form and location refers to the placement and arrangement of dwellings and their surroundings on the site.

Aesthetics →

Aesthetics are highly subjective and depend a great deal on the characteristics of the surrounding environment.

Site →

It's not possible to provide a design guide to suit every site or type of development.

Access →

Good medium-density housing design should cater to the transport, security and mobility requirements of each occupant.

Structure →

All medium-density housing must meet the requirements of the New Zealand Building Code for structural performance.

Protection from fire →

Medium-density housing involves people living in closer proximity, which has several implications for fire safety.

Services →

Depending on size, most medium-density housing developments include a wide variety of services.

What matters in the design of housing?

MEDIUM-DENSITY HOUSING

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WHAT IS MDH? CONSENTS **DESIGN**

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Design

The quality of a medium-density development depends on its design. A good MDH design is highly subjective (it depends on the nature of the surroundings, the build budget, expected return) and the intended use of the building. However, there are several guidelines that may be useful to designers of MDH.

- Exterior →**
Good exterior design and using higher-quality construction techniques and materials are important factors.
- Interior →**
Effective medium-density housing requires careful design of interior spaces.
- Acoustics →**
When considering the interior layout, designers should pay special attention to acoustic privacy.
- Energy management →**
Consider energy management and sustainability issues such as greenhouse gas emissions at each step of the design process.
- Design review →**
It is increasingly common for medium-density housing development and construction projects to be subjected to a design review process.
- Design for maintenance →**
Larger MDH developments can present significant ongoing maintenance challenges so it is important to include facilities management and future maintenance from the beginning of the design process.
- Extensions and alterations →**
Any alterations and additions to existing medium-density housing must be designed with great care.
- Non-structural elements →**
Non-structural systems include all the elements within a building that are not part of the primary gravity or lateral force-resisting structure, but are still required for the building to function.

The current District Plan came into effect in 2000 and it needs an update. Due to the Resource Management Act 1991, we have a legal requirement to review the District Plan every 10 years. This is so we can make sure that we enable all the latest national policies and regulations.

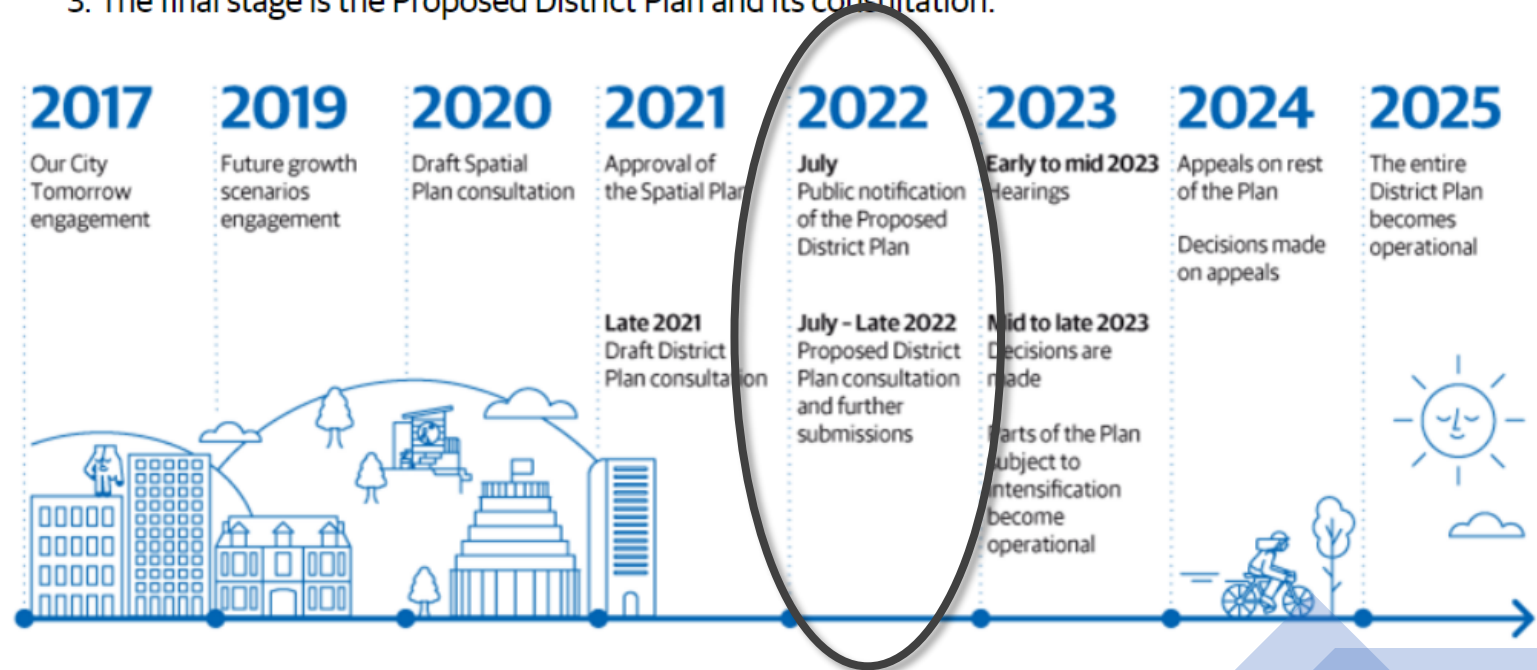
Our timeline

There are three phases to the District Plan Review.

- 1. The Spatial Plan.
- 2. The Draft District Plan.
- 3. The final stage is the Proposed District Plan and its consultation.

— 2022

- July - We notified the public of the Proposed District Plan. Parts of the plan became operational immediately, for example, medium density housing provisions and the heritage register.
- July to September - Consultation and submissions on the Proposed District Plan.
- August - Deadline for implementing National Policy Statement on Urban Development.
- Late 2022 - Further submissions accepted.



Full Wellington City Proposed District Plan

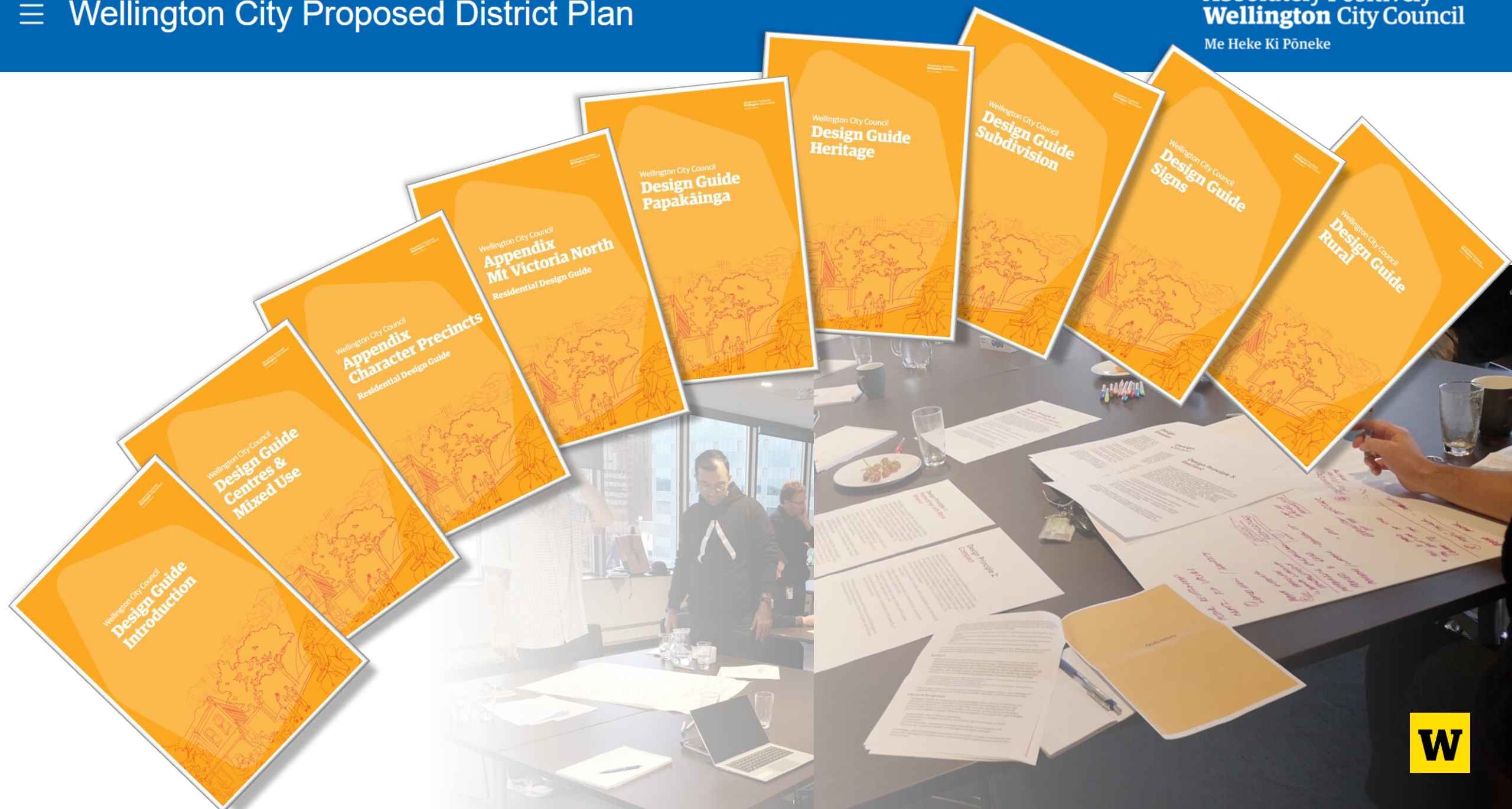
Proposed: 21 Jul 2022
Revision: 21 Jul 2022

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Centres and Mixed Use Design Guide	
Residential Design Guide	▲
Character Precincts	
Mount Victoria North	
Papakāinga Design Guide	
Heritage Design Guide	
Signs Design Guide	
Subdivision Design Guide	
Rural Design Guide	



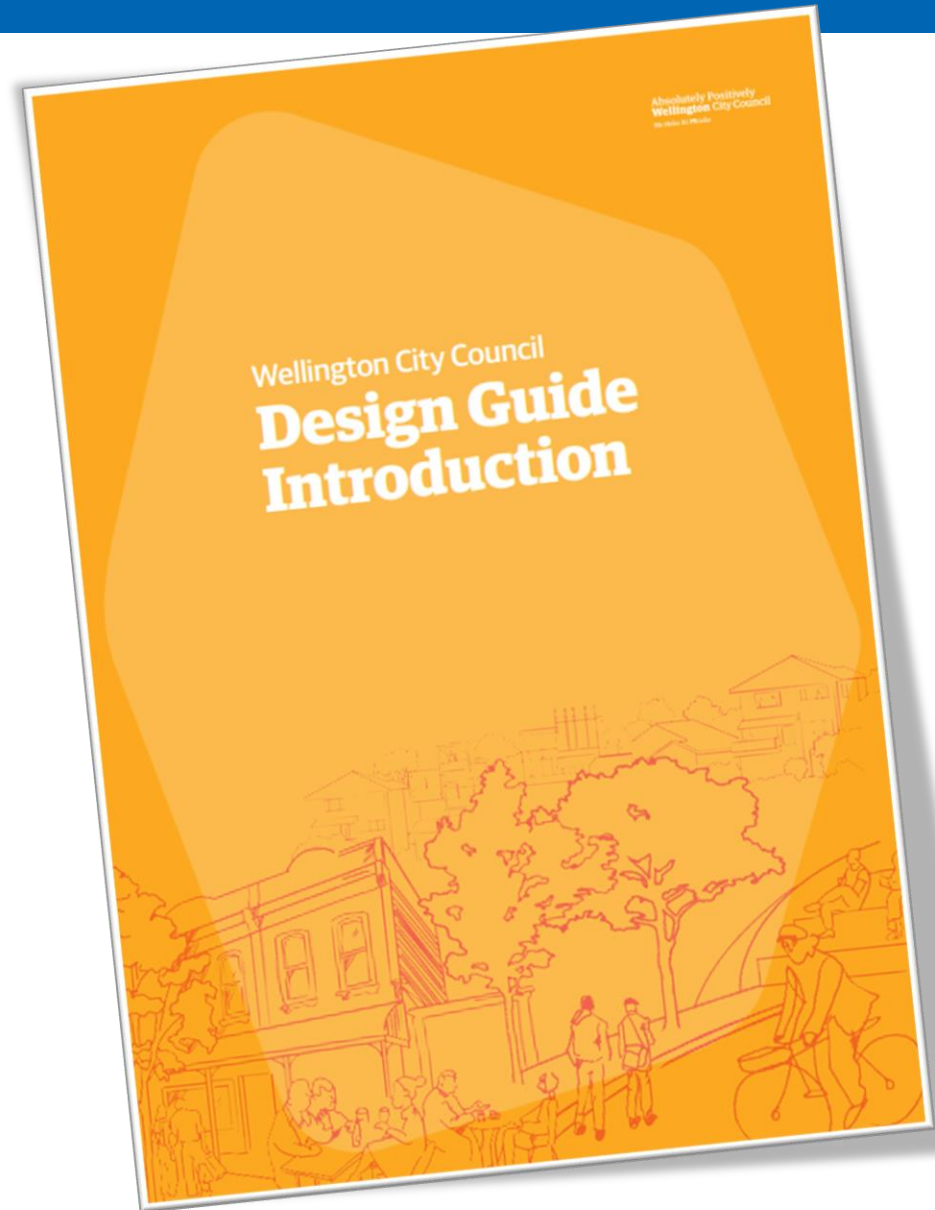


Design Principles

Following on from a number of engagement opportunities with the community as part of Planning for Growth, Wellington City Council has identified six city goals to guide the Spatial Plan, District Plan and related efforts to plan for and support anticipated growth:

1. **Partnership with mana whenua**
2. **Compact**
3. **Inclusive and connected**
4. **Greener**
5. **Resilient**
6. **Vibrant and prosperous**

These goals are used as design principles that all new developments in Wellington should strive to meet.



Design Outcomes

Design outcomes are intended to support the design principles and achievement of good design across Wellington. **While the Design Guides are ultimately outcome-focused, specific guidance should not be used as a strict template or planning rules, nor should it reduce the potential diversity of design approaches taken.**

Rather, the Council anticipates guidance to be interpreted and used appropriately by resource consent applicants and advisors, so as to achieve good design that meets the overarching outcomes and principles of these design guides.

In support of the six design principles, the following four design outcomes help to coordinate specific guidance across a range of scales, from the wider environment through to individual buildings.

1. **Responding to the natural environment**
 - Land
 - Water
 - People
2. **Effective public-private interface**
 - Urban structure
 - Fronting the street
 - Heritage
3. **Well-functioning sites**
 - Movement and access
 - Open spaces
 - The site
 - Placing the building
4. **High quality buildings**
 - Sustainability
 - Built form
 - Inclusivity
 - External appearance
 - The internal spaces

Unheard Stories: mana whenua identities, worldviews and practice

Māori, and more specifically mana whenua identities, worldviews and practices have for the most part been erased from our built environment. **Acknowledging these in appropriate and considered ways offers an opportunity to create a unique sense of place in any new development.** At times, particularly where developments are large or impact significantly on wider urban systems, it will be appropriate to engage mana whenua in the design process. This should be factored into resourcing for development projects.

To support robust design outcomes for mana whenua, one of the six goals for Our City Tomorrow is partnership with mana whenua. This goal has been translated into a design principle to guide development through the resource consenting process.

The Design Guides ensure the integration of mana whenua identities, worldviews and practice into the city and that new initiatives and developments reinforce the city's aspiration to become a city where mana whenua can flourish.

Environmental sustainability

Wellington needs to and can become more sustainable, ensuring its natural environment is protected, enhanced and integrated into the urban environment. Design plays a crucial role in achieving sustainability goals. The unique benefits and efficiencies of buildings, sites and urban systems need to be maximised, delivering quality places where resources are optimised. Sustainable design can include the ongoing use of existing buildings and the adaptation of heritage buildings for new uses.

The Design Guides aim to ensure that nature and eco-friendly practices are more proactively integrated into our city, and that new development contributes to a future for Wellingtonians that is environmentally sustainable.



Density, height and new housing types

More and more people are choosing to make Wellington their home. Higher densities and more people are a good thing, and larger populations can sustain more local businesses and initiatives. Higher densities make public transport options, community services and events more viable and therefore more available. **When done well, density can increase the general well-being of people through improved social connection opportunities, safety and accessibility.**

In delivering density, new developments will need to provide for a range of housing types. This will be needed as our population becomes more and more diverse. This means that new buildings in Wellington are likely to be taller than some of their neighbours, at least at first. Done well, new development can be integrated with our valued heritage places and the city can seize this opportunity to set a new benchmark for design quality in Wellington. **It can and should contribute to our city's evolving identity, which consists of buildings, streets, spaces, landscapes, history, people, uses, stories, mana whenua stories, memories and more.**

The Design Guides aim to ensure that density, height and new housing types are delivered through quality design, so that Wellington continues to be a place that a diverse range of people are proud of and want to call home.



The landscape context contributes to a neighbourhood's unique sense of place and identity.

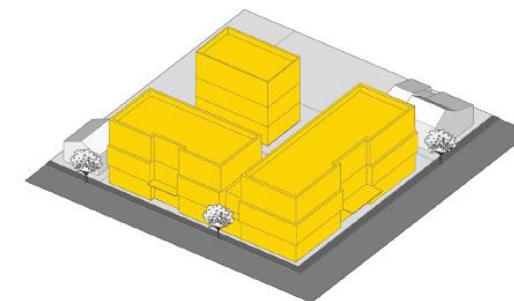
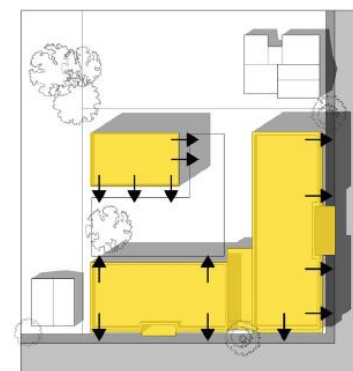
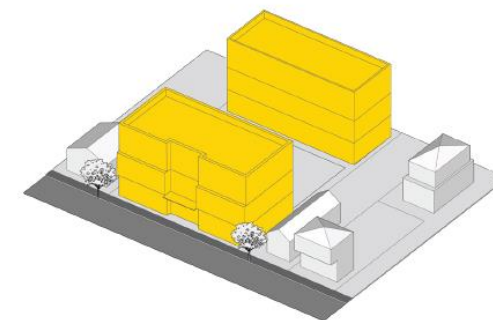
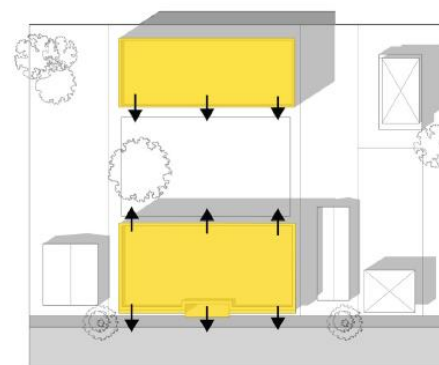
- G1.** ••• Prepare a contextual analysis that depicts how the development proposal positively contributes to the surrounding area. Contextual analysis should include the following:

Ground floor interface and frontage

- G21.** ••• Development must be designed to positively contribute to the adjacent street's amenity, vibrancy, and safety.
- G22.** ••• Give a sense of human scale at the publicly occupied edges of buildings by using appropriate materials, detailing and modulation.

If a building contains features comparable in size with the human figure, these features are considered to be at a human scale.

- G23.** ••• Ensure the site layout orientates residential units to face either the public space, the street, or communal open space of the development to avoid side facing buildings.



- G50.** ••• For large developments, avoid concentrating garages at the internal street frontage or repetition of garage doors along the internal street frontage.

Façades with doors and windows should be the dominant feature along streets. Where vehicle access from the rear is not possible, garages should be located to the side of the dwellings, recessed behind the front building façade.



Carbon reduction - site

- G73.** •• Developments should provide for a range of sustainable travel modes by:
- » Provide charging capability for electric cars if carparking is proposed.
 - » Designing spaces to facilitate easy access to and from nearby public transport stops or mass transit stops.
 - » Providing parking areas and facilities for transport options other than private cars that are large enough to service the type and scale of the development.
 - » Providing end of journey facilities and bike storage in developments.

- G79.** •• Consider the dimensional proportions of communal open space to create a feeling of intimacy and enclosure balanced with openness, flexibility of use and maximum sunlight access.



- G109.** ••• Design multi-unit housing to achieve a sense of individual identity and address for each dwelling.

For architectural coherence in a multi-unit development, consider the following design techniques:

- *Group units into modules that relate to the dimensions of buildings typical for the neighbourhood.*

Light and Sun

- G118.** ••• Locate and design the living areas and bedrooms of individual residential units to achieve direct natural lighting and optimise sun exposure and views.
- G119.** ••• Orientate and position all dwellings and their windows to receive the maximum possible hours of midwinter sun into at least one main living room.

Accessibility

- G132.** ••• Ensure developments are inclusive of people of all ages and abilities, including the ageing population, children and pregnant women or parents with infants and toddlers.

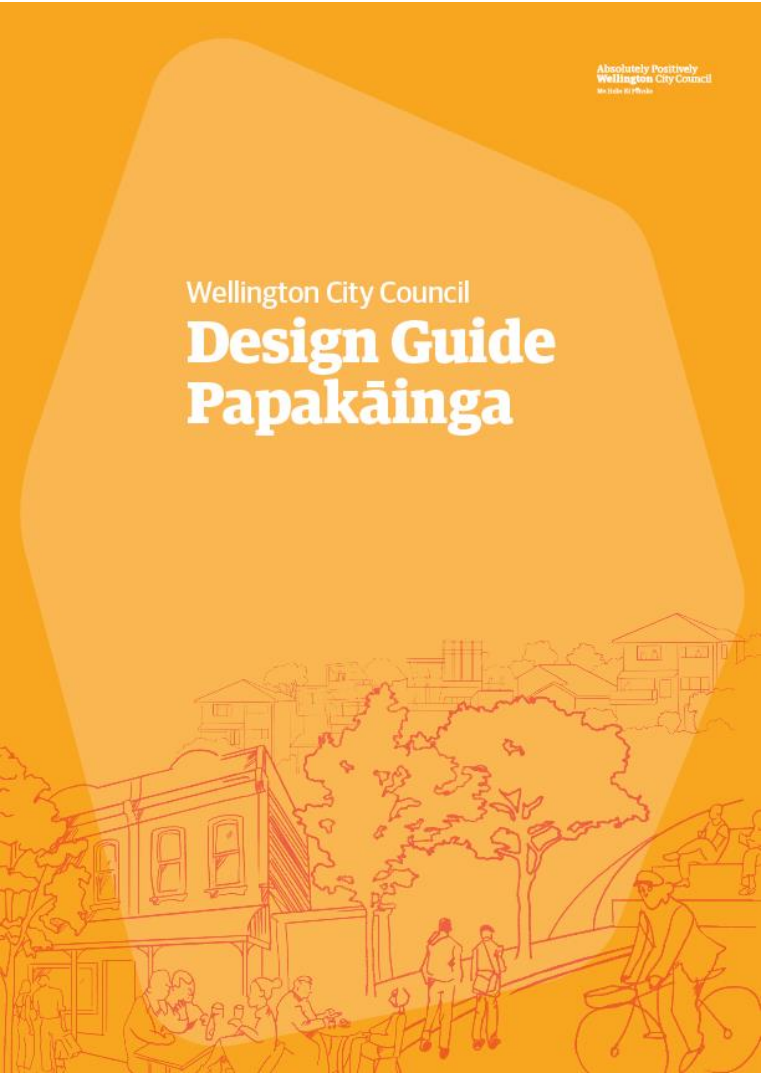
City outcomes contribution

G137. ••• The scale of larger commercial, residential, or mixed-use developments has a direct bearing on the quality and level of amenity offered by the city’s public environment, and the public’s enjoyment of it. To address this, five factors, collectively referred to as **City Outcomes Contribution**, will be considered in assessing the quality of larger scale development - provision of public space, sustainability, accessibility, provision of assisted housing, and urban design quality. The aim of this assessment is to incentivise “density done well” by giving density-related development concessions in return for publicly beneficial outcomes. The following tables set out the development types that trigger consideration of **City Outcomes Contribution**, including associated numeric thresholds to be satisfied and the outcomes sought.

Table 1: City Centre Zone - Thresholds for any under or over height development comprising 50 or more units or any comprehensive development

Threshold	Points required	Comments
Maximum height limit		
Any development that exceeds the maximum height limit by 10% - 24%	20	Developments that are within the 10% height threshold do not need to meet the outcomes, however they need to satisfy the relevant guidelines in this guide.
Any development that exceeds the maximum height limit by 25% - 49%	30	-
Any development that exceeds the maximum height limit by 50% or more	40	-
Minimum height limit		
Any development below the minimum height limit by 25% - 49%	30	Developments below the 25% minimum height threshold do not need to meet the outcomes, however they need to satisfy the relevant guidelines in this guide.
Any development below the minimum height limit by 50%	40	





Papakāinga Design Guide

This document aims to provide a guide to support the aspirations of mana whenua and Māori, more generally around papakāinga in a Wellington context. Given Wellington’s urban setting, new models of papakāinga might be sought that draw on higher density housing typologies such as terraced housing or apartment blocks (often named vertical papakāinga). This guide aims to support consent applications across the spectrum of low, medium and high-density housing typologies.

What is a ‘papakāinga’?

The ‘papa’ in papakāinga’ refers to Papatūānuku earth mother, and ‘kāinga’ is often translated as home, or when brought together, papakāinga can be defined as a village or a communal living environment. Papakāinga has traditionally referred to a cluster of dwellings occupied by a particular kinship/whānau/hapū group and located on ancestral whenua.

Urban structure

- G12. Where a pōwhiri space is required, it should be integrated into the site layout and the surrounding context to enable pōwhiri to happen without disruption from the urban setting, such as vehicle noise from busy streets.



Te Aro Papakāinga, Dwell Housing Trust/Te Aro Pā Whenua Trust – Clear entrances to welcome inhabitants and visitors alike with each dwelling having a connection to the street.
(Roger Walker Architecture and Design Ltd, 2016)

Some examples



(photos by Crystal Olin)

Hīnaki Street Apartments (Hīnaki neighbourhood, Tāmaki, Auckland)

This neighbourhood is 4 minutes' drive from Panmure Town Centre, and 3 minutes' drive from Glen Innes Town Centre. It borders Ruapotaka School and is a 12-minute walk to the Tāmaki Estuary. When it is fully built, it will provide 300+ new homes, along with new and upgraded parks, playgrounds and infrastructure. Hīnaki Street Apartments provide 75 1-, 2- and 3-bedroom homes, 61 KiwiBuild and 14 open market. They are developed by NZ Living / Simplicity.



Some examples

FINANCIAL COMPARISON

CATEGORY	OUR MODEL	TYPICAL SECTOR
Build rate on GFA	\$2,400/m2	\$3,400/m2
Design costs	3%	9%
Finance, Legal & Sales	3%	9%
Contingency	0%	3%
TOTAL COSTS (100 homes)	\$45m	\$65m
Rent Return Year 1	5.5%	3.8%



Crystal Olin)

Town Centre. It borders new homes, along with new room homes, 61 KiwiBuild and

www.NZLiving.net (SOURCE: Simplicity, at Affordable Housing & Investment Summit 2022)



Hi
This
Rua
and
14 open market. They are developed by NZ Living / Simplicity.

Some examples



(renderings by TOA Architects: <https://toa.net.nz/work/mahitahi-kainga/>)

Mahitahi Kāinga Trust – Te Kōtukutuku Papakāinga (Otago, Auckland)

A social housing project consisting of 41 single bed apartments, Whanau apartment and Whare Manaaki (communal gathering space, plus 3 office/consult spaces). Common space is clustered together in a central landscaped courtyard to encourage interaction and connection between residents. The project was developed through a co-design process and used a guiding narrative to keep the project true to its values and embed the stories gifted to the project into the fabric of the buildings.



Some examples



Te Kāhui
Whaihanga
New Zealand
Institute of
Architects

Explore Connect About us What's on Awards Shop 0

2022 Auckland Architecture Awards Winner

Kōtukutuku Kāinga

The inspirational narratives of the great ancestor Taramainuku, the Manukau Harbour and two waka have, in this Ōtara kāinga, manifested in two broad embracing arms connected by a generous courtyard at ground level. The two waka Tau Ihu or prow carvings are here detached and grounded to become pou forming a gateway anchoring the frontage and place. A Whare Manaaki and community garden sit alongside, 'steading the waka', while offering a trusted meeting space and broader social facilities for inhabitants and the community. This project rises to the challenge of securing a place for a community sector more accustomed to disparity. The all-embracing roof of the apartments intersects with the tau ihu or pou, yet does not touch them, leaving intact their defiant gesture as a key identifier and cultural statement for this project's inhabitants.



(renderings by TOA Architects: <https://toa.net.nz/work/mahitahi-kainga/>)

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Some examples



(photos from TUD website: <https://www.theurbandevolver.com/articles/tud-awards-winner-development-of-the-year-medium-density-residential>)

Breese Street by Milieu (Brunswick, VIC, AUS)

A collaboration between local architects DKO and Breathe Architecture, this project is designed to foster community, strengthen connects and provide better ways of living in an urban area. The building's sawtooth roof architecturally responds to the suburb's industrial heritage, while its orientation and façade optimises thermal efficiency and delivers dual aspects to most homes, facilitating cross-flow ventilation and reduced energy consumption. The project consists of 59 apartments across two buildings, creating two cores and a maximum of five homes per floor. With a 7.9 NatHERS star rating, no fossil fuels are created or consumed at Breese Street, and the energy supplied throughout is 100 per cent sustainably sourced via a combination of wholesale GreenPower purchasing and a 30-kilowatt PV solar panel system.



Some examples

- 📌 **Houses Awards**
2021 Apartment or Unit (Shortlisted)
- 📌 **Houses Awards**
2021 Sustainability (Shortlisted)
- 📌 **VIC Architecture Awards**
2021 Sustainability (Shortlisted)
- 📌 **The Urban Developer Awards**
2021 Excellence in Sustainability (Shortlisted)
- 📌 **The Urban Developer Awards**
2021 Development of the Year — Medium Density Residential (Shortlisted)
- 📌 **INDE Awards**
2021 Multi Residential (Honourable Mention)
- 📌 **Sustainability Awards**
2021 Multi Residential



<https://www.urbandeveloper.com/articles/tud-awards-winner-development-of-the-year-medium-density-residential/>

community, strengthen connects and provide better
cultural heritage, while its orientation and façade
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Some examples

Swanston Street; Melbourne, Australia



Location: Downtown CBD, City of Melbourne, Australia

Population: 4.4 million

Length: 1200 m–10 blocks

Right-of-Way: 30 m

Context: Mixed-Use (Office/Commercial/Residential) Main Street

Cost: 25.6 million AUD (18.8 million USD) for design and construction of phases 1 and 2

Funding: Public

Max. Speed: 10 km/h

Overview

Swanston Street is one of the main north-south streets in the city of Melbourne, lined on either side with a number of iconic landmarks.

Once a very congested and polluted street, it is today an example of pedestrian-oriented and transit-priority design.



Photo: Top: City of Melbourne and Bottom: Douglass Hill

Streets
Avenues and Boulevards
Transit Streets

Goals

- Strengthen the identity of the city and enhance user experience and access for shoppers, visitors, workers, cyclists, and transit users.
- Create more attractive, democratic, and safe public spaces.
- Provide spaces where people can gather and meet.
- Provide spaces for art and events.

Key Successes

Providing an improved retail environment.

Providing an efficient, equitable, and comfortable public transport experience.

High-quality streetscape design, which reflects the unique characteristics of the city.

Newly constructed tram stops brought in a shared zone, changing cyclist, commuter, and pedestrian behavior.

In an innovative outreach strategy, comedians were engaged to work with users to understand the new spatial arrangement and the changed traffic conditions.

Key Elements

Increased sidewalk width.

Improved legibility of the street.

Dedicated cycle lanes.

Raised tram platforms to allow universal access.

Removal of taxi and vehicle access at all times.

Service, delivery, and emergency vehicle access maintained.

High-quality finishes, including bluestone and granite paving, custom designed lighting, furniture, and signature planting.

Transit stops located along public destinations where possible, such as City Square and the State Library.

Lessons Learned

Community engagement throughout the project ensured information sharing and engagement with the community throughout design development. A full-time community liaison officer kept local retailers and relevant stakeholders informed and dealt with issues as they emerged throughout the construction period.

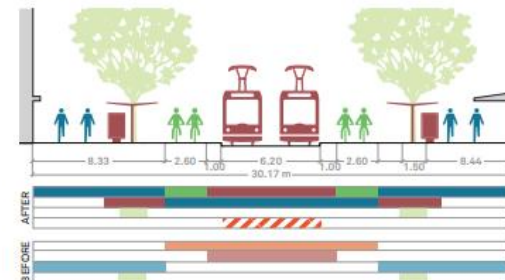
Involvement

Public Agencies
City of Melbourne, Yarra Trams, VicRoads, Victoria Police, Department of Transport, Planning and Local Infrastructure

Private Group and Partnerships
Australian Industry Group, Australian Retail Association

Citizen Associations and Unions
Bicycle Victoria, Transport Workers Union

Designers and Engineers
City of Melbourne



Project Timeline (Phase 1 and 2)

June 2009–June 2012 (3 Years)



Evaluation

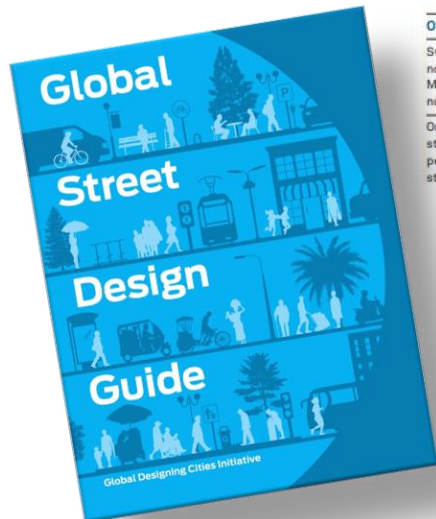
+24%
Increase in pedestrian volumes (2010–2018)

+5%
Increase in retail space (2010–2018)

GLOBAL DESIGNING CITIES INITIATIVE



CASE STUDY



Some examples



(photos by Crystal Olin, 2014)

Hammarby Sjöstad (Stockholm, Sweden)

Hammarby Sjöstad is an ambitious brownfield development spanning 160 hectares, built between 1994-2020. Most of the buildings are located around Lake Hammarby, an area previously known as the "Lugnet" industrial park. The development is comprised of 12,700 apartments and a multitude of restaurants, cafes and shops within a walkable environment. Due to its size and geographical location in Stockholm, its designers needed to supply a variety of social facilities—including commercial streets, schools and health care facilities – within the development. It boasts a high environmental profile, aiming to spearhead sustainable city-planning; it features the “Envac” system that set a global standard for waste and recycling collection. During the expansion on the Stockholm metro, one of the new stations will be built in Hammarby Sjöstad.



Thank you!

Questions?

(Mt Victoria Lookout, Wellington – photo supplied by Wellington City Council)



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