# **URBAN DESIGN TOOLKIT** A VISION FOR THE WELLINGTON REGION









Hāpaitia te ara tika, pūmau ai te rangatiratanga mo ngā uri whakatipu.

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# **1.0** What this toolkit does

The Urban Design Toolkit delivers on a range of important benefits, including social wellbeing, environmental health, economic vibrancy, community connection and climate resilience. This responds to the challenge of climate change and a resource-constrained future, where we need to design our urban areas to be more resilient and sustainable while creating the foundations for strong communities.

Good urban design will be critical to reducing transport emissions in the region through reducing our reliance on private vehicles as it can make our communities more walkable – so that people are able to access most of the things and services they need without needing to own a car. A better designed region can also reduce the burden of infrastructure costs on our communities by using our existing networks more efficiently.

Part 2 of the Toolkit provides process guidance and possible interventions for developing sustainable future communities. It focuses on the application of six place pillars, or key principles for urban design, which provide a holistic framework of the key qualities that contribute to the creation of more liveable and sustainable communities and that make a place a community.

Part 3 offers a range of international and national exemplars that inspire sustainable urban design at different scales within the Wellington Region.

The Urban Design Toolkit:

- Supports reduced transport emissions by demonstrating an urban design vision for the region
- Provides an accessible toolbox for non-experts to help support communities, local government, iwi and hapū, developers and other stakeholders to influence better outcomes for their community
- Demonstrates best practice that can be applied to a range of contexts
- Supports regional and district policies such as the Regional Policy Statement and district plans with practical guidance

Ka-tipu, toitū te whenua.





The Commons, Brunswick, Melbourne, Australia (Nightingale Housing)



## Designing communities fit for the future

2.0

Our regional communities of the future will be shaped by a range of dynamics, including population growth and associated infrastructure needs, climate impacts, and energy and resource constraints. While we cannot accurately project the future, we can be sure that it will not be the same as the immediate past. What is certain is that our urban areas, where about 87 percent of New Zealanders live, will need to make reduced resource and energy demands and be more integrated with ecological systems to be resilient and future-fit.

Future communities will require future-focused and ecologically sound design and decision-making, laying the groundwork for intergenerational waiora/wellbeing, thriving local economies, urban connectivity and human and environmental resilience.

This section outlines where development should take place, before describing what good development looks like. This is achieved by applying the six place pillars to four urban development scenarios at different scales: single site, neighbourhood/ street, community precinct and local centre.





## Where development should go

The elements of good site selection

Identifying strategic locations for development is essential for creating future communities that are resilient and sustainable. See the diagram below for some key considerations for developers and territorial authorities when evaluating and selecting future development sites.

### Mana Whenua **Relationships**



Resilience to natural hazards including climate change (e.g. site location not subject to flooding, landslides and coastal inundation) and consider potential seismic impacts

## **Guiding Place Pillars**

Key principles for integrated urban design

We have developed these place pillars informed by regional, national and international policy, planning and design practice. They provide the foundational elements for the creation of more liveable, equitable and sustainable communities, while addressing climate, resilience and affordability issues.



Future communities are designed around walkability (being able to access most of the things in everyday life by walking, cycling or a short trip by public transport). This allows people to connect to the places, people, localities, events and communities that are important to them and helps create vibrant, peoplefriendly neighbourhoods.

Our neighbourhoods, towns and cities of the future will need to be resilient in the face of a changing climate and utilise less energy and resources. Sustainable urban design will help deliver on the reduction of resource and energy use and greenhouse gas emissions, as well as the enhancement and care of nature through watersensitive urban design and regenerative design.

Promoting mixed-use development (e.g., retail, business and light industrial mixed and combined with residential) supports a diversity of activities within a compact area, supporting a vibrant and diverse local economy and socially connected community.

Future urban communities are designed in a way that protects, restores and enhances the natural environment. This will enable people to reconnect with nature in the places they live and work, and create more resilience in our urban spaces. For example, cooling and water-regulating functions of trees, water regulating functions of wetlands and biodiversity enhancing effect of green corridors.

At the heart of making a well-functioning society are communities in which people's social, cultural and economic needs are met. Good urban design can help create public safety, a sense of connection to place and community cohesion. It can also meaningfully contribute to affordability and quality of life.



**6 PA TAURIKURA:** Expressive Place, Character and Identity

Each place is unique and has its own character and features. Celebrating place is a way of acknowledging these special aspects that make one place distinct from the next. Sense of place is supported by quality built environment, architecture, streetscape, public realm and open-space as well as important relationships to nature.

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## What future-fit communities look like

Single Site // Neighbourhood Street // Community Precinct // Local Centre

The Toolkit presents four urban development scenarios to envision the possibilities of future place: a single site, a neighbourhood / street, a community precinct and finally a local centre.

These show ways we can renew and improve existing urban environments at a range of scales.

The diagram below shows how the place pillars inform the design of future communities,

to help ensure that they are resilient, and they protect and enhance nature and provide for social connection and cultural and economic vibrancy.





Redeveloping a typical suburban site

**BEFORE:** 

proposed Density: 20 - 40 dwellings per hectare

NOW:





### NATIVE PLANTING

MAXIMISE OPPORTUNITIES TO CREATE ECOLOGICALLY DIVERSE GREENSPACE PROVIDING HABITAT, SHADE AND WEATHER PROTECTION, USING ECO-SOURCED SPECIES APPROPRIATE TO THE AREA

reduces the environmental impacts of stormwater, protects against flooding, can improve water quality in nearby waterbodies and eases pressure on



**Possible interventions** 



**1\_Ngā haerenga:** 



2\_Pito Mata: **Resilient Place** 

Journeys of Place

- 01\_Bike share facilties to promote active transport for local trips and to provide health and social benefits
- 02 Attractive pathways and connections to neighbours / local amenities, encouraging accessibility, walkability and participation
- 03\_Carpooling/sharing facilities to minimise private car ownership, reduce vehicles on the road and provide affordable, convenient ways of utilising a common collection of vehicles
- 04\_Universally accessible design, supporting inclusivity and equitable movement with ease and circulation designed for all people

- 01\_Prioritisation of natural, renewable and low-carbon materials for building and construction to lower the environmental impact and carbon footprint of construction
- 02\_Energy efficient design including triple glazing, insulation, solar orientation and balanced ventilation
- 03\_Centralised heating/cooling facilites to maximise energy efficiency
- 04\_Grey water reuse for garden irrigation, toilet flushing and laundry
- 05\_Shared composting facitilies to reduce organic waste going to landfill and increase garden yields
- 06\_Water-sensitive urban design, such as swales, rain gardens and use of permeable surfaces and natural processes to reduce runoff, improve water quality and provide greenspace
- 07\_Renewable energy generation, including solar panels for heating purposes, collective energy storage for surplus



3 Puna Waiora: Vibrant Local Economies

- 01\_Bookable multi-purpose space to encourage residents to participate and share in a variety of hobbies / activities / events / local services
- 02\_Common resources comprised of gardens, harvesting and preserving kai, shared vehicles and bikes and shared facilities
- 03\_Dual residential/retail or co-working spaces to provide micro-enterprises / an additional income or amenity for residents without the need to travel
- 04 Site recycling station for households to reduce waste and encourage a collective behaviourial shift



4\_ Oranga Taiao: Nature in Place

- 01\_Restoring original planting, planting and growing native and local species of plants, to maximise indigenous biodiversity and seasonal benefits for flora and fauna
- 02\_Green infrastructure, including green roofs and green walls to improve habitats, biodiversity, temperature regulation, carbon sequestration, natural watercyles and downstream water quality
- 03\_Productive vegetation that provides food and also benefits bird and insect populations



5\_Kāinga Tipu: Healthy People and *Communities* 

- **01\_Common plaza** for socialising and gathering together
- 02\_Shared multipurpose room for community gatherings, occasions and celebrations
- 03\_Diversity of housing options/ typologies to grow social and cultural diversity, and support affordability
- 04\_Spaces for excercise and outdoor activity including the use of shared equipment and facitilies
- 05\_Amenities that integrate cultural practices such as mara kai [food production] and wānanga [education]
- 06\_Integration of crime prevention through environmental design such as the use of lighting, sightlines and activity to create safe environments





### 6 Pa Taurikura:

Expressive Place, Character and Identity

- 01\_Well-considered relationship to neighbourhood that is sensitive to existing and future environments, including heights, setbacks, outlook, privacy and materials
- 02\_Enhancement of streetscapes and public spaces through design principles such as streetfacing windows and minimising full-height front fencing
- 03\_Celebration and preservation of existing qualities of **place**, such as architectural and environmental qualities, including trees, to enhance aspects of place
- 04\_Quality architectural form that is harmonious and creates an unique, attractive environment complementary to its natural and built context



**Examples of sustainable urban design** 





2\_Pito Mata:

**Resilient Place** 

3\_Puna Waiora:

Journeys of Place

Vibrant Local Economies

### PLACE PILLARS

Merelbeke is a development that is centred around spacious grounds and facilites designed to create an active and sustainable life for families. The social commons demonstrates this ethos, with diverse and open facilites that interact with a nearby garden and courtyard.

Toiora High Street features townhouses centred around a large communal garden with consolidated on-site parking. Some common parking is provided, including EV chargers. The shared residents facilities also include multi-use room, meeting room, office, guest accomodation, workshop and garden shed.







The main common area at 26 Aroha, a Mt Albert cohousing development, is integrated with shared services such as laundry facilities, solar energy generation and waste disposal. This ensures that basic services are used most efficiently and are accessible to all residents.



UKO Glebe is a coliving facility that features a flexible commercial space on the ground floor that can be utilised for retail, hospitality or co-working. This area is integrated with the dwellings and communal spaces in the building so that they function as a whole and amenity benefits are maximised.





The Bryggervangen "Climate District" project involves integrating stormwater retention with communal green spaces on the site. This sees a combination of raingardens, tanks and piping systems minimise flood risks and enures that stormwater efficiency is maximised along with the health of greenspaces.

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Toiora High Street (2023) Dunedin



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4\_ Oranga Taiao: Nature in Place



5\_Kāinga Tipu: Healthy People, Communities and Place



6 Pa Taurikura Expressive Place, Character and Identity





Cohaus is a community of people living in a twenty-unit housing development in Grey Lynn. A shared central garden is the focus of the development including fruiting trees, vegetables and native species, a common room, storage spaces, laundry and bike parking.



**Aotearoa Placemaking** 

## **COHAUS, GREY LYNN, AUCKLAND**

Cohaus is a medium-density residential development in Grey Lynn, Auckland, comprised of 20 dwellings ranging from apartments to terraced townhouses. It is an cohesive community on a single site that is wellintegrated with the surrounding environment.



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use.

Maximised solar gain through building and landscape design and and stormwater management through water sensitive urban design.

Cohaus includes on-site bike-storage and a shared electric car system, maximising convience and minimising private vehicle

An on-site studio provides a communal working environment for residents.

The living environments centre around a common garden area that has shared productive gardens and an orchard.

Co-haus encourages social participation through its shared spaces, creating a cohesive community.

The architectural form is sensitive to the surrounding suburban environment. The development kept an existing villa that was on the site, incorporating this home into the development.



## Single Site Scenario Who lives here?

"I thought moving to a lowmaintenance place would finally "Hi there, we are **Maggie RETIRED COUPLE** get my husband to relax, but and Bill Turner. We nope! Turns out he's signed up are a few years into our to lead the community garden! retirement after working Guess I won't be seeing him around much!" - Maggie in the health industry most of our lives." Maggie Bill "The street art is always changing. It is like having your own daily dose of culture outside your door! Though, there's this new sculpture down the road that's got me scratching my head." - Bill **OUR DAILY TIMELINE** 9am <u>12pm</u> The Turner's spend a few mornings in the week volunteering at the local They enjoy having lunch in the shared green space to watch the hustle and bustle library, where they can chat with the locals and of the community around them. find some good books.





"I still don't quite understand how solar panels work, but they seem to be bringing down the monthly power bill, so I can't complain! Plus, the house always feels nice and warm with lots of sunshine coming in." - Bill





## <u>4pm</u>

Bill heads off to the community garden. He wants to do some weeding and grab some fresh vegetables to prepare later for dinner.

<u>1pm</u>

At least once a week, the Turner's bus into the city to visit their grandkids for dinner.

### <u>8pm</u>

When they arrive home, the Turner's enjoy a gentle stroll around the neighbourhood to unwind and recap the day together often stopping to say quick hellos to neighbours.



# Single Site Scenario Who lives here?

**INTERGENERATIONAL FAMILY** 

Grandpa

'Talofa, we are the **Fiaola** Family: Grandma and and grandchildren Lani and

"Living next to a playground is like having a built-in babysitter! Keeping an eye on the kids? Easy peasy. Getting them to leave? Mission: Impossible!" - Sina



"When we have events as a whānau, it can be tough to get there by bike or bus. That's why having the option to hop into a car is unmatched! And bonus points for not having to feed it any fuel!" - Malo



## **OUR DAILY TIMELINE**



<u>7am</u>



<u>7:30am</u>

The Family enjoy having breakfast together in the morning before the day kicks off.

### Sina bikes to her job at the High School while the Grandparent's walk the kids to the school bus stop. Malo books a ride share to get to work

Grandma and Grandpa Fiaola meet the kids at the school bus stop and walk home together. The kids go play at the neighbourhood playground which the Grandparents can view through the lounge window.

<u>3:30pm</u>





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"I thought downsizing meant our social life would shrink, but booking the shared commons has been a game changer! Now we can still host family gatherings, just with a strict 'no sleepover' policy otherwise we would have the whole village staying!" - Grandma Fiaola



### <u>6:30pm</u>

The Family walk to the social commons area where they are put on a movie for some friends and the community.

### <u>8:30pm</u>

The Family wander home through the shared green space and settle down for the night.



# Single Site Scenario Who lives here?

**TEENAGER LIVING** WITH FAMILY

Aroha

"Kia ora, Ko Aroha tōku ingoa! I am 17 years old, living with my mama, papa and sister. I recently moved to Te Whanganui-a-tara from Ōtautahi for my Dad's job. I've been loving it so far!"

"Tu meke! I feel like I basically know the whole block! It is quite nice having familiar faces around, plus I definitely get some juicy gossip from some of my neighbours!" - Aroha



"I had to read up on how it was possible to harvest and reuse rain and greywater. Mīharo! What a cool initiative! It's like turning leftovers into something with purpose again!" - Aroha

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### HER DAILY TIMELINE



<u>7:45am</u>

school.

Aroha walks through the shared green space, filled

with native plantings, on her way to the bus stop for

<u>4pm</u>

the kids.

Once home from school,

Aroha heads to the shared

common space where she

Aroha has planned some

helps run a kids club. Today,

eco-awareness activities for

<u>6pm</u>

She quickly pops down from her family's apartment to grab some butter for her Mum from the local dairy. Luckily, it is located on the ground floor of her apartment.



"Looking out my window and seeing natives growing is so cool. There are even some rākau rongoā (medicinal plants) planted which Mum has been teaching me about!" - Aroha





<u>7:30pm</u>

She meets her new local friends in the shared green space where they sit and chat at their favorite picnic table

<u>9pm</u>

Aroha quickly does some homework beside her bedroom window, looking over the shared green space.



**Meeting key needs** 





2\_Pito Mata:

**Resilient Place** 

1 Ngā haerenga Journeys of Place

3\_Puna Waiora: Vibrant Local Economies

PLACE PILLARS



### SOCIAL INTERACTION OPPORTUNITIES

Helping out in the community garden, lending a hand at the local library, and just enjoying eating lunch in the shared garden has helped The Turners (retired couple) connect with many of their neighbours within their block.

The Fiaola Family spend a lot of time in the shared exercise area and playground. They love the social commons area, and often host movie nights, so the neighbourhood families can come to relax and mingle alongside! Aroha is on a friendly first-name basis with all her neighbours and the local shopkeepers, as she often sees them as she goes about her day! It helps her feel safe being able to recognise the people around her and be acknowledged.



### PLACE CONNECTIONS

The Turners feel like their block is so vibrant and attractive. They know they are home when they wander the block and see beautiful murals that various neighbours have helped to make and artistic sculptures scattered throughout the place.

The Fiaola Family often uses the shared commons to host family gatherings and play music together and dance. Neighbourhood kids usually like to join in to Sasa and Fa'ataupati learn more about the Samoan culture.

Aroha has a deep connection to nature she learnt this from her koro (grandfather) as he loved ngahere (forests). This connection is why she loves that her home is surrounded by native greenery, as it is a reminder of her koro.



## SUSTAINABLE PRACTICES

The Turners were intrigued by the energy efficient design of the block and how the block could generate its own renewable energy. They think the new technologies and innovations at home are wonderful. They are yet to feel cold in their home and rarely have to use the heat pump!

The Fiaola Family loves using the small fleet of electric vehicles available to the residents of their block. It means they can run errands and drop kids off at playdates without the car maintenance headaches.

Aroha was excited to learn that her neighbourhood has houses that capture rain and greywater, and that it is then reused in places like the garden, toilet and laundry!





5\_Kāinga Tipus Healthy People, Communities and Place



6 Pa Taurikura: Expressive Place, Character and Identity









Redeveloping a local neighbourhood and streetscape

**BEFORE**:

1 - H





Approximate Site Size: 2ha-5ha





















**Possible interventions** 



1\_Ngā haerenga: Journeys of Place

- Interventions
- 01\_Traffic calming measures, such as angled slow points and varied paving materials, to protect pedestrians
- 02\_Local amenity in the form of retail, hospitality and other local shops that enables shorter trips and use of active transport
- 03 Design of public transport with **local amenity** such as having bus stops near community hubs to enhance connectivity for longer distances
- 04\_Planted streets that make walking and cycling more enjoyable, provide shade and temperature regulation, protect pedestrians from vehicles and encourage safer vehicle speeds
- 05 Cycle lanes to promote safer transport outcomes and make cycling more attractive to residents and visitors of all ages
- 06\_Carpooling and bike sharing facilities to reduce private vehicle use
- 07\_Universally accessible design to support equitable access to mobility for all within the streetscape



2\_Pito Mata: **Resilient Place** 

01 Prioritisation of active transportation to reduce carbon emissions

### 02\_Electric car charging

- 03\_Stormwater management through the introduction of swales, raingardens and detention ponds reduces runoff and contamination of waterways. Rain tanks enable the reuse of water in houses and gardens
- 04\_Community compost garden to reduce landfill organic waste and increase garden yields
- **05\_Energy efficient design** to reduce energy demand
- 06\_Neighbourhood electricity generation and storage including district energy systems, shared batteries and solar panels, to support resilience



3\_Puna Waiora: Vibrant Local Economies

- 01\_Public spaces designed for markets and events that provide local commercial opportunities
- 02\_Micro amenity through commerical and mixed land uses that provide employment and economic stimulation
- 03 Dual residential/retail or coworking spaces to provide an additional income or amenity for residents
- 04\_Bookable multi-purpose buildings nested in developments and public spaces to encourage residents to participate and share in a variety of hobbies/activities/events/ local services



4\_ Oranga Taiao: Nature in Place

- 01\_Retaining existing vegetation and tree canopies to enhance resilience and urban biodiversity
- 02\_Water sensitive design including maximising permeable surfaces to improve stormwater and biodiversity impacts
- 03\_Planting that is appropriate to the local context to maximise indigenous biodiversity benefits and improve the quality of the urban environment
- 04\_Ecological networks and habitat corridors that connect streets, neighbourhoods and cities
- 05\_Berm planting with vegetation and community gardens (e.g., mara kai) and interventions such as insect hotels to provide amenity in addition to ecological value



5\_Kāinga Tipu: Healthy People and Communities

- 01\_Diversity of housing options and typologies to ensure social and cultural diversity, affordability and liveability for residents
- 02\_Movement and activity equipment for residents integrated into the streetscape to connect with each other and enhance their physical health
- 03\_Public and common spaces to provide flexible and temporary areas for collaboration and cultural sharing
- 04\_Spaces for neighbourhood art installations, including street sculptures and murals, to enhance opportunities for local expression





6\_Pa Taurikura: Expressive Place, Character and Identity

- **01\_Urban design** that responds to and complements the surrounding environment, including through material use, landscaping and architectural form
- 02\_Enhancing the quality of public **spaces** through considered use of building setbacks, street-front glazing, building orientation and minimising fencing through planting
- 03 Preservation of particular street features and native and street trees to enhance existing character
- 04 Varied architectural form that creates a visually interesting and diverse environment



**Examples of sustainable urban design** 



Benthemplein combines public space with stormwater management: Recreation areas are integrated into a stormwater system so that after heavy rainfall they operate as detention ponds. Flows into these areas also have a sculptural component through water features.



Nightingale 1 is a mixed-used development with apartments above ground floor commercial tenancies. This integrates with a public realm seating area that extends into the streetscape. Also included is a communal roofgarden on the top floor. The City Life Box was designed to bring plant life into the street scape. The architectural intervention allowed members of the public to either passively or actively engage with planter boxes through sitting and resting or gardening and cultivating the vegetables and flowers.

City Life Box (2014)

Copenhagen, Denmark



1\_Ngā haerenga:



2\_Pito Mata: 3\_F

Journeys of Place Resilient Place

**3\_Puna Waiora:** Vibrant Local Economies





The retrofitting of a suburban Parisian street with protected cycle lanes creates a hierarchy of movement that enhances the experience of cyclists and pedestrians. This is achieved through reconfiguring a wide roadway with adequate space for cyclists and berm planting for protection from vehicles.



Long Bay is a new suburb on Auckland's North Shore where recreational amenity infrastructure helps to unify elements of the streetscape, such as planting, and destinations of the wider suburb.





The Didsbury Art Trail connects Hobonsville Point's vibrant commercial areas with its many parks and providing an opportunity for many local artists to feature and share their work. Pictured is "Tree Cosy", by Alison Milne, which adds an expressive element to a treelined streetscape.





**Aotearoa Placemaking** 

## **TE PUNAWAI PAPAKĀINGA, WAINUIOMATA**

Mana Whenua Taranaki Whānui ki Te Upoko o Te Ika have led this papakāinga development, which provides for the potential of over 180 units. It shows how a new community can be created through dwelling and street design.



Upgrades to the streetscape make it a safe and welcoming environment for pedestrians.

1\_Ngā haerenga: Journeys of Place



Building systems have been utilised to reduce operating costs and maximise the efficiency of the construction process.





Māra kai (communal productive gardens) provide a focal point for the community.





5\_Kāinga Tipu: Healthy People, Communities and Place



6\_Pa Taurikura: Expressive Place, Character and Identity

A range of different typologies have been provided, including affordable and kaumatua (elder) housing. Development incoporates an existing kohanga reo (kindergarten).



The design of the homes and streetscapes have bespoke features, colour pallettes and design elements that link and connect back to the story of place and to the whakapapa of the family living in the home.













Who lives here?







"With my visual impairment, having a transport system I can trust makes all the difference. The bus stop is near my apartment and is well marked, making it easy to get to and

Once home, Alex takes Teddy for a quick walk around the neighbourhood, enjoying the wide paths separated from the cyclists/ scooters and pedestrian



Who lives here?



"I had a close encounter with a reversing car once, and ever since then, I am on high alert walking down the street. Luckily, my street's got fewer surprise vehicle exits!" - Sarah





"I thought moving away from my wider family would be really challenging as they supported me a lot. However, I am connecting with many other families in the area, and my neighbours have even offered a helping hand with childcare!" -Sarah



**OUR DAILY TIMELINE** 

<u>7:45am</u>

<u>8:30am</u>

Sarah then bikes home and walks to the local childcare Sarah and Emma jump on their bikes and use the protected cycle lanes to travel to the local primary centre on her street where she has picked up some school, where Sarah drops relief work. Emma off for the day.

<u>2:45pm</u> Sarah bikes to Emma's

school for school pick up. As they bike home, they take notice of the new street art being placed down their street.

"Mum sometimes lets me play on the playground at night because she says it will tire me out before bed. I once played on the playground till 10pm before Mum made me go to bed!" - Emma





### <u>5:30pm</u>

Sarah and Emma make a picnic dinner which they go eat at a table in the shared space. They make friends with another family who live across the road that have similar aged children and exchange phone numbers.

### <u>6:30pm</u>

Sarah and Emma have a play around on the public gym equipment along the exercise trail on their street. They then head home to settle down for the night.



Meeting key needs





2\_Pito Mata:

**Resilient Place** 

**1\_Ngā haerenga:** Journeys of Place **3\_Puna Waiora:** Vibrant Local Economies

PLACE PILLARS





### ACCESSIBLE SPACES

Though Alex has low vision, the street has been built to accommodate his needs. There are level entrances, a lift in his building, tactile indicators at crossings, green space to toilet Teddy, and cyclist free sidewalks. The list goes on.

Sarah appreciates the spacious sidewalks and fewer vehicle access points intersecting them. She also finds crossing the street easier because the street has traffic calming measures that help dirvers to slow down and prioritise pedestrians. Alex's low vision prevents him from driving, and Sarah does not have a car, but luckily, shops nearby provide easy access to food, and bus stops connect them to key areas of Wellington.

### SENSE OF SAFETY

Sarah likes that there is clear sight to the greenspace as the vegetation is kept low and open fencing is used. She feels like she can easily view out over the area, and similarly appreciates the neighbourly eyes on the street.

Alex's neighbour always keeps him in the loop with updates from the community noticeboard. It's nice knowing his neighbours check-in and think about him. The streetscape, greenspace and playground are properly lit up at night, meaning the residents feel safe to be outside for a walk around in the evenings.



### **COMMUNITY ACTIVITY, SUPPORT AND PARTICIPATION**

Sarah feels like she has her own personal support network surrounding her. With familiar faces and frequent smiles in her neighbourhood, and her workplace just down the road, she feels very supported. Alex has taken on a role in tending to the community garden. Through this, he's made numerous connections and some kind souls even offer to take Teddy for a stroll when he wants to relax.

Emma and Sarah love eating dinner in the shared green space. They have made a lot of local friends by doing this.





**5\_Kāinga Tipu:** Healthy People, Communities and Place



**6\_Pa Taurikura:** *Expressive Place, Character and Identity* 







NOW:

## **Community Precinct Scenario**

Development of a new community on a greenfield site

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**BEFORE :** 

Proposed Density: 30-60 dwellings per hectare









Prioritising active transport through making key streets safe, enjoyable and efficient for cyclists and pedestrians. This includes the use of planting, cycle lanes, wide footpaths, lighting, retail and hospitality and limiting private vehicle speeds and movement.





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**Possible interventions** 



**1\_Ngā haerenga:** Journeys of Place

- 01\_Pedestrian-priority streets Interventions through planting, cycle lanes, wide footpaths, lighting, active land uses and limiting private vehicle speeds and movement
  - **02\_Compact neighbourhoods** that encourage the use of active transport
  - 03 Integrating public transport with the public realm, including local amenity and public spaces, to enhance connectivity for longer distances and reduce car dependency
  - 04\_Connectivity through the **neighbourhood** by use of paths and parks that allows for active transport
  - 05\_Public bike parking and sharing facilites that are integrated with land uses and public transport
  - 06\_Carpooling and EV rental to provide transport flexibility and choice for residents
  - 07\_Universally accessible design to support equitable access to mobility for all within the streetscape



2\_Pito Mata: **Resilient Place** 

- 01\_Neighbourhood-level water sensitive design including stream naturalisation and restoration and the restoration of wetland ecosytems to mitigate flood risks
- 02\_Prioritisation of active transportation to reduce carbon emissions
- 03 Neighbourhood-wide stormwater management to be used to reduce runoff and the quality of water bodies
- 04\_Neighbourhood electricity generation and storage, including district energy systems, shared batteries and solar panels, to support resilience
- 05 Neighbourhood recycling station that integrates with wider waste-management system
- 06\_Electric car charging



3\_Puna Waiora: Vibrant Local Economies

- 01\_Mixed-use communities, including small-scale services, sustainable retail and food supply, to promote local commerce and amenity
- 02\_Vibrant ground floor uses to stimulate the local economy, provide local employment and activate the streetscape
- 03 Public spaces designed for markets and events that provide opportunities for commercial activities to be integrated with public spaces
- 04\_Flexible collaboration and coworking spaces to provide an additional income or amenity for residents



4\_ Oranga Taiao: Nature in Place

- 01\_Retaining existing vegetation and tree canopies to enhance resilience and urban biodiversity
- 02\_Restoration of aquatic, coastal, wetland and riparian ecosystems for their biodiversity, cultural and spiritual importance through site works programmes for nature improvements and replanting
- 03\_Planting that is appropriate to the local context to maximise indigenous biodiversity benefits and improve the quality of the urban environment
- 04\_Ecological networks and habitat corridors that connect streets, neighbourhoods and cities



5\_Kāinga Tipu: Healthy People and Communities

- 01\_Diversity of housing options/ typologies to foster a vibrant, inclusive neighbourhood
- 02\_Public and common spaces to provide flexible and temporary areas for collaboration and cultural sharing
- 03\_Pocket parks that are vibrant, safe and promote connection between people, including māra hūpara (playgrounds)
- 04\_A network of community gardens for residents to work together, provide kai and gain a sense of belonging
- 05\_Provision of childcare and social services to improve neighbourhood amenity and outcomes for families and tamariki
- 06\_Spaces for art installations, including sculpture walks and a range of public art, including murals, to enhance opportunities for local expression
- 07\_Public spaces for exercise for residents to connect and enhance their physical health

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6\_Pa Taurikura: Expressive Place, Character and Identity

- **01\_Urban design** that creates a distinct neighbourhood, including through material use, landscaping and architectural form
- 02 A street and open space network that creates a sense of place through enabling connectivity to public spaces and privacy to residences
- 03\_Vibrant public spaces through environment and peoplefocused street and plaza design, providing flexible and temporary areas for collaboration and cultural sharing
- 04\_Designed landscapes that help people connect to sites of cultural, historical and natural significance
- 05\_Varied architectural form that creates a visually interesting and diverse environment



**Examples of sustainable urban design** 



The solar settlement spans 11,000m<sup>2</sup> with 59 homes and 9 penthouses. With innovative & sustainable living, these energyefficient residences generate surplus energy. Operating with efficient car-sharing, it annually produces 420,000 kWh of solar power, saving 200,000 litres of oil and 500 tonnes of CO<sub>2</sub>.



Västra Hamnen excels in watersensitive design, fostering a sustainable urban landscape. Utilizing green roofs, permeable surfaces, and vegetation, it efficiently manages stormwater, with canals and ponds purifying rainwater. Well-planned parks act as natural reservoirs, averting floods and nurturing an ecobalanced cityscape.

Incredible Edible Todmorden, England

Todmorden's urban farming "Incredible Edible" initiative transformed the town, cultivating public spaces for growing food. Residents planted fruits, vegetables, and herbs, fostering self-sufficiency, community engagement, and local food education, rethinking urban spaces and promoting a more sustainable community.



Journeys of Place

2\_Pito Mata:

**Resilient Place** 

3\_Puna Waiora: Vibrant Local Economies

### PLACE PILLARS

The B:Hive project provides a dynamic co-working space that sparks collaboration, innovation, and cost-effective solutions for businesses. It cultivates a supportive community, reduces isolation, and boosts productivity, making it an ideal hub for professionals seeking an engaging workspace.







Superkilen park





5\_Kāinga Tipu: Healthy People, Communities and Place



6\_Pa Taurikura: Expressive Place, Character and Identity

Mana takata and manaakitaka (a



Superkilen Park in Copenhagen's Nørrebro district celebrates diversity with an innovative design merging 60+ cultures. It's a hub for socializing, leisure, and cultural appreciation, revitalizing the area, drawing global visitors, sports and showcasing how urban spaces can energize communities while embracing diversity and creativity.





**Aotearoa Placemaking** 

## PĀ REO, TE WĀNANGA O RAUKAWA, ŌTAKI

Pā Reo is the new campus for Te Wānanga o Raukawa. Since 1981, the Wānanga has offered education, training and cultural learning with a Māori culture and values lens. Pā Reo is an example of creating a sense of place with a resilient, long-term aspiration for building sustainable community precincts.



The campus creates a revitalised entranceway and pedestrian paths that connect to Ōtaki Town Centre.

1\_Ngā haerenga: Journeys of Place



It is designed and built to become a fully certified Living Building, one of only 30 in the world. The design is resilient to stormwater and flooding.



2\_Pito Mata:

The project is a a modern wananga environment that supports the efforts of higher learning devoted to the world of Mātauranga Māori.





4\_ Oranga Taiao: Nature in Place

Rongoā planting, alongside fruiting and other edible species, are planted around the wananga. Existing vegetation was protected and enhanced.



The provision of diverse facilities, such as basketball courts and collective study areas, promote a sense of community for wananga faculty and alumni.

5\_Kāinga Tipu: Healthy People, Communities and Place



The use of landscaping and architectural motifs give a sense of place that is unique to Māori and to the Ōtaki area.

6\_Pa Taurikura: Expressive Place, Character and Identity











Who lives here?



"With all these new apartments sprouting up, business is booming! I might need to expand my staff! Who knows, maybe my next employee will be a new resident!" - Wiremu



"Surprisingly, we've become evening stroll enthusiasts. It's like we're on a mission to uncover the latest street art masterpiece every night. Plus, it's a bonus that we're getting fitter!" - Matt



**OUR DAILY TIMELINE** 



<u>8:30am</u>

Wiremu makes the short walk to his store where he begins opening for the day.

Matt and Wiremu meet for lunch in the park and sit by the waterway that runs through their block.





"I love having a good yarn at the local fish and chip shop or grocer, though it can be a struggle when I'm in a hurry!" - Matt

### <u>6:30pm</u>

They attend a local farmers market being held at the community centre where Wiremu makes friends with a potential new supplier of honey for his store.



On their walk home from the farmers market, they wander past some of the community artworks, one of which Matt helped create.



Who lives here?











<u>5:30pm</u>

The Family jump on their bikes and detour through the bushlands not far from their house to get to the local park for their BBQ dinner.

<u>6pm</u>

The Families use the public BBQ facilities under a pavilion to cook while the kids play in the park.



**Meeting key needs** 



Journeys of Place



2\_Pito Mata: 3\_Puna Waiora: Resilient Place Vibrant Local

PLACE PILLARS

Vibrant Local Economies

# CSC Sees

## **ECONOMIC AND EMPLOYMENT OPPORTUNITIES**

As a local business owner, Wiremu has noticed that with the increase in residential population, the daily foot traffic counts are excellent with, customers streaming through his business's door.

On Matt's walk to the co-working space near his home, he notices more shops popping up as more people are beginning to see the value in the local amenity neighbourhood and invest in the growing area.

The Andersons love shopping locally and supporting small businesses nearby. They also enjoy visiting the local market every Saturday morning and ordering groceries online, which get delivered by bike.



## **HEALTH AND FITNESS BENEFITS**

Being able to ditch the car and walk and bike places has done wonders for Olivia's state of mind. Who knew a little stroll could make such a big difference to her sense of well-being and life in general? After their busy days, Matt and Wiremu often feel like a little stroll around their lively neighbourhood, enjoying the vibrant atmosphere and inadvertently steps-per-day up whilst getting fitter. The Andersons love hopping on their bikes to cruise along the cycle lanes or pedal through the ngahere. It's their favourite way to soak up the fresh air, release energy, and stay in tip-top shape!



## **PROXIMITY TO AMENITIES**

Being close to the local shops and amenities has significantly enhanced Olivia's convenience and relaxation in life. The Andersons, and Matt and Wiremu, find that residing near amenities has helped them cut down on travel expenses. They've also heard that homes near shops are easier to resell. Going to the local shops often leads to great conversations with Matt's neighbours and the staff, as it seems like everyone gravitates there.

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**4\_ Oranga Taiao:** Nature in Place



**5\_Kāinga Tipu:** Healthy People, Communities and Place



**6\_Pa Taurikura:** *Expressive Place, Character and Identity* 





The Urban Design Toolkit | GREATER WELLINGTON 61







## **Local Centre Scenario**











THE CENTRE ENCOURAGING CREATIVITY AND INTERACTION. ART MAY EXPRESS MANA WHENUA PŪRĀKAU [MYTH] AND COMMUNITY CULTURE AND STORIES ENHANCING THE CONNECTIONS TO PLACE, CHARACTER AND CULTURE OF THE PRECINCT





### **CULTURAL AND INNOVATION CENTRE**

A cultural and innovation centre with parklands adjoining the heart of place provides a social and civic amenity for the wider area and region as well as a key anchor and destination for the local centre.







## **Local Centre Scenario**

Phases of urban renewal





2\_Pito Mata: 1\_Ngā haerenga: Journeys of Place Resilient Place 3\_Puna Waiora: Vibrant Local Economies

PLACE PILLARS

## PHASE 1 (0-15 YEARS)





4\_ Oranga Taiao: Nature in Place



5\_Kāinga Tipu: Healthy People, Communities and Place



6\_Pa Taurikura: Expressive Place. Character and Identity



CORRIDOR AND STREETS, PARKLANDS, POCKET AND LINEAR PARKS, SWALES AND COMMUNITY GARDENS

### WATER SENSITIVE **URBAN DESIGN**

GREEN SPACES ARE COORDINATED WITH THE EXISTING STORMWATER NETWORK TO SLOW RUNOFF AND IMPROVE RESILIENCE TO EXTREME WEATHER EVENTS

### TACTICAL URBANISM

PUBLIC ART AND CULTURAL STORY INSTALLATIONS INTRODUCED TO STREETS, BUILDINGS, PUBLIC REALM TO CELEBRATE PLACE IDENTITY

### CATALYST **PUBLIC REALM UPGRADES**

CREATING A HEART OF THE PRECINCT, MAIN CHARACTER STREETS, COMMUNITY GARDENS, ALLOWING A DYNAMIC URBAN ENVIRONMENT THAT CONTRIBUTES TO A SENSE OF PLACE


Phases of urban renewal

### PHASE 2 (15-25 YEARS)





**1\_Ngā haerenga:2\_**Journeys of PlaceRe

2\_Pito Mata: 3\_Puna Waiora: Resilient Place Vibrant Local Economies

PLACE PILLARS

# PHASE 3 (25+ YEARS)

70



Nature in Place



**5\_Kāinga Tipu:** Healthy People, Communities and Place



**6\_Pa Taurikura:** *Expressive Place, Character and Identity* 

#### GREEN SPACES REACH MATURITY

OFFERING BIODIVERSE ENVIRONMENTS TO LOCAL RESIDENTS AND VISITORS, MAINTENANCE IS FULLY PLANNED AND FUNDED

#### SUB-PRECINCTS TAKE SHAPE

LOTS ARE DEVELOPED AND THE LOCAL CENTRE NOW INCLUDES SUB-PRECINCTS, EACH WITH THEIR OWN NEIGHBOURHOOD FEEL AND DISTINCT SENSE OF PLACE

#### PERIPHERAL FRINGE DEVELOPMENT

WIDER INTENSIFICATION AND REDEVELOPMENT IS CATALYSED IN SURROUNDING NEIGHBOURHOODS, DUE TO PROXIMITY TO LOCAL CENTRE



**Possible interventions** 



1\_Ngā haerenga: Journeys of Place



2\_Pito Mata: **Resilient Place** 

01\_Transit-oriented development

- to enhance connectivity and reduce car dependency 02\_Integrated transport facilites
- and hubs that are coordinated with land uses and provide intermodal connectivity to allow a range of trips to be taken comfortably and easily
- **03 Alignment of movement** networks with density and landuses to create connectivity across a compact local centre and through individual neighbourhoods that allow for active transport
- 04\_Pedestrian-priority streets through planting, cycle lanes, wide footpaths, lighting, active land uses and limiting private vehicle speeds and movement
- 05\_EV rental and bike share to provide short-term transport flexibility and choice for residents
- 06\_Universally accessible design to support equitable access to mobility for all within the streetscape

- 01 Prioritisation of active and public transportation to reduce carbon emissions and congestion
- 02\_Catchment-level water sensitive design, including catchment-based approaches to stormwater management and habitat creation to reduce flood risks
- 03\_Stormwater management system to be used in larger public spaces and also by individual businesses and households at the neighbourhood level to reduce the environmental impacts of stormwater, protect against flooding, improve water quality in nearby waterbodies, and ease pressure on infrastructure
- 04\_Neighbourhood electricity generation and storage, including district energy systems, shared batteries and solar panels, to support resilience



3\_Puna Waiora: Vibrant Local Economies

- 01\_A mix of land uses across scales, including integrating essential amenities into individual communities, with larger elements, such as supermarkets, museums and schools serving the entire local centre
- 02\_Vibrant retail to stimulate the local economy, provide local employment and activate the streetscape
- 03\_A range of working spaces, including large offices, light industrial workshops and studios, and smaller collaboration spaces to create a strong economy that reduces commute times
- 04\_Local waste facilities including recycling facilties, tip-shops and links with wider waste systems to promote efficient management and reuse of waste



4\_ Oranga Taiao: Nature in Place

- 01\_Retaining existing vegetation and tree canopies to enhance resilience and urban biodiversity
- 02\_Planting that is appropriate to the local context to maximise indigenous biodiversity benefits and improve the quality of the urban environment
- 03 Integration of green infrastructure with built form, such as through biophilic design to reduce construction impacts and enhance biodiversity, providing a connection to nature throughout the local centre
- 04\_Ecological networks and habitat corridors implemented in streets and parks that connect the local centre to other areas and habitats
- 05 Restoration of aquatic, coastal, wetland and riparian ecosystems for their biodiversity, cultural and spiritual importance through site works programmes for nature improvements and replanting



5\_Kāinga Tipu: Healthy People, Communities and Place

- 01\_Diversity of housing options/ **typologies** to foster a vibrant, inclusive neighbourhood
- 02\_Pocket parks and streets that are active, safe and promote connection, including māra hūpara (playgrounds)
- 03\_Integration of schools, childcare and social services into the urban fabric to improve neighbourhood amenity and outcomes for families and tamariki
- 04\_Spaces for art installations, including sculpture walks and a range of public art, including murals, to enhance opportunities for local expression
- 05 A network of community gardens that provide a range of food and link to community and retail infrastructure, allowing residents to work together, provide kai and gain a sense of belonging
- 06\_Public spaces for excercise for residents to connect and





6\_Pa Taurikura: Expressive Place, Character and Identity

- 01\_A dense and vibrant urban **form** through use of mixed design principles to enhance local choice and support greater interactivity, and urban connectivity
- 02\_An interconnected network of public realm areas providing each neighbourhood with its own special public spaces for recreation and gathering
- 03\_A day and night place activation scheme to enliven streetscapes and public spaces through eventing, public art installations and tactical urbanism initiatives
- 04\_Designed landscapes that help people connect to sites of cultural, historical and natural significance, as well as provide a sense of place for the local centre
- **05 Varied architectural form** that creates visually interesting and diverse environments providing an identity for the area

enhance their physical health



**Examples of sustainable urban design** 



BuurtHubs (mobility hubs) are facilites where shared electric modes of transport (cycles, scooters or cars) are available to local residents. BuurtHubs have been contributing to reducing car reliance and ownership by offering free alternatives in green transportation.



This project aims to create a vibrant and innovative urban space with diverse businesses and a mixture of community, cultural and recreational spaces. Inclusive of afforable housing and student housing as well as new retail destinations, this project is also aiming to improve connectivity for pedestrians.

Kulturhuset Bergsjön is a cultural facility that includes a library, theatres and a citizens office. The building is embedded with the open space adjacent to the site and the use of green infrastructure contributes to a cohesive whole. The design is designed to be highly accessible for a diverse population.



1 Ngā haerenga

Journeys of Place



2\_Pito Mata: **Resilient Place** 

3\_Puna Waiora: Vibrant Local Economies

#### PLACE PILLARS

Putney Vale is managed by hundreds of local residents. These gardens serve the community by encouraging physical activity, providing open space, and bringing a sense of accomplishment in growing your own food. The gardens are popular with a waiting list that can last several years.

Hobsonville Point (2015)

Auckland, New Zealand

2



Little Streets project is making Melbourne CBD easier for people to walk, shop and dine through the use of indigenous vegetation. This will play a key role in stormwater management, cultural inclusivity and to create a sense of place with each street having its own design developed by a local company.

> Hobsonville Point is a mediumdensity masterplanned community that includes a range of townhouses, apartments and detached dwellings. These achieve a high urban quality due to a wide range of architectural expression within distinct guidelines. A mix of tenures are also accounted for.



Nature in Place



5\_Kāinga Tipu: Healthy People, Communities and Place



6 Pa Taurikura: Expressive Place, Character and Identity



Little Streets (2021) Melbourne, Australia



Who lives here?







"With our chaotic schedules and mismatched destinations, having reliable transport options was essential. So having the mobility hub nearby is perfect!" - Jake





<u>4pm</u>

After the flat's busy days, Raj takes over the kitchen and cooks a delicious dinner for everyone. He uses vegetables picked from the nearby community garden to help lower costs.

#### <u>8pm</u>

While Raj and Sophie begin to wind down for the night, Aria and Jake walk back to the mobility hub, where they catch a bus into town. Jake heads to a pub to perform with his band, and Aria heads to a friends to finish an assignment due the next day.



Who lives here?







"I used to dread hopping behind the wheel after a hectic shift. Now, I just kick back on the train or bus and begin to unwind with my music." - Emily





<u>6:30am</u>

Emily travels home on the bus after a hectic shift. She feels exhausted. <u>7am</u>

She walks from the bus stop to home as birds chirp and the sun rises. She stops at the local cafe and grabs a snack before bed.



**Meeting key needs** 





2\_Pito Mata:

**Resilient Place** 

Journeys of Place

**3\_Puna Waiora:** Vibrant Local Economies

PLACE PILLARS

.....



### **COMFORTABLE LIFESTYLE**

The Flat adores their cozy, innovative, modern abode. They appreciate its design style and the orientation for ample sunlight, which keeps the home warm and slashes their heating bills. The Flat and Emily enjoy not having too much extra to manage on the domestic front, not having a yard to maintain. It gives them more time for the things they enjoy. With Emily working shift work, she appreciates the well-lit streets when arriving at night, as well as the triple glazing and soundproofing her modern home offers her when she needs to sleep during the day.



# **MOBILITY CONVENIENCE**

Sophie's morning walk to work is a breeze. She loves the connected pedestrian-friendly journey, thanks to separate cycle lanes, activated streetscapes and wide sidewalks that prioritise her mobility as a walker. The Flat and Emily adore living near the mobility hub. With access to buses, trains, e-scooters, e-bikes, and electric cars, they have endless transport options to go wherever they please!

The Flat always has a blast e-biking into town for a fun night. They're grateful for the dedicated cycling lanes that make their journey smoother and safer.



# **DIVERSITY IN HOUSING TYPES**

Having a wide range of housing types and sizes in the area has allowed Emily to buy her own little studio apartment! And later on if she wants to stay in the centre she knows she can find something for her next phase of life too. She loves being a homeowner. The Flat was taken aback to discover a spacious terraced house to accommodate them all! They had doubted townhouses would have big enough bedrooms but were pleasantly surprised with the design layouts.

Emily and the Flat have a diverse mix of neighbours thanks to the variety of housing types available, creating a vibrant community.





**5\_Kāinga Tipu:** Healthy People, Communities and Place



**6\_Pa Taurikura:** *Expressive Place, Character and Identity* 





Mixed-use laneway





Urban neighbourhood life





Urban agriculture





Green street / spine





# **3.0** A vision of our future region

::::

The section provides inspiring examples of what can be achieved in terms of sustainable placemaking at a range of scales. These case studies are both international and local and exemplify compact, mixed-use urban places, connected and responsive to natural environments.

The case studies are at different scales (rural, suburban, local centre and urban centre) and have local place references for us to envision what these could look like if situated in the Wellington Region. The relationship between these different scales of urban form are shown in the drawing below.



Envisioning our future region

# Rural

Natural, agricultural and productive landscapes and communities.





Our rural environments are where food and fibre are produced, but they also provide urbandwellers with opportunities to experience nature in scenic reserves and regional parks as well as other outdoor activities. Their rural characteristics often mean they are places of strong community and local identity.







ŌTAKI

FEATHERSTON









MARTINBOROUGH

# **Helsinge Garden City**

Location	Area	Year	Status
Helsinge - Denmark	65 ha	2016-present	In progress



The Helsinge Garden City project is an ambitious and innovative urban development initiative that seeks to create a model of sustainable, livable, and community-oriented urban living. Located in the picturesque region of Helsinge,

Denmark, this project represents a bold step towards reimagining urban planning and design with a focus on environmental sustainability, quality of life, and social cohesion.



seamlessly integrate parks,

gardens, and natural areas

into its layout. This not only

provides residents with access

to recreational spaces but also

helps maintain a healthy urban

# Sustainable design

The project places a strong emphasis on sustainable design principles. It incorporates green building practices, renewable energy sources, and eco-friendly infrastructure. A central focus is to reduce the carbon footprint of the city through smart urban planning.

### **Green spaces**

One of the standout features of the Helsinge Garden City is its abundance of green spaces. The city is designed to

ecosystem.

#### Mixed land uses

The city is designed to promote mixed land uses, with residential areas, commercial spaces, and cultural hubs



coexisting in harmony. This design encourages a vibrant and walkable urban environment, reducing the need for excessive car use and promoting a sense of community.

# Accessibility

The Helsinge Garden City project prioritizes accessibility for all residents. There are wellplanned public transportation networks, bicycle lanes, and pedestrian-friendly streets. This promotes an inclusive and equitable urban environment.

### **Community engagement**

The project emphasizes community engagement in its planning and development. Residents are actively involved in decision-making processes, ensuring that the city meets their needs and preferences.

#### Smart technology

The Helsinge Garden City integrates smart technology to improve efficiency and enhance the quality of life for its residents. This includes smart energy management, waste disposal, and transportation systems.

### **Cultural and recreational** facilities

The city boasts a range of cultural and recreational facilities, including theaters, art galleries, sports complexes, and community centers. These amenities contribute to a rich cultural life and promote wellbeing among the residents.

#### Affordable housing

The project includes a variety of housing options





to accommodate different income levels, ensuring that the city remains inclusive and economically diverse.

# **Education and healthcare**

**Educational institutions** and healthcare facilities are integrated into the urban fabric, making it convenient for residents to access quality services.

# **Natural integration**

The Helsinge Garden City







project is mindful of its natural surroundings, preserving and enhancing the existing ecosystem. It embraces the beauty of the region and ensures minimal disruption to the environment. The Helsinge Garden City project sets a remarkable example of how urban planning can be approached with a holistic and sustainable

mindset. Its commitment to green spaces, community engagement, and sustainable living makes it a model for future urban developments, demonstrating that it's possible to create cities that are not only functional but also harmonious with the environment and designed for the well-being of their residents.

# Kereva Living Lab and Neighbourhood

Location	Area	Year Status
Kerava - Finland	80 ha	2019 - 2024 Complete



The City of Kerava requested the design of an urban framework and circularity toolkit. Their vision was to turn an overlooked 80-hectare area into a lively neighborhood, an exhibition hub, and a dynamic Living Lab, all in one.

This space will initially undergo a remarkable transformation as the venue for the 2024 annual Housing Fair, a prestigious national event that showcases the latest groundbreaking concepts, designs, and advancements in the housing sector. Subsequent to the Housing Fair, this area will evolve into a thriving community for around 2,000 residents, pioneering a neighborhood dedicated to the continuous exploration, testing, and implementation of circular economy principles.

# From greenfield to a Living Lab

Nestled between an eastern motorway and a western railway, the original site showcases a







picturesque blend of farmland, a flourishing forest, and the meandering Keravanjoki River. Drawing inspiration from these natural treasures, it proposes three distinctive spatial visions for the masterplan: a serene forested living experience, an embrace of rural farm life, and the nurturing of communal living within clustered neighborhoods.

In the northern region, reforestation of greenfields has been undertaken, forging a truly unique setting where sustainable apartments, detached homes, and townhouses could thrive. At the heart of the site, the central section transformed into a fertile canvas for dwellings, greenhouses, lively food markets, and essential childcare facilities. The southernmost area underwent a remarkable transformation into a collection of neighborhood clusters, each sharing vibrant playgrounds, tranquil gardens, and welcoming communal spaces.

Each of these districts boasts generous open spaces where Living Lab experiments and pilot projects focused on the circular economy can take root and flourish. Meandering pedestrian and cycling paths



#### **Precedent Study**





seamlessly interconnect these homes, facilities, and the vibrant community they encompass.

In addition to the urban framework, a comprehensive circular economy toolbox was provided, equipping the City of Kerava with the necessary resources to ensure the neighborhood authentically embodies circular principles. Beyond the Housing Fair, the central park will evolve into a recreational sanctuary for the entire city to enjoy and cherish. Envisioning our future region

# Suburban

Living in residential neighbourhoods, is so much more than just houses.



Suburban neighbourhoods are what make up most of Aotearoa's urban fabric, consisting largely of residential streets with dwellings ranging from detached homes to terraced homes/ townhouse and apartments. These places have the opportunity to be enhanced with better urban design that produces more mixed amenity, higher quality green spaces, and an improved public realm for cultural and social activities.









# **Toiora Co-housing**

Location	Area	Year	Status
Dunedin - New Zealand	5,000 m <sup>2</sup>	2019 - 2021	Complete



standard homes, from one to five bedrooms, and their own private outdoor area. Part of the former school buildings has also been modified to accommodate a large communal community centre with a dining area, offices and meeting rooms.

The buildings are in a L shape distribution that shelters a large common garden and acts as a barrier for the main streets. A benefit of designing and building row houses is thermal efficiency, with reduced heat loss due to the shared walls.









The group of owners known as Toiora High Street CoHousing Community purchased a 5,000 m<sup>2</sup> site that was the former High Street Primary School in November 2018.

This project is New Zealand's first certified passive house cohousing development. With 21 certified Passive House "Classic"







# Passive House principles

- (1) Solar orientation
- (2) High insulation
- (3) High performance windows
- (4) Air tight enclosure
- (5) Balanced ventilation with heat recovery

# Communal veggie garden

- Enviromental cleanup
- Fresh nutritious food
- Food security
- Social health & community cohesion
- Community meeting & event space
- Neighborhood beautification & community pride
- Anxiety & stress reduction
- Physical health improvement
- Environmental awareness
- Learning opportunities
- Inter-generational collaboration

# **Bicycle storage**

- Increased sense of safety
- Protection from weather conditions

# **EV chargers**

- Convenience of charging
- Increased property value
- Cost savings
- Future-proofing
- Community building
- Environmental benefits

# **Beekkwartier Sustainable Neighbourhood**

Location Roosendaal, Netherlands Year 2019 - Ongoing Status Under Construction



Beekkwartier is a sustainable neighbourhood that connects over 100 homes to a new ecological district in Roosendaal.

The neighbourhood design reinforces social inclusion through green pathways that unite the neighbourhood's three blocks and allows the residents to enjoy nature. With diverse housing typologies, the blocks can accommodate a wide range of people. The residents can choose their living condition: in a bustling city-like block closer to the city centre, or private and quiet areas closer to the new park.

Deliberate distinctions emerge between open and enclosed environments, tall and low structures, arid and aquatic regions. Simultaneously, expansive, porous surfaces designed for water retention seamlessly unite these discrete zones, both in appearance and physical connection. Furthermore, vegetated elements are included in public spaces, squares, gardens, and communal courtyards. The Court block, located nearest to the city, exudes an unmistakably urban vibe. It comprises multiple apartment buildings arranged around a sizable courtyard and a communal area. Moving on to the garden block, this serves as an intermediary zone that seamlessly connects groundlevel residences via a shared garden. This particular block is distinguished by a spacious communal deck, which serves as a hub for residents to come together. Lastly, the Park block takes on a more traditional character, consisting of separate family homes, each with its private entrance and immediate outdoor area.





### Sustainable principles









Envisioning our future region

# **Local Centre**

**Mixed-density communities** 



Local Centres are the places that serve our suburbs and offer secondary centres to the main centres of business, employment and commerce. Our Local Centres can be vibrant, mixed-use places that also include residential living. It is important to consider the advantages of densifying Neighbourhood Centres to accomodate more living units, and subsequently activate our local centres throughout both the day and night.













LOWER HUTT

# Nærheden Sustainable Community

Location	Area	Year	Status
Copenhagen - Denmark	63 ha	2019 - Ongoing	Under Construction



The Nærheden project in Denmark is a notable and innovative urban development initiative. Located in the town of Hedehusene, just 20 kilometers west of Copenhagen, Nærheden represents a remarkable example of how modern urban developments can prioritize sustainability community, and quality of life.

Location and background

Nærheden is strategically located in the Greater Copenhagen area, one of Denmark's most vibrant regions. The project was conceived to address the growing demand for housing in the region, driven by the city's economic and cultural vitality. The



location is also advantageous due to its proximity to public transportation, major highways, and the natural beauty of the surrounding countryside.

# Sustainable design

Sustainability is at the heart of the Nærheden project. The development features an array of eco-friendly design elements, including energy-efficient buildings, green infrastructure, and renewable energy sources. Its buildings are constructed using sustainable materials, and advanced energy-saving technologies are incorporated to reduce the ecological footprint of the community.



#### **Diversity of housing**

Nærheden offers a wide range of housing options, catering to various lifestyles and demographics. The housing options include apartments, townhouses, and single-family homes. This diversity allows for a mix of residents, fostering a sense of inclusivity and community.

#### **Innovative architecture**

Architectural innovation is another standout feature of the Nærheden project. The development showcases modern Scandinavian design principles, blending functionality with aesthetics. The buildings are aesthetically pleasing and designed with a focus on space utilization, making them both comfortable and efficient.

# Community and social interaction

Nærheden prioritizes community and social interaction in its design. The layout promotes walkability and cycling, reducing the dependence on cars. The presence of communal spaces, parks, and recreational areas encourages residents to interact and engage with one another, fostering a strong sense of community.

#### Sustainable mobility

The project emphasizes sustainable transportation. It is well-connected to public transportation networks, making it easy for residents to commute to Copenhagen or other nearby areas. Additionally, cycling and pedestrian paths are integrated into the community, further



reducing the need for cars and promoting a healthier lifestyle.

# Cultural and educational amenities

Nærheden offers cultural and educational amenities that enrich the lives of its residents. These include schools, daycare centers, and community centers. These facilities not only provide essential services but also contribute to the sense of community and belonging.

# **Global influence**

The Nærheden project has garnered international attention as a model for sustainable urban development. It serves as an inspiring example of how to create communities that prioritize ecological responsibility and resident well-being. The project demonstrates that it is possible





to build vibrant, modern, and sustainable urban communities that enhance the quality of life for residents while minimising their environmental impact.





# Västra Hamnen Bo01 Living Community

Location	Area	Year	Status
Malmö - Sweden	25 ha	2001	Complete



The Västra Hamnen masterplan in Malmö is a prime example of innovative urban development and sustainable urban living. Located in the city of Malmö, Sweden, Västra Hamnen, which translates to "Western Harbor", has become a symbol of urban

transformation and a model for environmentally conscious and socially inclusive city planning. The masterplan was conceived as a response to the changing demands of urban living and the need to reduce the ecological footprint of urban areas.







Key features of the Västra Hamnen masterplan include:

# **Sustainability**

At the heart of the Västra Hamnen masterplan is a commitment to sustainability. The entire development was designed with a focus on reducing environmental impact. This includes energy-efficient buildings, renewable energy sources, and an extensive public transportation network. The district also integrates sustainable water management

systems and green spaces, contributing to a healthier and more environmentally conscious urban environment. The neighborhood incorporates green building practices, energyefficient technologies, and a focus on reducing the carbon footprint of its residents.

### **Mixed-use development**

Västra Hamnen is a true mixeduse urban area, featuring a blend of residential, commercial, and recreational spaces. This mix of functions encourages a

diverse and vibrant community, where residents can live, work, and play within the same neighborhood. This approach fosters a sense of belonging and reduces the need for long commutes.

#### **Innovative architecture**

Västra Hamnen is known for its modern and innovative architecture. The most iconic structure in the district is the Turning Torso, designed by the renowned architect Santiago Calatrava. This twisting skyscraper is not only a symbol of the area but also a testament to the innovative design principles that underpin the development.

#### Waterfront living

Situated along the coast of the Öresund strait, Västra Hamnen offers residents the unique opportunity to live by the water. The area features a beautiful seaside promenade and recreational areas that make it a popular destination for both residents and visitors.

#### Accessibility

The Västra Hamnen masterplan prioritizes accessibility. The development is well-connected to the rest of Malmö through efficient public transportation, pedestrian-friendly pathways, and cycling routes. This emphasis on sustainable mobility contributes to a reduction in car dependency.

### **Social inclusion**

The Västra Hamnen development promotes social inclusion by providing a range of housing options, from affordable





apartments to high-end condominiums. This diversity encourages a socioeconomically mixed community, fostering a sense of togetherness and reducing social segregation.





# **Urban Centre**



Urban Centres are the epitome of the hustle and bustle of city-living. Designed well, urban centres can provide vibrancy and dynamism. They offer a multiplicity of exchange and experience. Urban character is achieved through creating a walkable, compact environment where there is diverse architectural quality and spaces for people from all walks of life.





PIPITEA

CUBA STREET







CENTRAL WELLINGTON

# Vallastaden

Location	Area
Linkoping - Sweden	TBA m <sup>2</sup>

The Vallastaden project in Linköping, Sweden, is a remarkable and innovative urban development initiative that has garnered international attention for its forward-thinking approach to housing and urban planning. This project represents

Year

2019 - 2022

a prime example of how modern cities are reimagining urban living to address the changing needs and aspirations of their

Status

residents.

Complete



# Location and background

Vallastaden is situated on the eastern outskirts of Linköping, a thriving and dynamic city in the heart of Sweden. The project was conceived as a response to the city's rapid growth and the need for more housing. Linköping is known for its strong economy, thriving tech industry, and vibrant cultural scene, making it an attractive place for people to live and work.

# Sustainable design

One of the most striking aspects of the Vallastaden project is its focus on sustainability. The architects and planners aimed to create a sustainable, eco-friendly community from the ground

up. The development features energy-efficient buildings, green spaces, and pedestrianfriendly streets. Each house is designed with sustainable materials and energy-efficient systems, contributing to reduced





energy consumption and lower environmental impact.

#### **Diversity of housing**

Vallastaden stands out for its diverse range of housing options. Rather than following a one-size-fits-all approach, the project offers a mix of housing types, including apartments, townhouses, and singlefamily homes. This diversity accommodates a wide range of demographics, from young professionals and families to retirees, promoting a sense of inclusivity and community.

### **Innovative architecture**

The architecture of Vallastaden is both contemporary and innovative. The project invited various architects to design unique and eye-catching structures. As a result, each building is distinct in its design, creating a visually stimulating environment that showcases modern Swedish architectural prowess.

# **Community and social** interaction

Vallastaden prioritizes community and social interaction, which is reflected in its design. The layout promotes walking and cycling, reducing the need for cars. The presence of public squares, parks, and communal areas encourages residents to interact and build a sense of belonging. This focus on community contributes to a higher quality of life for Vallastaden's residents.

# **Flexibility and social** interaction

The Vallastaden project is designed to be flexible and adaptable. As societal needs and demographics change, the housing units can be modified



to accommodate evolving requirements. This adaptability is key to ensuring the long-term viability and relevance of the development.

# **Cultural significance**

Vallastaden has not only garnered attention for its urban planning and design but also for the cultural events and festivals it hosts. It has become a cultural hub for Linköping, with regular art exhibitions, performances, and other events that enrich the lives of its residents.

### **Global influence**

The Vallastaden project has drawn the interest of urban planners and developers worldwide. It serves as a model for sustainable, communityfocused urban development, inspiring similar projects in other countries.





# **The Urban Village Project - SPACE10**

Location Copenhagen - Denmark

#### Year 2015-2023

Status Complete



Space10 is an innovative and forward-thinking project, it is not a single, specific project but rather a unique initiative by IKEA's innovation lab. Space10 is designed to explore and develop ideas, concepts, and solutions to address some of the world's

most pressing challenges, particularly those related to urban living, sustainability, and the future of our cities.

Here's an overview of Space10 and its objectives:





# **Origin and purpose**

Space10 was established in 2015 by IKEA in Copenhagen, Denmark, as an external innovation lab. The lab operates independently and is tasked with exploring emerging trends, technologies, and



ideas to anticipate and tackle future challenges related to urbanisation and sustainability.

# **Research and prototyping**

Space10 focuses on conducting research and prototyping innovative solutions. They often collaborate with experts, researchers, designers, and creative thinkers to develop concepts that address urban living, such as smart cities, sustainable architecture, and the future of food.

### Collaboration

Collaboration is at the heart of Space10's approach. They work with a wide range of partners, including universities, startups, and non-profit organizations, to create a diverse and dynamic network of innovators.

#### Areas of exploration

Some of the key areas of exploration within Space10 include sustainable architecture. urban farming, renewable energy, and more. They have created prototypes for everything from modular urban farming systems to sustainable housing concepts.

### **Public engagement**

Space10 actively engages with the public through exhibitions, workshops, talks, and opensource projects. This outreach is aimed at fostering dialogue and involving a broader community in discussing and developing innovative solutions.

### **Publications**

Space10 has produced a range of publications, including reports and cookbooks, to share their findings and insights with a global audience. These publications often provide valuable information and inspiration for those interested in sustainable living and urban development.

### Sustainable living labs

The lab often creates "living labs" to test and showcase their concepts. These labs are physical spaces where they can experiment with their ideas and gather feedback from the community.













# **4.0** Further urban design and related guidance

#### **Residential communities**



National medium density design guide Ngā tohutohu hoahoa ā-motu mō te wharenoho mātoru-waenga

Ministry for the Environment 2022

This guide is targeted at the design and development of medium-density housing in Aotearoa New Zealand, particularly small-scale property owners or those with limited experience in more complex residential developments. It is a useful document for understanding how development could progress under the Medium Density Residential Standards, a component of the National Policy Statement on Urban Development.



#### **Residential Design Guide**

Wellington City Council 2022 The intent of the Residential Design Guide is to facilitate new residential development that is well-designed and contributes to a well-functioning urban environment. It is aimed primarily at developers and professionals, with technical contents that speaks to district plan requirements. In particular, it is used by Wellington City Council in assessing development proposals.



#### Medium

EBOSS and Guy Marriage 2022

This book and online resource is a source of technical and background information for developers and professionals in New Zealand. It includes detailed guidance for designing and building medium density housing, with a particular focus on the desired architectural outcomes. It also provides analysis of the challenges facing medium density housing in New Zealand and four local case studies.





https://environment.govt.nz/assets/publications/ national-medium-density-guide.pdf

https://docs.isoplan.co.nz/figures/ wellingtonProposed/1216/Residential%20 Design%20Guide.pdf

https://www.mediumdensity.nz/

#### Transport, streets and urban form



#### Aotearoa urban street planning and design guide

New Zealand Transport Agency 2022 (created) 2024 (amended)

People, Places and Movement - an integrated public transport and urban form design guide

New Zealand Transport Agency 2024 (anticipated)

This guide sets out the policy context and criteria for planning, designing and evaluating streets for the New Zealand Transport Agency. It is a practical tool to support good outcomes by linking high-level spatial planning and network planning, with planning and design for street space in urban centres and neighbourhoods.

This soon-to-be-released guide will focus on creating safe, attractive, and accessible urban spaces and places that enable walking, cycling, and shared modes around key public transport hubs. It will help planners, designers, engineers, and architects integrate public transport and urban form to provide better travel options, improve safety, and support lower carbon emissions as our towns and cities grow.

#### Water sensitive design



**Practising integrated** urban and water planning: framework and principles

**Cooperative Research Centre for Water** Sensitive Cities 2021

Aimed at Australian cities, this framework highlights five key activities for integrating urban and water planning, illustrated with case examples. The framework seeks to guide practitioners, particularly those involved in urban development or water services, in designing collaborative, context-sensitive and integrated approaches to urban and water planning. This includes underlying planning and participation processes as well as specific design outcomes.



**Water Sensitive Design** for Stormwater: Treatment **Device Design Guideline** 

Wellington Water 2019

This guideline communicates Wellington Water's requirements for the design of stormwater treatment devices. This comprises technical information relating to the optimal water sensitive design outcomes, from concept to detailed design. This is applied in a range of contexts, including constructed wetland elements, swales, bioretention systems and permeable (porous) paving.

https://www.nzta.govt.nz/about-us/about-nztransport-agency-waka-kotahi/environmentaland-social-responsibility/urban-street-guide/

https://www.nzta.govt.nz/roads-and-rail/urbandesign-guidance/people-places-and-movementan-integrated-public-transport-and-urban-formdesign-guide-draft/

https://watersensitivecities.org.au/content/ practising-integrated-urban-and-water-planningframework-and-principles/

https://www.wellingtonwater.co.nz/assets/ WSD-for-Stormwater-Treatment-Device-Design-Guideline-December-2019.pdf

