



# Mt Welcome Masterplan + Landscape Urban Design Strategy

13.03.26

**PUKERUA BAY, PORIRUA , WELLINGTON.  
422A AND 422B STATE HIGHWAY 59**

Prepared by Blac Limited for Pukerua Property Group Limited Partnership C/o Classic Developments Limited



## Introduction\_

The Mt Welcome development represents a significant opportunity to establish a well-designed, resilient, and connected community that reflects its unique landscape and cultural setting. This Landscape and Urban Design Strategy (“Strategy”) has been prepared to support the consenting process by outlining how the proposed development responds to the natural, cultural, and built environment, while creating a safe, functional, and high-amenity environment for future residents. This Strategy sets out the overarching design framework that will guide more detailed design stages.

The development will provide 949 residential lots, together with a mixed-use neighbourhood centre of approximately 1.3 hectares. The masterplan incorporates significant areas of public open space, more than 3 kilometres of walking and cycling connections, and 1.6 hectares of ecological restoration / riparian planting. Community facilities and neighbourhood amenities are integrated throughout, ensuring a balance of housing supply, social infrastructure, and environmental enhancement.

The site occupies a position on the northern edge of Porirua, between Pukerua Bay and Plimmerton, adjacent to State Highway 59 and the North Island Main Trunk rail corridor. Its ridges and slopes form a natural transition between the coastal saddle of Pukerua Bay, the seaside character of Plimmerton, and the wider Porirua Harbour landscape and inland Wellington region. The development sits on the lower foothills of the larger Mt Welcome landform, which is a defining feature in the local landscape.

To the north, Mt Welcome will connect directly to Pukerua Bay, a coastal settlement framed by steep escarpments and expansive sea views. Pukerua Bay acts as the northern gateway into the Porirua region from the Kāpiti Coast while development will extend the presence of this settlement.

Immediately south, the site links visually and physically to Plimmerton, located approximately 3.5km away. Plimmerton is a long-established coastal community centred around its beach, harbour entrance, and rail station. Compared to Pukerua Bay, it provides a wider range of daily amenities and services, reinforcing its role as a local centre.

Further south, Porirua City, which is located approximately 6km away, extends around Te Awarua-o-Porirua Harbour. As a large urban centre, Porirua provides regional-scale amenities and employment. From Mt Welcome’s elevated landform, there are commanding views into the harbour basin and surrounding hills, reinforcing the development’s role as a northern marker of the city’s growth and as a threshold between rural coastal landscapes and expanding urban areas.

In this context, Mt Welcome occupies a bridging position—linking coastal and rural landscapes with the established settlement pattern of Plimmerton and the expanding urban fabric of Porirua. This is the intended function. This creates both opportunities and responsibilities: to respect and enhance natural and cultural values, restore ecological systems, and shape a development that is distinctive, connected, and enduring.

The vision for Mt Welcome is to establish a community with a strong sense of place, underpinned by high-quality public spaces, well-connected streets and pathways, and housing opportunities. Landscape and urban design are treated as structuring elements: open space networks, planting, stormwater systems, and cultural features are integrated with transport, infrastructure, and built form to deliver a resilient and cohesive outcome.

A public open day was held on the 4th of September 2025 to share the draft masterplan for comment. Feedback from this engagement contributed to the refinement of the final masterplan and the detailed design of specific areas. There are many aspects that have informed this strategy, including an iterative design process and technical input from other disciplines such as civil engineering, development, planning, and ecology. Engagement with key stakeholders — including councils, the local community, and mana whenua — has also been central to shaping the outcomes of the strategy.

This report sets out the vision, key structuring elements, and guiding principles for detailed design and implementation. It seeks to ensure the development delivers enduring benefits for residents, mana whenua environmental values, and the wider Porirua community, while reinforcing the natural and cultural identity of the landscape.

## Purpose + Implementation\_

This Strategy for Mt Welcome has been prepared for purposes of:

### Supporting the Fast-Track Consent Application

Providing a comprehensive framework that aligns with the resource consent process, and ensures the development’s landscape outcomes meet all relevant regulatory requirements and standards.

### Coordinating and Confirming Vested Landscaped Areas with Council and Mana Whenua

Identifying and outlining the areas of open space and landscaping to be vested, and supporting collaboration with Porirua City Council (the “Council”) and mana whenua to ensure these areas respond to statutory requirements and reflect cultural values and aspirations.

### Guiding Detailed Landscape Design and Implementation

Establishing a clear framework to inform the detailed design phase, and ensuring that all landscape elements are delivered consistently and in accordance with the agreed vision, from planning through to completion.

### Informing Private Lot Landscape Design Guidelines

Providing the basis for design guidelines that will shape landscape outcomes within private lots, ensuring coherence across the wider development, and promoting high-quality, environmentally sustainable design.

In summary, this Strategy sets out a cohesive and coordinated approach to landscape planning and design. It ensures alignment with regulatory processes, provides clarity for Council and mana whenua, and guides implementation across both public and private spaces to achieve a unified and enduring development outcome.





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Earthworks

## **Design Standards + Selections\_**

Surfaces

Furniture

Signage + Art

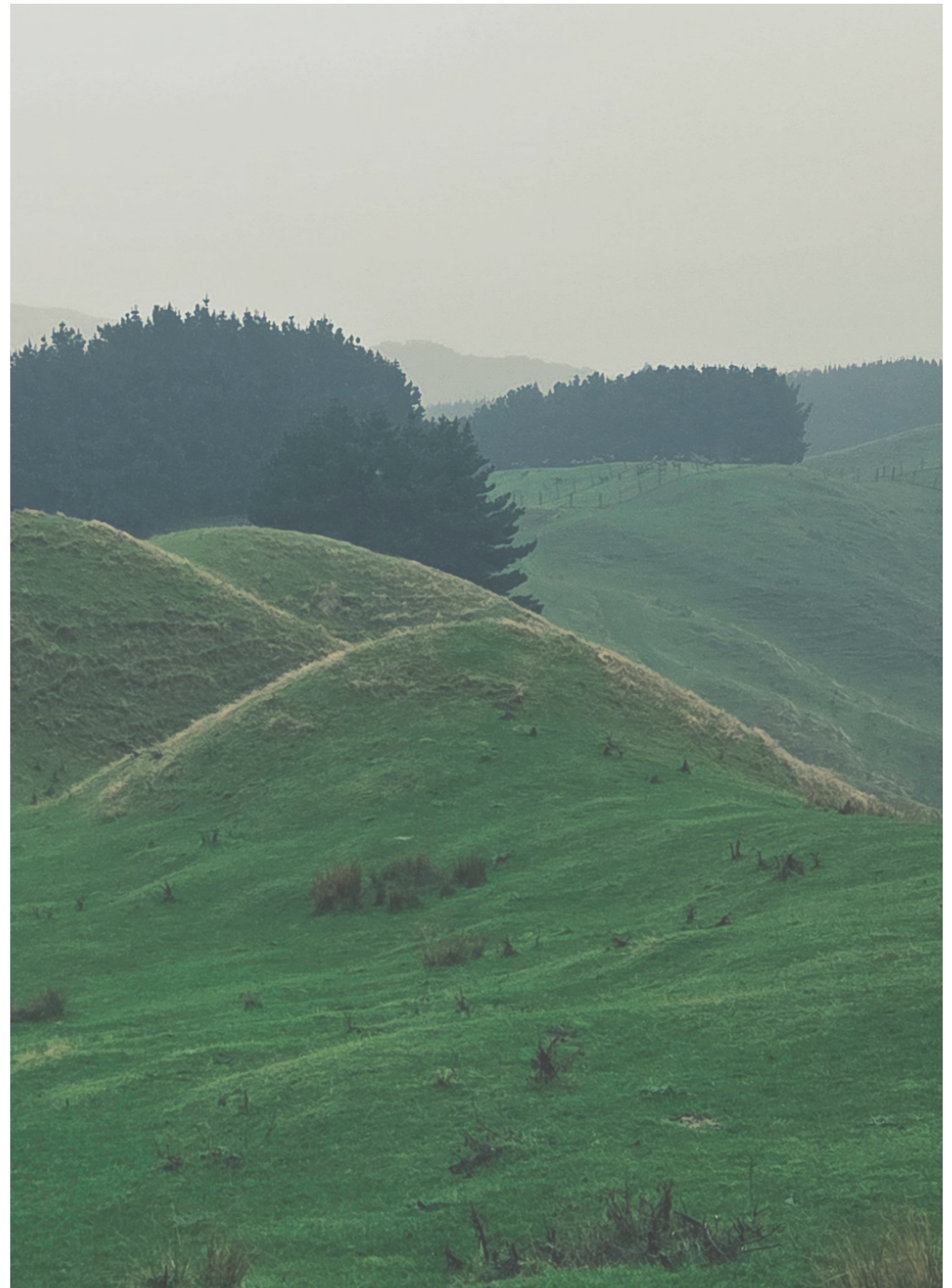
Lighting

Fences + Walls

Structures

Street Planting

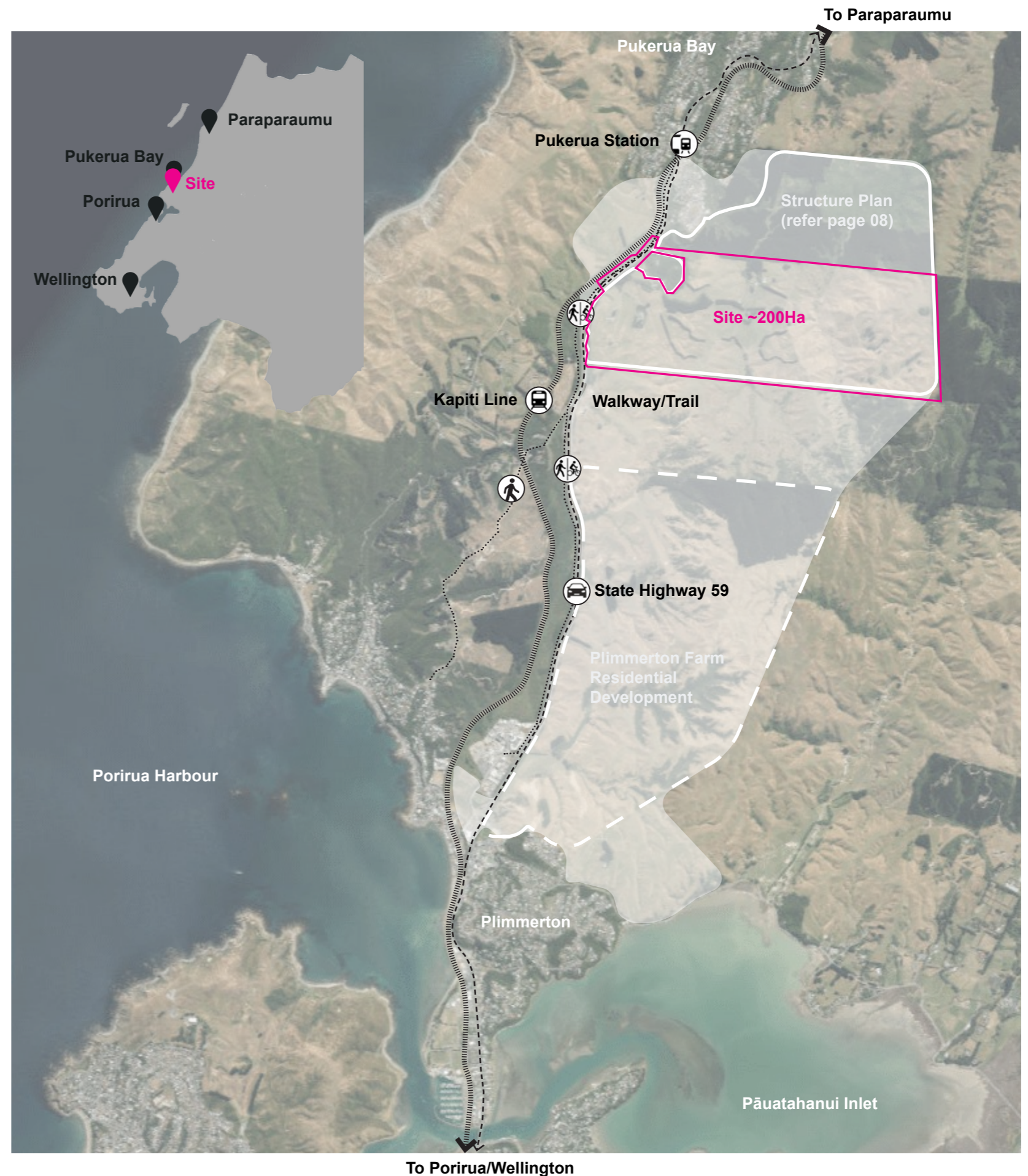
General Planting



## Location, Context + History

The broader Mt Welcome area was originally occupied by Māori, including Ngāti Ira and later Ngāti Toa Rangatira, who valued the rich coastal and inland resources of the region. European settlement began in the mid-1800s, with gold mining briefly explored in the 1860s. The area later transitioned to rural farmland and is now undergoing urban development.

The site lies adjacent to the coastal township of Pukerua Bay, with direct access to State Highway 59, the Kapiti rail line/North Island Main Trunk line, and Pukerua Bay Station. It is also near local walking tracks, including the Paekākāriki Escarpment Track and the Taua Tapu Track.



## Mount Welcome Gold Mines

TWO GOLD MINES OPERATED FOR A SHORT TIME ON MOUNT WELCOME, THE HIGHEST POINT ON THE HILLS EAST OF PUKERUA BAY.

In July 1869 two men searching for cattle in the bush found an outcrop of quartz on the ridge near Mount Welcome. At this time, Wellington was in the grip of a gold frenzy with over 100 claims pegged out on the Karori Goldfield. Earlier, specks of gold had been found in the gizzard of a duck which was being prepared for cooking. The duck had come from Pauatahanui.

The Mount Welcome Gold Mining Company was registered in August 1869 with 29 shareholders and capital of £290. Most of the shareholders were from the Horokiwi Valley and Pauatahanui. Within a short time a log house had been erected and a number of men were at work near the top of Mount Welcome. The Telegraph Gold Mining Company with capital of £600 began in the same area.

By late October the Mount Welcome Company was in financial difficulty and operations were suspended. The Telegraph Gold Mining Company struggled on until January 1870. Five shafts, the deepest 18 metres, and four drives with the longest over 30 metres, were cut into solid rock. No gold was ever found. Today the drives are home to colonies of cave wetas.

The Wall family, who began farming the area east of here in 1852, called their farm Mount Welcome. The name came about when gold prospectors asked if they could go on to the property and were told, "You are welcome". Although known locally as Mount Welcome, maps from 1884 named the peak "Diggins" until 1979 when it became "Diggings No. 2". In 2009 NZ Topo Map did away completely with historic names and this peak is now simply a number: 7408. There is no known Māori name and Pukerua Bay residents continue to call the peak Mount Welcome.

Advertisement for shareholders meeting Evening Post 5 October 1869 p.3, Papers Past

MOUNT WELCOME GOLD MINING COMPANY.  
A MEETING of Shareholders will be held at Blackie's Mount Welcome Hotel, Horokiwi Valley, on Saturday, the 10th inst, at 7 p.m.  
R. COOPER, Manager.



Members of He Ara Pukerua team inside Mt Welcome gold mine drive. Photo Ashley Blair.

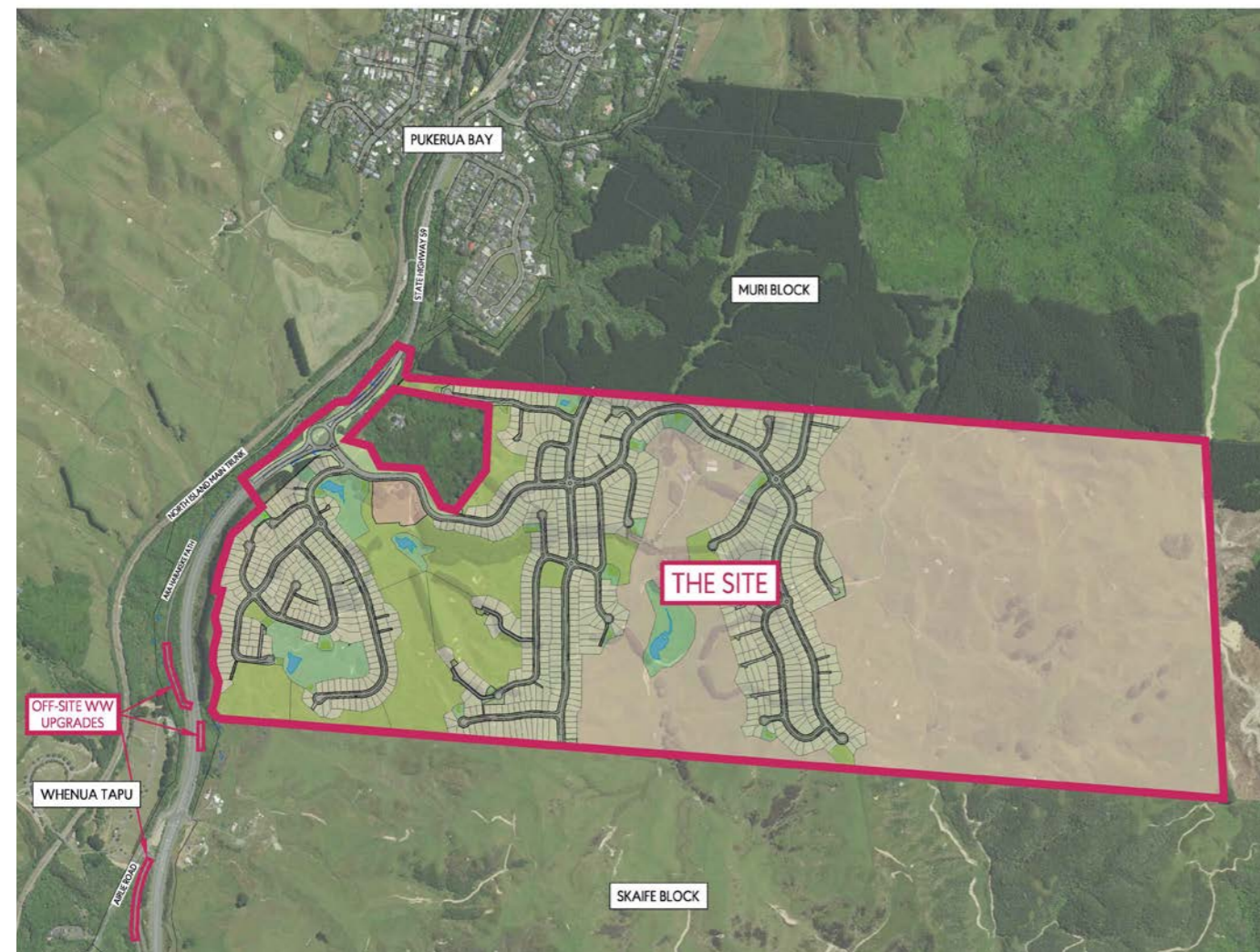


# The Site\_

The Mt Welcome development site lies on the south-eastern edge of Pukerua Bay, between the established settlement and the rural hinterland that extends towards Plimmerton. The application area comprises several parcels fronting State Highway 59, including properties at 422 SH59 (Lots 1 & 2 DP 534864, Lot 2 DP 89102, Part Lot 1 DP 89102) and 34 Muri Road (Lot 1 & Lot 1000 DP 608433), together with associated road reserve. In total, the site spans approximately 200 hectares across rolling hill country.

The landform is characterised by spurs and steep-sided gullies, with elevations rising from ~60 m ASL at SH59 to ~180 m ASL on higher ridges. The site is largely in pastoral use, interspersed with pine shelterbelts and regenerating bush. Several gullies contain wetland systems and streams, which form part of the wider catchment draining west towards the Kākaho Stream and ultimately Te Awarua-o-Porirua Harbour. Four existing rural dwellings are located within the Mt Welcome block.

Under the Porirua City Council District Plan 2025 (PDP), the land is zoned Medium Density Residential, Neighbourhood Town Centre, and Rural Lifestyle, and sits inside the Northern Growth Development Area (NGDA). The PDP Structure Plan for the NGDA anticipates urban development supported by ecological restoration, new reserves, stormwater management areas, and an integrated transport network.



## Adjacent Sites

**Muri Block (north)** – Immediately adjoining Mt Welcome to the north-east, the Muri Block (128.9 ha) is dominated by pine plantation with remnant kohekohe forest and wetlands. It contains three Significant Natural Areas (SNAs) – Hundred Acre Bush, Ngaio Bush, and Muri Road Wetland – which provide high ecological value and buffer the Kākaho Stream. The Muri Block also connects directly to the existing suburban settlement of Pukerua Bay, including its railway station, school, and local shops.

**Skaife Block (south)** – Situated between Mt Welcome and the recently rezoned Plimmerton Farm, this block provides a transitional rural landscape. It is anticipated to be subject to future development pressure given its location within the NGDA corridor.

**Plimmerton Farm (further south)** – This large area was rezoned through Plan Change 18 and will accommodate significant residential growth. Together with Mt Welcome and the Muri Block, it forms part of a coordinated expansion front between Pukerua Bay and Plimmerton.

**Pukerua Bay Settlement (north-west)** – The coastal community of Pukerua Bay lies just 400 m from the northern edge of the site. It is framed by steep escarpments and has a suburban character with strong vegetation cover. Its railway station and proximity to SH59 make it a natural connection point for future development.

**Rural Hinterland (east)** – Beyond the Mt Welcome ridgeline, land rises towards the Akatarawa Forest and remains in rural and forestry use. This backdrop reinforces the rural-urban interface that future development will need to manage sensitively.



# Northern Growth Development Area + Structure Plan\_

The Northern Growth Development Area (NGDA) sits between Pukerua Bay and Plimmerton on the northern edge of Porirua, spanning ~323 ha of greenfield land identified by Council as being suitable for urban growth. It is framed by rolling spurs and gullies draining west to State Highway 59 and the North Island Main Trunk line, with Mt Welcome forming the defining backdrop. This landscape position creates both constraints and opportunities: to transition between coastal settlement, rural foothills, and the Porirua Harbour basin, while safeguarding significant ecological and cultural values.

## Landscape & Visual Values

As part of the strategic planning for the NGDA, Boffa Miskell’s landscape assessment highlighted the site’s distinctive rural foothill character, with pine plantation in the Muri Block and open pastoral spurs across Mt Welcome. Several Significant Natural Areas (SNAs) – Hundred Acre Bush, Ngaio Bush, and Muri Road Wetland – contribute to the ecological and visual identity of the area. The visual catchment is relatively contained, with primary views from SH59, the railway, and parts of Pukerua Bay. The Structure Plan responds by retaining SNAs, integrating wetland and riparian systems, and ensuring future urban form is embedded within the landform and green structure.

## Urban Design Framework

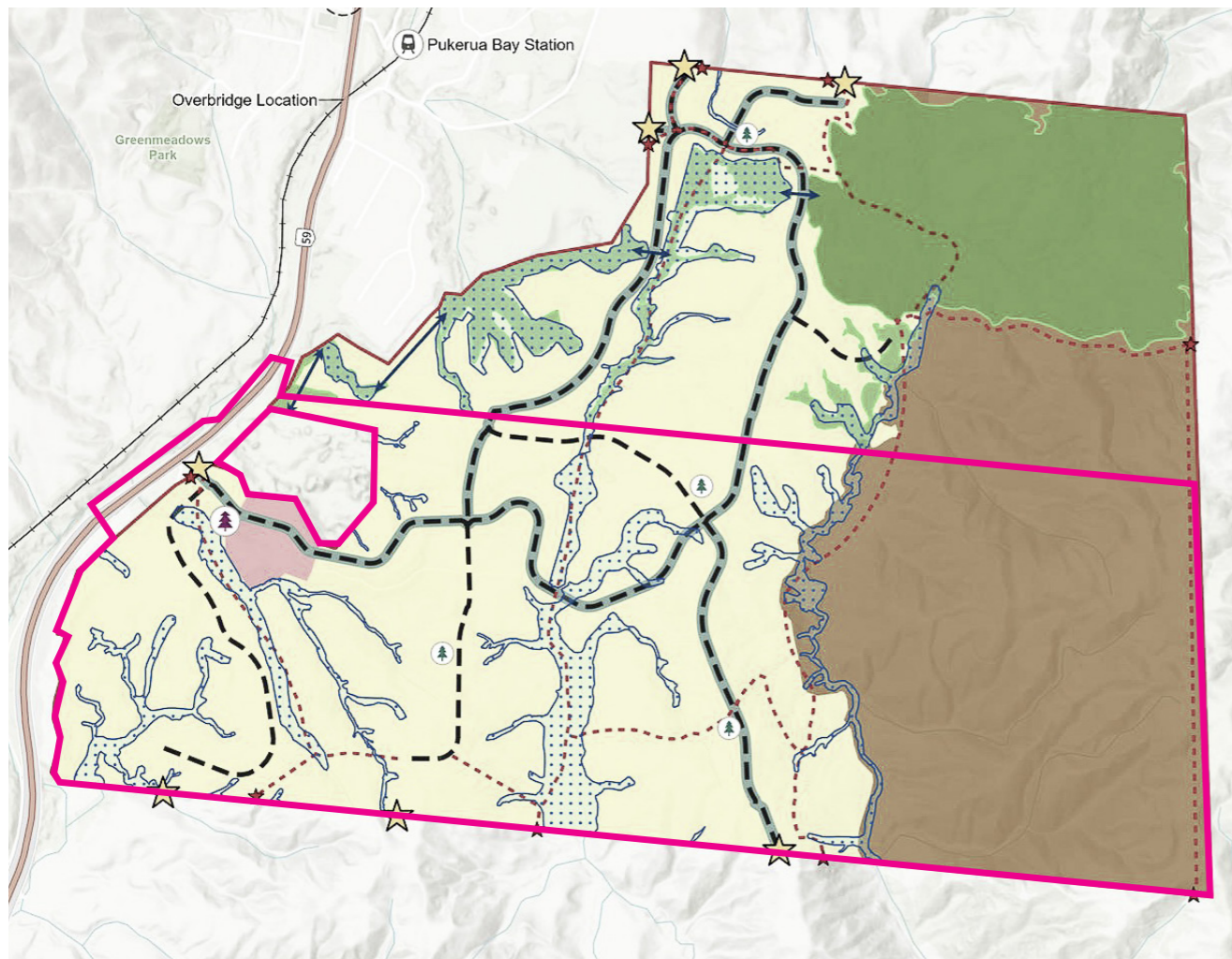
Boffa Miskell’s urban design assessment identified the NGDA as a strategic growth area capable of supporting Porirua’s long-term housing needs under the NPS-UD. The Structure Plan proposes predominantly medium-density residential neighbourhoods, anchored by a neighbourhood centre near SH59, and supported by walking/cycling networks. Connectivity is a key principle: future development must link north to Pukerua Bay (rail, school, local centre) and south to Plimmerton Farm, while managing sensitive transitions to rural land east of the site. The design framework emphasises choice, connected streets, high-quality open space, and integrated stormwater management.

## Ecology & Resilience

Boffa Miskell’s ecological investigations showed the site contains a mosaic of habitats: pine forest with remnant kohekohe stands, regenerating bush, wetland gullies, and freshwater streams. Multiple areas qualify as SNAs under the Regional Policy Statement and PDP. The plan variation incorporates these into a blue-green network linking streams, wetlands, and hill country bush, offering opportunities for ecological restoration and corridor creation. Recommendations emphasise water-sensitive design, riparian planting, and restoration of natural systems to enhance biodiversity and protect downstream values, particularly Te Awarua-o-Porirua Harbour.

## District Plan Chapter – Northern Growth Development Area

Variation 1 Part B – Northern Growth Development Area to the operative Porirua District Plan (PDP) introduced the Structure Plan to guide future growth. It set out how development could fit within the landscape, identified ecological areas for protection, addressed stormwater management, mapped indicative transport routes, and determined appropriate zoning to provide for additional residential capacity. Consultation with the community and stakeholder groups was undertaken on a draft Structure Plan, including targeted engagement with the Pukerua Bay and Plimmerton communities. The resulting Structure Plan and technical reports, together with public feedback, provided the foundation for this Strategy. It is acknowledged, however, that the Structure Plan offered only a broad framework and did not benefit from the more detailed investigations that now inform this masterplan.



### LEGEND

- Development Area
  - Transport connection
  - Walkway connection
  - Proposed road
  - Indicative bus route
  - Indicative existing track
  - Proposed track
  - the „Site“
- Proposed landuse**
  - Medium density residential
  - Neighbourhood centre
  - Rural lifestyle
  - Significant natural area
  - Freshwater management area
  - Neighbourhood reserve
  - Neighbourhood community park
  - Ecological connections



# Key Considerations + Development Approach\_

The Mt Welcome site presents a mix of opportunities and constraints that inform this Strategy. These arise from the site's topography, ecology, landscape context, and transport environment.

## Freshwater Management

Wetlands and gullies provide opportunities for restoration, stormwater management, and green corridors.

Approach: Retain and enhance wetlands and margins with ecological value with planting where practicable, and manage stormwater through water-sensitive design.

## Topography

Steep slopes create distinctive open spaces but limit feasible development.

Approach: Use landform to shape open space and views while minimising earthworks and retaining character where practicable.

## Recreation

Natural landform supports open space and internal walking tracks.

Approach: Provide parks, open spaces, and tracks integrated with gullies and ridges.

## Connections

Links to Pukerua Bay, the Muri Block, the railway, and future urban areas via roads, shared paths, and walkways support integration however, the steep landforms make achieving this challenging.

Approach: Provide connections for vehicular and active modes where logical and practicable.

## Neighbourhood Integration

Strong connections to Pukerua Bay and future link to the South will reinforce cohesion.

Approach: Create clear paths and street links where possible to create future integration.

## Community and Ecological Interface

Development should be visually and physically sympathetic to existing and future residential areas, public spaces, and ecological areas.

Approach: Apply landscape treatments and built form controls to manage effects and ensure development is consistent with the planned character.

## State Highway 59

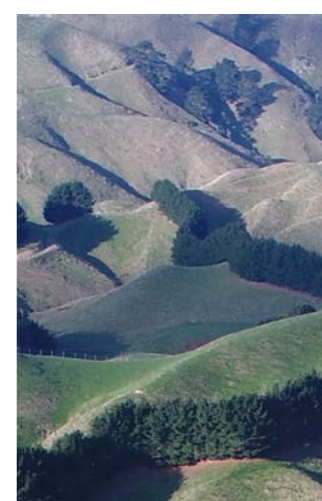
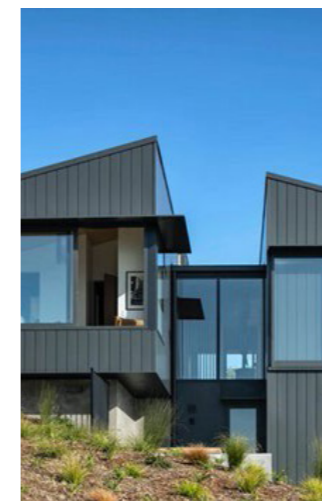
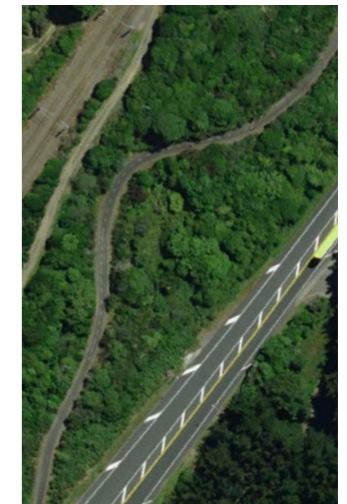
Proximity provides regional access and an arrival point, though connections are constrained.

Approach: Provide safe, legible access and a distinct gateway.

## Neighbourhood Centre

The scale of development requires neighbourhood services and facilities.

Approach: Deliver a mixed-use neighbourhood centre with amenities, community facilities, and transport links.





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Masterplan + Overview\_

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Focus Areas\_

Entrances

Streets + Lanes

Access Lanes

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Neighbourhood Centre

Housing Typologies

Parks + Reserves

Streams + Wetlands

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## Design Standards + Selections\_

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Signage + Art

Lighting

Fences + Walls

Structures

Street Planting

General Planting



# Masterplan + Overview\_

Mt Welcome will deliver approximately 949 residential lots, supported by a neighbourhood centre and a connected network of public spaces. These will be integrated within and alongside extensive areas of restored and enhanced native vegetation and natural landscapes.

The proposal includes on-site flood mitigation measures to reduce potential downstream effects, a new water reservoir on the neighbouring Muri Block, additional water storage facilities, new roading, and improved pedestrian and cycle connections to Pukerua Bay village and rail station. Extensive recreational and amenity spaces will also be provided as part of the development.

The project is anticipated to be delivered over 15+ civil stages, subject to market conditions. Earthworks will be undertaken during each construction season (October to May), with civil works continuing year-round. Lots will be released progressively, ensuring that environmental effects are appropriately managed throughout construction.

## Key Features

### Entrances



Entrances marked by layered concrete walls, embossed with Mt Welcome identity, framed by coastal-to-inland planting and trees - reinforcing the threshold and local landscape.

### Streets + JOALs



Street network built around a main Collector Road with parking, cycle lanes, footpaths and shared paths, supported by street trees and planting to balance safety, standards, and amenity.

### Access Lanes



Accessways with raingardens, low fencing, seating, and bollard lighting, plus steps with bike/scooter ramp to ensure safe, open, and accessible connections through the neighbourhood.

### Trails + Amenities



Trail network includes on-ground tracks and boardwalks where practicable, built to Council standards, with durable surfaces, seating, and wayfinding to connect wetlands, streets, parks and the neighbourhood centre.

### Neighbourhood Centre



Neighbourhood Centre anchored by a supermarket and ECE, supported by retail and hospitality, with parking screened, active edges to reserves, and a safe, walkable hub overlooking wetlands and the valley.

### Housing



The lot layout provides standard sites of 300 m<sup>2</sup> - 450 m<sup>2</sup>, allowing for a range of housing types. Some irregular lots occur in constrained locations but are balanced by enhanced amenity. All sites comply with the PDP, and the housing shown is indicative only.

### Parks + Reserves



Mt Welcome provides a destination neighbourhood reserve by the neighbourhood centre with play, recreation, and community facilities, plus three parks offering 3,000 m<sup>2</sup> (or greater) flat, flexible open spaces.

### Retention Wetlands + Margins



Mt Welcome sits within the Taupō Stream and Kākaho Stream catchments and is designed as a catalyst for ecological restoration, with farming retirement, replanting, and targeted retention wetland and margin enhancement.

### Stormwater Reserves



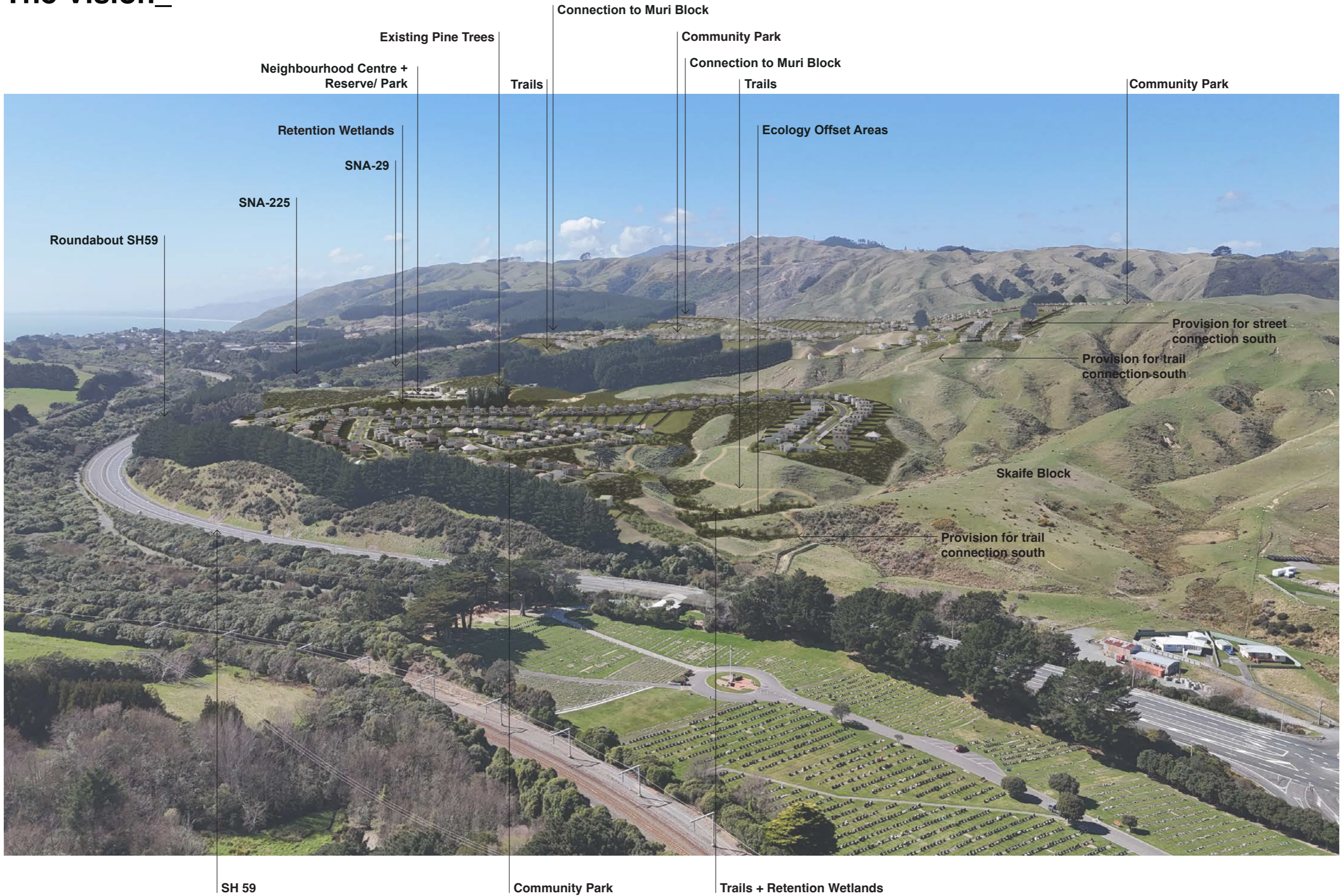
Stormwater reserves planted as native arboretum with raingardens and habitat species, some designed as dual-use paths and rest spots to connect people with nature.

### Earthworks



Following earthworks, fill areas will be grassed and strategically planted, while cut faces will also be grassed. Residual pasture land will be left to naturally regenerate over time, with gorse providing a nursery for native forest succession.

# The Vision\_



blac.

# Masterplan\_



# Masterplan: Lower Terrace\_



**KEY**

Refer page 20 onward for further information.

**Entrances**

- 1 Main Entrance/ SH 59 Intersection
- 2 Secondary Entrance

**Access**

- 3 Collector Road
- 4 Local Street
- 5 JOALs
- 6 Access Lanes
- 7 Trails + Amenities

**Development Zones**

- 8 Neighbourhood Centre
- 9 General Housing

**Parks + Reserves**

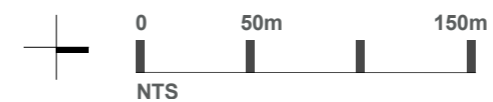
- 10 Neighbourhood Reserve/ Park
- 11 Neighbourhood Community Park

**Stormwater/ Ecology**

- 12 Retention Wetlands/ Ecology Offsets Areas
- 13 Stormwater Reserves
- 14 SNA 29
- 15 SNA 225
- 16 Lizard relocation offset areas mix

**Earthworks**

- 17 Cut or Fill Hydroseed
- 18 Fill Planted
- 19 Cut Planted



# Masterplan: Upper Terrace\_



**KEY**

Refer page 20 onward for further information.

**Entrances**

- 1 Main Entrance/ SH 59 Intersection
- 2 Secondary Entrance

**Access**

- 3 Collector Road
- 4 Local Street
- 5 JOALs
- 6 Access Lanes
- 7 Trails + Amenities

**Development Zones**

- 8 Neighbourhood Centre
- 9 General Housing

**Parks + Reserves**

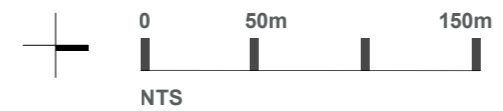
- 10 Neighbourhood Reserve/ Park
- 11 Neighbourhood Community Park

**Stormwater/ Ecology**

- 12 Retention Wetlands/ Ecology Offsets Areas
- 13 Stormwater Reserves
- 14 SNA 29
- 15 SNA 225
- 16 Lizard relocation offset areas mix

**Earthworks**

- 17 Cut or Fill Hydroseed
- 18 Fill Planted
- 19 Cut Planted



# Masterplan: Lucas Block\_



**KEY**

Refer page 20 onward for further information.

**Entrances**

- 1 Main Entrance/ SH 59 Intersection
- 2 Secondary Entrance

**Access**

- 3 Collector Road
- 4 Local Street
- 5 JOALs
- 6 Access Lanes
- 7 Trails + Amenities

**Development Zones**

- 8 Neighbourhood Centre
- 9 General Housing

**Parks + Reserves**

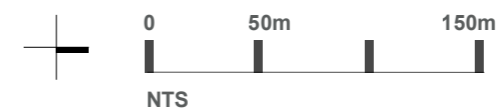
- 10 Neighbourhood Reserve/ Park
- 11 Neighbourhood Community Park

**Stormwater/ Ecology**

- 12 Retention Wetlands/ Ecology Offsets Areas
- 13 Stormwater Reserves
- 14 SNA 29
- 15 SNA 225
- 16 Lizard relocation offset areas mix

**Earthworks**

- 17 Cut or Fill Hydroseed
- 18 Fill Planted
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Signage + Art

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## Design Principles \_

# PLACE-LED DESIGN WITH PEOPLE AT HEART

The Mt Welcome Strategy is guided by three core principles: Local Identity, Simplicity, and Resilience. The vision is to foster a neighbourhood that responds to its natural setting, is easy to move through, and remains sustainable well into the future. ‘Local’ celebrates Mt Welcome’s unique cultural and environmental context, weaving it into the design language. ‘Simplicity’ prioritises clear, user-friendly infrastructure to support the community. ‘Resilience’ speaks to long-term sustainability through the use of robust materials and proven design approaches. These values are consistent with the Porirua City Council’s District Plan: Variation 1, Part B – Northern Growth Development Area, which promotes the retention of natural features where practicable, landscape and ecological improvement, and housing and local amenities for the community.

## Design Principles \_

### 01

#### PLACE.

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Designs should respond to, and complement, the local context, histories and character of the planned urban realm and natural underlying landscape.

### 02

#### SIMPLICITY.

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The public realm should be refined and considered with a consistent and recognisable set of features, with variations dependent on the nature and character of the immediate context.

### 03

#### RESILIENCE.

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All elements should be designed and built to endure over time and support community. A ‘less is more’ approach—executed to a high standard—is essential for long-term sustainability and effective asset management.

## Key Guidance Documents \_

The Strategy has been informed by the following key documents. A full list of documents considered has been provided at the end of this document.

- Porirua City Council’s District Plan
- Porirua Code of Land Development and Subdivision Engineering 2010/ NZS 4404
- Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (2017)
- Porirua City Council Track Standards Manual (Version 1.2, 2014)
- New Zealand Urban Design Protocol
- CPTED Design Principles
- Recreation Aotearoa Guidelines

# Focus Areas\_

This Strategy has been prepared as an overlay to the masterplan. It sets out the vision and design approach across ten key focus areas, which together provide the framework for delivering a cohesive, high-quality environment. Several of these focus areas also serve as typical examples, illustrating how the landscape approach can be applied consistently across similar areas throughout the wider development.



## Focus Areas

- ① Entrances (refer page 22)
- ② Streets + Lanes (refer page 24)
- ③ Access Lanes (refer page 28)
- ④ Trails + Amenities (refer page 30)
- ⑤ Neighbourhood Centre (refer page 32)
- ⑥ Housing Typologies (refer page 34)
- ⑦ Parks + Reserves (refer page 36)
- ⑧ Retention Wetlands Ecological Offset Areas (refer page 42)
- ⑨ Stormwater Reserves (refer page 46)
- N/A General Earthworks (refer page 47)



# 1: Entrances

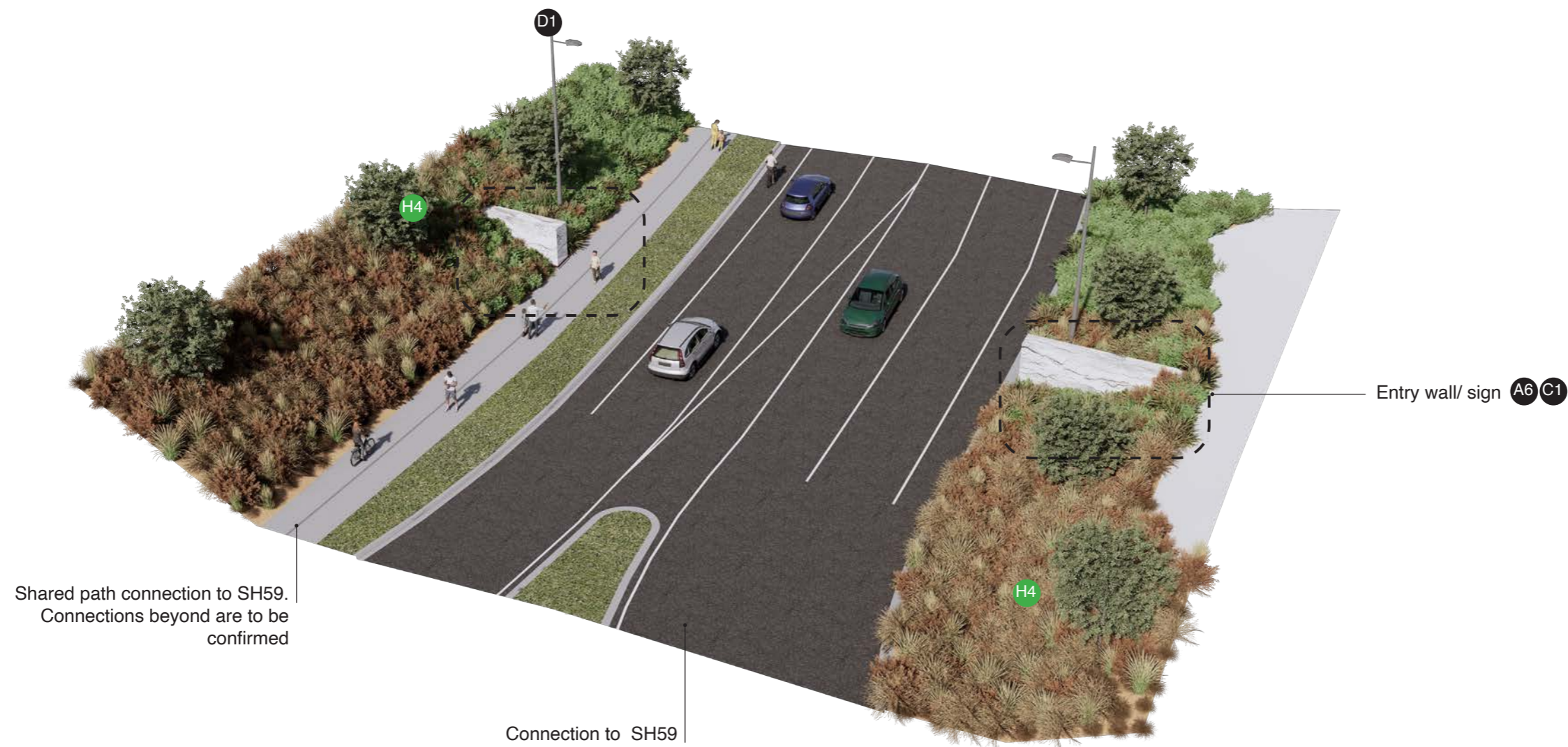
The intent for the primary and secondary entrances is to establish a simple yet striking threshold into the Mt Welcome neighbourhood. The design seeks to create a unique sense of place that reflects the site's history while remaining integrated with future adjacent developments.

The proposal is to create layered concrete walls. These walls will express the site's geology and acknowledge its natural, mining, and farming histories. The identity of Mt Welcome will be embossed into the wall, providing a tangible representation of place to complement the abstract narrative expressed through the materiality and form.

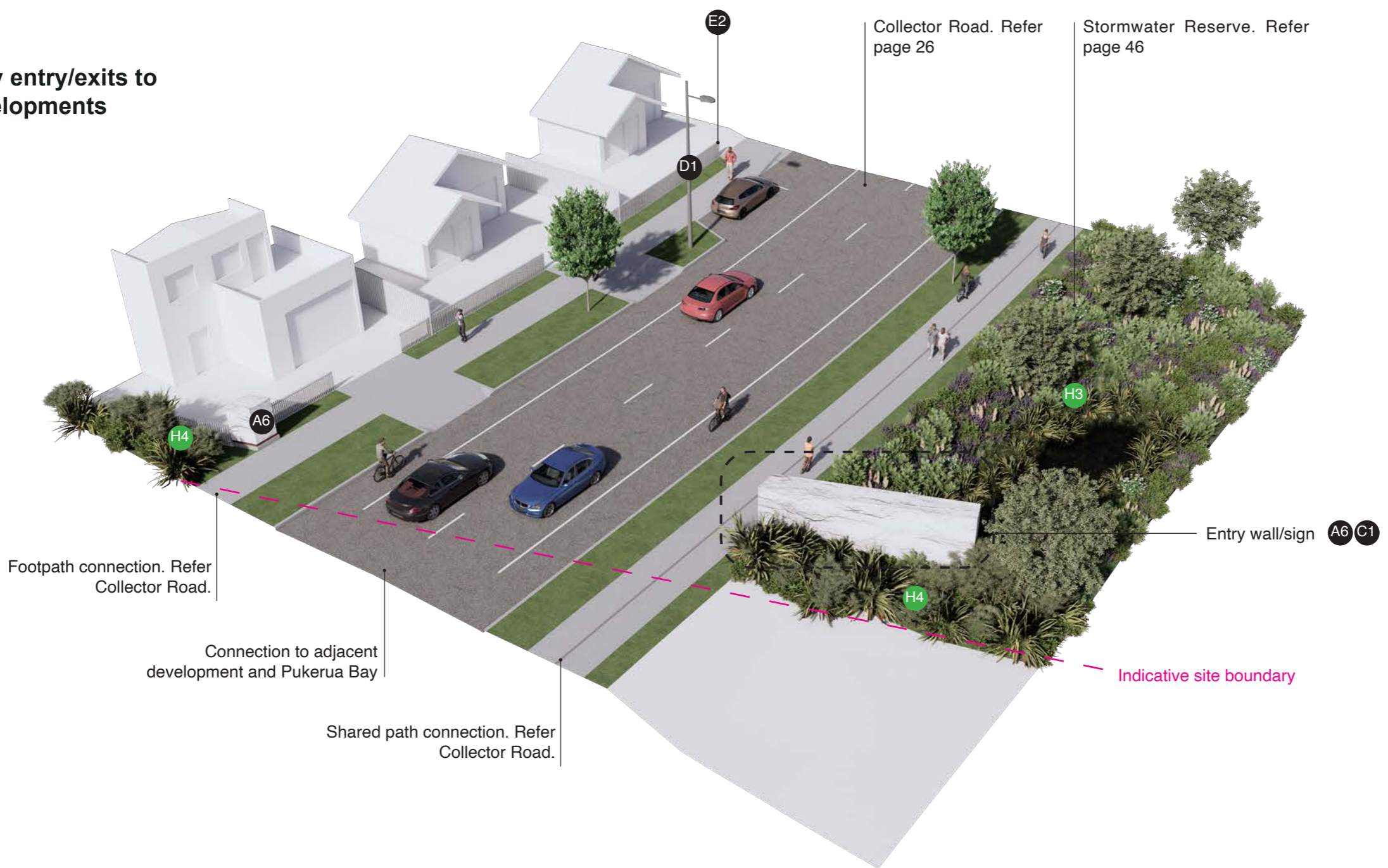
Framing the wall, a curated entrance planting mix will be implemented, transitioning from a coastal brown palette to a lush inland green palette. This planting strategy reinforces the sense of arrival while anchoring the entrance within the wider coastal landscape. Specifically planted trees are placed to reinforce the threshold and triangular forms of Mt Welcome and the landscape.

Refer to the Streets section for details on the associated street design. *For tag references see page 49 - Design Standards + Selections.*

## Main entry/exit from/to SH 59



Secondary entry/exits to other developments



Collector Road. Refer page 26

Stormwater Reserve. Refer page 46

Footpath connection. Refer Collector Road.

Connection to adjacent development and Pukerua Bay

Shared path connection. Refer Collector Road.

Entry wall/sign A6 C1

Indicative site boundary

## 2: Streets + JOALs

Roads and streets have been designed to balance the requirements of NZS 4404, Council standards, transport safety, and desired urban design outcomes.

The resulting network is structured around a primary Collector Road that accommodates traditional vehicle lanes and parallel parking, supports buses on public transport routes and also integrates on-street cycle lanes designed for confident commuters. A 1.8 m footpath is provided on one side of the street, complemented by a 2.5 m wide shared path on the other. This shared path provides a safe, multi-use space for pedestrians, children on bikes, and other micromobility users.

Street trees and corner planting are incorporated at key intersections to enhance amenity and provide identity, while standard grass berms are retained elsewhere to enable easy, ongoing maintenance.

*For tag references see page 49 - Design Standards + Selections.*

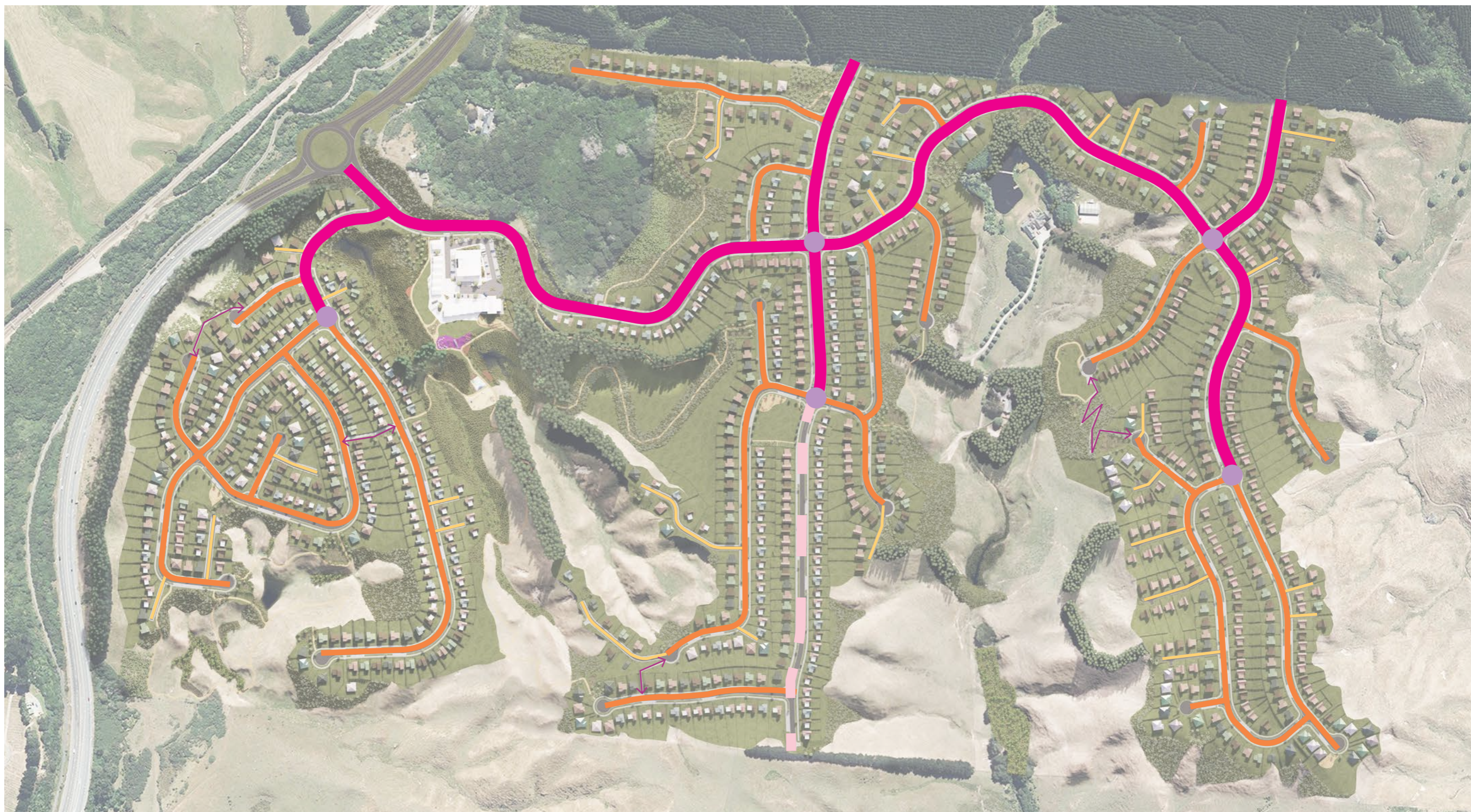
**Example: Collector Street**



**Example: Local Street**



# The Network\_

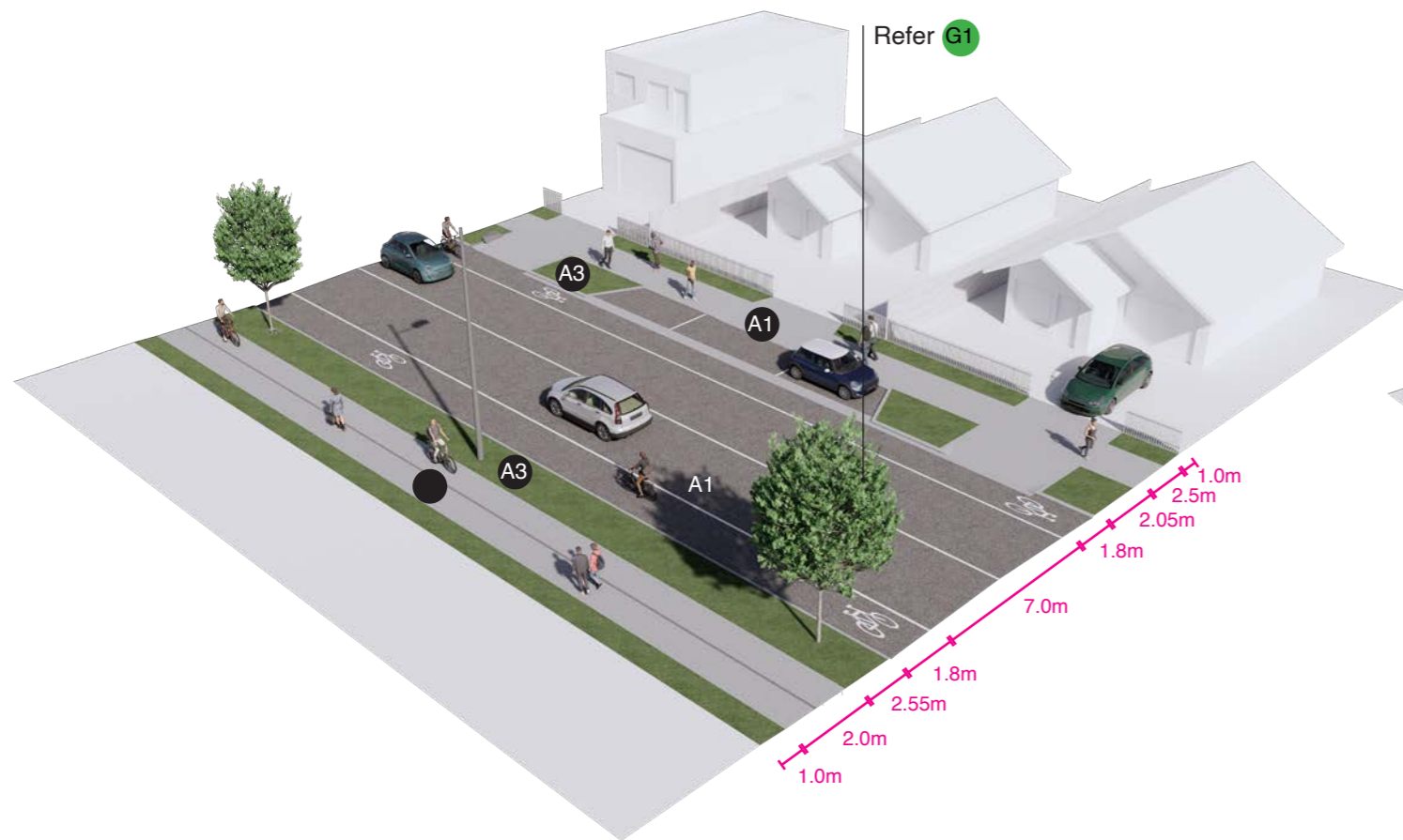


- Collector Roads (Types A, B + C)**
- Collector Road (Types D, E)**
- Local Streets (Types F, G + H)**
- JOALS (Types 1, 2 + 3)**
- Accessways**
- Roundabouts**



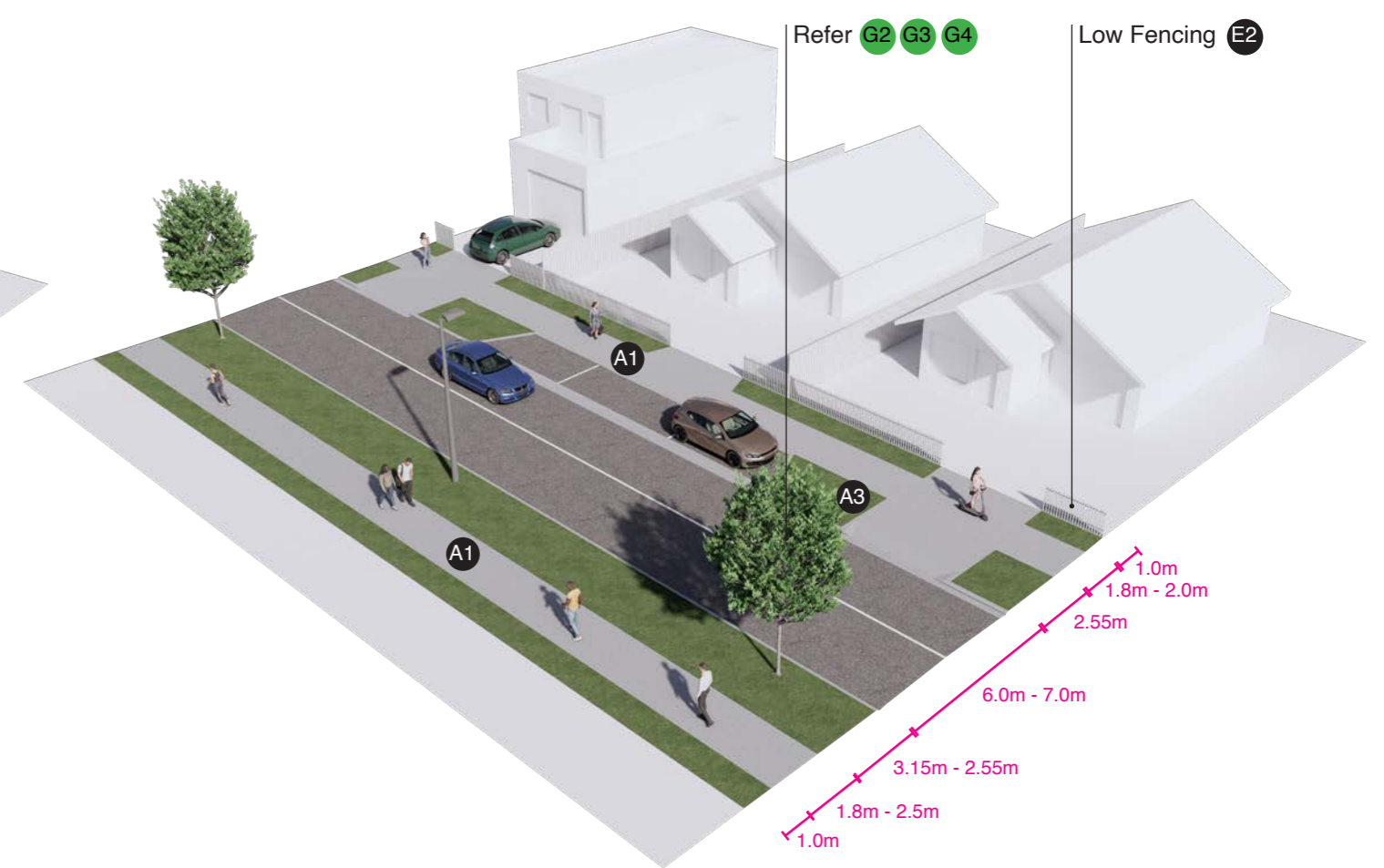
Note: Refer to the following pages for indicative street cross sections and to the civil drawings for exact street layout and design.

### Collector Roads Types A,B,C,D and E



Note: Refer to civil cross sections for exact dimensions

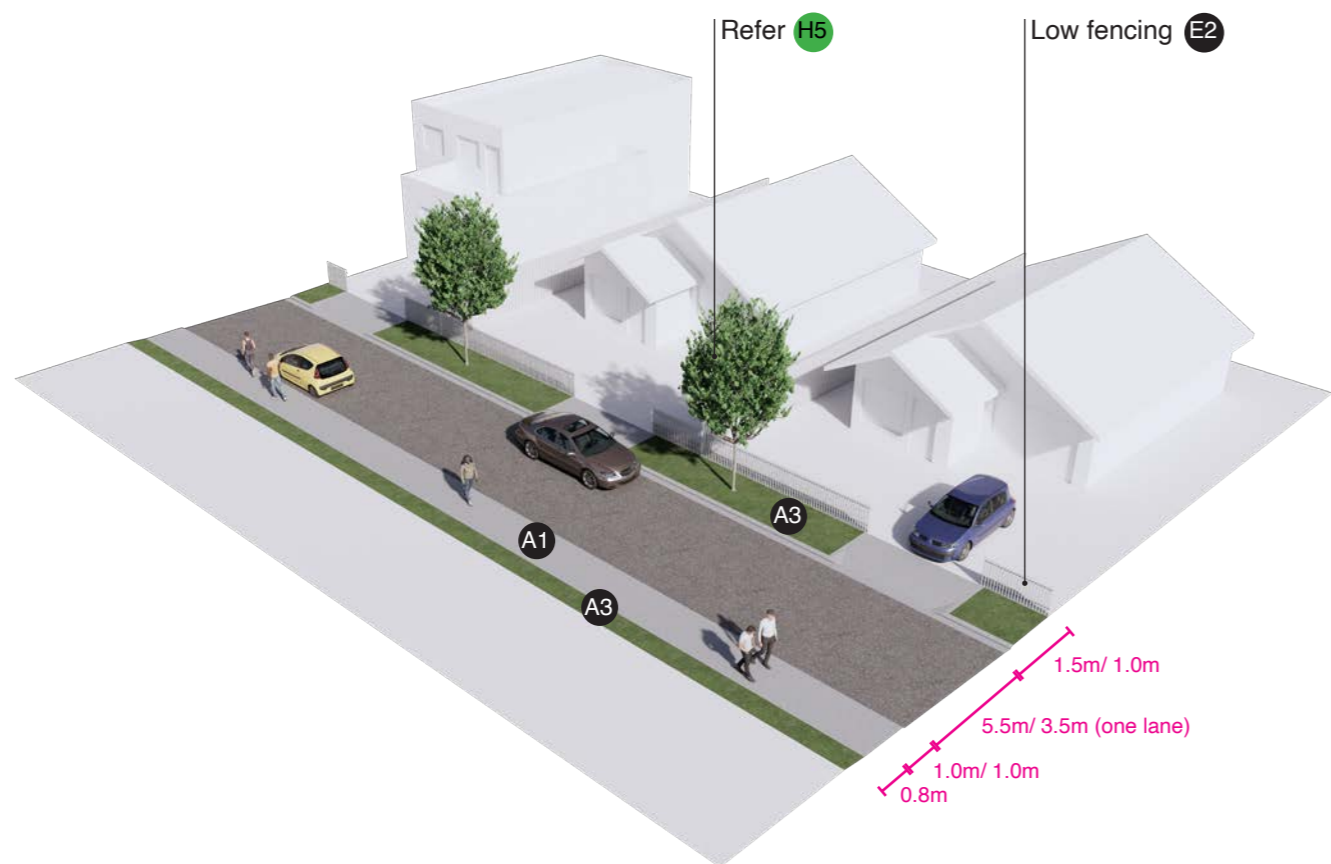
### Local Streets Types F,G + H



Note: Refer to civil cross sections for exact dimensions

### JOALS

Types 1,2 + 3



### Typical Intersections/Roundabouts



Note: Refer to civil cross sections for exact dimensions

### 3: Access Lanes

Across the development, four pedestrian accessways are proposed to provide convenient connections through the neighbourhood. These links are framed by rain gardens, hillside vegetation, or traditional planting, which introduce additional width, light, and visual interest — enhancing the overall landscape experience of each lane.

Dwellings fronting onto the lanes will incorporate low fencing to maintain an open character and promote passive surveillance. Bollard lighting will be used to provide safe illumination for users while minimising light spill onto neighbouring properties.

Steps have been avoided where possible (with one exception) to maximise accessibility for all users and grades are  $\leq 1:12$ . Seating is provided as a place to rest or wait for others, offering a moment of respite from the busier surrounding streets.

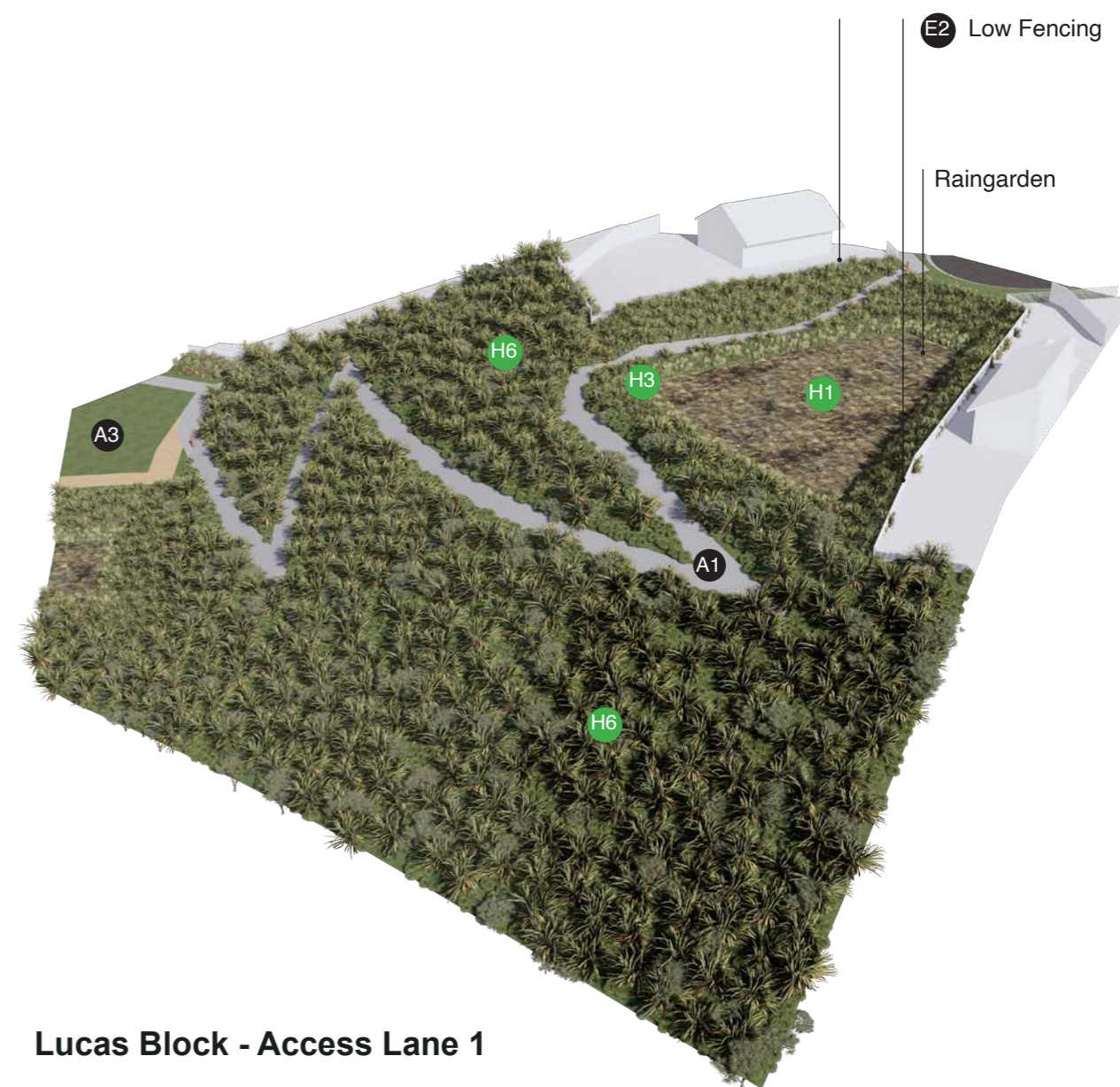
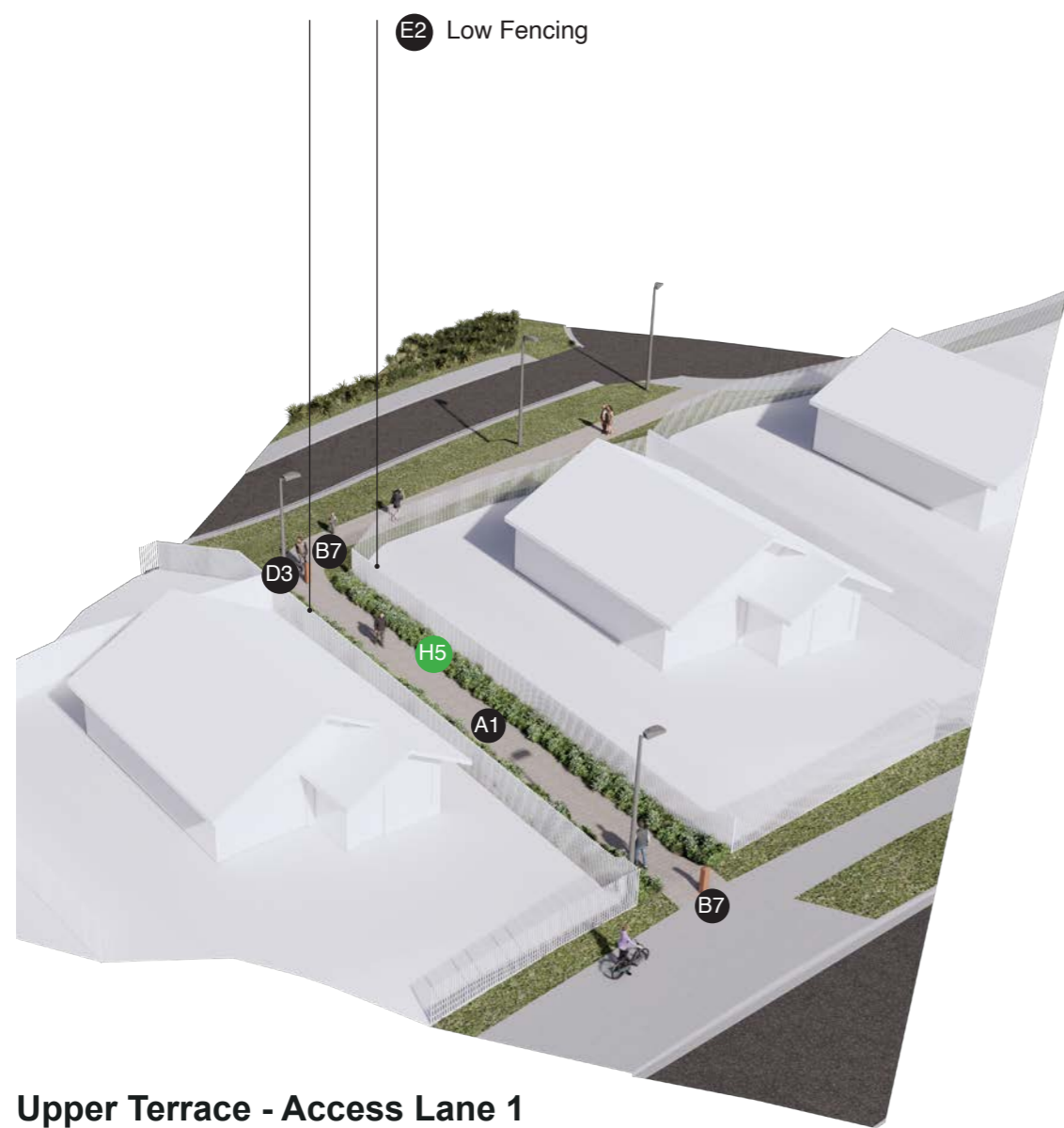
*For tag references see page 49 - Design Standards + Selections.*



Lower Terrace - Access Lane 1



Lower Terrace - Access Lane 2



## 4: Trails + Amenities

Trail design follows the Porirua City Council Track Standards Manual (the “Manual”). These walkways are classified as Short Walks or Walking Tracks, which recommend gradients of 1:6 to 1:8 wherever practicable. Short sections with gradients up to 1:4 (25% maximum) are acceptable, provided the track surface is well-bound and side drains are protected from scour. Overall, the Manual promotes gradients being kept to a practicable level given the site’s topography.

3 km of trails are being provided, primarily connecting the Lower and Upper Terraces. Two primary trail types are proposed:

**On-ground trail** – These will utilise existing farm tracks where possible, or follow newly formed alignments. As per the Manual, surfaces will be finished with a mix GAP20 aggregate and a clay fines content of between 3% and 5% to provide a durable, all-weather walking surface.

**Boardwalk trail** – These will be implemented in areas where on-ground pathways are not suitable, or where the experience is enhanced by engaging with the landscape—such as traversing wetlands, gullies, or elevated viewpoints. Boardwalks where required will be constructed to Council standards to ensure accessibility, durability, and ease of asset management.

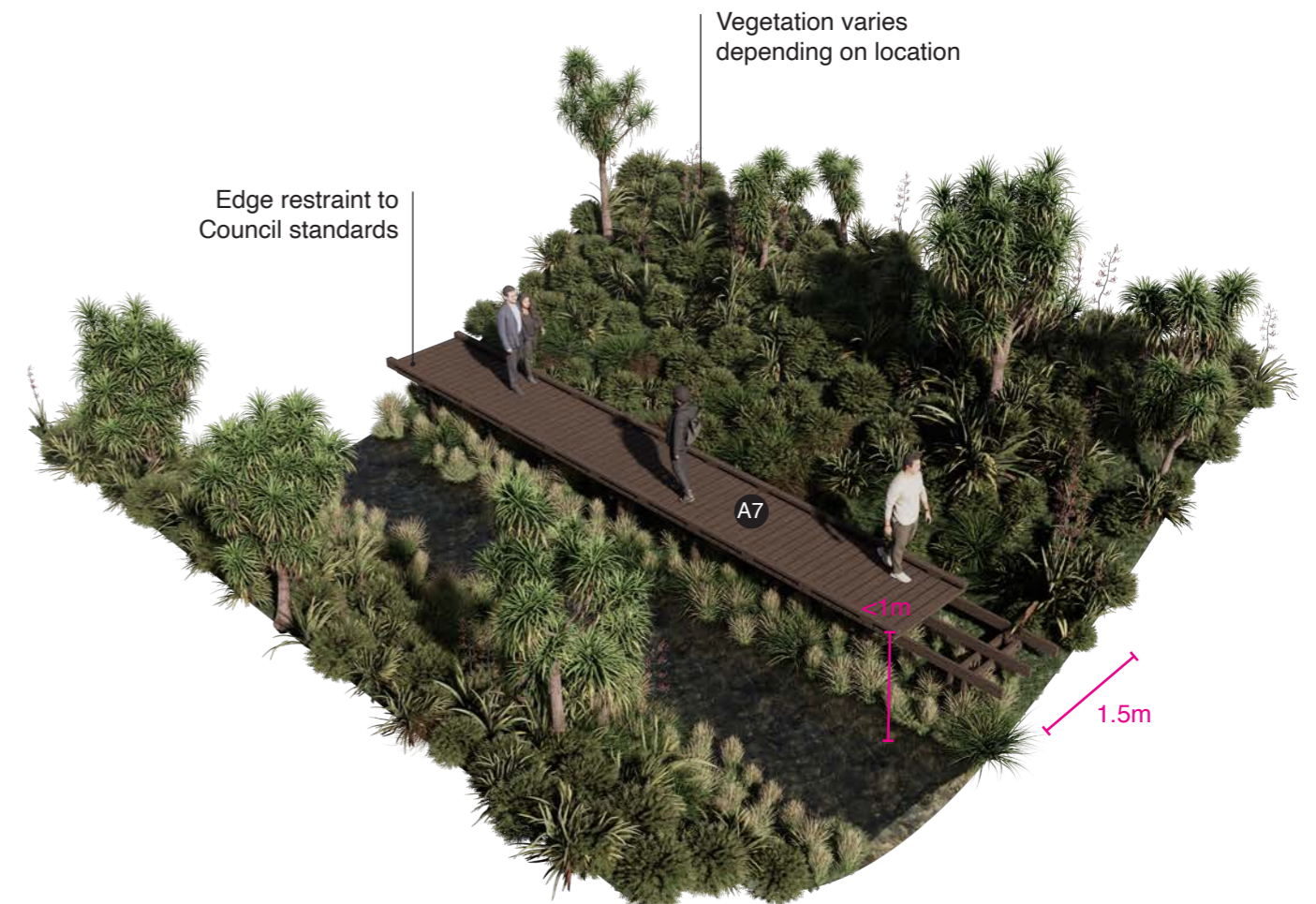
Along all trails, seating and wayfinding signage will be provided. These elements will assist users in navigating to other trails, local streets, and, in particular, the town centre, thereby strengthening pedestrian connectivity and encouraging use of the open space network.

For tag references see page 49 - Design Standards + Selections.

**On-ground (Benched)**



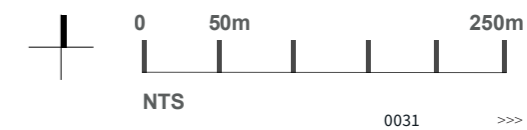
**Boardwalk**



The Network\_



--- Proposed Trails    - - -> Future Connections       Reserves  
(refer page 36)



# 5: Neighbourhood Centre

The Neighbourhood Centre is designed to secure adequate space through subdivision while setting a clear vision consistent with the wider development. It is envisioned that a small supermarket (circa 800m<sup>2</sup>) would anchor the centre, with parking and servicing arranged intuitively but screened from key frontages and views. An early childhood centre is also anticipated (based on Ministry of Education standards for 100 people = 620 m<sup>2</sup> total site, 210 m<sup>2</sup> building, 280 m<sup>2</sup> play, 130 m<sup>2</sup> parking/drop off) overlooking the valley and retention wetlands, integrating with the natural slope for play.

Complementary retail and hospitality buildings (120–140 m<sup>2</sup> each) could connect to the internal street network and Neighbourhood Reserve, activating edges and orienting towards the restored wetlands and valley. The Centre is intended as a striking, walkable, and engaging hub, with materials and public realm design focused on safety, quality, and durability and overall integration with the wider design context.

For tag references see page 49 - Design Standards + Selections.

Small supermarket example



Early childhood centre example



Neighbourhood centre retail or hospitality example



Walkable neighbourhood centre



View coming into town - uphill (Indicative, showing potential outcome only)



View coming into town - downhill (Indicative, showing potential outcome only)



A Vision\_

Set near the SNA with buffer and entry planting, the Neighbourhood Reserve and ecological areas provide a natural outlook and green backdrop to the neighbourhood centre.

Welcoming / High-Amenity Street Interface

Small Supermarket

Retail / Hospitality

Slow, pedestrian-friendly streets connect through to the Neighbourhood Reserve.

The car park is tucked below the hill and positioned behind the larger building.

Early childhood centre designed to utilise the natural environment, providing opportunities for play, exploration, and a strong visual connection to the surrounding landscape.



View overlooking Neighbourhood Reserve/ Park and Centre (Indicative, showing potential outcome only)

# 6: Lot Conditions and Housing Typologies

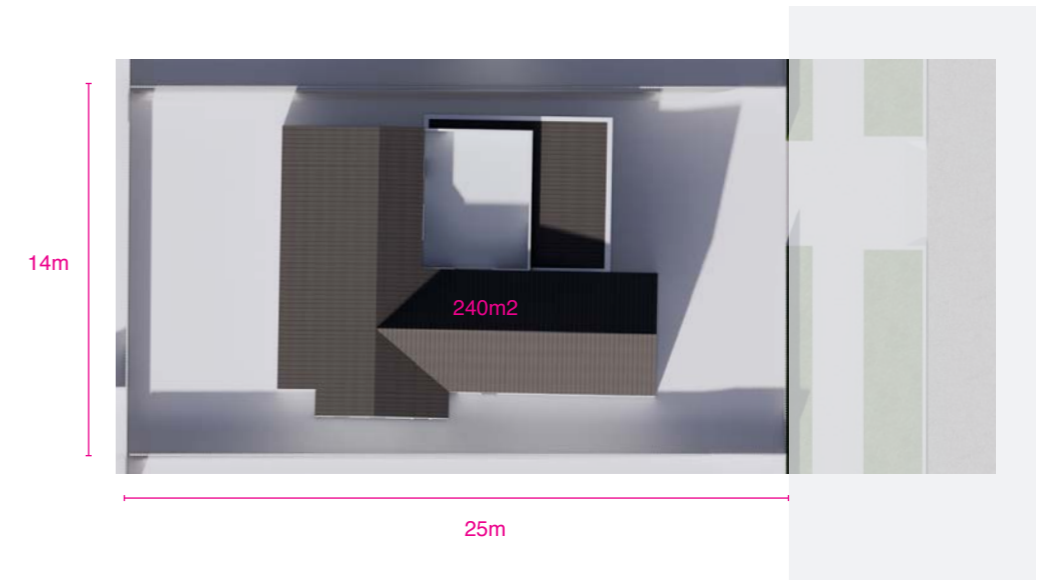
Across Mt Welcome, a variety of lot conditions are proposed. The typical lot pattern is rectangular, designed to meet or exceed the minimum area (300 m<sup>2</sup>) and dimension (14 x 9 m) requirements set out in the PDP.

In some locations, such as at natural hill terminations, cul-de-sacs, or around significant landscape features, lots may take on more irregular shapes or be smaller than the typical lots located in less constrained areas. These sites, however, often benefit from enhanced amenity values—such as outlook, proximity to open space, or connection to pedestrian networks—which can offset their smaller size or irregular form. These lots will still comply with the overall 300 m<sup>2</sup> minimum set out in the PDP.

The following section outlines the envisaged housing typologies for Mt Welcome and demonstrates how both standard and irregular lots can be configured to comply with PDP requirements while still achieving strong residential function, quality urban form, and high levels of amenity.

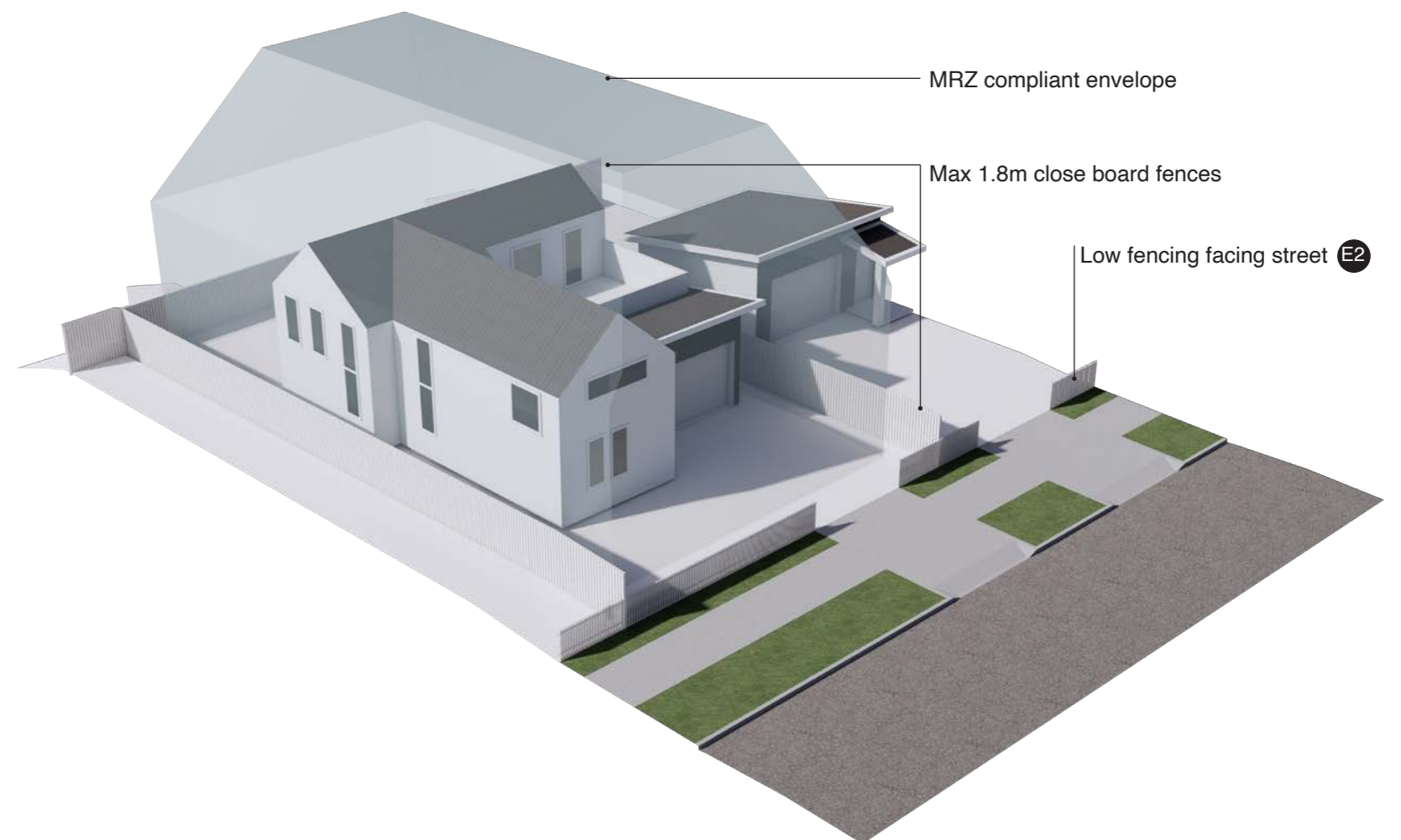
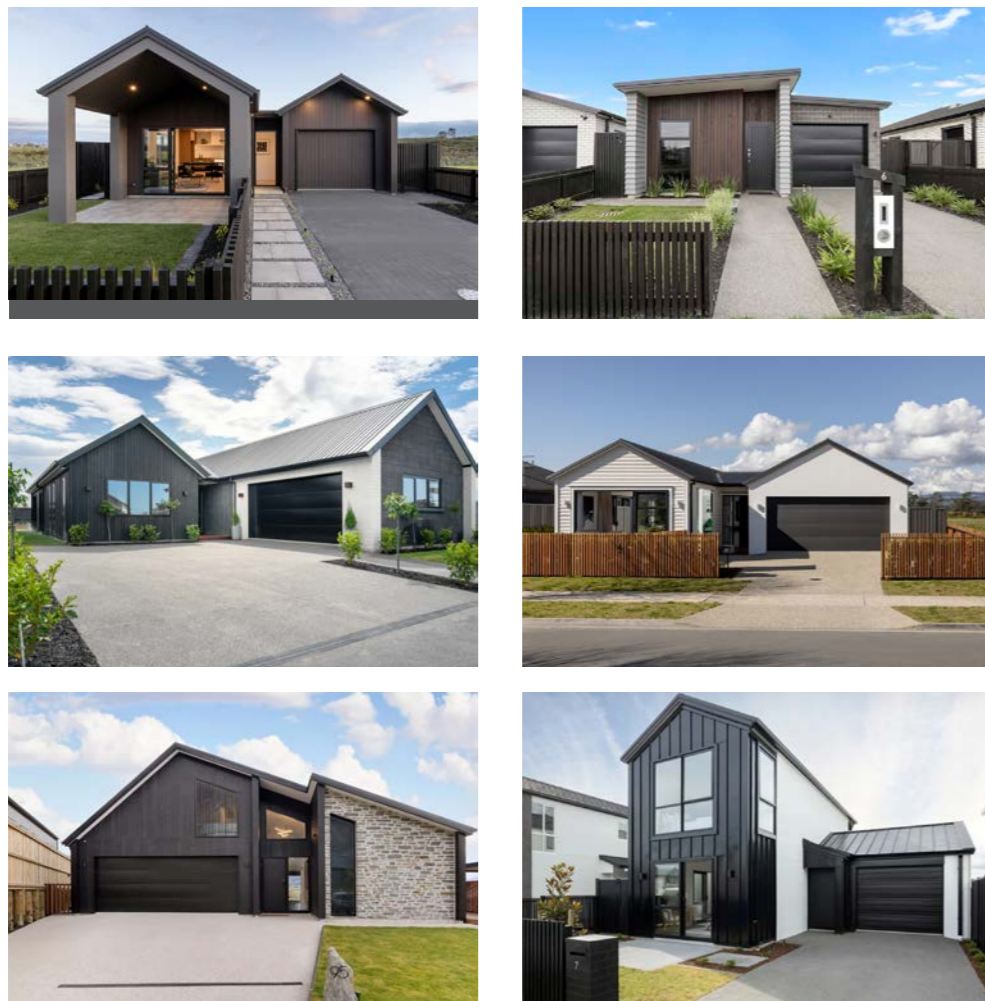
For tag references see page 49 - Design Standards + Selections.

Plan View

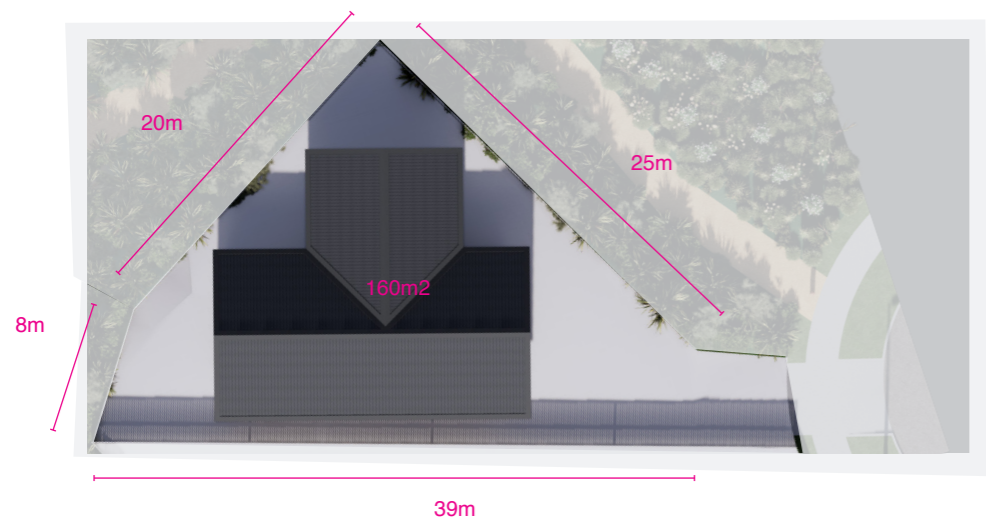


,Typical' Lots

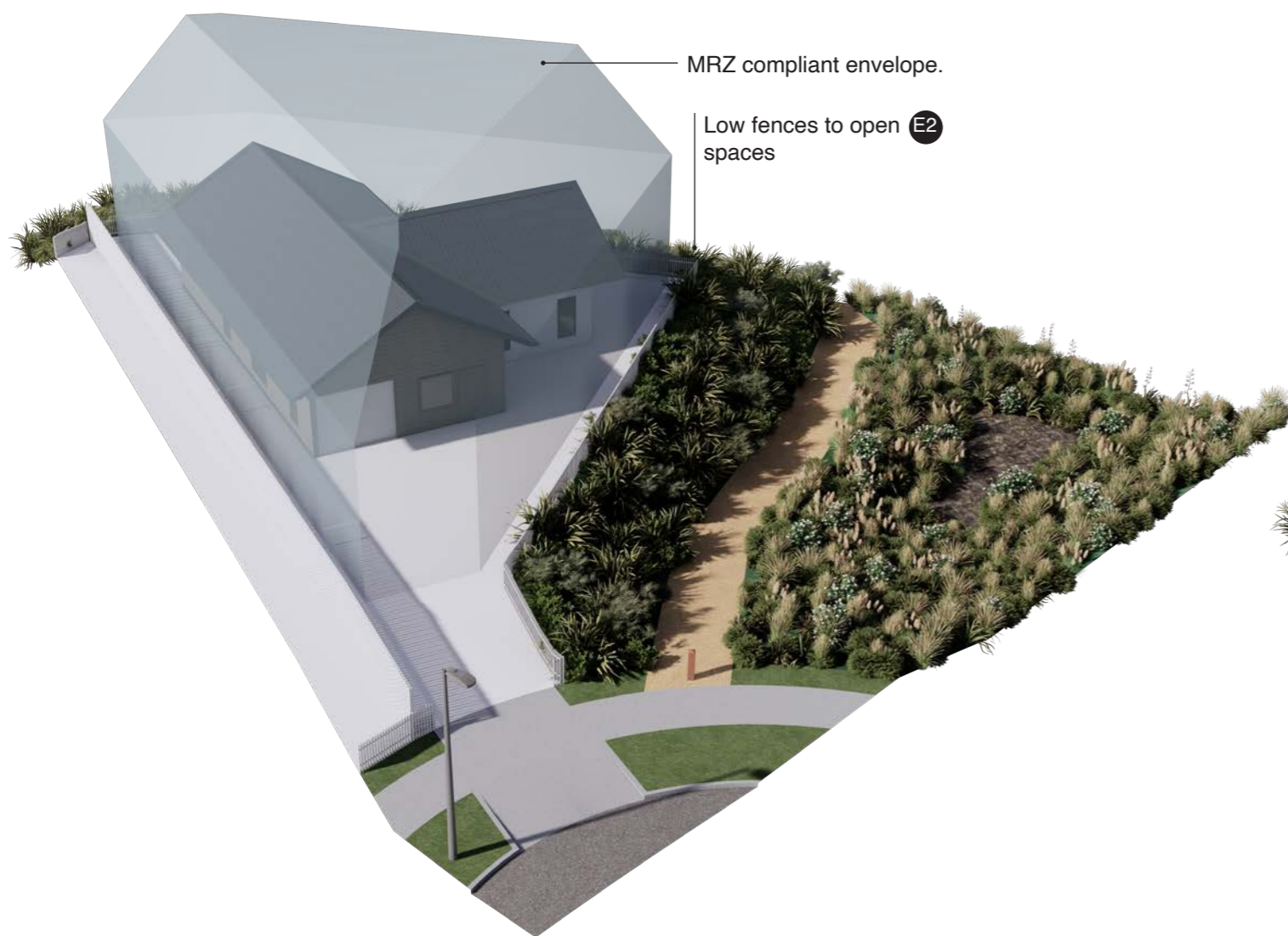
Single and double storey housing examples - ranging from 140 - 250 m<sup>2</sup> gross floor area



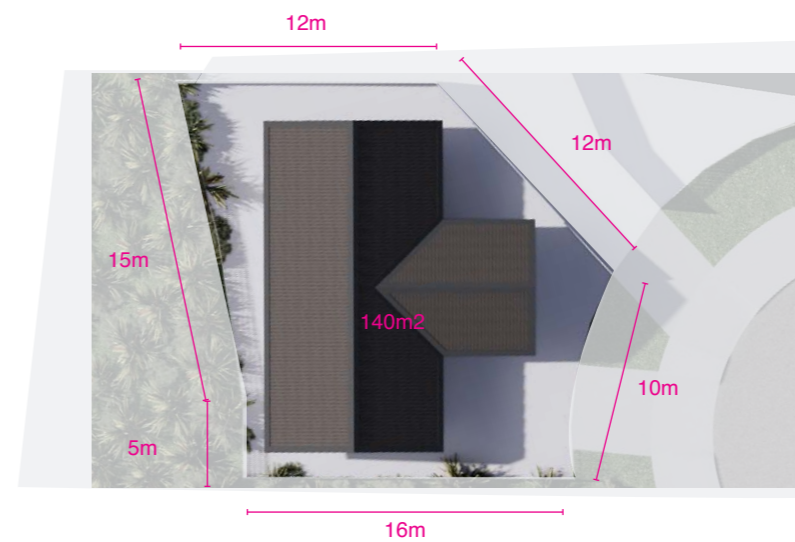
Plan View



,Wedge' Lots



Plan View



,Smaller' Lots

E2 Low fences to open spaces



## 7: Parks + Reserves

Mt Welcome has been designed to achieve the Structure Plan's objective of providing a variety of active neighbourhood reserves and community parks, complementing the passive recreation opportunities offered by the trail network. Parks are located within reasonable walking distances (<600m), consistent with Porirua District Council and Recreation Aotearoa Association guidance.

### “Neighbourhood Reserve (Park)”

Adjacent to the Mt Welcome Neighbourhood Centre, a “destination” reserve/park is proposed. This reserve will contribute to the amenity and identity of the centre, while also acting as a focal point for the wider community. The neighbourhood reserve will provide approximately 7000 m<sup>2</sup> of open space and has been designed to achieve a higher level of amenity than a typical neighbourhood park.

Key features may include:

- Natural play areas integrated into the landscape.
- Hardscaped open space to support town centre businesses (e.g. spill-out space for cafés and events) and improve accessibility for elderly and mobility-impaired users.
- Public amenities including toilets, BBQ facilities, and seating areas.
- Active recreation facilities such as a basketball court.
- Open grassed areas for flexible, informal use.

Strategically located, the reserve is perched above and oriented toward a large retention wetland at the confluence of several valley catchments. This retention wetland is undergoing ecological remediation, providing a unique natural outlook from the town centre and reserve spaces.

The wider trail network has been designed to weave through these valley systems, connecting the retention wetland, reserve, and town centre to create a fully integrated recreational and ecological landscape. Additionally, the collector roads provide a shared path which connects to this space from all parts of the development.

### “Neighbourhood Community Parks”

Four neighbourhood parks are proposed across the Lower Terrace, Upper Terrace, and Lucas Block, ensuring all residents have easy access to open space. Two parks are over 3,000 m<sup>2</sup> each, with the other two totalling around 3,000 m<sup>2</sup> combined, providing a well-balanced network of recreation areas.

Designed in line with the Structure Plan, Council Development Contributions Policy, and Recreation Aotearoa guidance for a 950 HUE community, the parks offer flat, open grassed spaces for flexible use. Earthworks create level areas suited to informal play and community activity, with simple play features supporting everyday family use.

*For tag references see page 49 - Design Standards + Selections.*

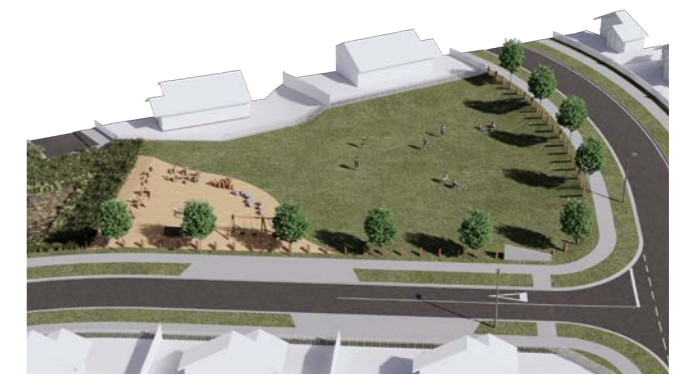
„Mt Welcome” Reserve/ Park  
(Refer Page 38)



„Upper Terrace” Park  
(Refer Page 39)



„Lower Terrace” Park  
(Refer Page 40)



„Lucas Block” Parks  
(Refer Page 41)



The Network\_



 Neighbourhood Reserve/ Park  
(refer page 38)

 Neighbourhood Community Parks  
(refer page 39-41)

 <600m Walking Distance



NTS

0037

>>>

## „Mt Welcome” Reserve/ Park

Adjacent to the Mt Welcome Neighbourhood Centre, a destination neighbourhood reserve of ~ 7,000 m<sup>2</sup> is proposed as a key community hub and landscape feature. Designed for higher amenity than a typical park, it will strengthen the identity and activity of the town centre.

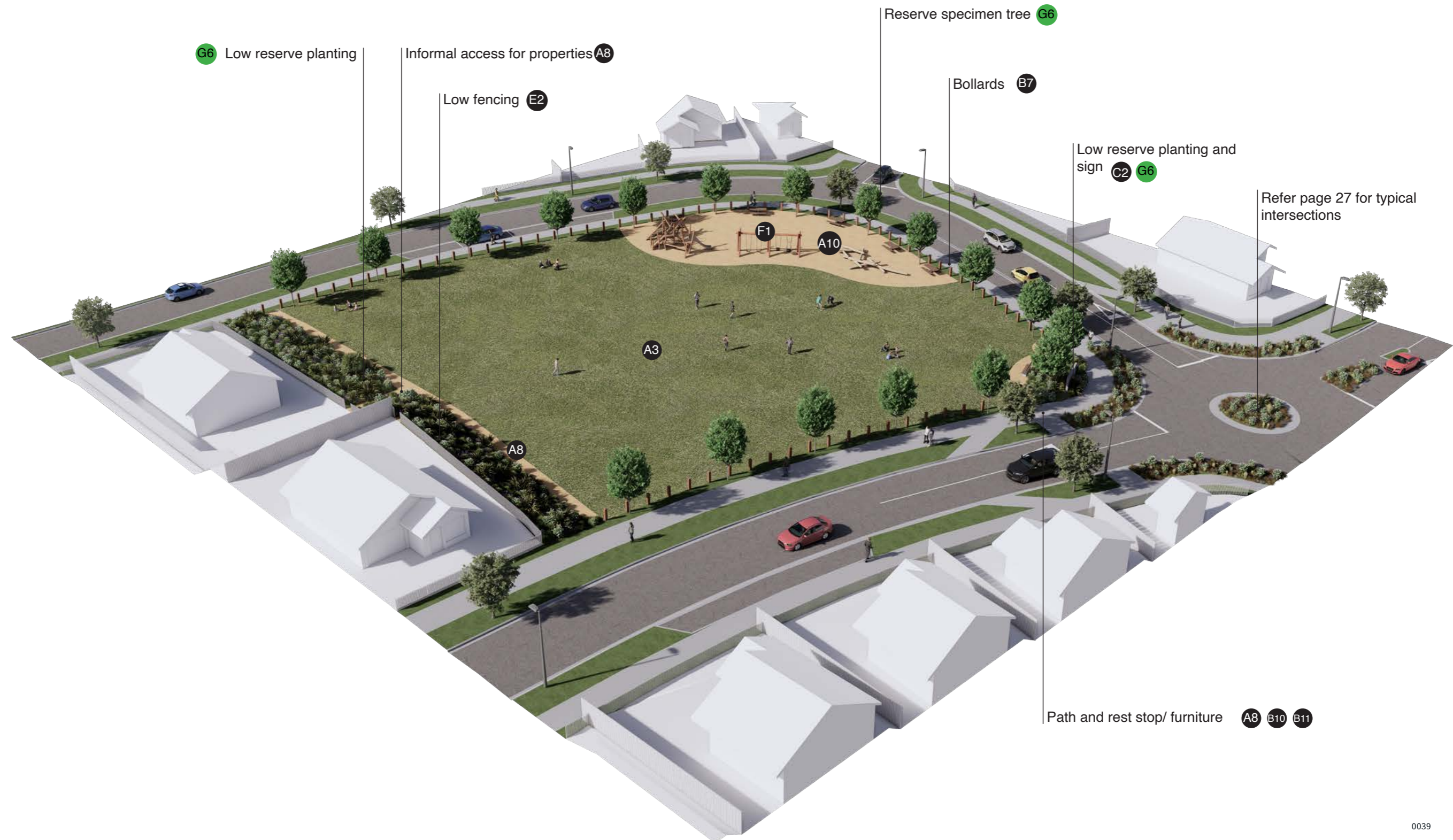
The reserve will include natural play areas, hardscaped spaces that support cafés and community events, and public amenities such as seating, BBQs, and toilets. Active recreation (e.g. a basketball court) and open grassed areas will provide space for both informal play and relaxation.

Set above a retention wetland undergoing ecological restoration, the reserve enjoys a unique natural outlook. Trails weave through the valleys, linking the wetland, reserve, and town centre, while shared paths along collector roads ensure safe, easy access from across the neighbourhood.



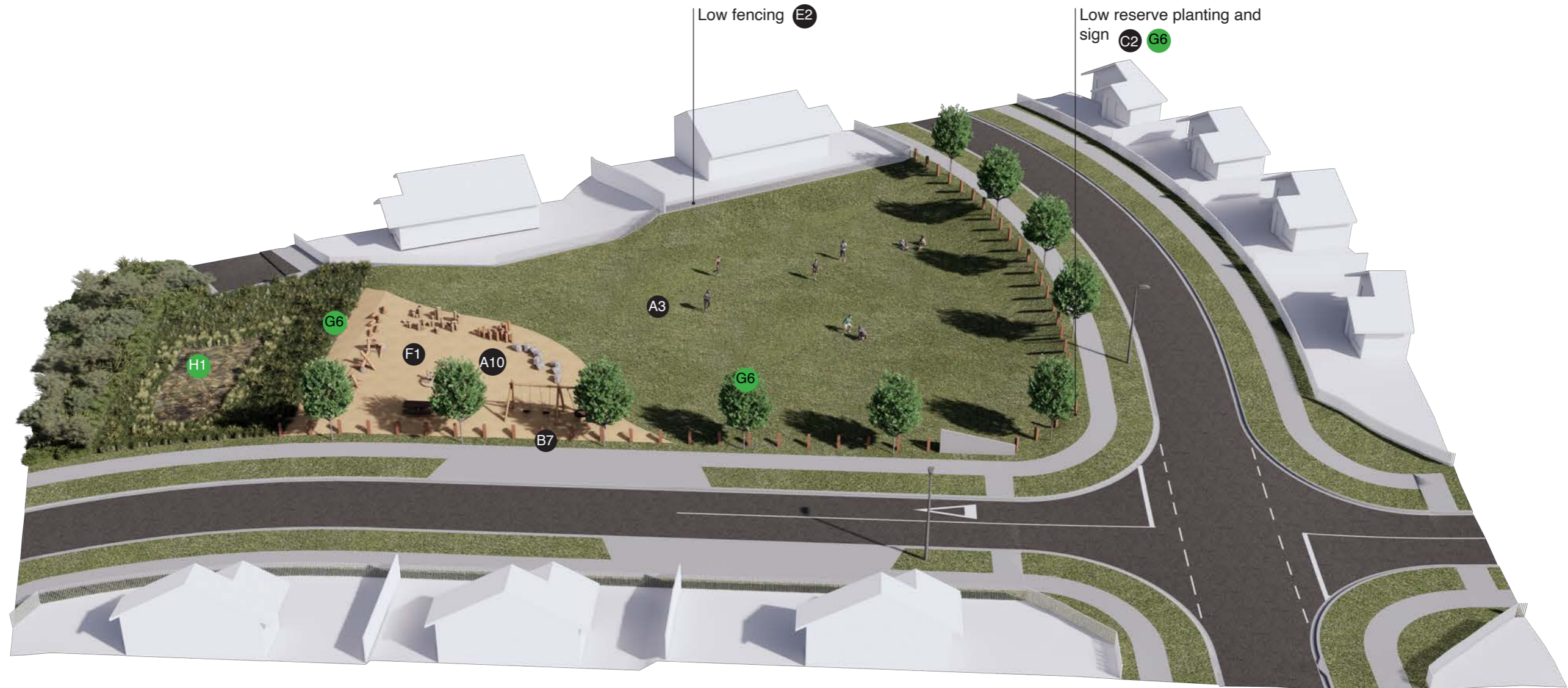
## „Upper Terrace” Park

The Upper Terrace Reserve will primarily function as a large open field (60x60m), providing space for children to play and parents to relax. Seating opportunities will be included for older residents, along with two family-sized picnic tables to support informal gatherings and summer “fish and chip” evenings.



## „Lower Terrace” Park

The Lower Terrace Reserve will provide a central open space (50x30m, ~ 1500m<sup>2</sup>), suitable for casual and equipment based play, small gatherings, and quiet recreation. Seating will be integrated to allow parents and grandparents to watch children at play, while also offering spots to enjoy the surrounding landscape. Picnic tables will be provided to encourage neighbourhood use, from informal lunches to relaxed evening catch-ups. There will be connections to the wider trail network from this reserve.



### „Lucas Block” Parks

Two Lucas Block Reserves are proposed — a main reserve of ~ 3,000 m<sup>2</sup> and a smaller reserve of ~ 1,500 m<sup>2</sup>. Both provide flat, open spaces designed for casual recreation, play, rest, and relaxation. Seating will be positioned to allow parents to watch children, pause along nearby trails, and take in views of the surrounding landscape. Picnic tables and benches will support neighbourhood use, from relaxed lunches to informal evening gatherings.



## 8: Retention Wetlands + Ecological Offset Areas

The Mt Welcome development sits within both the Taupō Swamp catchment (discharging to Porirua Harbour) and the Kākaho Stream catchment (outletting to the Pāuatahanui Inlet, and ultimately the wider Porirua Harbour). According to the Blue Green Ecology assessments, the site itself has relatively low ecological value, whereas downstream environments hold significant ecological values, despite being subject to ongoing pressures from historic land use and landscape modification.

The development is positioned to act as a catalyst for landscape and ecological improvement, delivering benefits both on-site and downstream.

### Key Initiatives

- Retirement of farming activities, reducing land-use pressures.
- Locating housing and earthworks outside more valued environments, protecting valued ecological areas.
- Rehabilitation of earthworked areas through native planting and grassing, reducing sedimentation to waterways.
- Targeted remediation of wetlands and their margins, prioritising areas identified with ecological value and best opportunities for ecological return.

These initiatives are integrated into the design of homes, reserves, the town centre, and the trail network. This ensures protection and enhancement where pressures are greatest, while also maintaining community access to natural areas—supporting engagement and ongoing improvement.

### Catchment Context

#### Kākaho Stream Catchment

- Birdlife & marine species: Flows into Pāuatahanui Inlet, an Outstanding Waterbody supporting saltmarsh, tidal flats, wetland birds, and marine species.
- In-stream habitat: Moderate–poor ecological condition due to sediment and nutrient input from pasture and forestry.
- Fauna focus: Provides habitat for birds, fish, and estuarine invertebrates.

#### Taupō Stream Catchment

- Wetland fauna: Contains the Taupō Swamp Complex (37.2 ha), a nationally significant wetland identified as an Outstanding Wetland.
- Faunal values:
  1. Native wetland birds (e.g. swamp hens, bitterns, waterfowl).
  2. Freshwater fish (though passage is restricted by culverts/modified channels within and outside the site).
  3. Invertebrate communities in swamp and stream habitats.
  4. Habitat values: Dominated by harakeke (*Phormium tenax*), providing nesting and feeding resources for wetland species.

For tag references see page 49 - Design Standards + Selections.

Existing Valley Conditions

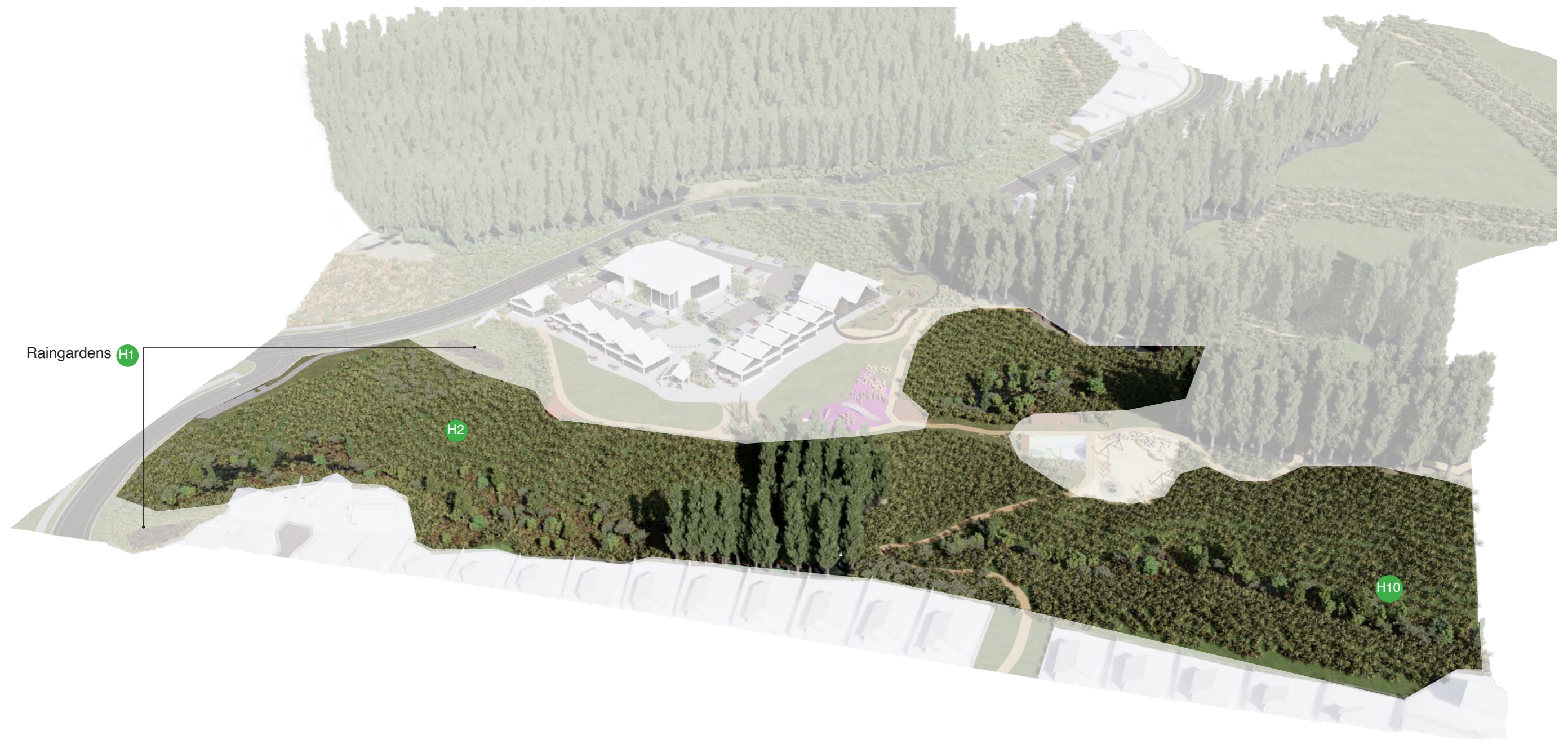


Example of Proposed Planting Potential



## „Neighbourhood Centre” Ecological Area

The “Neighbourhood Centre” Ecological Area is approximately 0.8 ha in extent. Although it currently has only low ecological value, it is proposed to be enhanced through targeted remediation planting along and around its margins. The Retention wetland will be established predominantly with *Carex secta* and *Carex geminata*, with supporting planting of mānuka (*Leptospermum scoparium*), *Coprosma propinqua*, harakeke (*Phormium tenax*), and tī kōuka (*Cordyline australis*). In addition, specimen trees of pukatea (*Laurelia novae-zelandiae*), swamp maire (*Syzygium maire*), and kahikatea (*Dacrycarpus dacrydioides*) will be strategically positioned to provide long-term canopy development and enhanced ecological resilience. Together, this planting mix is intended to strengthen wetland character, improve ecological function, and provide diverse habitat values over time.



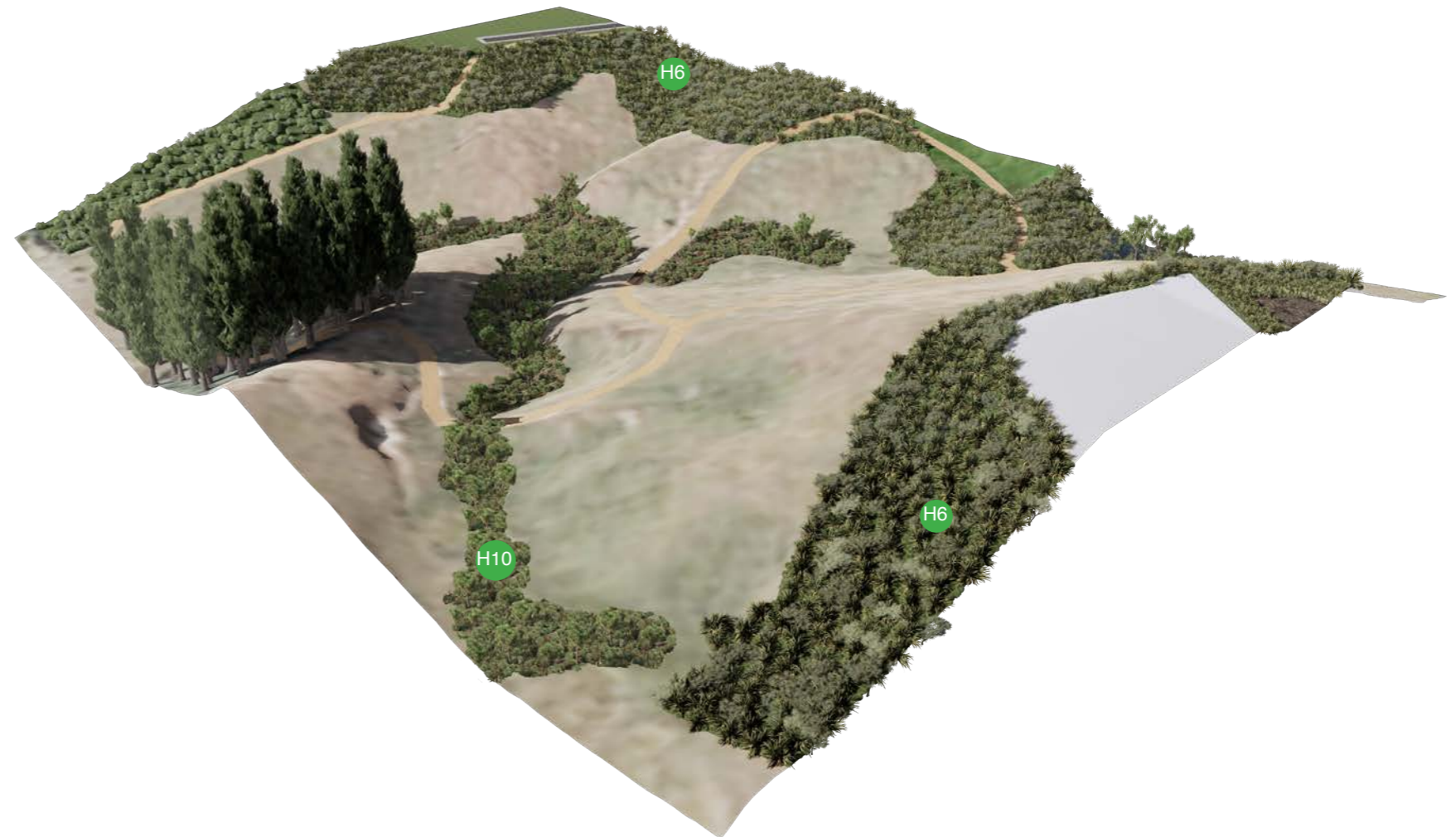


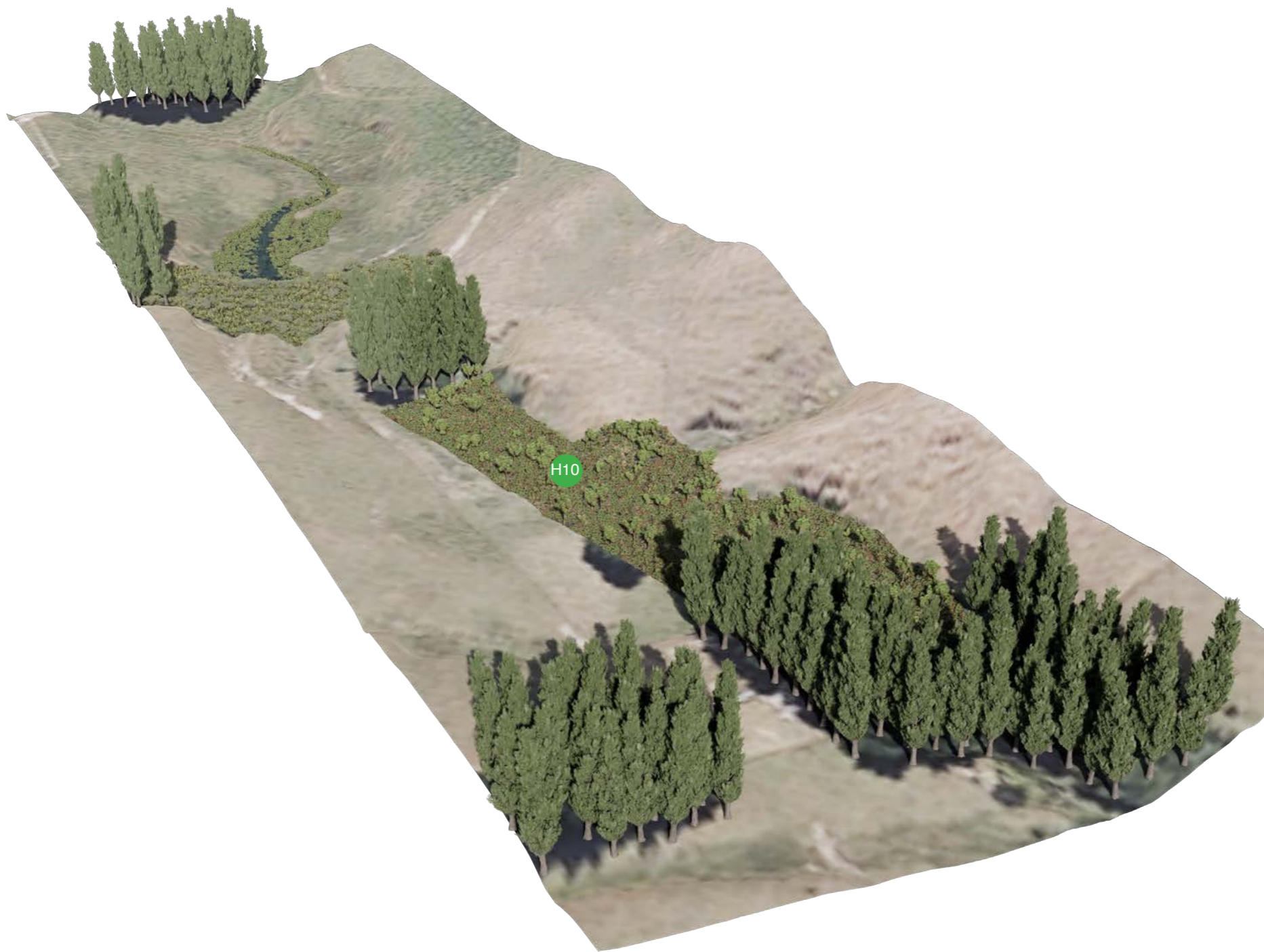
**„Lower Terrace A” Ecological Area**

The “Lower Terrace A” Ecological Area is approximately 0.64 ha in extent. Although it currently has only low ecological value, it is proposed to be enhanced through targeted remediation planting along and around its margins. The Retention wetland will be planted predominantly with *Carex secta* and *Carex geminata*, supported by *Juncus edgariae*, *Coprosma propinqua*, harakeke (*Phormium tenax*), and tī kōuka (*Cordyline australis*). Together, this planting mix is intended to strengthen wetland character, improve ecological resilience, and provide habitat benefits over time.

**„Lower Terrace B” Ecological Area**

The “Lower Terrace B” Ecological Area is approximately 0.38 ha in extent. Although it currently has only low ecological value, it is proposed to be enhanced through targeted remediation planting along and around its margins. The Retention wetland will be planted predominantly with *Carex secta* and *Carex geminata*, supported by *Juncus edgariae*, *Coprosma propinqua*, harakeke (*Phormium tenax*), and tī kōuka (*Cordyline australis*). Together, this planting mix is intended to strengthen wetland character, improve ecological resilience, and provide habitat benefits over time.





**„Lucas Block A” Ecological Area**

The “Lucas Block A” Ecological Area is approximately 0.55 ha in extent. Although it currently has only low ecological value, it is proposed to be enhanced through targeted remediation planting along and around its margins. The Retention wetland will be established with pukatea (*Laurelia novae-zelandiae*) and kahikatea–swamp maire associations, supported by *Carex* species and *Juncus* sedgelands. Together, this planting mix is intended to strengthen wetland character, improve ecological resilience, and provide habitat benefits over time.

## 9: Stormwater Reserves

Throughout the development there are a number of stormwater reserves and residual, often sloping land that is otherwise unusable for most activities. The approach is to vegetate the remaining areas as a native arboretum.

A planting palette has been developed in collaboration with an ecologist, selecting species that provide unique benefits such as seed sources, food sources, and habitat. In locations where access to the raingardens is required, these spaces have also been designed for dual use — functioning both as footpath connections (providing shortcuts through the neighbourhood) and as small rest spots where people can connect with nature.

*For tag references see page 49 - Design Standards + Selections.*



# 10: General Earthworks

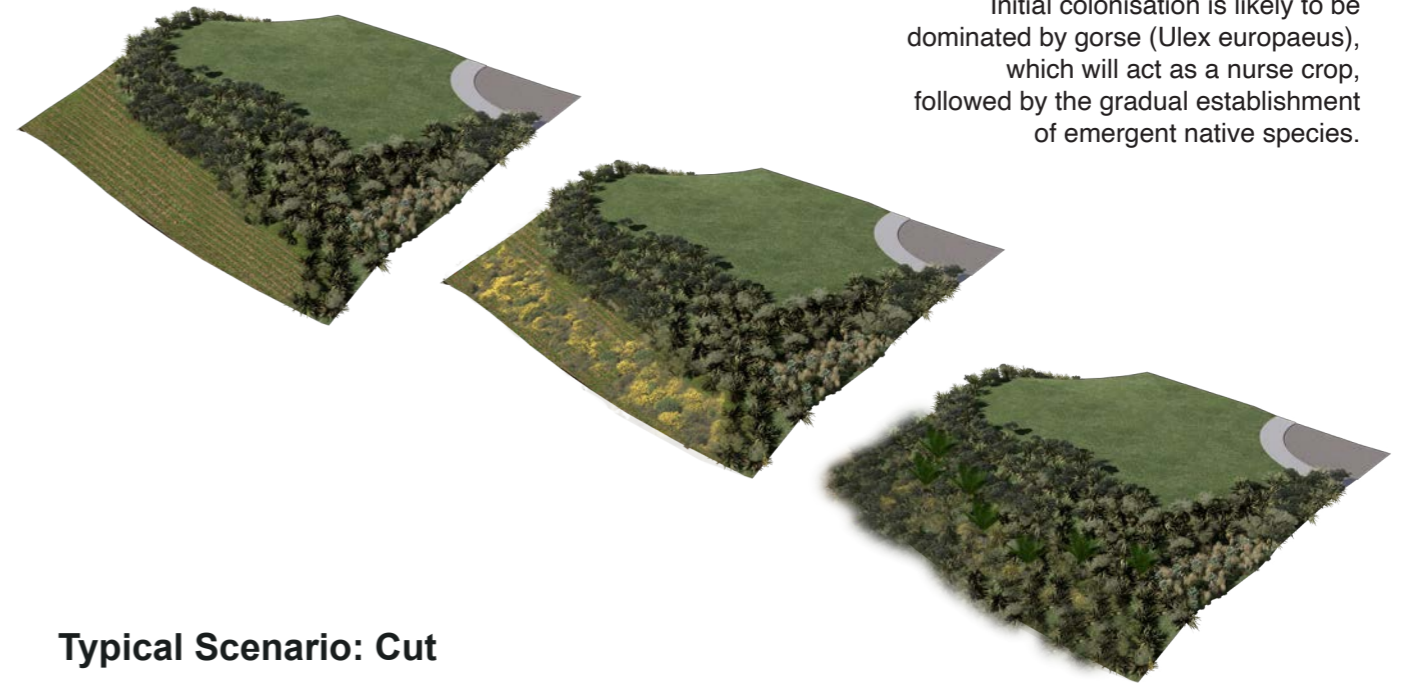
The landscape approach following earthworks varies depending on whether the ground is cut or filled. Fill areas generally provide more suitable conditions for planting, while cut faces can be challenging to establish successfully. In these locations, hydroseeding is often the more reliable approach to re-establish pasture cover, reduce visual starkness, and minimise long-term erosion and sedimentation. Two typical scenarios are outlined below.

Residual land, particularly in valleys between remediated areas or earthworked land, will remain in pasture. With the retirement of farming, it is expected that these areas will begin to regenerate naturally over time — initially through the colonisation of gorse, which often acts as a nursery crop for emergent, successional native forest species. This natural process can be accelerated through various methods once the land is vested in Council.

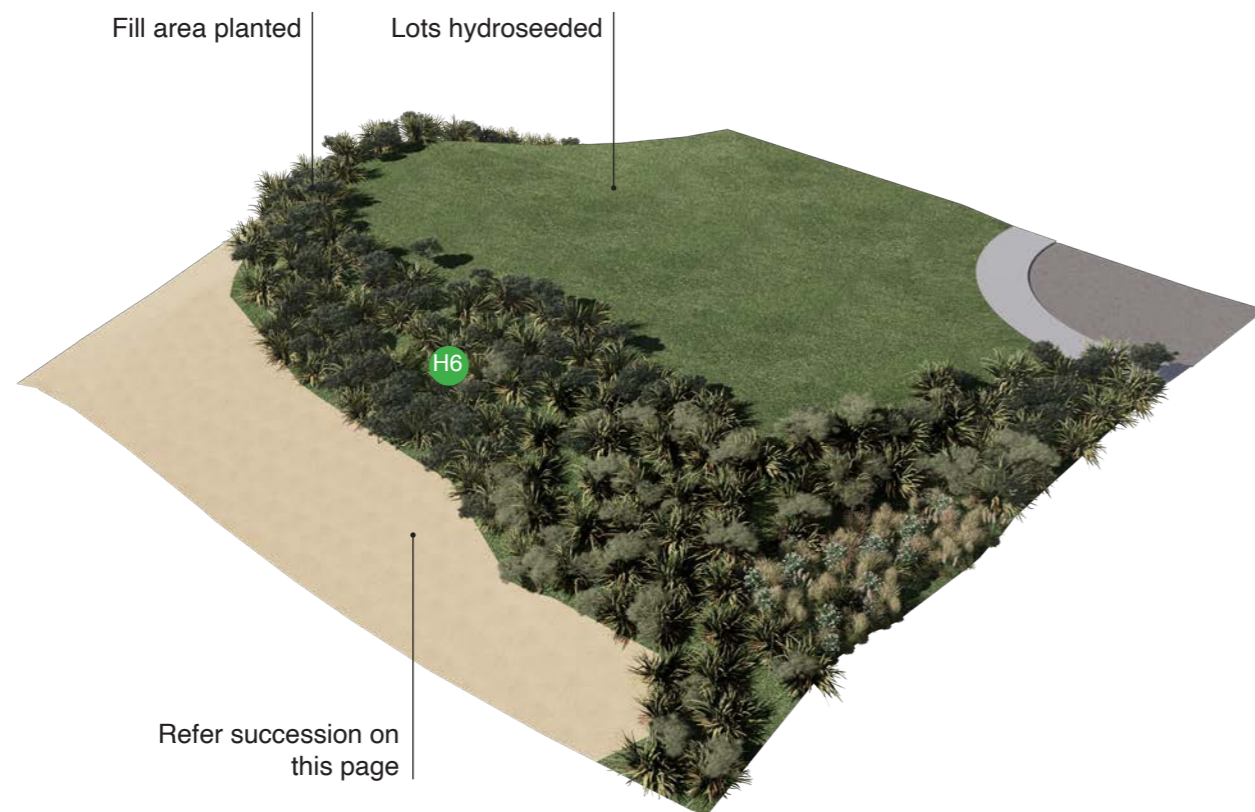
*For tag references see page 49 - Design Standards + Selections.*

## Expected succession

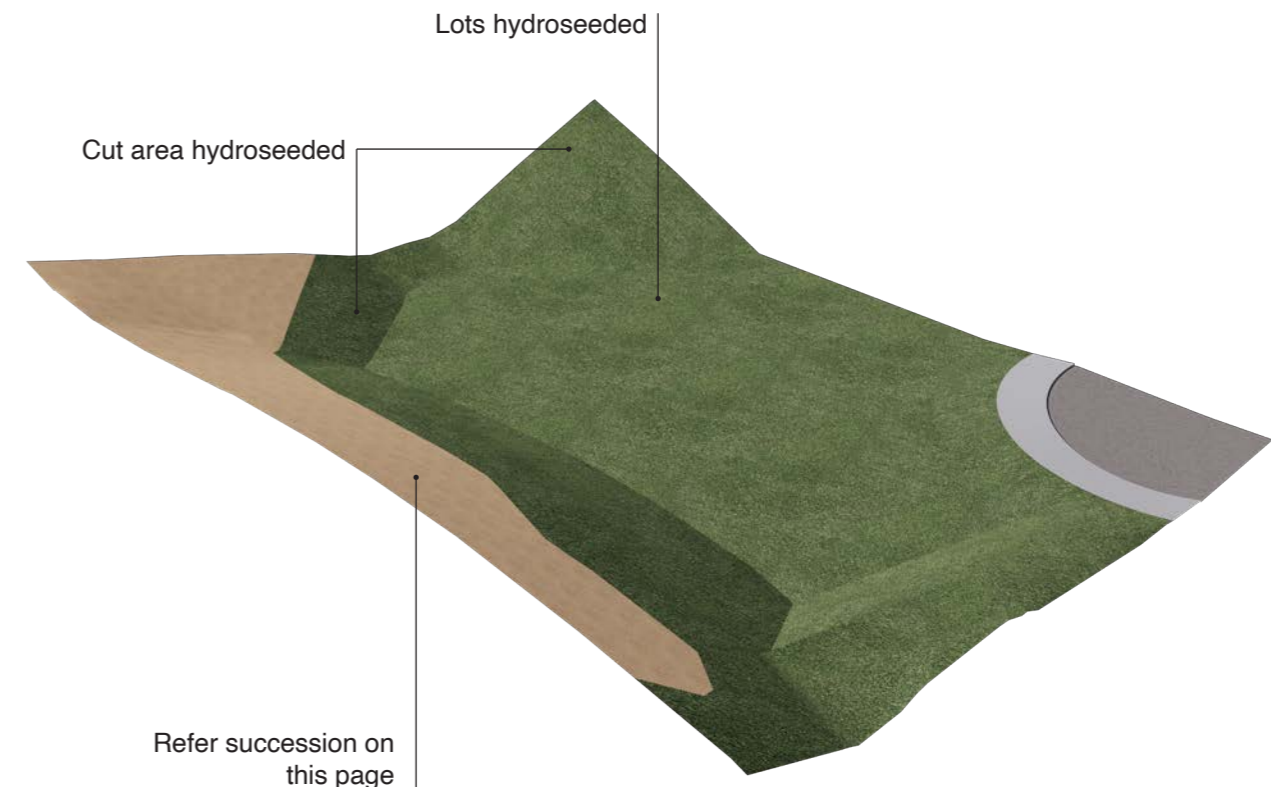
The existing land and pasture cover will remain in place, with natural regeneration expected to occur over time due to de-stocking of the land. Initial colonisation is likely to be dominated by gorse (*Ulex europaeus*), which will act as a nurse crop, followed by the gradual establishment of emergent native species.



## Typical Scenario: Fill



## Typical Scenario: Cut





## **Background\_**

Location, Context + History\_

The Site\_

Northern Growth Area + Structure Plan\_

Key Considerations + Development Approach\_

## **Masterplan\_**

Masterplan + Overview\_

## **The Strategy\_**

Design Principles \_

Focus Areas\_

Entrances

Streets + Lanes

Access Lanes

Trails + Amenities

Neighbourhood Centre

Housing Typologies

Parks + Reserves

Streams + Wetlands

Stormwater Reserves

Earthworks

## **Design Standards + Selections\_**

Surfaces

Furniture

Signage + Art

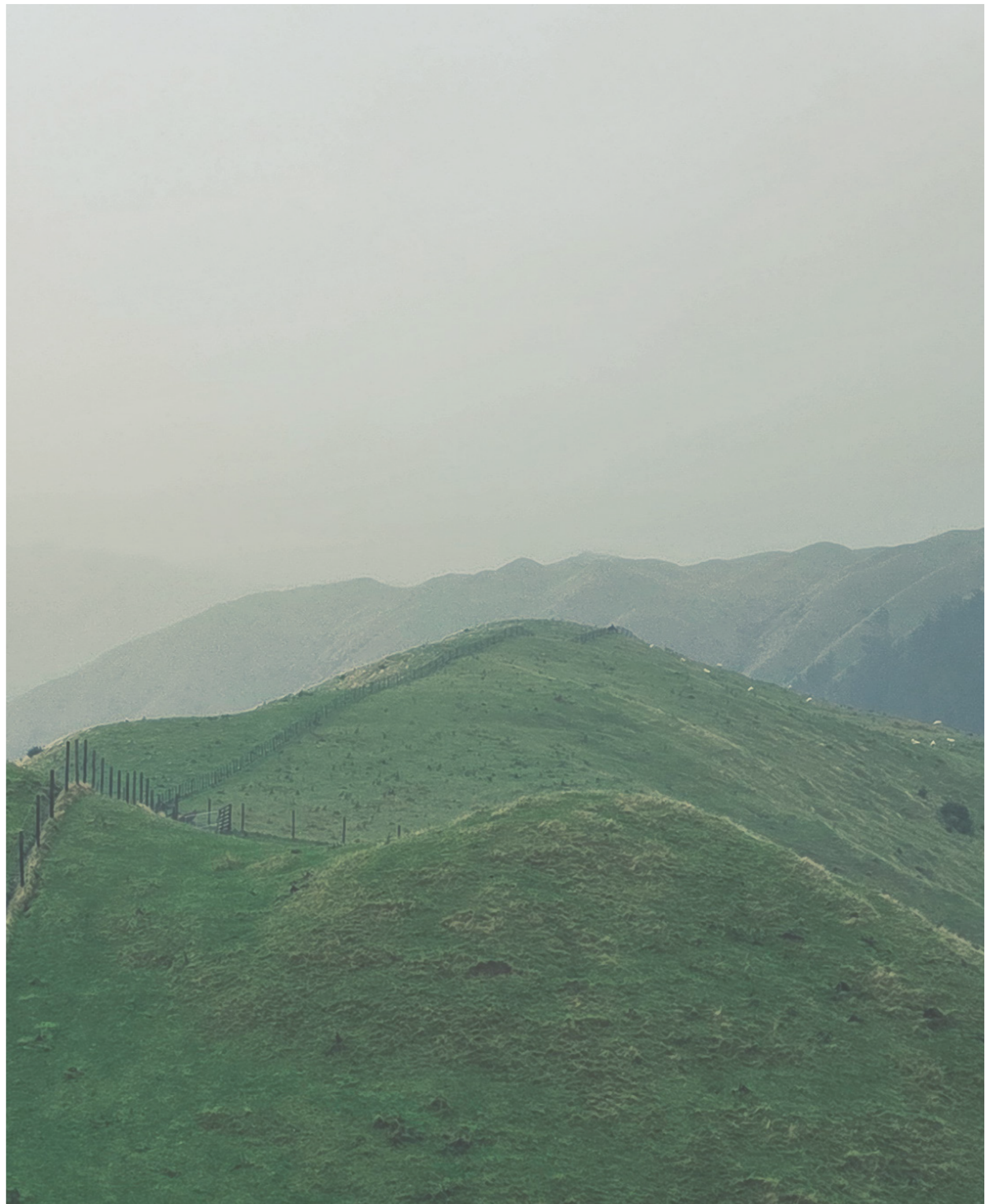
Lighting

Fences + Walls

Structures

Street Planting

General Planting



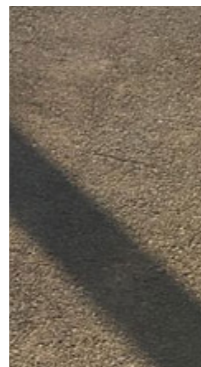
# A - Surfaces natural + high quality

Exterior materials have been carefully selected to reflect and complement the surrounding landscape, creating a cohesive and balanced visual character and building an identity for Mt Welcome. A mix of rural and urban design influences is encouraged, with a strong focus on using high-quality materials that provide durability and perform well over time.

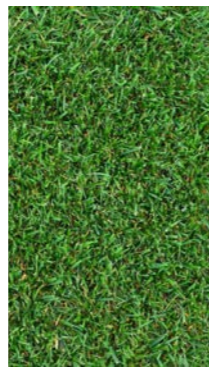
A1 Brushed concrete with a trowelled centre line on shared paths



A2 Asphalt



A3 Grass (Species by Council)



A4 Exposed concrete



A5 Permeable pavers



A6 Feature walls (off-form concrete, multi-pour)



A7 Timber platforms or boardwalks



A8 AP20 with clay fines (3% - 5%)



A9 Shredded bark over topsoil

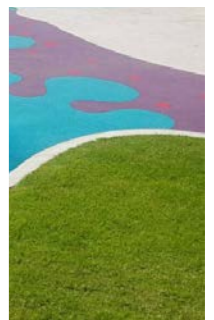


„Share with care“ signage to shared path“

A10 Safety bark



A11 Softfall



# B - Furniture informal + formal

The furniture selection has been designed to work as a unified suite, while allowing for variation to suit the distinct character of different spaces—ranging from the more structured town centre environment to the relaxed, nature-rich settings of the surrounding parks and reserves. In the town centre, the furniture incorporates forms that reference the hill and peak motifs used throughout the “Mt Welcome” identity. All pieces are standard, off-the-shelf products to support efficient procurement and straightforward replacement. The chosen suite prioritises durability, functionality, and suitability for each location’s intended use.

B1 Taniko seat



Taniko bench



B2 Plaza platform



B3 Haehae bin



B4 Haehae picnic table



B5 Haehae cycle stand



B6 Horizon bollard



B7 Timber bollard



B10 Plaza bench



B11 Plaza picnic table



B8 Wheelstop



B9 Decorative rock



# C - Signage robust + recognisable

The signage strategy embraces a simple and low-profile design, subtly reflecting the heritage and landscape character of Mt Welcome. Organic, nature-inspired signage is proposed for reserves, parks, and trails, while more contemporary, urban forms will define signage within the town centre and at key entry points. The overall approach aligns with Council standards, including compliant street naming signage.

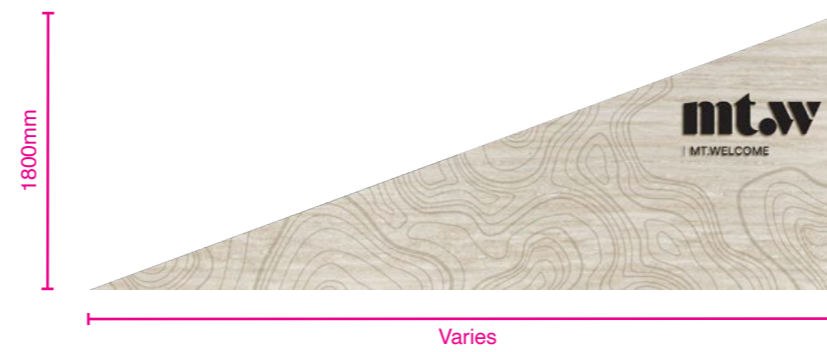
Mt Welcome branding



C1 Main + secondary entry sign (refer A6 Feature Wall)



C2 Neighbourhood Centre or reserve signs (refer A6 Feature Wall)



C3 Standard street sign



Note: Placed based on the Porirua City Council standards

C5 Trail wayfinding sign. Standard bollard cnc carved and painted.



Note: Placed in accordance with the Porirua City Council Track Standards Manual (Version 1.2, 2014)



Artist impression showing the proposed main entrance sign.



Artist impression showing the proposed Neighbourhood Centre sign.

# D - Lighting simple + elegant

Lighting for the development has been selected for its simplicity in both form and colour, with an emphasis on elegance and visual subtlety. Feature uplighting is proposed within the town centre, along with illumination for key wayfinding signage throughout the site. All lighting will be designed to comply with NZS 1158.3.1:2020 standards.

D1 Street light: Milford Column - Nox luminare



D2 Carpark + pathway light: SHS Column - Nox luminare



D3 Carpark + pathway light: Bollard Light - Ibex Canto



3000k Lighting colour



Nox M or S to suit



Pole colour - Gloss Black



D4 Sign uplight - Uni Lamp: Sirius 600 inground uplight



D5 Tree uplight - Uni Lamp „Graviton Round“

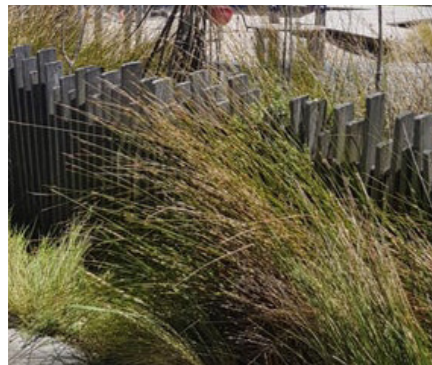


# E - Fences + Walls

## low + open, recessive

The fencing strategy provides a combination of open and secure solutions that maintain a low profile and reflect the desired character of the development. Walls are designed to appear natural or visually unobtrusive, ensuring they do not overpower the surrounding landscape. Where possible, fences and walls should be integrated with planting to soften their visual impact. Fencing within private lots will be subject to design guidance set out in a Residential Design Guide.

E1 Feature fence



E2 Low (1 - 1.5m) open fencing



E3 High (1.8m) closed boarded



E4 Planted screens



E5 Park feature/safety fence (if required)



E6 Standard retaining (if required)



E7 Feature walls (of form conc multi pour or ramped earth)



E8 Streamside retaining/ rock revetments



# F - Structures nature based play + amenities

Structures should look and feel appropriate to the character of Mt Welcome being an urban development in a dynamic natural landscape. Use of natural materials formed into either natural play or urban play features. Below elements are indicative.

F1 Natural play playground and exercise equipment - timber, rocks, galvanised steel and rope-based



F2 Early Childhood Play



F3 Hillside play



F4 Halfcourt



F5 Natural Land Bridge



F6 Timber Platform over Wetland



# G - Street Planting landscape + rural inspired

Street planting has been planned on a precinct-specific basis to create distinct landscape identities across the development. Plant species are predominantly native and generally align with the recommendations for the “Inland Wellington – Porirua” zone, as outlined in the Wellington Regional Native Plant Guide 2010. Preference has been given to indigenous species traditionally used in Māori practices for kai (food), rongoā (health), and mahi toi (art). Where departures from the guide occur, they are intended to introduce seasonal interest, colour, or fragrance. Exotic species have been kept to a minimum, with a strong focus on re-establishing native plant communities.

All specimen street trees (marked with green outlines) are to be a minimum 95L grade or at least two metres tall at the time of planting. Tree supports should preferably be natural mānuka/kānuka stakes or timber, reinforcing the natural character of the streetscape. Refer to relevant Porirua City Council guidelines for requirements around street planting, installation, and ongoing maintenance.

**G1** Collector Streets - Across Development Mix



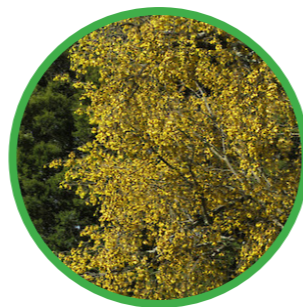
Houhere / Lacebark



Tarata / Lemonwood



Titoki



Large Leaved Kōwhai



Tarata / Lemonwood



Whauwhaupaku / Five-finger



Mānatu / Ribbonwood



Kanuka

**G2** Neighbourhood Streets - Lower Terrace Mix



Silver tussock



Snow Hebe



Smooth-leaved Hebe



Mikoikoi / New Zealand Iris



Kakaha / Bush flax



Wiri Mist Hebe



Silver Tussock



Yellow New Zealand Iris

**G3** Neighbourhood Streets - Upper Terrace Mix



Button Cotula



Creeping Pōhuehue



Remuremu



Sand Coprosma



Purple Bidibid



Sand Coprosma



Button Cotula



Cushion Plant

**G4** Neighbourhood Streets - Lucas Block Mix

G5 Neighbourhood Centre Mix



Houhere / Lacebark



Horoeaka / Lancewood



Kakaha / Bush flax



Pukio / Swamp sedge

G6 Parks and Reserves Mix



Mānatu / Ribbonwood



Tōtara



Kohekohe



Tī kōuka / Cabbage Tree



Tōtara / Creeping Fuchsia



Nana' Hebe



Napuka Hebe



Creeping Pōhuehue



Yellow New Zealand Iris



Pānakenake



Rengarenga Lily



Wharariki / Mountain Flax



Emerald Gem Phormium



Mikoikoi / New Zealand Iris



Button Cotula



Tūrutu



Coprosma, Black Cloud



Snow Cap' Parahebe



Oioi / Jointed Rush



Tūrutu

# H - General Mixes

## place specific

H1 Raingarden Mix



Rautahi / Cutty grass



Pukio / Swamp Sedge



Orange New Zealand Sedge



Coastal Cutty Grass



Pūrei / New Zealand Sedge



Rautahi

H2 Retention Wetlands + Margins Mix

Upper Bank Mix



Mānuka



Putaputawētā



Mingimingi



Harakeke / New Zealand Flax



Makomako / Wineberry



Tī kōuka / Cabbage Tree

Lower Bank / Aquatic Mix



Baumea



Kutakuta



Jointed baumea



Red pondweed



Spike sedge



Stout water milfoil



Pūrei / New Zealand Sedge



Swamp astelia



Kāpūngāwhā



Raupō

H3 Stormwater Reserve Arboretum Mix



New Zealand Broadleaf



Wharariki / Mountain Flax



Mānuka



Tarata / Lemonwood

H4 Entrance Mix



Horoeke / Lancewood



Orange New Zealand Sedge



Mikoikoi / New Zealand Iris



Creeping Pōhuehue



Kōhūhū / Black Matipo



Kōhūhū / Black Matipo



Karamū



Māhoe



Shrubby tororaro



Mingimingi



Kakaha / Bush flax



Twiggy Coprosma



Harakeke / New Zealand Flax



Red Matipo / Māpou



Shrubby Tororaro



Nīkau palm



Puka / Pukanui



Kānuka



Wīwī

# H - General Mixes place specific

H5 Access Lane + JOAL Mix



Horoeka / Lancewood

H6 Fill Slopes + Residual Land Mix  
(only where planting is proposed)



Kānuka

Stage 2 - Enrichment Mix



Māhoe



Tī kōuka / Cabbage Tree



Māpou / Red Matipo



Northern Rātā



Tarata / Lemonwood



Mikoikoi / New Zealand Iris



Harakeke / New Zealand Flax



Hīnau



Makomako / Wineberry



Kōhūhū / Black Matipo



Karamū



Pānakenake



Tawa



Kāmahi



Mānuka



Rimu

H7 SNA 5m Buffer Mix



Karamū / Shining karamū



Wharangi



Whauwhaupaku / Five-finger



Mānatu / Ribbonwood

H8 SNA Fill Mix



Karamū / Shining karamū



Wharangi



Whauwhaupaku / Five-finger



Mānatu / Ribbonwood



Twiggy Coprosma



Red Matipo / Māpou



Māhoe



Houhere / Lacebark



Twiggy Coprosma



Red Matipo / Māpou



Māhoe



Houhere / Lacebark



Akapuka / Shining broadleaf



Akiraho



Ngaio



Harakeke / New Zealand Flax



Akapuka / Shining broadleaf



Akiraho



Ngaio



Harakeke / New Zealand Flax

# H - General Mixes

## place specific

H9 Lizard Relocation Offset Areas Mix

H10 Western Kakaho Revegetation Mix



Tauhinu



Harakeke / New Zealand Flax



Houhere / Lacebark



Kōwhai



Kahikatea



Mingimingi



Karamū / Shining karamū



Putaputawētā



Mānatu / Ribbonwood



Pōhuehue



Mānuka



Tī kōuka / Cabbage Tree



Whauwhaupaku / Five-finger

H11 Wetland Gully Mix



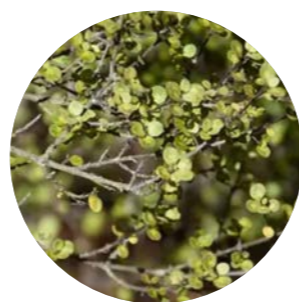
Pūrei / New Zealand Sedge



Rautahi



Broom rush



Swamp coprosma



Kahikatea

H12 Wetland Riparian Mix



Mānuka



Makomako / Wineberry



Kōhūhū / Black Matipo



Pukio / Swamp Sedge



Coastal Cutty Grass



Budding club-rush



Swamp maire



Mingimingi



Putaputawētā



Karamū



Rautahi / Cutty grass



Wiwi



Spike sedge



Pukatea



Whauwhaupaku / Five-finger



Harakeke / New Zealand Flax



Heketara



# Guidance / Referenced Documents\_

The following strategy has been informed by the following documents:

- Wellington Water Managing Stormwater Runoff - The use of approved solutions for hydraulic neutrality Version 3, August 2020
- Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling (2017)
- Aotearoa Urban Street Planning and Design Guide
- New Zealand Building Code D1/AS1 New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS: 4121-2001)
- NZ Transport Agency document M30 Specification and Guidelines for Road Lighting Design (2014)
- NZ Transport Agency List of M30 Approved Luminaires (2020)
- NZ Transport Agency M26:2012 Specification for Lighting Columns
- NZ Transport Agency M26A:2017 Specification for Lighting Columns
- Porirua City Council Track Standards Manual (Version 1.2, 2014)
- Wellington Water Managing Stormwater Runoff, The use of rain tanks for hydraulic neutrality, Acceptable solution June 2019
- Wellington Water Regional Standard for Water Services May 2019
- AS/NZS 4282:2019 Control of the Obtrusive Effects of Outdoor Lighting
- CIE 150:2017 Guide on the limitation of the effects of obtrusive light from outdoor lighting installations, Second Edition
- Porirua Code of Land Development and Subdivision Engineering 2010
- Restoration Planting: A guide to planning restoration planting projects in the Wellington region
- Porirua City Council Riparian Management Strategy (Taupō and Kākaho)
- Mind the stream: A guide to looking after urban and rural streams in the Wellington region
- Porirua Proposed District Plan, specifically:
  - Northern Growth Development Area
  - Medium Density Zone
  - Neighbourhood Centre Zone
  - Natural Character
  - Public Access
  - Ecosystems and Indigenous Biodiversity
  - Subdivision
  - Earthworks
  - Light
  - Signs
  - Infrastructure

# Image References

All images included in this document have been for contextual illustration only (non-commercial use). Images sourced from third-party websites (e.g., Isthmus, Boffa Miskell, Broxap, Boundaryline, Parklife, Winton, Best Awards, council or destination sites) are used as precedents to illustrate design character, material palette, and context relevant to the Mt Welcome Masterplan and Landscape Urban Strategy. All rights remain with the original authors or organisations. Where noted, images have been supplied directly with permission (e.g. Classic Developments Limited, Tilley Street & Park Furniture, UNILAMP)

Page 6

Image 1. Image showing an engraving of Porirua Harbour, drawn by Samuel Charles Brees and engraved by Henry Melville (London, 1847). Source: Alexander Turnbull Library / National Library of New Zealand.

Image 2. Image showing a heritage panel display at He Ara Pukerua, Pukerua Bay. Source: He Ara Pukerua, 2023.

Page 7

Image 3. Map showing the location of the Mt Welcome site. Created by Envelope Engineers, 2025.

Page 8

Image 4. Structure plan of the Mt. Welcome area. Source: Porirua City Council Structure Plan (2023).

Page 9

Images 5A – 5L. Contextual imagery supporting the Key Considerations and Development Approach for the Mt Welcome area. Images have been sourced from Google and Blac Project photography for illustrative purposes. See this page for individual credits.

Individual references:

Image 5A. Image showing a man carrying two children, illustrating community connection and everyday life. Caroline Hernandez via Unsplash (2020). Free to use under the Unsplash Licence.

Image 5B. Image showing the existing site perspective on the Mt Welcome site. Taken by Blac Project, 2025.

Image 5C. Image showing an existing drone view of the Mt Welcome site. Taken by Blac Project, 2025.

Image 5D. Image showing State Highway 59, looking towards the entrance to the proposed Mt Welcome site. Source: Google Street View, 2024.

Image 5E. Image showing the Dairy Flat Roundabout project, illustrating local road layout and engineering context. Source: Dempsey Wood Civil Ltd., 2024

Image 5F. Image showing an aerial view of Pukerua Bay, Kāpiti Coast, New Zealand. Licensed via iStock (file ID: 1089389730), 2025.

Image 5G. Image showing a New Zealand wetland trail, illustrating local context and connectivity. Source: National Wetland Trust of New Zealand (Wetland Trails page).

Image 5H. Image showing State Highway 59 and Significant Natural Area (SNA 27) from an aerial perspective. Source: Google Maps Imagery, 2024

Image 5I. Image showing a family walking along the Travis Wetland Walk in Christchurch, highlighting interaction between people and the wetland environment. Source: Christchurch City Council (Ōruapaeroa–Travis Wetland Walk page).

Image 5J. Image showing a precedent housing project illustrating the intended character of the proposed development. Source: New Zealand Institute of Architects (Awards page).

Image 5K. Image showing an existing drone view of the Mt Welcome site. Taken by Blac Project, 2025.

Image 5L. Image showing street design in Selwyn District. Source: Selwyn District Council (Residential Development Design Guide, December 2024).

# Image References

## Page 24

Image 6. Reference image showing a collector street example. Photographer: David St George. Source: Isthmus - Hobsonville Point Project.

Image 7. Reference image showing a local street example. Source: Myland Partners – Mānawa & Scott Point project.

## Page 32

Images 8A - 8H. Precedent images supporting the Neighbourhood Centre section. Images have been sourced from public websites and Blac Project photography and are used for contextual illustration only (non-commercial use). See this page for individual credits.

### Individual references:

Image 8A. Reference image showing a small supermarket example.

Source: Lake Tekapo local retail reference, via [www.laketekaponz.co.nz\(2025\)](http://www.laketekaponz.co.nz(2025)).

Image 8B. Reference image showing a small supermarket example. Source: CBC Construction – Commercial Projects ([www.cbconstruction.co.nz / projects-commercial](http://www.cbconstruction.co.nz / projects-commercial)), accessed 2025.

Image 8C-D. Reference images showing an early childhood centre example.

Source: NZIA (Award Detail page – Penny Lane Early Childhood Centre).

Image 8E. Reference image showing a neighbourhood centre retail or hospitality example. Source: OneRoof – 5 Catalina Avenue, Karaka ([www.oneroof.co.nz](http://www.oneroof.co.nz)), accessed 2025.

Image 8F. Reference image showing a neighbourhood centre retail or hospitality example. Source: Pegasus Town Retail Centre ([www.pegasus-town.co.nz / retail](http://www.pegasus-town.co.nz / retail)), accessed 2025. Image 8G. Reference image showing a walkable neighbourhood centre main street at Queenstown Mall, New Zealand. Source: TripAdvisor – Queenstown Mall, pedestrian precinct ([www.tripadvisor.com](http://www.tripadvisor.com)), accessed 2025.

Image 8H. Reference image showing a walkable neighbourhood centre at Akaroa, New Zealand. Source: Wikimedia Commons – File "73 Beach Road, Akaroa, Canterbury, New Zealand.jpg".

## Page 42

Image 9. Reference image showing example of proposed planting potential. Source: Kauri Park Nurseries website.

## Page 50

Image 10. Reference image showing care sign on pavement surface. Source: Unknown.

## Page 51

Images 11A – 11K. Furniture and decorative elements proposed for Mt Welcome. Sources: Tilley Street & Park Furniture (NZ); Broxap (UK), for reference use only.

### Individual references:

Image 11A. Reference image showing the Taniko Seat. Source: Tilley Street & Park Furniture website.

Image11B. Reference image showing the plaza platform. Source: Tilley Street & Park Furniture website.

Image 11C. Reference image showing the Haehae bin. Source: Tilley Street & Park Furniture website.

Image 11D. Reference image showing the Haehae picnic table. Source: Tilley Street & Park Furniture website.

Image 11E. Reference image showing the Haehae cycle stand. Source: Tilley Street & Park Furniture website.

Image 11F. Reference image showing the horizon bollard. Source: Tilley Street & Park Furniture website.

Image 11G. Reference image showing square timber bollard. Source: Broxap.

Image 11H. Reference image showing the plaza bench. Source: Tilley Street & Park Furniture website.

Image 11I. Reference image showing the plaza picnic table. Source: Tilley Street & Park Furniture website.

Image 11J. Reference image showing the Taniko bench. Source: Tilley Street & Park Furniture website.

Image 11K. Reference image showing the wheelstop. Source: Tilley Street & Park Furniture website.

## Page 52

Image 12. Reference image showing the street sign. Source: Wikimedia Commons, licensed under CC BY-SA 3.0.

Image 11G (Repeated). Reference image showing square timber bollard. Source: Broxap

Image 13. Reference image showing timber bollards. Source: OakApple Products website.

## Page 53

Images 14A-14G. Lighting reference images supplied directly by UNILAMP (Thailand) with permission for illustrative use in the Mt Welcome Masterplan and Landscape Urban Strategy.

## Page 54

Image 15. Reference image showing feature fence at Waitangi Park. Source: MapQuest. (Image may be subject to copyright.)

Image 16. Reference image showing open fencing. Source: Unknown.

Image 17. Reference image showing closed boarded fencing. Source: Boundaryline website. (All rights reserved. Used for reference only.)

Image 18. Reference image showing green screen fencing. Source: Boundaryline website. (All rights reserved. Used for reference only.)

Image 15 (Repeated). Reference image showing feature fence at Waitangi Park. Source: MapQuest. (Image may be subject to copyright.)

Image 19. Reference image showing a retaining wall. Source: Green Republic website. (All rights reserved. Used for reference purposes only.)

Image 20. Reference image showing feature walls at a residential project by Seear-Budd Ross. Source: Best Awards website.

Image 21. Reference image showing a stone retaining wall (Wanaka Stone). Source: ArchiPro NZ website. All rights reserved.

## Page 55

Image 22. Reference image showing a playground in Greenhill Park, Hamilton. Source: Greenhill Park website.

Image 23. Reference image showing Te Pā Harakeke, a nature-based playground in Tahunanui, Nelson. Source: Boffa Miskell website.

Image 24. Reference image showing the outdoor gym at Northlake, Winton. Source: Winton NZ website.

Image 25. Reference image showing childcare outdoor play facilities. Source: Gardiner Architecture website.

Image 26. Reference image showing a natural hillside play area. Source: Instagram (@byla.landscape.architects).

Image 27. Reference image showing the playground at Kāwaroa Park, New Plymouth. Source: Taranaki .co.nz

Image 28. Reference image showing a half basketball court. Source: Parklife website.

Image 29. Reference image showing a wetland walkway at Ōruapaeroa. Source: Christchurch City Council website.

Image 30. Reference image showing a timber platform over a wetland. Source: Jos van de Lindeloos portfolio website.

## Page 56

### Collector Streets\_Across Development Mix

Image 31. Image showing Hoheria populnea (Lacebark / Houhere), photographed at Hutt River Trail north of Stokes Valley, Lower Hutt.

Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0 (Creative Commons Attribution).

# Image References

Image 32. Image showing *Poa cita* (Silver tussock), photographed at Tumbledown Bay, Banks Peninsula. Photographer: Melissa Hutchison, Date taken: 25/10/2020. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 33. Image showing *Leptinella dioica* (Button Cotula), photographed at Katiki, Otago. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 34. Image showing *Pittosporum eugenioides* (Lemonwood / Tarata), photographed at Maidstone Park, Upper Hutt. Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0.

Image 35. Image showing *Veronica albicans* (Snow Hebe), photographed at Cobb valley. Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 36. Image showing *Muehlenbeckia axillaris* (Creeping Pōhuehue), photographed at Mt Cook. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Neighbourhood Streets\_Lower Terrace Mix

Image 37. Image showing *Alectryon excelsus* subsp. *excelsus* (Titoki), photographed at Kennedy Bay. Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0.

Image 38. Image showing *Veronica diosmifolia* (Smooth-leaved Hebe), photographed by the Department of Conservation. Source: New Zealand Plant Conservation Network. Licensed under Public Domain.

Image 39. Image showing *Goodenia radicans* (Remuremu), photographed at Waikanae Estuary. Photographer: Jeremy R. Rolfe, Date taken: 18/01/2013. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 40. Image showing *Sophora tetraptera* (Large-leaved kōwhai), photographed at Masterton, Wairarapa. Photographer: John Barkla, Date taken: 01/09/2012. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 41. Image showing *Libertia grandiflora* (Mikoikoi), photographed at Kauaeranga valley. Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 42. Image showing *Coprosma acerosa* (Sand coprosma), photographed at Hokio Beach. Photographer: Jeremy R. Rolfe, Date taken: 14/01/2014. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Neighbourhood Streets\_Upper Terrace Mix

Image 34 (Repeated). Image showing *Pittosporum eugenioides* (Lemonwood / Tarata), photographed at Maidstone Park, Upper Hutt. Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0.

Image 42 (Repeated). Image showing *Astelia fragrans* (Kakaha), photographed at Atiwhakatu Stream, Tararua Forest Park. Photographer: Jeremy R. Rolfe, Date taken: 02/02/2008. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 43. Reference image showing *Acaena inermis*, photographed at Moawhango River (Dec 1996). Photographer: Colin C. Ogle. Source: New Zealand Plant Conservation Network. Licensed under: CC BY-NC.

Image 44. Image showing *Pseudopanax arboreus* (Five-finger / Whauwhaupaku), photographed at Maidstone Park, Upper Hutt. Photographer: Jeremy R. Rolfe, Date taken: 11/07/2010. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 45. Image showing Hebe ‘Wiri Mist’, photographed at Auckland Botanic Gardens. Photographer: Krzysztof Ziarnek. Source: Wikimedia Commons. Licensed under CC BY-SA 4.0.

Image 42 (Repeated). Image showing *Coprosma acerosa* (Sand coprosma), photographed at Hokio Beach. Photographer: Jeremy R. Rolfe, Date taken: 14/01/2014. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Neighbourhood Streets\_Lucas Block Mix

Image 46. Image showing *Plagianthus regius* (Mānatu), photographed at Remutaka Rail Trail. Photographer:Jeremy R. Rolfe, Date taken: 02/12/2006. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 32 (Repeated). Image showing *Poa cita* (Silver tussock), photographed at Tumbledown Bay, Banks Peninsula. Photographer: Melissa Hutchison, Date taken: 25/10/2020. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 33 (Repeated). Image showing *Leptinella dioica* (Button Cotula), photographed at Katiki, Otago. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 47. Image showing *Kunzea ericoides* (Kānuka), photographed at Nelson.

Photographer: Jeremy R. Rolfe, Date taken: 06/01/2015. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 48. Image showing *Libertia ixioides* (New Zealand iris). Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 49. Image showing *Scleranthus biflorus* (Canberra grass), photographed at Palliser Bay. Photographer: Jeremy R. Rolfe, Date taken: 20/02/2010.

Source: New Zealand Plant Conservation Network. Licensed under CC BY.

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Neighbourhood Centre Mix

Image 31 (Repeated). Image showing *Hoheria populnea* (Lacebark / Houhere), photographed at Hutt River Trail north of Stokes Valley, Lower Hutt.

Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0 (Creative Commons Attribution)

Image 50. Image showing *Fuchsia procumbens* (Creeping fuchsia) — Great Barrier Island. Photographer: Bec Stanley. Source: New Zealand Plant Conservation Network. Licensed under CC BY-SA.

Image 51. Image showing *Phormium ‘Emerald Gem’* (Green Dwarf Flax), photographed and supplied by Kauri Park Nurseries Ltd. Source: Kauri Park Nurseries website.

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Image 52. Reference image showing *Pseudopanax crassifolius*, photographed at Days Bay, Eastbourne (03/08/2013). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under: CC BY.

Image 53. Image showing Hebe ‘First Light’ (PBR), photographed at Auckland Botanic Gardens. Source: Auckland Botanic Gardens. Licensed under All rights reserved (© Auckland Council 2025).

Image 41 (Repeated). Image showing *Libertia grandiflora* (Mikoikoi), photographed at Kauaeranga valley. Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 42 (Repeated). Image showing *Astelia fragrans* (Kakaha), photographed at Atiwhakatu Stream, Tararua Forest Park. Photographer: Jeremy R. Rolfe, Date taken: 02/02/2008. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 54. Image showing *Veronica speciosa* (Maunganui Bluff variety), photographed at Maunganui Bluff, Far North, 19 Sept 2023. Photographer: Marley Ford. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 33 (Repeated). Image showing *Leptinella dioica* (Button Cotula), photographed at Katiki, Otago. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 55. Image showing *Carex virgata* (Narrow-leaved sedge), photographed at Kaumingi Stream, Wairarapa (27/02/2014). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

# Image References

Image 36 (Repeated). Image showing *Muehlenbeckia axillaris* (Creeping Pōhuehue), photographed at Mt Cook. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 56. Image showing *Dianella nigra* (Turutu / New Zealand blueberry), photographed at Pinehaven, Upper Hutt (16/02/2008). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Parks and Reserves Mix

Image 46 (Repeated). Image showing *Plagianthus regius* (Mānatu), photographed at Remutaka Rail Trail. Photographer: Jeremy R. Rolfe, Date taken: 02/12/2006. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 48 (Repeated). Image showing *Libertia ixioides* (New Zealand iris). Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 57. Image showing *Coprosma* 'Black Cloud', illustrated from Auckland Botanic Gardens. Source: Auckland Botanic Gardens. Licensed under All rights reserved (© Auckland Council 2025).

Image 58. Image showing *Podocarpus totara* var. *totara* (Totara). Photographer: Department of Conservation. Source: New Zealand Plant Conservation Network. Licensed under Public domain.

Image 59. Image showing *Lobelia angulata*, photographed at Burnt Spur, Tararua Forest Park (13/12/2008). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 60. Image showing *Veronica catarractae* (Habit, West Arm, Lake Manapouri). Photographer: P.J. Garnock-Jones. Source: New Zealand Flora Info. Licensed under CC BY-NC 3.0 NZ.

Image 61. Image showing *Dysoxylum spectabile* (Kohekohe) — photographed at Tuatēawa, Coromandel (June). Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 62. Image showing *Arthropodium cirratum* (Rengarenga Lily), photographed at Hikurua / de Surville Cliffs. Photographer: Jeremy R. Rolfe (08/11/2007). Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 63. Image showing *Apodasmia similis* (jointed wire rush), photographed in The Catlins. Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 64. Image showing *Cordyline australis* (Cabbage tree), photographed at Cooks Cove. Photographer: John Sawyer. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 65. Image showing *Phormium cookianum* subsp. *cookianum* (Swamp Flax), photographed at Swampy Summit, Dunedin (28/07/2012). Photographer: John Barkla. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 56 (Repeated). Image showing *Dianella nigra* (Turutu / New Zealand blueberry), photographed at Pinehaven, Upper Hutt (16/02/2008). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

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Raingardens Mix

Image 66. Image showing *Carex geminata* (Twin-stemmed Sedge), photographed at Hay Reserve, Banks Peninsula (28/04/2019). Photographer: Melissa Hutchison. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 67. Image showing *Carex testacea* (Orange Sedge), photographed at Otama Beach (February). Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 68. Image showing *Carex secta* (Tall Sedge), photographed by Wayne Bennett. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

Image 55 (Repeated). Image showing *Carex virgata* (Narrow-leaved sedge), photographed at Kaumingi Stream, Wairarapa (27/02/2014). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 69. Image showing *Cyperus ustulatus*, photographed at Stokes Valley, Lower Hutt (08/01/2017). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

Image 70. Image showing *Carex lessoniana*, photographed at Howarth Wetland, Te Aroha.

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Retention Wetlands + Margins \_Upper Bank

Image 70 (Repeated). Image showing *Carex lessoniana*, photographed at Howarth Wetland, Te Aroha. Photographer: John Smith-Dodsworth. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

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Retention Wetlands + Margins\_Lower Bank / Aquatic

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Stormwater Reserve Arboretum Mix

Image 71. Image showing *Griselinia littoralis*, photographed at Whareroa, Pāekākāriki.

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Image 72. Image showing *Pittosporum tenuifolium* in flower, photographed in Dunedin.

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Image 77. Image showing *Leptospermum scoparium* var. *scoparium*, photographed at Cathedral Cove, Coromandel (01/08/2013). Photographer: John Sawyer. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

# Image References

Image 78. Image showing *Meliccytus ramiflorus* subsp. *ramiflorus*, photographed at Carter Scenic Reserve, Wairarapa. Photographer: John Sawyer (01/04/2010). Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

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Image 34 (Repeated). Image showing *Pittosporum eugenioides* (Lemonwood / Tarata), photographed at Maidstone Park, Upper Hutt. Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0.

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Entrance Mix

Image 31 (Repeated). Image showing *Hoheria populnea* (Lacebark / Houhere), photographed at Hutt River Trail north of Stokes Valley, Lower Hutt. Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY 4.0 (Creative Commons Attribution).

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Access Lane + JOAL Mix

Image 52 (Repeated). Reference image showing *Pseudopanax crassifolius*, photographed at Days Bay, Eastbourne (03/08/2013). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under: CC BY.

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Image 59 (Repeated). Image showing *Lobelia angulata*, photographed at Burnt Spur, Tararua Forest Park (13/12/2008). Photographer: Jeremy R. Rolfe. Source: New Zealand Plant Conservation Network. Licensed under CC BY.

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Fill Slopes + Residual Land Mix

Image 47 (Repeated). Image showing *Kunzea ericoides* (Kānuka), photographed at Nelson.

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Stage 2\_Enrichment Mix

Image 78 (Repeated). Image showing *Meliccytus ramiflorus* subsp. *ramiflorus*, photographed at Carter Scenic Reserve, Wairarapa. Photographer: John Sawyer (01/04/2010). Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

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Image 87. Image showing *Aristotelia serrata* (Inflorescence), photographed at Taringatura Hills, Southland (21/10/2016). Photographer: Jesse Bythell. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

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Image 90. Image showing *Dacrydium cupressinum* (Rimu), photographed at Pihanga, Tongariro National Park (01/02/2010). Photographer: John Sawyer. Source: New Zealand Plant Conservation Network. Licensed under CC BY-NC.

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# Image References

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SNA 5m Buffer Mix

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SNA Fill Mix

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Lizard Relocation Offset Areas Mix

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