

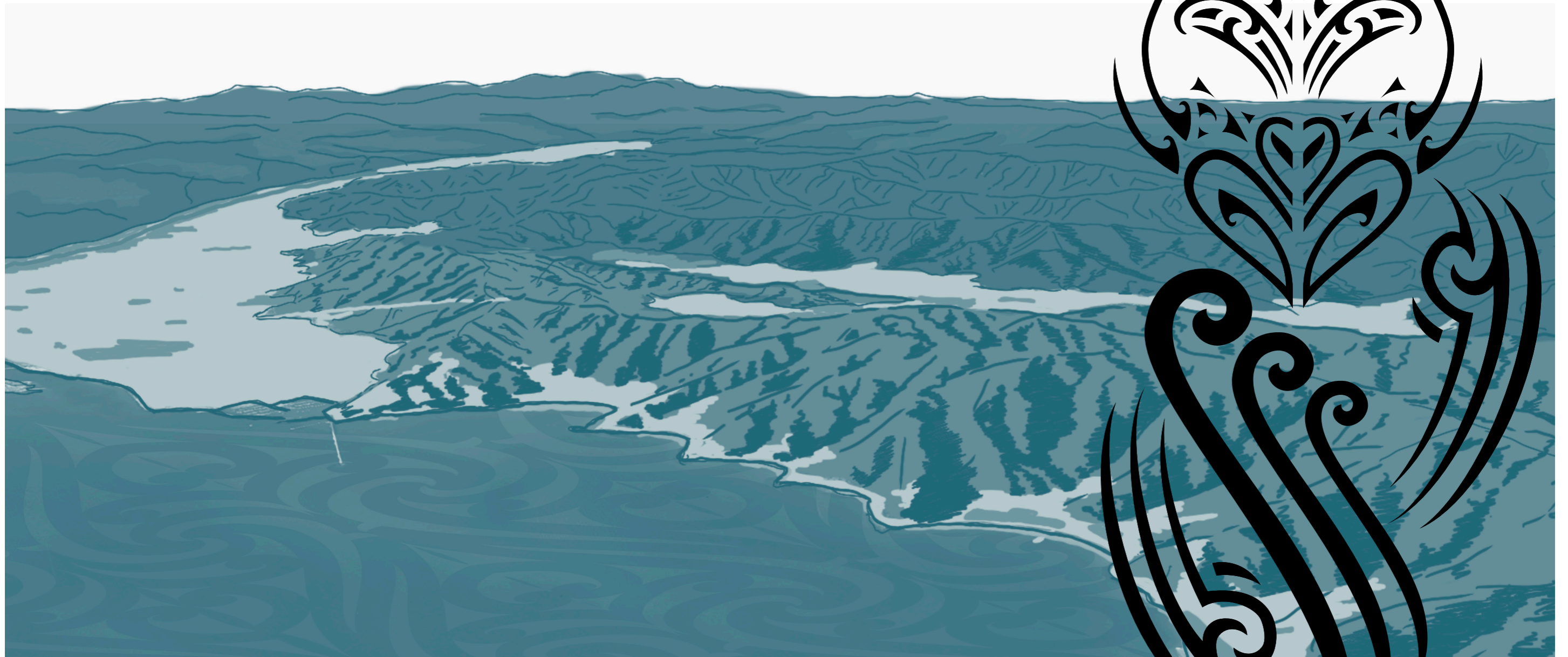
# Tupua Horo Nuku.

## Whiorau (Lowry) Bay - Design Protocols

### Eastern Bays Shared Path

#### NKP-TAT-THN-PLN-LS-LS-000004.

17 November  
2023



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## Authors

Prepared by, **Te Ara Tupua Alliance**  
Mana Whenua Advisors: **Mana Whenua Steering Group**  
Cultural Expression Artist: **Len Hetet**  
BSUDP Production and Review: **Te Ara Tupua Alliance**

Graphics, photographs and maps by **Te Ara Tupua Alliance** unless otherwise stated

Cultural Expression Artwork: **Len Hetet**  
Tupua, Ngāke - Cover Image  
Tupua Horo Nuku - Page Banner

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# Contents

Tupua Horo Nuku Eastern Bays	04
Tupua Horo Nuku The Pathway	05
Introduction	06
Purpose & Objectives	06
Relevant Consent Conditions	06
Structure	06
Consultation	07
Compliance Matrix	08
<b>01. Urban Design Plan</b>	<b>10</b>
Whiorau (Lowry) Bay Urban Design Plan	11
Whiorau (Lowry) Bay General Arrangement Plan Part 1 of 3	12
Whiorau (Lowry) Bay General Arrangement Plan Part 2 of 3	14
Whiorau (Lowry) Bay General Arrangement Plan Part 3 of 3	16
Site Photos	18
Approach and Principles	19
Priorities for Whiorau (Lowry) Bay	20
Seawall Structures	20
Beach Access & Safety Barriers	22
Beach Nourishment	22
Stormwater	22
Ecology	24
Planting	24
Urban Design	25
Cultural Landscape	27
Other Matters	28

# Tupua Horo Nuku

## Eastern Bays

The Eastern Bay area encapsulates many wahi tapu from Te kongutu o Te Awa Kairangi to Te Waha o te Ikanui. Its beginnings emanate out of the power and mana of Tupua-horo-nuku (evolving mass of solid matter), known as the tupua, Ngake.

Instructed by the mountain clan people who were summoned to the head of the fish, gathering on Pukeatua where they were gifted the appropriate incantations to prise open the mouth of the great catch of Māui-tikitiki-a-Taranga to enable it to breathe again, where they summoned from the great depths of Rua Tupua and Rua Tawhito of the fresh water lake who brought forth Tupua-horo-nuku and Tupua-horo-rangi.

**Tupua-horo-nuku, Tupua-horo-rangi**  
**Tai kukume mai takiwā ia mouri e runga**  
**Kia horo wawe mouri e raro koi ikaroa<sup>1</sup>**

***The narrative of the eastern bay speaks of and highlights  
“te ihi, te wehi me te mana nui o Tupua-horo-nuku.”***

Te Awa Kairangi, formed out of the raging whip lashing tail of Ngake as he wound himself up into a frenzy, generating and amassing energy and power, splitting the land mass immediately behind him lacerating Papatūānuku, imbuing “te ara mouri” inland to the Tararua and Remutaka. Whilst at the same time hurling himself towards the barriers hearing the pounding and thunderous waves smashing in the distant. Smashing his way out from his land lock imprisonment to freedom unto Hinemoana and

1 He karakia nō te kainga  
2 He karakia nō te kainga  
3 He karakia nō te kainga

Tangaroa. In his destructive escape came forth the islands of the harbour later to be named by Kupe the pacific navigator, and as centuries passed the peopling of Te Wai-manga arrived gifting new names later to be suppressed through imperialistic and colonial methodologies which are still impacting on us since their arrival in 1769.

**Tēnei te ara kei runga**  
**Tēnei te ara o Ranginui e tū nei**  
**Tēnei te ara o Papatūānuku e takoto nei...<sup>2</sup>**

**Ripiripia te ika nui**  
**Haehaea te ika roa**  
**Ka hora, ka hora te kai ki a Tamanuiterā**  
**Ka hora, ka hora te kai ki a Tāwhiri-mātea...<sup>3</sup>**

Immediately following the severing, Hine-wai-tootaa and Hine-kōrako went about their duties caressing and gently healing Papatūānuku. Calling upon their sister Hine-wairere they asked her if she could follow the scarification marks of Papatūānuku until she was fully covered to sooth her skin to ease the pain. To this day they still nurture and care for her.

Te Awa Kairangi like many rivers began its life through the kuia Hine-wai-tota, Hine-kōrako and Hine-wairere, being the ancestress of condensation, lunar droplets and water flow gathering on the many peaks on both sides of the river. Fed by melting snow, ice and rainwater running off the land, the collective

of droplets follows cracks and crevices within the landscape formed out of the raging whip lashing of the tail of Ngake (seismic activity) in his attempt to escape to freedom from his land lock lake imprisonment.

The many small tributaries joining together growing larger forming the collective mass of Te Awakairangi, flowing every second of the day. The following whakatauaaki encapsulates who the people of Te Ātiawa are and our responsibility for the water and the whenua.

**Te Ātiawa tupua rau, he auripo i te manga iti, he auripo i te manga nui rānei, he kaitiaki ki te whenua <sup>4</sup>**

Te Ātiawa of many phenomena's, where there is a ripple in a small tributary or great river, there is a guardian and protector on the land.

Over time the continuous flow of Te Awa Kairangi has shaped the landscape moving and wearing away rock, carving out a network of valleys eventually reaching the lower grounds, widening and reaching the point where the fresh water meets the salt water.

**Whakapakarukaru puare te waha o te ika roa**  
**Te hononga o ngā wai e rua...<sup>5</sup>**

The Eastern Bay commences at the meeting of the waters.

4 Nā Kura Moeahu whakahi  
5 He karakia nō te kainga

# Tupua Horo Nuku

## The Pathway

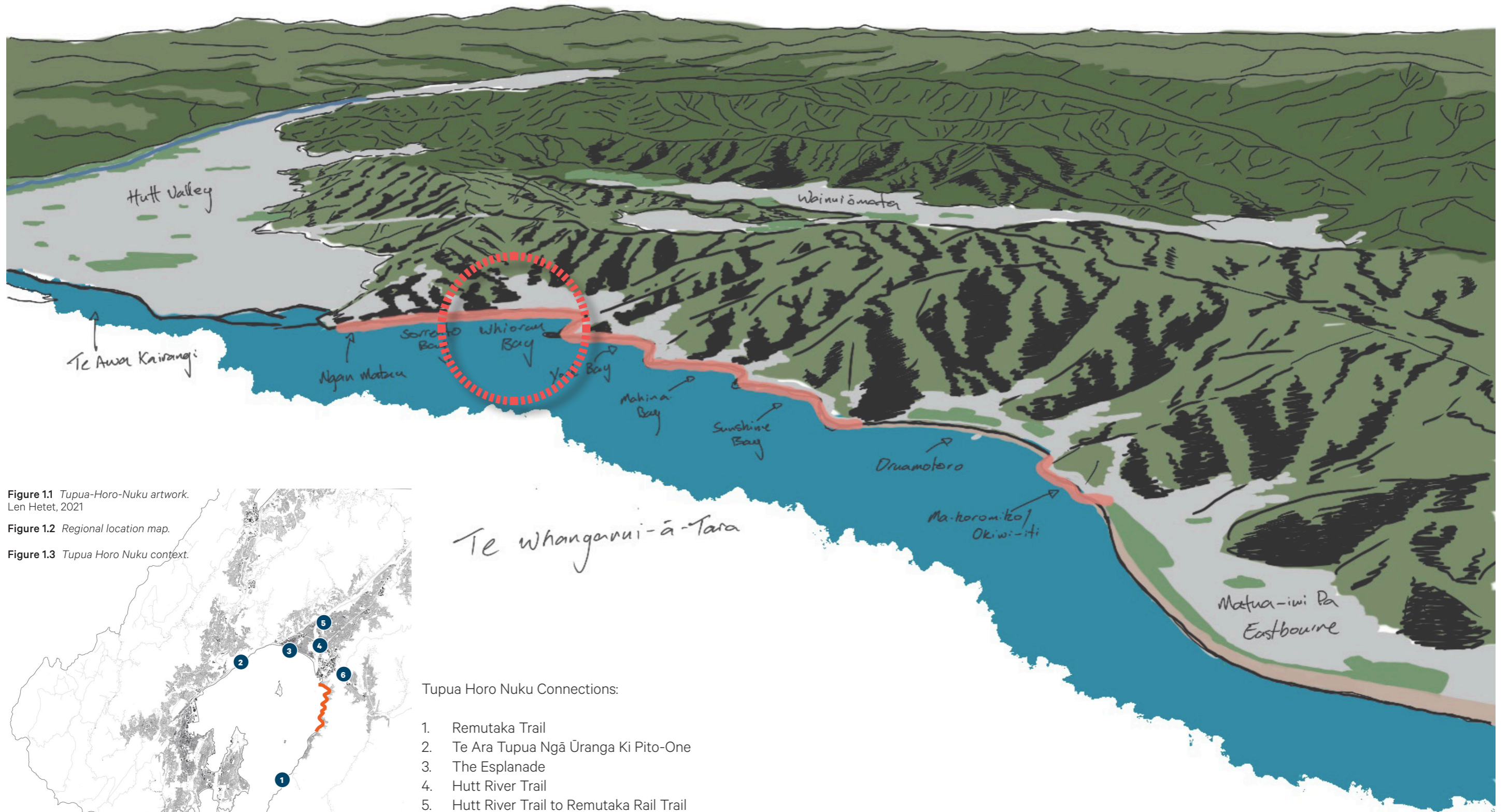
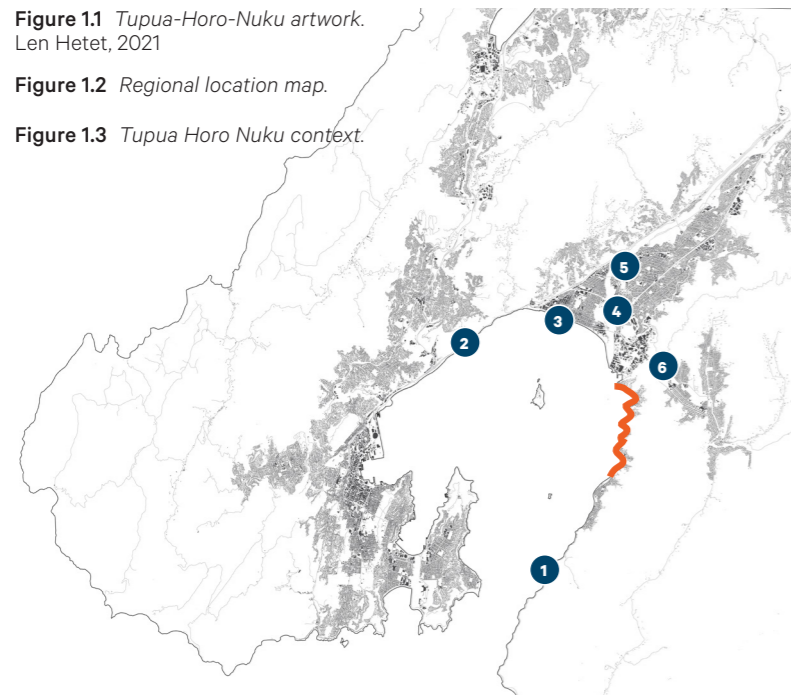


Figure 1.1 Tupua-Horo-Nuku artwork. Len Hetet, 2021

Figure 1.2 Regional location map.

Figure 1.3 Tupua Horo Nuku context.



Te Whanganui-ā-Tara

Tupua Horo Nuku Connections:

1. Remutaka Trail
2. Te Ara Tupua Ngā Ūranga Ki Pito-One
3. The Esplanade
4. Hutt River Trail
5. Hutt River Trail to Remutaka Rail Trail
6. Te Hikoi Ararewa (Wainuiomata Hill Shared Path)

# Introduction

## Purpose & Objectives

The purpose of the Bay Specific Urban Design Plan (BSUDP) is to provide bay specific detailed design for the Project responding to local landscape character, identity and land use, in the broader context of the Landscape and Urban Design Plan (LUDP).

Consent conditions for the Eastern Bays Shared Path (Tupua Horo Nuku) guide the content of the BSUDP and the preceding LUDP. The conditions outline the purpose of the management plans, the contents of the plans, expert inputs, stakeholders to be consulted, the approval and certification process and how to manage disputes. Community aspirations, engineering constraints with urban design and landscape layers are applied to achieve a unique bay specific design, integrated with the Eastern Bays Shared Pathway.

## Relevant Consent Conditions

**LV.5** The LUDP shall include the final BSUDPs for each bay within the Project area. The final BSUDPs shall address detailed design within the particular bay for the benefit of pedestrians, cyclists and others using the local road network as well as the specific urban design, landscape, ecology and recreational amenity matters (including those listed in Condition LV.7) as relevant to the particular bay.

The final BSUDPs may be prepared later and added to the LUDP on a staged basis if the Construction Works are staged bay by bay and individually certified under Condition LV.6.

**LV.6** The BSUDPs shall be prepared by the Consent Holder in two stages for each bay:

(a) Stage 1: A draft design protocol that sets out the priorities for the bay design in terms of engineering, safety and access and mobility requirements as well as ecology, natural character, landscape, urban design and recreational amenity elements and issues. The draft design protocol shall provide visual representations of best practice on comparable coastal Shared Path Projects

to demonstrate the level of design to be targeted. The protocol shall be provided to the relevant Resident Association for the affected bay (if any). The East Harbour Environment Association and the Eastbourne Community Board for comments (if any) within 15 working days from receipt.

Any comments received, and the Consents Holder's response and reasons if they are not accepted, are to be provided to the Manager, Environmental Regulation, and Team Leader, Resource Consents alongside the draft design protocol, within 20 working days from receipt of the comments.

(b) Stage 2: The final BSUDPs are to be certified either on their own (in accordance with Condition GC.5) or, if included in the initial LUDP, when the LUDP is certified under Condition LV.1.

**LV.7** The BSUDPs shall include specific landscape and urban design details for:

- (a) Seawall structures, including transition zones between seawall types and transitions between natural or rocky areas and seawall structures;
- (b) Beach access including steps, ramps and associated handrails where required, **so that people wishing to access the beach can do so safely;**
- (c) Safety barriers and railing and screening barriers between important habitat for Shoreline Foragers and the Shared Path;
- (d) The treatment of stormwater structures at the coastal interface;
- (e) Little Penguin and Shoreline Forager related structures including penguin passage elements, ramps, nests, boxes and wooden poles for roosting;
- (f) Planting treatment;
- (g) The treatment of existing trees and existing landscape and natural features;
- (h) The design and area of space available for recreational amenity activities;
- (i) The design and orientation of features, spaces and access points;
- (j) Refuge and seating opportunities, including size and arrangement of space to allow for stopping and gathering at frequent intervals distributed along the route;
- (k) Signage ensuring their consistency along the Shared Path, including branding and reduction of visual clutter;
- (l) Storyboards;

(m) Surface treatments;  
(n) Any other relevant matter for that bay necessary to achieve the purposes of the LUDP in condition LV.2.

## Structure

In satisfying Conditions LV.5 - LV.7 of the Resource Consent the Draft Design Protocol process informing the BSUDPs is:

- Illustrate bay locations and describe the landscape context.
- Ascertain draft priorities for each bay. Priorities include issues involving: safety, access and mobility; engineering; ecology; natural character; landscape; urban design; and recreational and amenity elements.
- Show visual representations of best practice through precedent examples of comparable Shared Path Projects.
- Outline landscape and urban design approaches and principles for each bay to set the scene for design plans and details.
- Develop an illustrative schematic plan for each bay.

# Consultation

## Consultation

In accordance with Condition LV.6 the Draft Design protocol for Whiorau Bay is required to be provided to the relevant Resident Association for the affected bay, the East Harbour Environmental Association, and the Eastbourne Community Board for comments. A record of the consultation and comments received, together with an indication on responses will be outlined at Stage 2 submission.

# Compliance Matrix

Consent Condition	Response	
<p>LV 5.</p> <p>The LUDP shall include the final BSUDPs for each bay within the Project area. The final BSUDPs shall address detailed design within the particular bay for the benefit of pedestrians, cyclists and others using the local road network as well as the specific urban design, landscape, ecology and recreational amenity matters (including those listed in Condition LV.7) as relevant to the particular bay.</p> <p>The final BSUDPs may be prepared later and added to the LUDP on a staged basis if the Construction Works are staged bay by bay and individually certified under Condition LV.6.</p>	<p>The final Whiorau Bay BSUDP will be individually certified and attached to the LUDP on completion.</p>	
<p>LV 6</p> <p>The BSUDPs shall be prepared by the Consent Holder in two stages for each bay:</p> <p><b>(a) Stage 1:</b> A draft design protocol that sets out the priorities for the bay design in terms of engineering, safety and access and mobility requirements as well as ecology, natural character, landscape, urban design and recreational amenity elements and issues. The draft design protocol shall provide visual representations of best practice on comparable coastal Shared Path Projects to demonstrate the level of design to be targeted. The protocol shall be provided to the relevant Resident Association for the affected bay (if any) The East Harbour Environment Association and the Eastbourne Community Board for comments (if any) within 15 working days from receipt.</p> <p>Any comments received, and the Consents Holder's response and reasons if they are not accepted, are to be provided to the Manager, Environmental Regulation, and Team Leader, Resource Consents alongside the draft design protocol, within 20 working days from receipt of the comments.</p> <p><b>(b) Stage 2:</b> The final BSUDPs are to be certified either on their own (in accordance with Condition GC.5) or, if included in the initial LUDP, when the LUDP is certified under Condition LV.1.</p>	<p>This draft design protocol sets out relevant priorities for engineering, safety and access and mobility requirements as well as ecology, natural character, landscape, urban design and recreational amenity elements and issues. This design protocol reflects the aspirations and objectives of the LUDP. This draft design protocol will be issued to all relevant parties.</p> <p>Final Whiorau Bay BSUDP to be developed and certified following completion of LV6(a).</p>	
Consent Condition.	Response	Page ref
<p>LV 7.</p> <p>The BSUDPs shall include specific landscape and urban design details for:</p>		
<p>(a) Seawall structures, including transition zones between seawall types and transitions between natural or rocky areas and seawall structures;</p>	<p>In general, colonised rock will be placed below mean high water springs (MWHS) and non-colonised rock will be placed above MHWS at the seawall transitions (if appropriate). The placement of rock will occur under the guidance of the Project Ecologist and Project Landscape Architect as required.</p>	12-17, 20-21
<p>(b) Beach access including steps, ramps and associated handrails where required, <b>so that people wishing to access the beach can do so safely;</b></p>	<p>Mini steps with handrails have been located along the extent of Whiorau Bay as well as an accessible ramp to access the beach. The construction of additional ramps and access points beyond that shown would increase the amount of reclamation and occupation of the coastal marine area.</p>	12-17, 22



Consent Condition	Response	Page ref
(c) Safety barriers and railing;	It is a legal requirement to include features that prevent people from falling from heights of 1m or more, where serious injury could result - particularly to children or other vulnerable people. In some places this can be achieved by using a wider 'step' or ledge in the double-curve seawall design. This takes up space and the footprint over which the Shared Path can be built is limited. The New Zealand Building Code required that any new structure with a potential fall from height of greater than 1 metre have fall prevention measures (generally balustrades). In the situation where balustrades have been specified on this Project, there is insufficient space to allow for the wide fall mitigation platforms (as used elsewhere) to be used without considerable encroachment into the coastal marine area (CMA).	Pg 22
(d) The treatment of stormwater structures at the coastal interface;	Stormwater outlets will be in-situ sections between pre-cast wall units. The outlet will sit within the curved seawall via a concrete housing which visually integrates the pipe to the seawall.	Pg 22
(e) Little Penguin and Shore Forager related structures including penguin passage elements, ramps, and wooden poles for roosting;	There are no Little Penguin and Shore Forager related structures proposed in Whiorau Bay. However, the proposed seawall design will help stop penguins from accessing the path and road.	Pg 24
(f) Planting treatment;	Planting has been included at the bus stop area. Plant species will be chosen from the Plant Palette within the LUDP that has been developed with the Project Ecologists.	Pg 24
(g) The treatment of existing trees and existing landscape and natural features;	There are no existing trees along the coastal edge in Whiorau Bay. The treatment of landscape is sympathetic to that which is existing.	Pg 11, 12-13, 7, 24
(h) The design and area of space available for recreational amenity activities;	The BSUDP has provided the design and area of space available for recreational and amenity values in accordance with Condition LV.7(h). We consider that our design provides the best solution in the circumstances as it falls within the consented footprint, does not increase the overall CMA reclamation, and provides a useable pathway.	Pg 12-17, 25 - 26
(i) The design and orientation of features, spaces and access points;	Refuge spaces are located to balance user needs, community preference, utilise retained existing trees for their character and amenity benefits, avoid encroachment on beaches as well as fit within CMA consented footprint. We note that creating further refuge spaces and access points would likely increase the area of the CMA occupied and/or reclaimed, which is not authorised by the resource consents.	Pg 12-17, 25 - 26
(j) Refuge and seating opportunities, including size and arrangement of space to allow for stopping and gathering at frequent intervals distributed along the route;	In Whiorau Bay we are only providing continued seating at the bus stop. This helps avoid encroachment into the CMA.	Pg 12-17, 25 - 26
(k) Signage ensuring their consistency along the Shared Path, including branding and reduction of visual clutter;	Signage will be designed so it is integrated into landscape elements to reduce visual clutter along the Shared Path. This approach is consistent across all bays.	Pg 25 - 26
(l) Storyboards;	The Alliance is taking a culturally led approach and therefore Mouri markers are used as the main interpretation method for the pathway in Whiorau Bay. Consideration of ecological and other local history as a second layer to be shared will be made through the detailed design process.	Pg 27
(m) Surface treatments;	A robust palette of materials is used to ensure visual cohesiveness and quality. Predominantly asphalt with sections of concrete. Concrete will also be used for areas where cultural graphics will be applied to the path.	Pg 27
(n) <u>Consideration of a minimum 3 m path width for York Bay only (for a 90 m length south of the existing bus stop; and</u>	N/A	
(o) Any other relevant matter for that bay necessary to achieve the purposes of the LUDP in condition LV.2.	Beach nourishment will be provided in the southern part of Whiorau Bay to improve a 'dry' high tide area for sitting and beach activities. The existing bus stop shelter will be replaced with a standard GWRC shelter.	Pg 22-23, 28-27



01. Urban Design Plan

# Whiorau (Lowry) Bay Urban Design Plan

LV.6 (a)

## Whiorau Bay is characterised by:

Whiorau Bay, also known as Lowry Bay, sits between Sorrento Bay and Whiorau Reserve. It is the largest of the Tupua Horo Nuku bays and has the largest residential population associated with it. This is likely due to the greater depth and more gradual elevation change compared to other bays. Since the World War II era, Whiorau Bay saw residential development and it became a sought-after suburb of Wellington. Many homes were built in the mid-20th century, and it continues to grow as a residential community. The surrounding hills and slopes are substantially covered with native New Zealand vegetation. This natural setting provides a tranquil backdrop for the bay.

Typical of the surrounding area, Whiorau Bay has a steep escarpment surrounding it with various public walking tracks. Whiorau Bay is not only a residential area but also a popular recreational destination. The Bay offers ample opportunities for outdoor activities, such as swimming, picnicking, beachcombing, bird watching, hiking, boating or water sports. The area's natural beauty and proximity to Wellington make it an attractive place for both residents and visitors.

Whiorau Bay has a shallow sandy beach, bus stop, and small informal ramps for the likes of kayaks and dinghy's. The bay currently has limited landscape design features with all of its seating, bins and informational signage located at the existing bus stop.

Almost all housing along the Bay's coastal edge is two stories allowing for uninterrupted sea views. Most are setback from Marine Drive with tall solid fences likely to help address storm surges and inundation of sea water in storm events. Most properties are accessed from Marine Drive but some also have side access from local streets.

The Skerrett Boat Shed is located on the water's edge in the northern part of the bay. It serves as a landmark and a symbol of the area's maritime heritage.

There are no trees along the bays coastal edge compared to other parts of Tupua Horo Nuku. The edge is predominately hard with small pockets of likely self-seeded coastal plants. Before being called Lowry Bay, the bay had the traditional name Whiorau meaning the place with many blue ducks. This was not only a place favoured for birding but also for fishing.

## Natural character:

In respect of natural character, this was discussed in detail during the resource consent process. The following discussion provides a summary of impact of the Project on natural character as well as highlights how different design features of the Project take natural character into account.

The resource consent application assessed the natural character of the Eastern Bays at a wider scale as having a moderate abiotic, biotic and experiential natural character. The Project was considered to have low effects on the wider Eastern Bays coastal landscape.

The impact of the Project at a local level on natural character was considered to depend largely on the final detailing and texture on the curved seawall faces, the material used for beach nourishment, the design response to the local landform where the walls finish at rocky outcrops, and design treatments in the more exposed, untamed areas outside of the beaches. Visual impact was considered to diminish over time because of weathering and as they become familiar features reducing to low adverse effects over time.

Within Whiorau Bay (and elsewhere) the Project is in general accordance with the consented approach and retains natural features such as rocky outcrops and beaches keeping the untamed character here intact.

The new design occupies existing beaches, however, beach nourishment with appropriate imported sands and fine gravels is expected to maintain the balance of natural character.

Ecological detailing is included on the curved seawall faces consistent with the consent design addressing loss of local natural character relating to perception and experience of the structure, as well as providing habitat opportunity where the wall texture is below high tide level. Marine growth will colonise these areas and it is expected the structure will weather into place.

Large boulders from site will be used to ameliorate transitions between seawall types and to cover footing concrete where it occurs. Culvert outfalls penetrate the recurve wall in two locations and require boxing in with a simple exposed aggregate concrete support flush with the recurve and are experienced as part of the greater patterned wall.

Ramps and steps are also finished with exposed pebble aggregate consistent in texture with the beach fine gravels which help to detune the engineered nature of these structures along with fit to landscape and natural character.

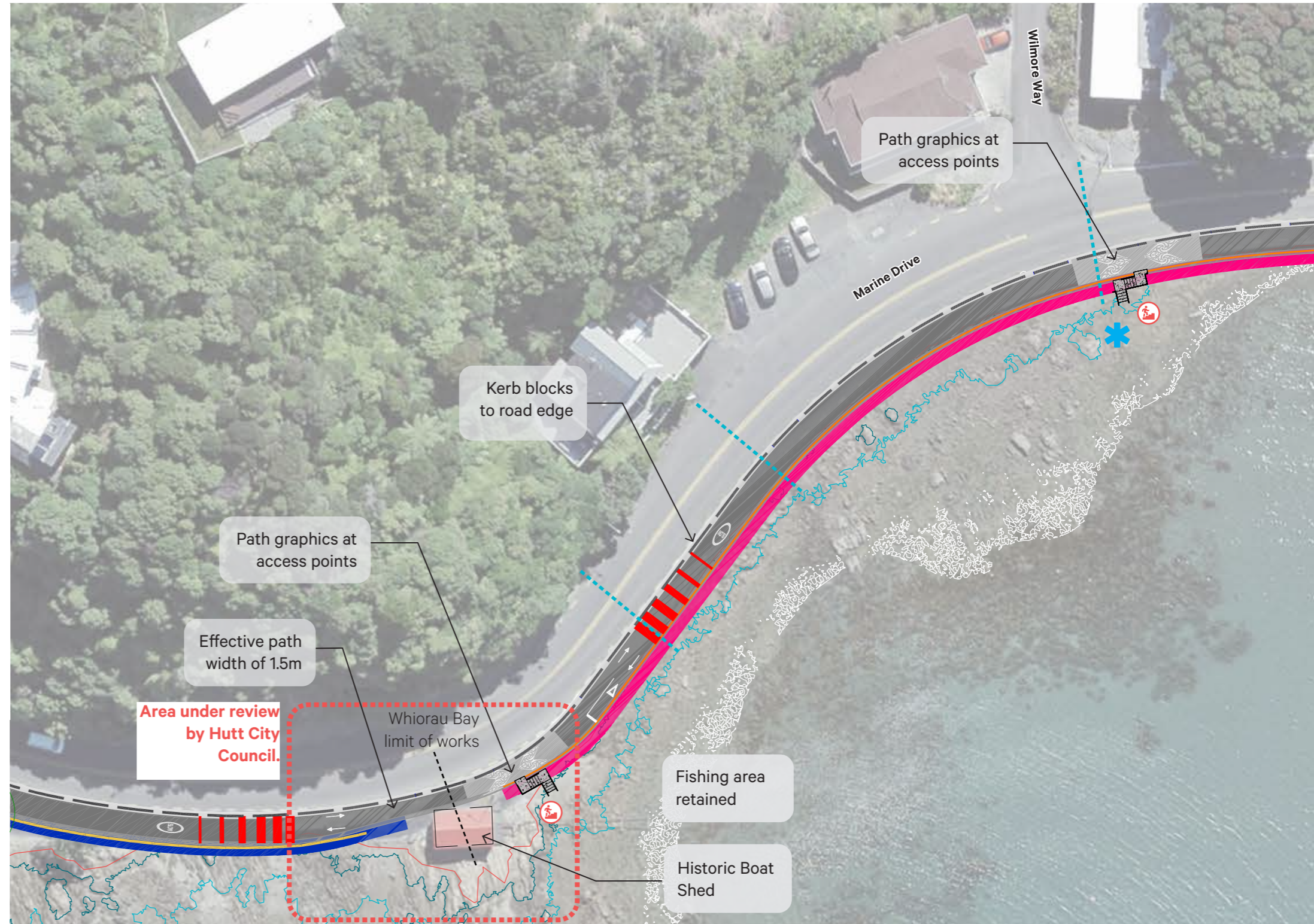
# Whiorau (Lowry) Bay General Arrangement Plan

## Part 1 of 3

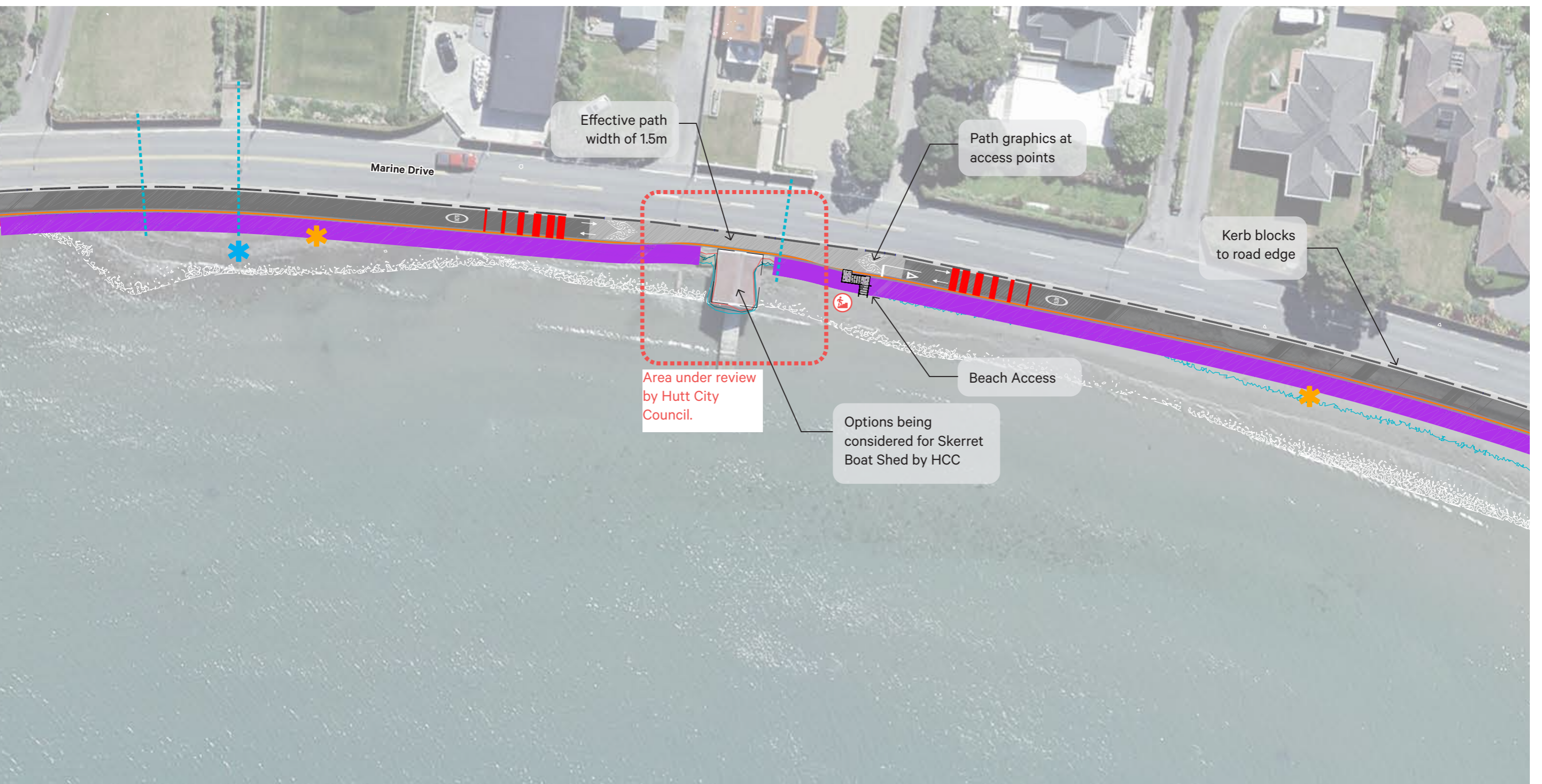
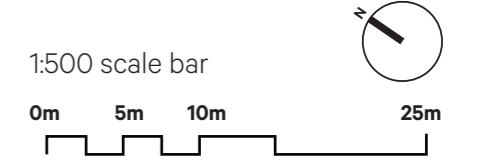
LV.6 (a) LV.7 (g) (h) (i) (j)

Legend.	
	Bus stop
	Location of Mini steps
Seawalls & Path	
	Timber kickrail
	Single curved seawall with bench
	Double curved seawall with bench
	Triple curved seawall with bench and kickrail
	Shared Path
	Concrete Shared Path pavement
Ecology and Landscape	
	Planting - new or additional
	Existing Seagrass
	Stream Culvert
	Fish passage- Stream outlet
	Indicative location of Ecological Enhancement Units (such as tide pools, Vertipools, and Small drilled rock pools)
Tides Existing	
	Mean High Water Springs (MHWS)
	High Tide
	Mid Tide
	Low Tide

Wall Type Sections.	
	Single curved seawall with bench and kickrail
	Double curved seawall with bench and kickrail
	Triple curved seawall with bench and kickrail



\*We anticipate some little penguin activity around culverts in the bay alongside potential nesting areas



Effective path width of 1.5m

Path graphics at access points

Kerb blocks to road edge

Area under review by Hutt City Council.

Beach Access

Options being considered for Skerret Boat Shed by HCC

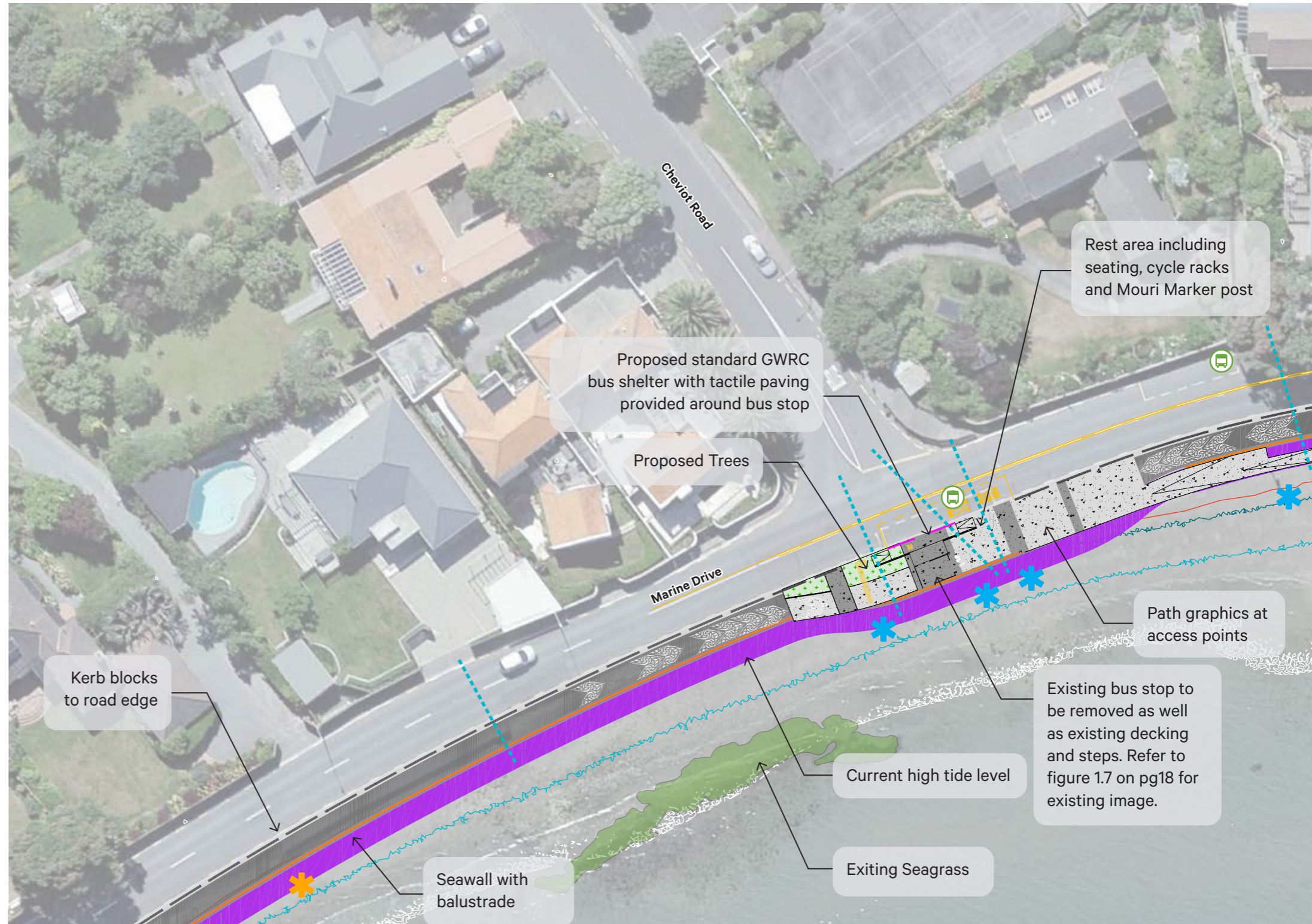
# Whiorau (Lowry) Bay General Arrangement Plan

## Part 2 of 3

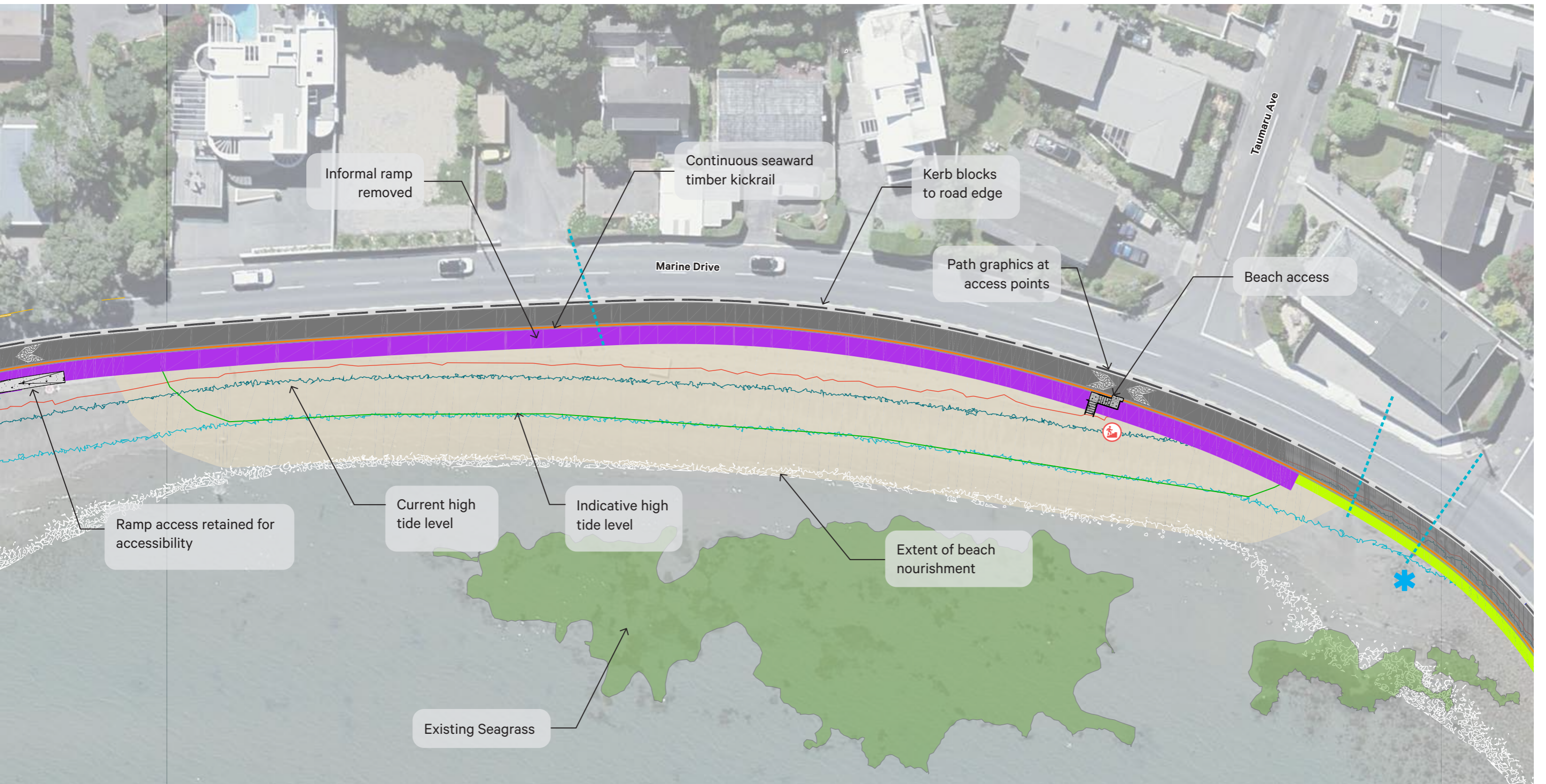
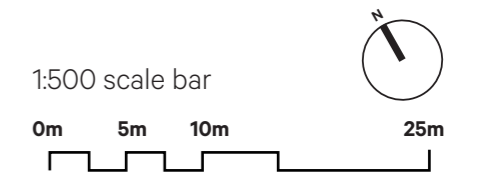
LV.6 (a) LV.7 (g) (h) (i) (j)

Legend.	
	Bus stop
	Location of Mini steps
Seawalls & Path	
	Timber kickrail
	Triple curved seawall with Balustrade
	Triple curved seawall with bench and kickrail
	Shared Path
	Concrete Shared Path pavement
Ecology and Landscape	
	Planting - new or additional
	Existing Seagrass
	Extent of beach nourishment
	Indicative high tide level resulting from beach nourishment
	Stream Culvert
	Fish passage- Stream outlet
	Indicative location of Ecological Enhancement Units (such as tide pools, Vertipools, and Small drilled rock pools)
	Tree Proposed
Tides Existing	
	Mean High Water Springs (MHWS)
	High Tide
	Mid Tide
	Low Tide

Wall Type Sections.	
	Triple curved seawall with Balustrade
	Triple curved seawall with bench and kickrail



\*We anticipate some little penguin activity around culverts in the bay alongside potential nesting areas



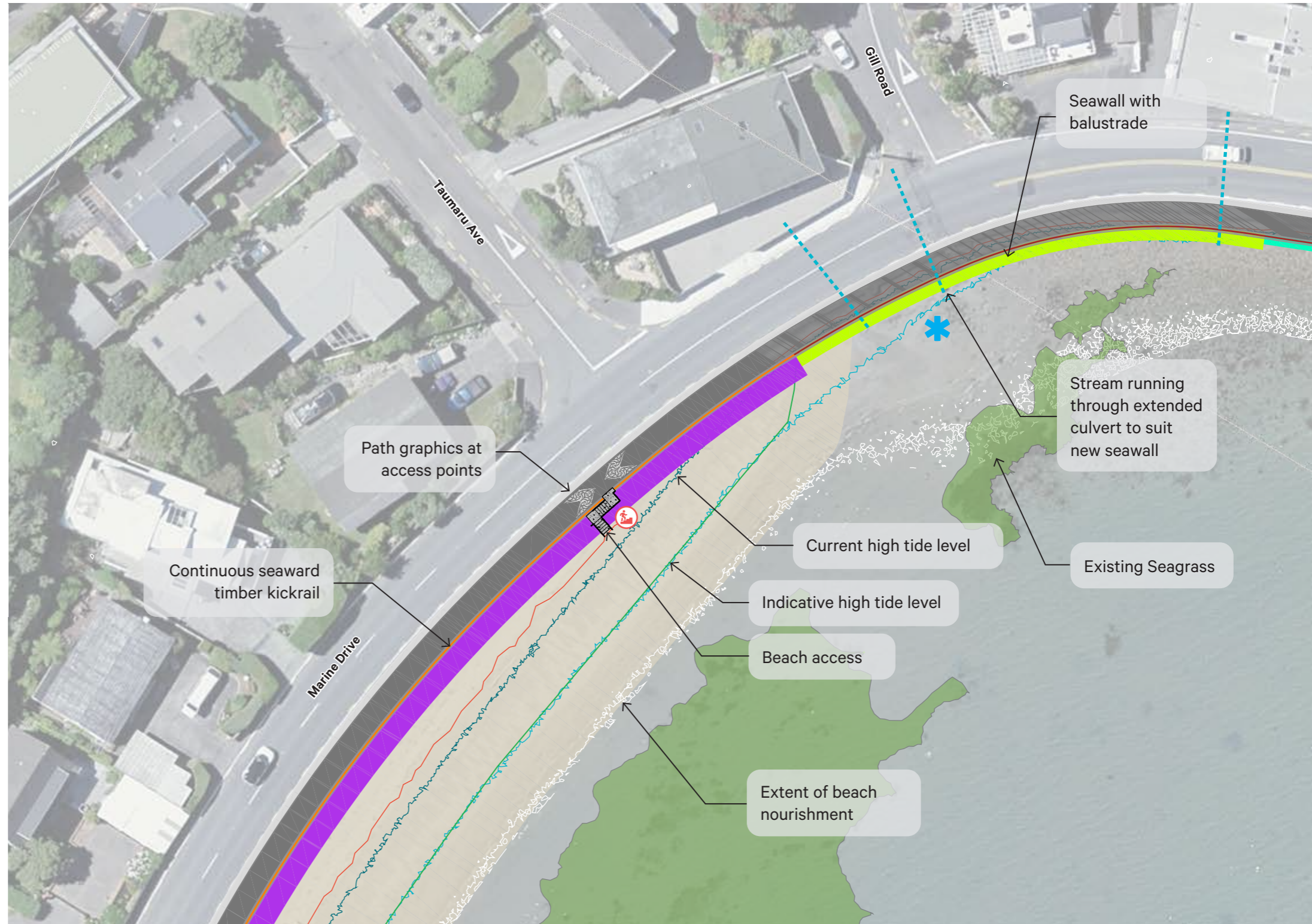
# Whiorau (Lowry) Bay General Arrangement Plan

## Part 3 of 3

LV.6 (a) LV.7 (g) (h) (i) (j)

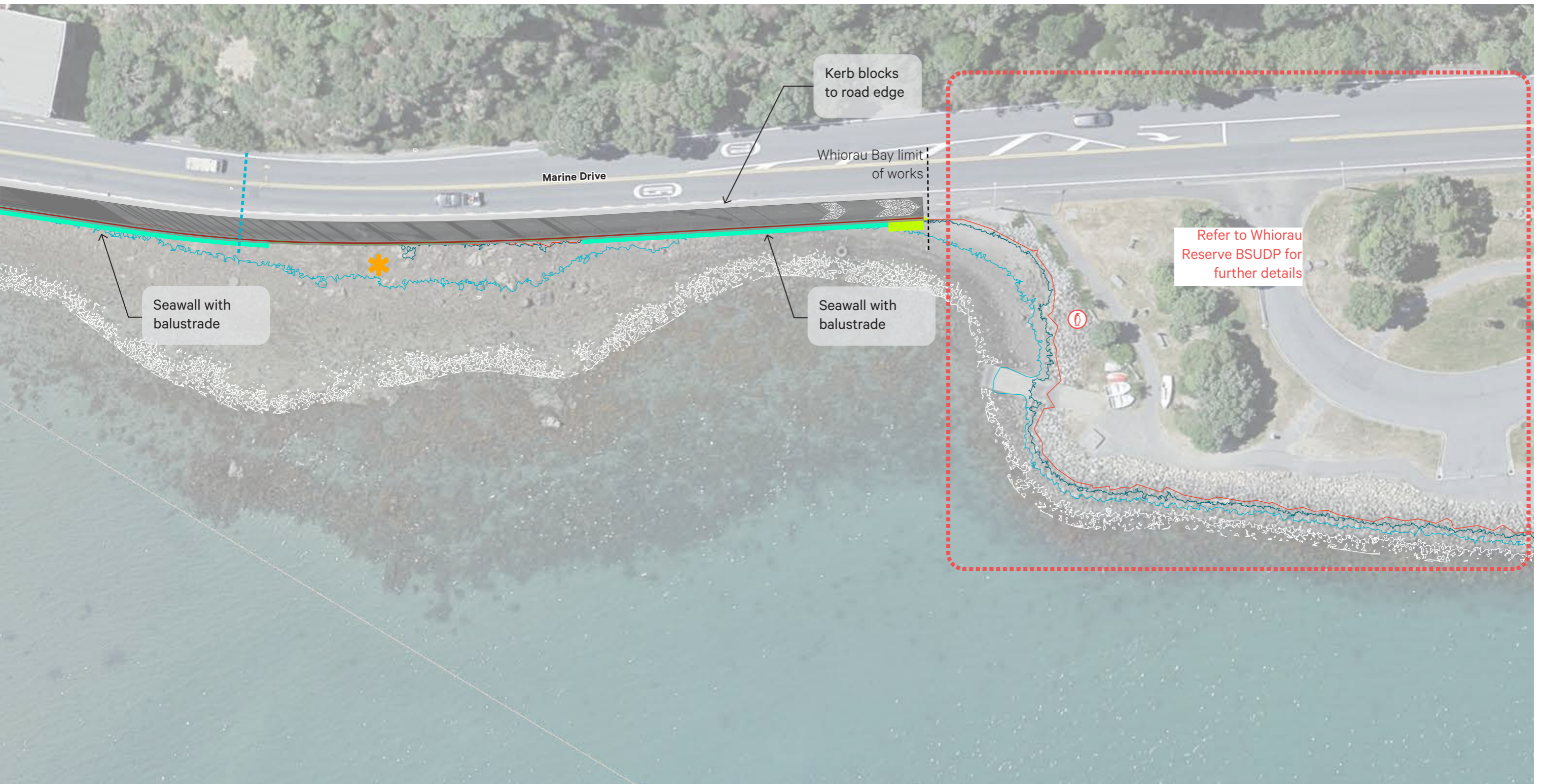
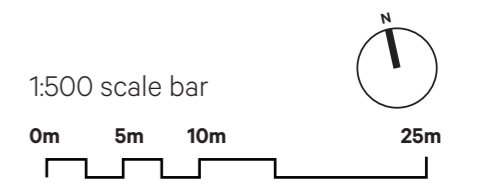
Legend.	
	Bus stop
	Parking
	Location of Mini steps
Seawalls & Path	
	Timber kickrail
	Double curved seawall with Balustrade
	Triple curved seawall with Balustrade
	Triple curved seawall with bench and kickrail
	Shared Path
	Concrete Shared Path pavement
Ecology and Landscape	
	Known Penguin nesting areas
	Planting - new or additional
	Existing Seagrass
	Extent of beach nourishment
	Indicative high tide level resulting from beach nourishment
	Stream Culvert.*
	Fish passage- Stream outlet
	Indicative location of Ecological Enhancement Units (such as tide pools, Vertipools, and Small drilled rock pools)
	Tree Retained
	Tree Removed
Tides Existing	
	Mean High Water Springs (MHWS)
	High Tide
	Mid Tide
	Low Tide

Wall Type Sections.	
	Double curved seawall with Balustrade
	Triple curved seawall with Balustrade
	Triple curved seawall with bench and kickrail



\*We anticipate some little penguin activity around culverts in the bay alongside potential nesting areas





# Site Photos



Figure 1.4 View of Whiorau Bay from Whiorau Reserve.



Figure 1.5 Whiorau Bay at low tide.



Figure 1.6 Existing stream and culvert in Whiorau Bay



Figure 1.7 Decking structure around existing bus stop.



Figure 1.8 Informal ramp from roads to beach.



Figure 1.9 Shallow waters and beach recreation.

# Approach and Principles

Rugged Coastal Environment	<ul style="list-style-type: none"> <li>— Reflect the wild coastal character and narrow edge through minimal disturbance and intervention at the coastal edge.</li> <li>— Retain any rocky outcrops.</li> <li>— Sympathetic transitions between seawalls and natural coastal edges.</li> <li>— Retain fishing access at southern end.</li> </ul>	Maintenance	<ul style="list-style-type: none"> <li>— The selected materials and patterns are durable, designed with longevity in mind, and that are able to be replicated.</li> <li>— Allow native plant species to self establish where conditions are appropriate.</li> <li>— Work with Hutt City Council to understand maintenance requirements.</li> <li>— Relocate electricity poles.</li> <li>— Remove concrete blocks and building rubble, previously used for managing coastal erosion.</li> </ul>
Less is more	<ul style="list-style-type: none"> <li>— Features added minimise obstruction to views and beach access.</li> </ul>	Bay specific narratives	<ul style="list-style-type: none"> <li>— To be undertaken with mana whenua advisors and artists. Cultural expression to be integrated into the overall design in relevant areas.</li> </ul>
Maintain integrity of rock outcrops	<ul style="list-style-type: none"> <li>— Rock outcrops are remnants of the existing coastal edge.</li> <li>— Retain the natural form of each outcrop.</li> <li>— Where modification is taking place integrate transition from the outcrop to the structure in a natural way.</li> <li>— Retain as much of the existing natural colonized rock as possible during seawall construction.</li> <li>— In addition, reuse the natural colonized rock removed during construction at the base of the seawalls.</li> <li>— Use natural colonized rock at seawall transitions, particularly those where the concrete seawall ties back into the natural rocky beach, to integrate the seawall and eliminate hard concrete edges.</li> </ul>	Materials palette	<ul style="list-style-type: none"> <li>— Hardwood timber - seating, linear barriers, wayfinding marker posts, where required.</li> <li>— Stainless steel - step hand rails, detailing into seating, cycle stands.</li> <li>— Textured concrete - seawall, vertipools, tidepools, mini steps.</li> <li>— Asphalt - Shared Path and stopping place north of the Day Bay Headland.</li> <li>— Natural colonized rock - seawall transition points and base of seawall.</li> <li>— Gravel around trees retained.</li> </ul>
<b>Details and elements</b>		Plant communities	<ul style="list-style-type: none"> <li>— Enhancement planting to headland areas.</li> </ul>
Consistency	<ul style="list-style-type: none"> <li>— Features and elements consistent across the Project.</li> </ul>		
Simple robust forms	<ul style="list-style-type: none"> <li>— Elements such as seating, wheel stops and steps are formed with simple block/rectangular shapes, not to detract from the wild coastal character, yet simple and accessible to use.</li> </ul>		
Existing structures and elements	<ul style="list-style-type: none"> <li>— Existing bus shelter to be replaced by a standard GWRC shelter.</li> <li>— Decking around existing bus stop to be removed</li> <li>— Skerrett Boat Shed being considered for relocation.</li> </ul>		

# Priorities for Whiorau (Lowry) Bay

## Seawall Structures

### LV 7. (a) - Seawall types and transitions

Vertical curved seawalls have been chosen across most of the Shared Path including Whiorau Bay because they deflect wave over-topping most effectively and create a reduced footprint on the foreshore compared to other non-vertical seawalls. This design also offers the flexibility to adapt the design to accommodate sea level rise in the future. Seawalls are required to be rebuilt along the majority of the Shared Path. They are designed to prevent coastal erosion and protect against storm surge and are therefore integral to protecting the Shared Path. The Design Features Report (Stantec, 2019) sets out engineering requirements for the Project. The main points can be summarised as:

- The seawall design allows for adaptive pathways to address sea level rise, such as protection to be added on top of the wall in future as required.
- Achieve consistency in the seawall profile throughout the corridor.
- The seawall is to be constructed from reinforced pre-cast concrete units. Construction methodology of the seawall will be determined by site conditions.
- Resilience of the road and underground services was considered in the design.
- Replacement and extensions to storm water pipes through the wall are to be like for like, and finish flush with the face of the seawall.
- Seawall transitions to be integrated to avoid abrupt ends/divisions. Transitions between seawall types e.g. between single and double will be managed between access points (steps and ramps). Transitions between wall edges and the existing coastal edge e.g. at headlands, will be softened/integrated with natural rock.
- Width of the Shared Path is to have a 2.5m effective width except for area past the boat shed which is currently design as 1.5m.
- The path surface is to be mixed asphalt and concrete with a 300mm wide concrete strip on the 'sea side' to define the coastal edge.
- The work is to be an improvement on existing conditions throughout the corridor.
- Fall from height safety will be addressed by either a 1.2m landing, where there is room, or a balustrade where there is not.

## Seawall types in Whiorau Bay

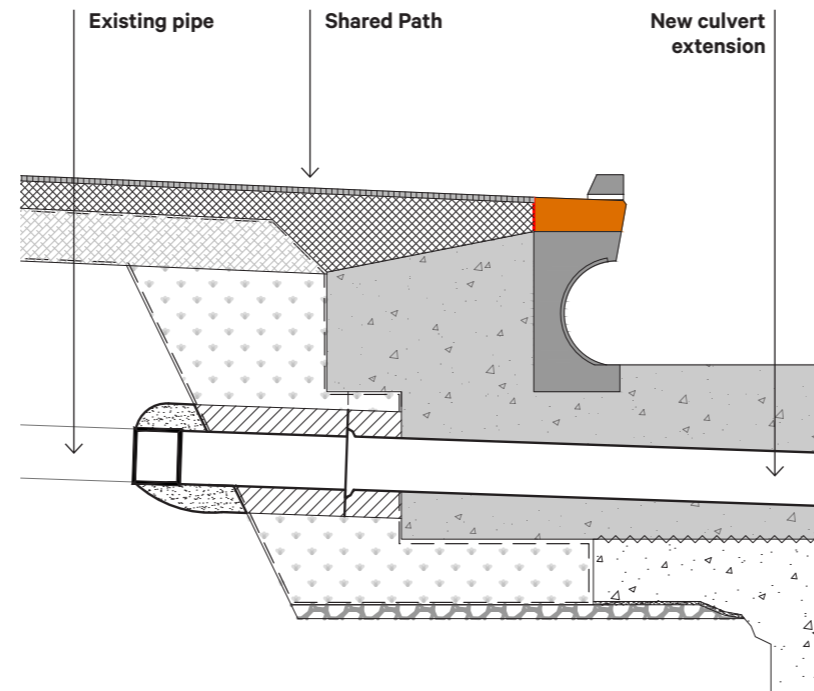


Figure 1.10 Single curved seawall with bench (type C1L) and stormwater outfall penetration.

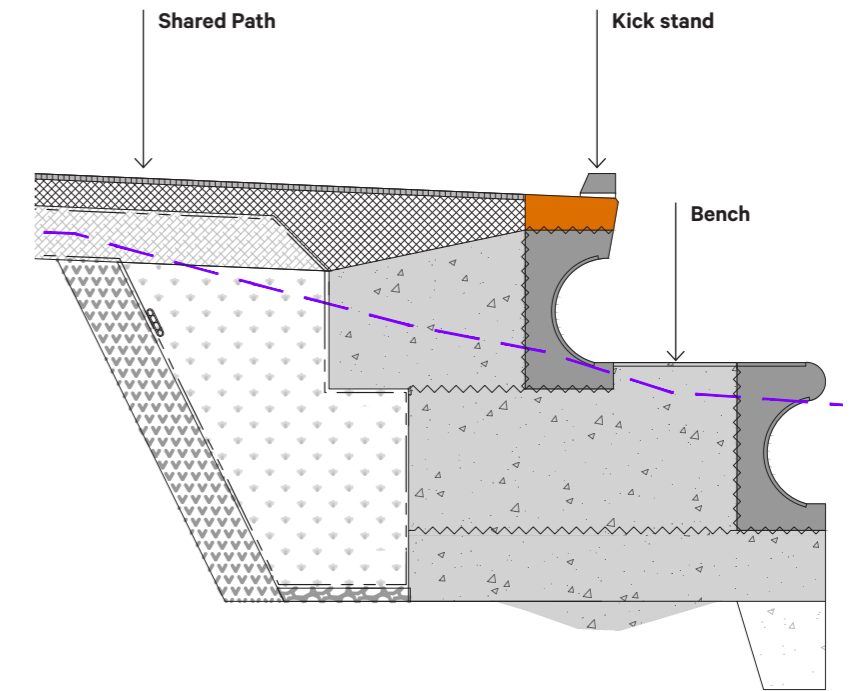


Figure 1.11 Double curved seawall with bench and kickrail.

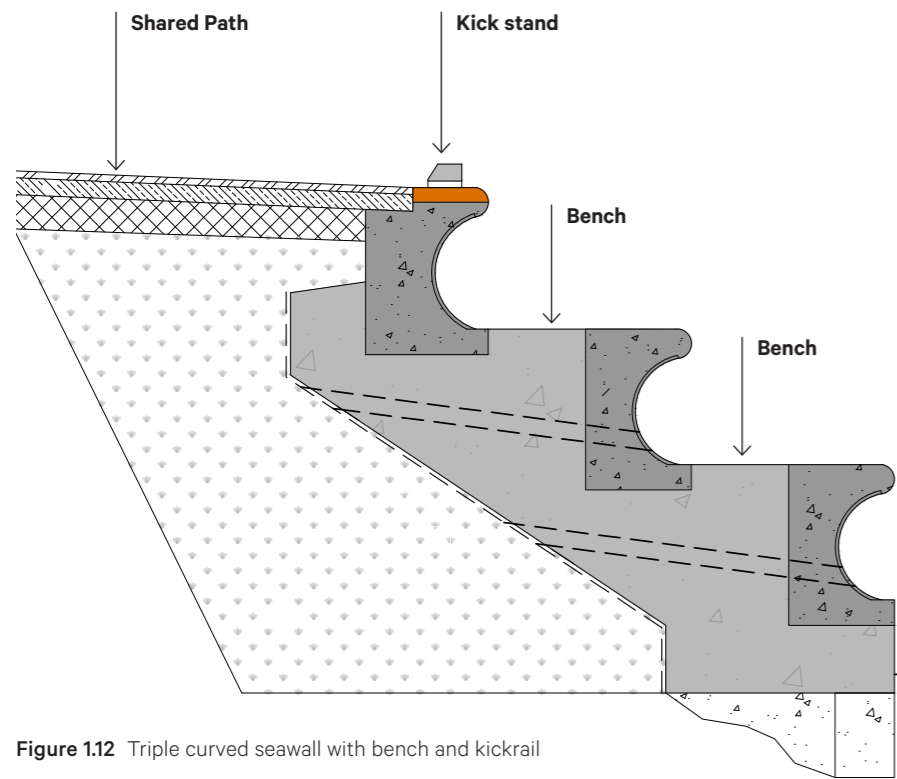


Figure 1.12 Triple curved seawall with bench and kickrail

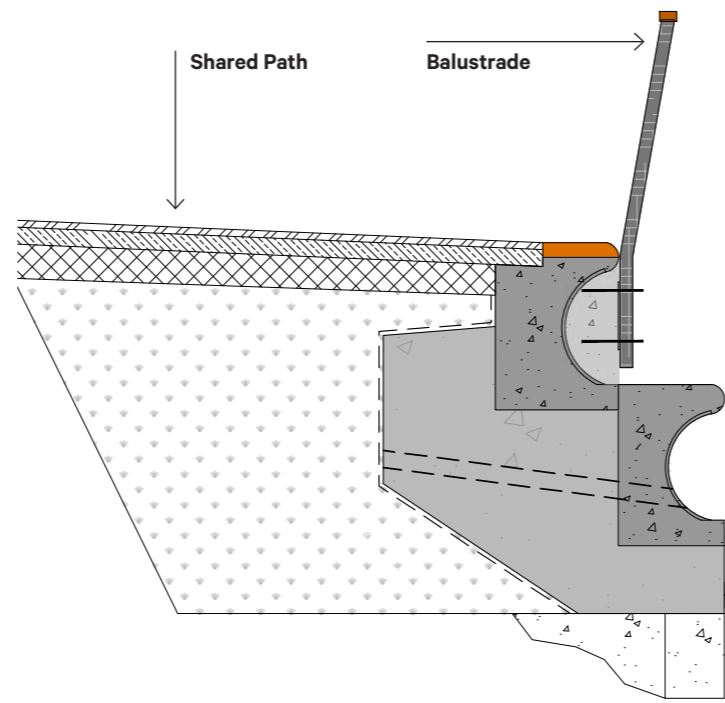


Figure 1.13 Double curved seawall with Balustrade.

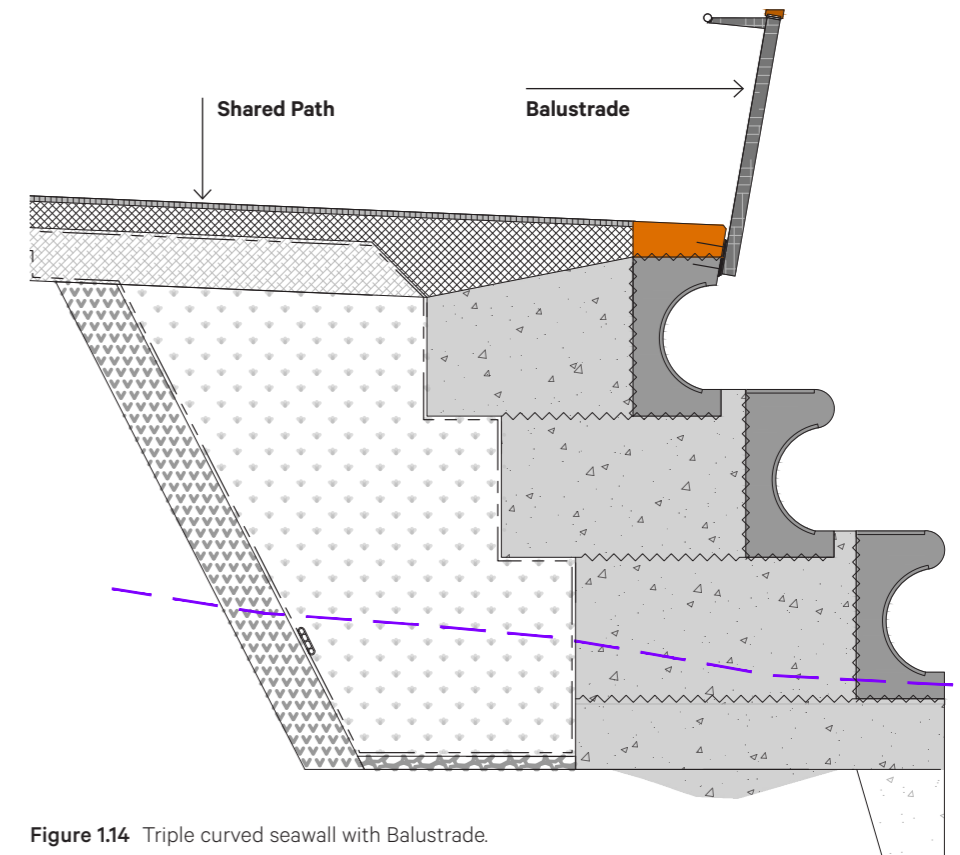


Figure 1.14 Triple curved seawall with Balustrade.

# Priorities for Whiorau (Lowry) Bay

## Beach Access & Safety Barriers

### LV 7. (b)(c) - Steps, Ramps & Handrails

An important aspect of the Shared Path is that public access to the beach is maintained and, at certain places, enhanced. Two forms of access are provided to the coastal marine area in Whiorau Bay, these include 'Mini Steps' and 'Ramps'.

Mini steps are proposed to provide additional access to the beach without encroaching unnecessarily onto the coastal marine area. Ramps are proposed to minimise encroachment onto the beach. The ramp shown in Whiorau Bay is existing.

The design priorities relating to beach access are:

- Should draw people to the coastal edge, away from the main path.
- Should be inviting and intentionally separate to the main path.
- Fit for purpose, using materials suitable for the marine context.
- Safety in design considering ease of use, surface texture/grip and handrails.
- Steps to be sited in logical, accessible locations with visual links to and from the Shared Path to enable their use.
- Design to reflect a distinctly Tupua Horo Nuku aesthetic, fitting in with their surroundings while providing opportunity for unique, place-based expression.
- Parallel design to seawall/coastline to reduce footprint on the beach and interference with coastal processes.
- Sight lines shall be maintained and unobscured as per CPTED (Crime Prevention Through Environmental Design) guidelines.
- Fall heights and barriers must comply with NZ Building Code D1 (Access Routes) and F4 (Safety from Falling).
- Provision for safe crossing places and desire lines shall be met as per the Pedestrian Planning and Design Guide (and the Pedestrian Network Guidance (Waka Kotahi, 2021) forthcoming).
- Consideration for the safety of sea birds and animals shall be informed by designed elements and interventions.
- Where stainless steel is used, some minor staining (tea bagging) is likely to occur.

## Beach Nourishment

### LV 7. (o) - Other matters

The effects of Tupua Horo Nuku on recreation and loss of amenity value are mitigated by placing beach nourishment at Whiorau Bay. By addressing adverse effects on this beach with 'dry' high tide areas used for sitting and other 'dry' beach activities, the proposal will maintain coastal amenity and ensure effects are no more than minor. Losses in the width of the beach – where nourishment is not proposed – and at rocky areas, are minimised by relying on a narrowed path where appropriate.

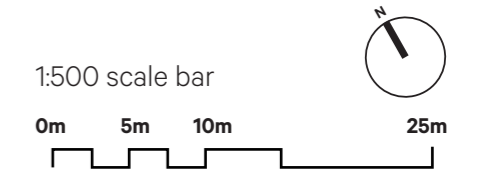
The placement of beach nourishment will avoid areas of high value intertidal and marine habitat, in accordance with the relevant consent conditions.











- Sand and gravel beach material brought into site.
- 1:4 profile to crest of new beach.
- Approximately 15m max of beach depth which varies as it ties into proposed seawalls.

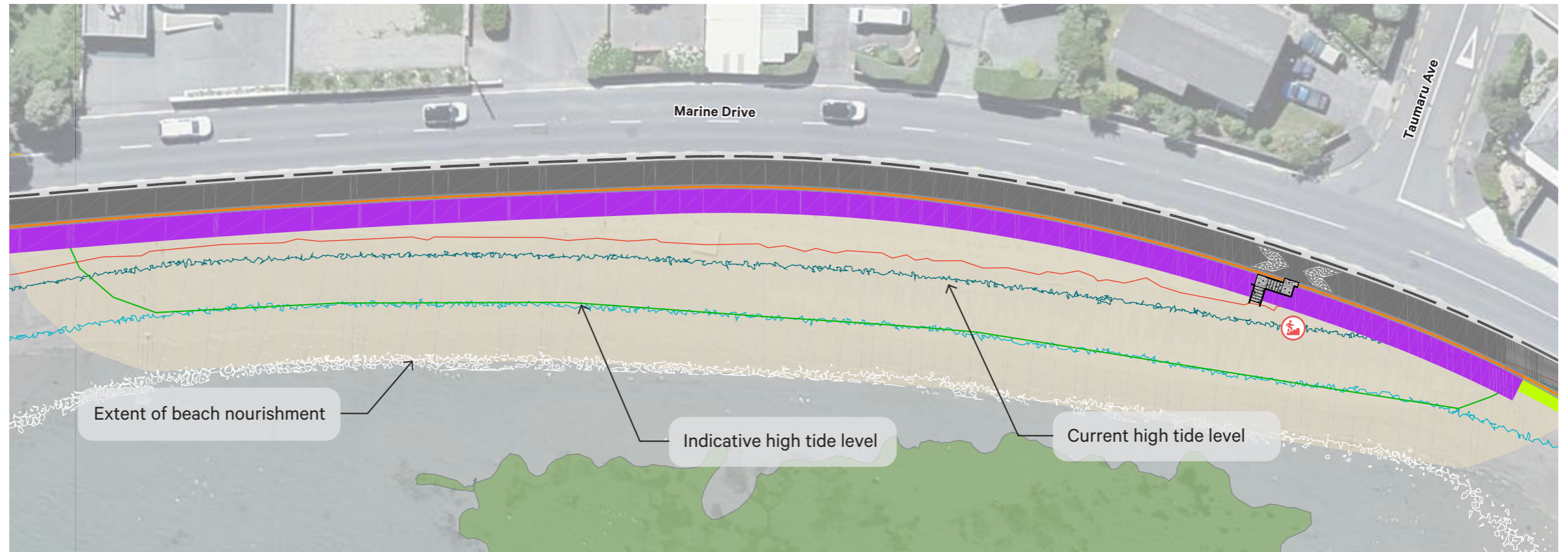
## Stormwater

### LV 7. (d) Structures and coastal interface

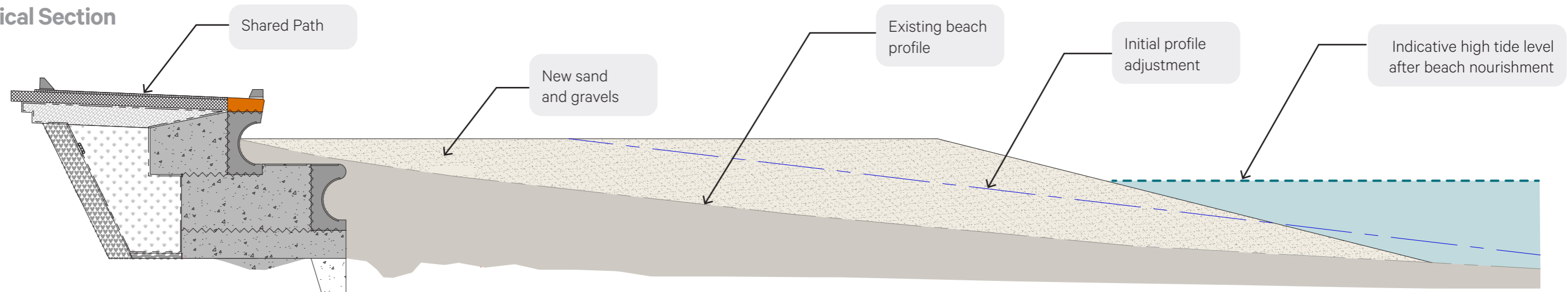
Storm water outlets will be in-situ sections between pre-cast wall units and are designed sympathetically to limit adverse effects on recreation.



- Legend.**
-  Location of Mini steps
  -  Extent of beach nourishment
  -  Existing Seagrass
  -  Indicative high tide level resulting from beach nourishment
- Seawalls & Path**
-  Double curved seawall with bench
  -  Timber kickrail
  -  Shared Path
  -  Concrete Shared Path pavement
- Tides Existing**
-  High Tide
  -  Low Tide



**Typical Section**



# Priorities for Whiorau (Lowry) Bay

## Ecology

### LV 7. (e) - Little penguins, rock pools, barriers

An ecology assessment of intertidal benthic ecology was undertaken in 2016-2017 by EOS Ecology (McMurtrie & Brennan, 2019). The assessment found that the existing intertidal environment is currently highly modified, with seawalls along the majority of the shoreline consisting primarily of angled concrete seawalls that support diversity and richness. Beach areas and fish passage issues have been summarized in the LUDP. Seabird protection is detailed in the Bird Protection Plan.

The main design aspects that will help to improve intertidal ecology and fish passage include:

- A texture applied to the curved seawalls horizontal flat steps and the vertical sides of access points (steps and ramps) to provide habitat for intertidal biota and splash zone coastal species. The textures are described and shown in the LUDP, the Seawall Revetment Habitat Plan (SRHP).
- Ecological enhancements, such as tide pools, vertipools, and small drilled rock pools are applied to discreet locations along the coastal edge that are within the intertidal zone.
- Re-use of colonised rocky material in front of the new curved seawalls to suit condition EM.19 (c) of the SHRP.
- Providing for fish passage at stream culverts to ensure the current level of passage for fish species migrating into upstream freshwater habitats is maintained or improved.

The number and locations of ecological enhancements may change post-construction based on suitable areas for placement to achieve the best ecological outcomes. The main ecological limitation for placement of such enhancements is that they need to be within the intertidal zone.



Figure 1.15 Texture applied to the curved seawalls

## Planting

### LV 7. (f)(g) -Trees, planting, natural character

#### Planting

The planting design for Whiorau Bay gives consideration to the dynamic coastal environment, its ecology, the various user experiences along the route, and maintenance and operations factors. Plant species have been chosen from the Plant Palette in the LUDP, which has been developed with the Project Ecologists. This includes indigenous species, which are suited to this specific coastal environment, and will encourage species of birds, lizards and insects which currently (or could potentially) inhabit areas along the route.

Proposed planting is reflective of (and reinforces) the Whiorau Bay context; planting provides a variety of experiences in response to the character, context, landscape and natural features along the route.

#### Natural Character

The overall adverse effects on natural character for Whiorau Bay are considered to be less than minor for the coastal landscape. The landscape and urban design approach and principles have been developed to mitigate effects of the Project on natural character.

As outlined in the LUDP, it is expected that any project effects on natural character, including the seawall and Shared Path will lessen over time as they weather and become established. A list of mitigation measures related to natural character attributes is provided below. Further detail of mitigation of effects on natural character and integration with the natural landscape is provided with the description of design areas and elements in the Urban Design Outcomes section of the LUDP.

Legibility – geomorphology:

- Retention of local rock for reuse at base of the seawalls.

Legibility – wayfinding and orientation:

- Reinforcement of the undulating coastline morphology by positioning the Shared Path along the coastal edge.
- Opportunities for local variation/reinforcement of local identity in the form of access points from the path to the foreshore.
- Improved access to headlands with strong natural character and natural features (such as trees, rocky outcrops and rock stacks).
- Provision of wayfinding markers, street furniture and signage to enhance the bays and associated neighbourhoods.
- Provisions for cultural expression and naming to reinforce sense of place.

Visibility – public and private views:

- Consistent detailing along the coastal edge and road edge to reduce the visual impact.
- Appropriate/considered design of urban features and landscape elements such as seating, bins, handrails, seaward side linear barriers, stormwater outlets, planting, signage and path markings to integrate them with the landscape setting.
- Incorporation of eco-mitigation surface textures consistently applied along the lower curve and 'step' of the wall to reduce the visual presence of the seawalls.



- Any safety balustrades to be designed as ‘transparent’ as possible to reduce visual appearance.

Picturesqueness:

- Path alignment responds to the local landform and land use patterns.
- Sensitive detailing of urban design and landscape elements, that respond to Mana Whenua, community identity and sense of place.
- Removal of existing unsightly structures and infrastructure along the Project site and the replacement of an eroding road with a consistent structurally stable edge.

## Urban Design

### LV 7. (h)(i)(j)(k) - Open spaces, features and signage

The Design Features Report (DFR) (Stantec, 2019) established a set of design principles and outlined the engineering requirements for the Project. This BSUDP has been developed in general accordance with these principles and requirements. The LUDP outlines the overarching principles, palettes, and narratives for detailed design. Principles for Whiorau Bay can be summarized as:

- Reflective of rugged coastal environment – materiality, robustness.
- Less is more – emphasise the natural setting and views.
- Maintain integrity of natural rock outcrops.
- Retain and enhance coastal vegetation where possible along coastal edge.
- Consistency across elements – a coordinated suite.
- Simple robust forms.
- Simple colour, surface texture, bespoke signage palettes.
- Maintenance considerations.
- Bay specific narratives expressed through cultural design.
- Sympathetic materials palette.

### Open space and Recreational Amenity

Tupua Horo Nuku provides a connection to a continuous coastal edge experience along Whiorau Bay. The Project will enhance existing levels of recreation and amenity values with the Shared Path improving access for people walking and cycling along the coast and between bays. This includes new beach access points providing access to the foreshore.

The main priorities identified are:

- Creating a fit for purpose Shared Path that provides access to the coast and to the bays between Point Howard and Eastbourne for people walking and cycling.
- Provide access to the beach, water and headlands.
- Provide stopping and resting places.
- Maintain views to the coast.
- Retain fishing access.

### Furniture and Features

The furniture palette for Whiorau Bay consists of interpretation signage and wayfinding, seating, bike racks and bins. The palette is to reflect the coastal setting of Tupua Horo Nuku and provide opportunities for cultural expression and narrative to some elements.

The design outcomes relating to furniture are:

- Use of standard Hutt City Council design elements where practical.
- A cohesive suite across multiple elements using robust materials suitable to the coastal environment.
- Appropriate in scale and number, avoiding visual clutter so as not to detract from the environment.
- Contribute positively to the character of Tupua Horo Nuku.
- Allow for opportunities to incorporate individual bay identities.

Formal seating is generally provided at places where stopping and gathering is encouraged and there is sufficient space. The proposed seats are made of timber which is a hard wearing material suitable for the coastal environment. There is a mixture of seating options including benches and seats with back rests and arms. The design is robust, with preference given to solid, chunky forms that are more in keeping with the coastal environment.

Bike racks are generally co-located with complimentary furniture and nearby bus stops and stopping locations. A standard simple design with a narrow profile is proposed to reduce the footprint. They have been located appropriately to assist safe and easy movement along the path.

### Signage and Wayfinding

Where width allows, gathering spaces, beach access points and bus stops are appropriately separated from paths to allow for slower and safer movement. Linemarking, symbols and directional arrows are also considered at the approaches and alongside bus stops and beach access points to visually separate fast and slow movement minimising conflict. These have been jointly expressed through cultural expression and symbols.

Traffic signage and markings will form part of the detailed design. The position of such signage should ensure minimal visual clutter and follow a clear design logic to the positioning, combining and layout of signs.

The design priorities relating to Signage & Wayfinding are:

- Give consideration to Hutt City Council cycleways and Transport Agency standards and Great Harbour Way precedents.
- Ensure CPTED concerns inform the wayfinding design approach.
- Create a visual language for Tupua Horo Nuku which suits the needs of the Project and is in line with Hutt City Council standards.
- Clearly communicate and link key destinations and named landmarks and assist in legibility of the proposed path.
- Ensure the level, format and intensity of wayfinding signage varies along the path, according to need.
- Create a coherent graphic language using robust materials suited to the coastal environment.

# Priorities for Whiorau (Lowry) Bay

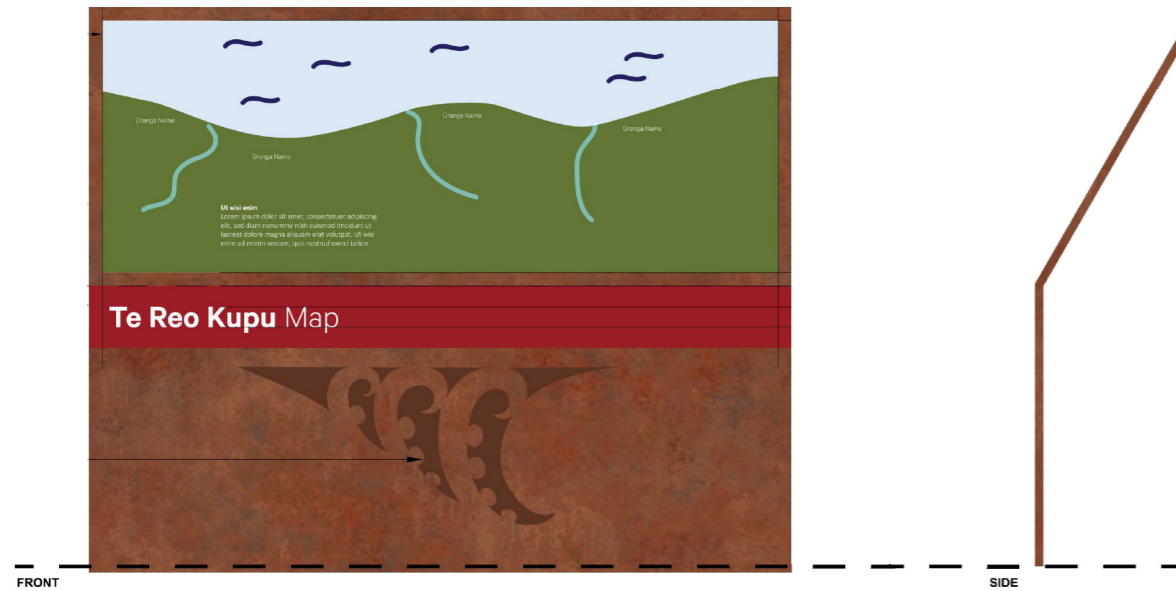


Figure 1.22 Signage design for stopping places (example only).

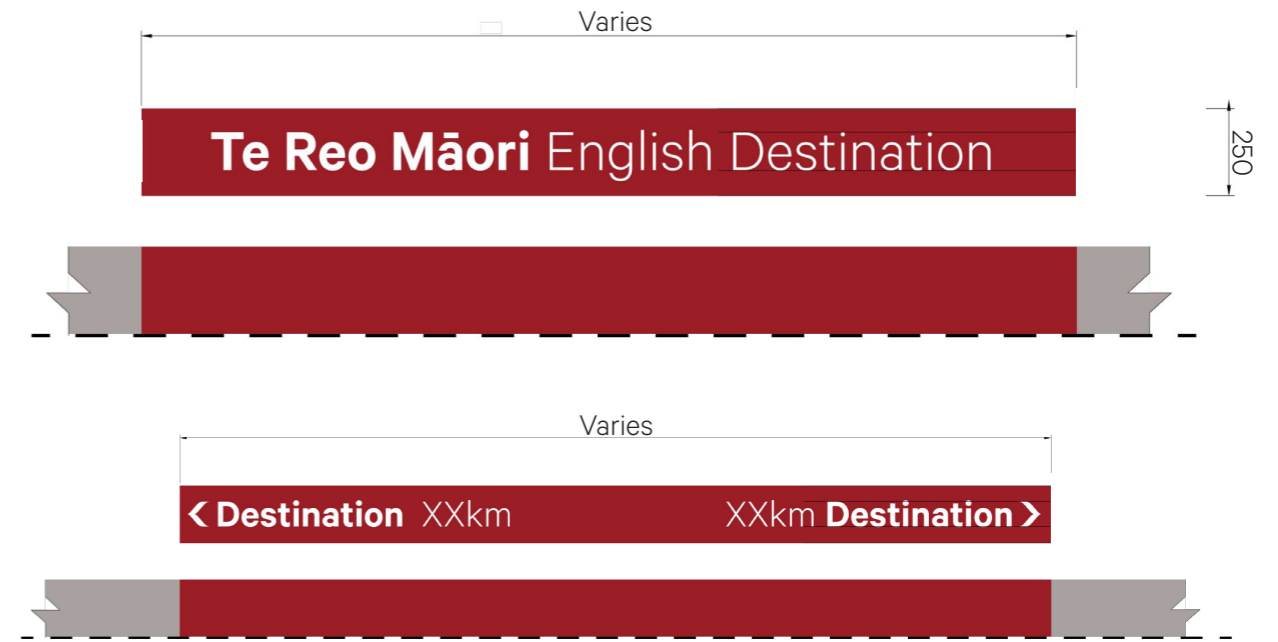


Figure 1.24 Steel panel with named location applied to kickrail (example only).



Figure 1.23 Signage design for habitat areas (example only).

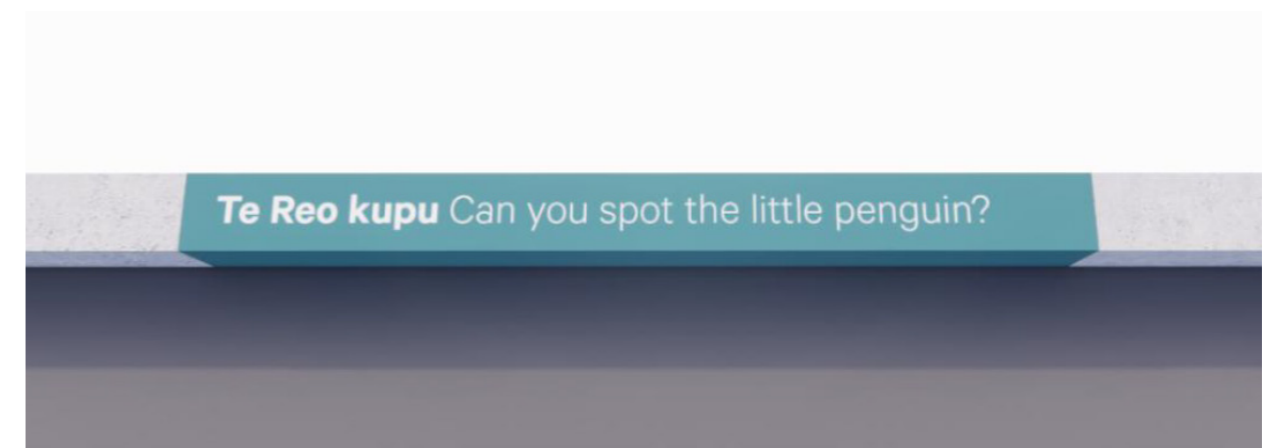


Figure 1.25 Interpretative panel applied to kickrail (example only).

## Cultural Landscape

### LV 7. (l)(m) - Storyboards and surface treatments

Celebration and interpretation of the cultural landscape is integral to the Project vision, design principles and design themes. The Cultural Narrative and Overlay for Tupua Horo Nuku sets out the principles and design response that will guide the cultural expression and create a foundation for the Project in partnership with Taranaki Whānui and Ngāti Toa, along with key Project groups.

It will be reflected in all parts of the urban and landscape design process, from the overall form of the footprint through a focus on kaitiakitanga and in the design of the seawall and other structures. This can also be realised through materials used, naming conventions, arrangement of gathering spaces, treatment of the stream crossings, signage, lighting, sculptural elements and artwork along with the consideration of options for future events, recreation and education activities.

The following imagery illustrates specific cultural expression design elements by Len Hetet. These elements complement and form part of the integrated approach to cultural expression as set out in the vision for the Project and outcomes for all of the components; from the underlying form to specific details.

#### Patterns:

*Te Āti Awa tupua rau, he auripo i te manga iti, he auripo i te manga nui raanei, he kaitiaki ki te whenua.*

Te Āti Awa of many phenomenas, where there is a ripple in a small tributary or great river, there is a guardian and protector on the land.

- This speaks to the connection between the tidal movements and the creation of the eastern bays land mass by Tupua Horo Nuku – Ngake.

#### Mouri Marker:

- The Mouri Marker represents an area of significance to Mana Whenua. It will highlight the Māori and English names of the bays and allow for our cultural narratives of those bays to be told.

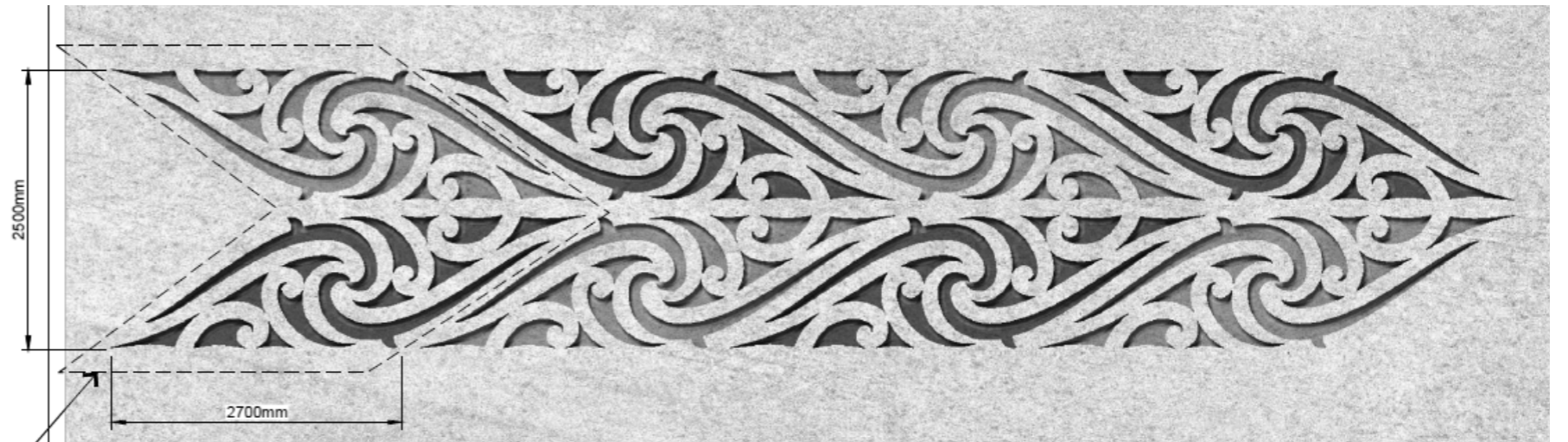


Figure 1.26 Indicative set out of cultural pattern to the path.



Figure 1.27 Mouri Marker post in timber, indicative sketch (artist supplied).



Figure 1.28 Indicative application of cultural pattern to the path.

# Priorities for Whiorau (Lowry) Bay

## Other Matters

### LV 7. (o) - Bus Stops & Shelters

As per the conditions, bus shelters shall enhance safety and convenience, and minimise risk for all users of the Shared Pathway and the road. The bus stops/ Shelter requiring replacement will, to the greatest extent practical, be designed taking into account the following design principles:

- (a) A preference that the Shared Path run behind the bus stop/ shelter;
- (b) The bus stop / shelter will be raised (separated with a kerb from the traffic lane where possible);
- (c) The bus stop / shelter will be designed in accordance with universal accessibility principles (such as, but not limited to, wheelchair friendly ramps and tactile pavers); and
- (d) Bus stop / shelter design will be fit for purpose to appropriately protect public transport users from the coastal elements.

The Alliance is proposing to replace the existing bus stop shelter with a standard GWRC shelter. The benefits of replacing this shelter are:

- Create an accessible bus stop for those less mobile.
- Improve safety by having glass shelters that allow better visibility for path users.
- Provide a raised kerb/access point for the bus shelter to ensure better safety for those boarding the bus.

A standard bus shelter is preferred by GWRC. These shelters were chosen as the design aligns well with the landscape and urban design principles with the potential for some modifications:

- Incorporate timber slats with a panel that can be painted and/or used as a community noticeboard.
- Painting of the roof fascia in a colour that matches the other urban design elements.
- Apply cultural expression onto glass or other materials.
- Potential to involve local schools in art creations.
- Modification to entrance point to avoid prevailing wind and splashback from passing vehicles when wet.

We cannot use the existing bus shelter in Whiorau Bay when creating an accessible bus stops due to the depth of the shelter. Using the existing shelter would encroach on the Shared Path and also on the coastal marine area.

The design outcomes relating to bus shelters are:

- Fit for purpose, providing best possible shelter from wind, rain and seawater ingress during storm events.
- Bus stop location needs to be safe and convenient for users.
- Bus shelters and entrance point onto the bus should be accessible for wheelchair users.
- Bus shelters should be designed so there is enough space for wheelchairs to get into.
- Design to reflect a distinctly Tupua Horo Nuku aesthetic, fitting in with the surroundings while providing opportunity for unique, place-based expression.
- Coastal plantings next to bus stops to soften hardscape through the bay specific plans.



Figure 1.30 Whiorau Bay Bus Stop

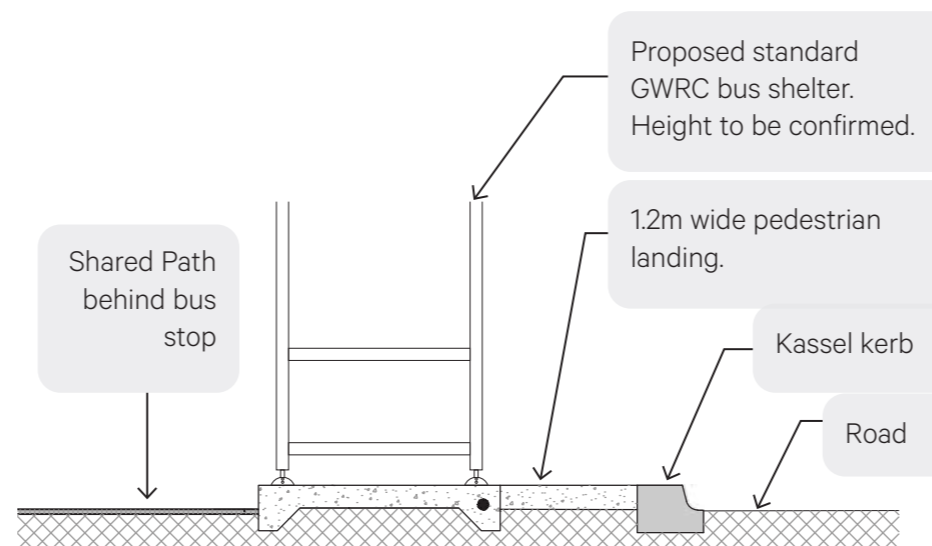


Figure 1.32 Typical bus stop side elevation showing level changes



Figure 1.31 Example of a standard bus shelter preferred by GWRC.

