



Wairoa District Council

# RANGI-HOUA | PILOT HILL



Heritage Reserve Management Plan  
prepared by *EASTERNEARTH* LANDSCAPE ARCHITECTS  
8 March 2011





# CONTENTS



<b>Contents</b>	<b>Page 1</b>
<b>The Process &amp; Acknowledgements</b>	<b>Page 2</b>
<b>Section 1 Rangihoua/Pilot Hill - A Heritage Reserve Landscape</b>	<b>Page 3</b>
Rangihoua/Pilot Hill: Historic Reserve Status	Page 4
Broad Aerial showing Sites of Natural & heritage Significance	Page 5
Natural & Heritage Values	Page 6
1885 Survey Plan of Pilot Hill	Page 7
Heritage Webs & Layers	Page 8
Early Flagstaff Photograph	Page 9
Rangihoua - Sites of Heritage Significance	Page 10
1942 Location Map of 7 Wairoa Pill Boxes	Page 11
Pilot Hill, Wairoa Star Article 2008, Nigel How	Page 12
<b>Section 2 Rangihoua/Pilot Hill - Site Analysis</b>	<b>Page 13</b>
Site Analysis - Physical Landscape & Landform	Page 14
The Visual Landscape	Page 15
Panoramas to Surrounding Landscape	Page 16
Site Analysis - Circulation & Parking	Page 17
Vegetation Appraisal	Page 18
Re-vegetation	Page 19
Invasive Plants	Page 20
Invasive Plants cont'd	Page 21
<b>Section 3 Rangihoua/Pilot Hill - Future Management</b>	<b>Page 22</b>
<b>Part A: Rangihoua/Pilot Hill:- Development Concepts</b>	<b>Page 23</b>
The Walkway	Page 24
Master Plan - Circulation	Page 25
Landscape Master Plan	Page 26
Open Space Design & Lookouts	Page 27
Materials as Symbols: Navigation Themes & Heritage Mythology	Page 28
<b>Part B: Rangihoua/Pilot Hill:- Carpark Concepts</b>	<b>Page 29</b>
Panoramas showing Car Park & Walkway (east)	Page 30
Rangihoua Eastern Reserve & Car Park: Site Analysis	Page 31
Pilot Hill Car Park - Concept 1 - Re-aligned Thru' Road	Page 32
Pilot Hill Car Park - Concept 2 - Single Entrance/Exit Road	Page 33
<b>Part C: Rangihoua/Pilot Hill:- Vegetation Management</b>	<b>Page 34</b>
Master Plan - Vegetation Recommendations	Page 35
Suggested Species for Stage 2 Re-Vegetation	Page 36

## Report History & Purpose

Production Date for Council meeting: 31 March 2010  
Council Draft Adoption Date: 13 April 2010

Report Issue for public consultation: 15 April 2010

This version of the report was adopted at the Wairoa District Council meeting of , A UFW 201% as the final Reserve Management Plan.

This report should be read in association with a second Reserve Management Report, entitled:  
*Wairoa Walkway Reserves: Reserve Management Plan* produced 31 March 2010 and adopted by Council on , March, 2011. This has a fuller range of objectives and policies regarding the management of the Wairoa Walkway Reserves, including Pilot Hill.



PAGE 1





## THE PROCESS

### The Walkway Committee

The Walkway Committee has been meeting within the Wairoa District Council chaired by the Mayor since 2008. It consists of a group of key community representatives and Council staff and Councillors. The engineering and construction process has been overseen by Council engineer William Lewis. The Committee's role has been to support the process, from vision to construction.

### Reserve Management Planning

The development of a continuation of the walkway into Pilot Hill overlaps with a Reserve Management process underway within the Wairoa District Council, under the supervision of its Chief Executive. Eastern Earth Landscape Architects was commissioned by the Wairoa District Council to prepare a Reserve Management Plan for the riparian and historic reserves within which the walkway lies, including Pilot Hill. This document serves the purpose of being a special Heritage Reserve Management Plan embedded within this wider process. It should be read in conjunction with the Wairoa Walkway Reserve Management Plan.

### Site Visit

On January 19th 2010, the committee undertook a site walkover. Nigel How and James Baty led the cultural exploration of the site. Eastern Earth Landscape Architects oversaw the landscape aspects of the site visit and William Lewis the engineering aspects. Cathryn Barr spoke of archaeological issues. A field sheet enabled members to give feedback on matters that they would like to be considered.

## ACKNOWLEDGEMENTS

### Cultural Advice: Nigel How, Ngati Kahungunu

Ngati Kahngungu consultation and advice has been a central part of the project's evolution. The team has been privileged to have the support, knowledge and mana of Nigel How, representing the hapu directly involved at Rangihoua.

### Engineering Support: William Lewis

Bill gave invaluable support as regards engineering and construction solutions.

### Archaeology: Cathryn Barr, Opus

In order to respect the heritage character and archaeology of Pilot Hill, an archaeologist was engaged to advise the team on the best approach for up-grading the hill and its paths, lookouts, seating and entrance. Cathryn Barr of Opus has provided invaluable assistance with the project and made recommendations to the Council regarding accessing the appropriate Historic Places Trust authority for development works.

### Graphic Support: Russell McCracken, Wairoa District Council

Russell has enabled us all to know more clearly where the exact location of the former pilot Hill flagstaff may have been! See Page 7. Site aerials included in this report are his work.







SECTION 1 : RANGI-HOUA/PILOT HILL - A HERITAGE RESERVE LANDSCAPE







Rangi-houa/Pilot Hill is listed within the Wairoa District Council District Plan as an Historic Reserve (R22).

It is also listed as an archaeological site within the District Plan (A57: Pa, Rangihoua, Pilot Hill/gravel-added soil/midden).

The site is also registered as an Archaeological Site with the New Zealand Historic Places Trust (NZAA Site X19/21, Rangihoua Pa).



RANGI-HOUA/PILOT HILL: HISTORIC RESERVE STATUS





# RANGI-HOUA/PILOT HILL - A HERITAGE LANDSCAPE



Whakamahi Lagoon & Wildlife Management Reserve

Ngamotu Lagoon & Wildlife Management Reserve

Rangi-houa Pa site and Pilot Station

Former Maori settlement along hill spur

Tauhara Stream

Former urupa and brick works

Location of former Ahi-paniki Pa which extended as far as Rangihoua/Pilot Hill

Wairoa River



Broad Aerial showing Sites of Natural & Heritage Significance

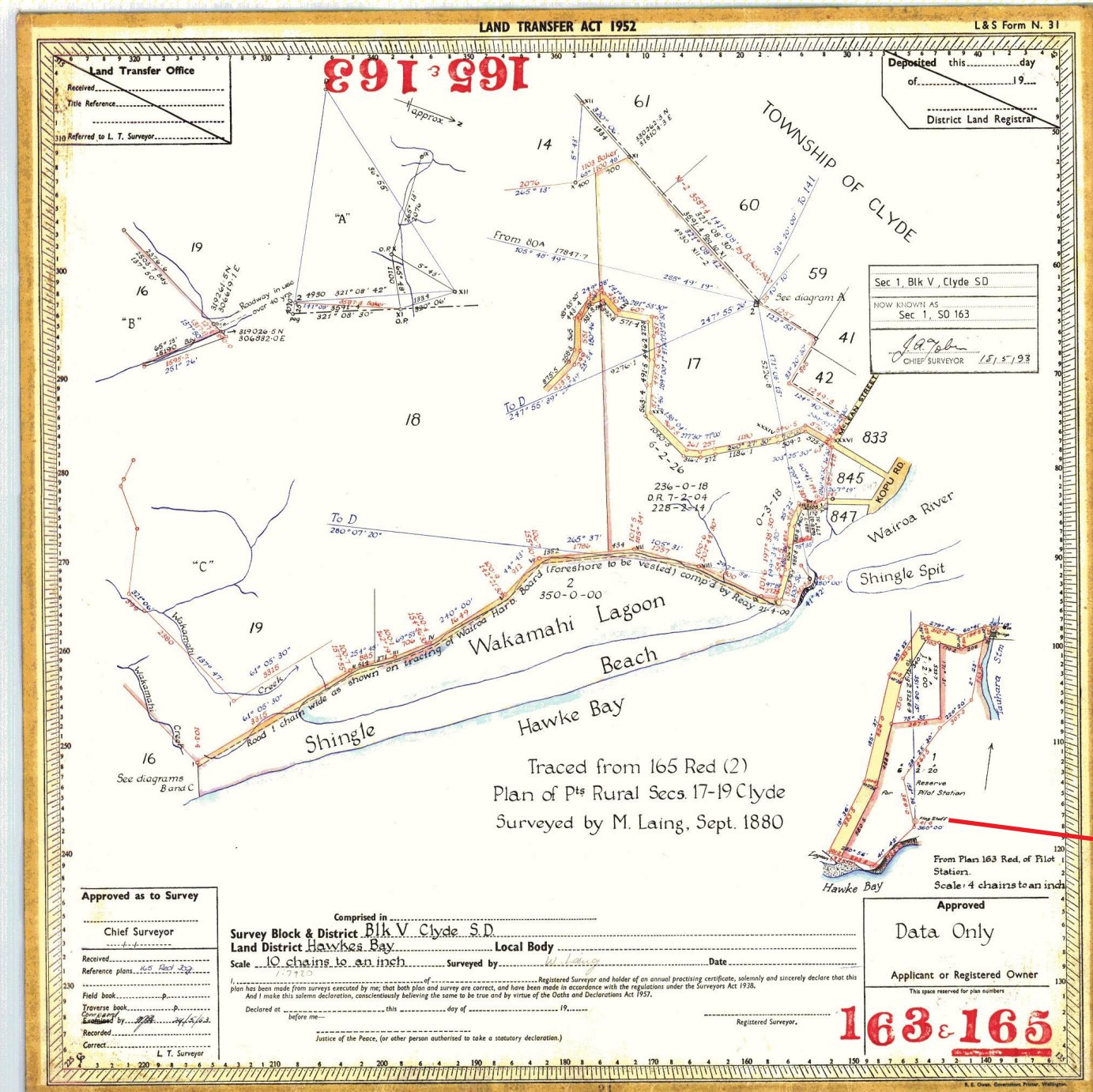




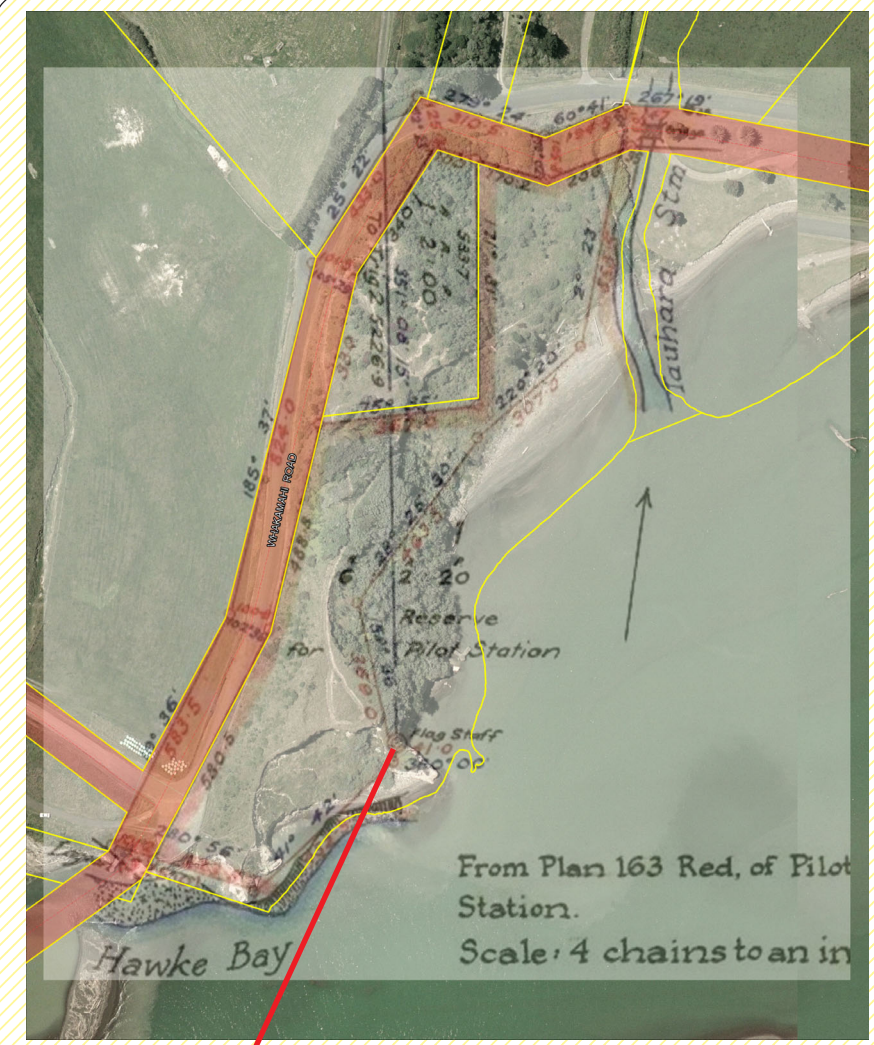
- ◆ Dynamic location where Wairoa River meets the sea
- ◆ Spectacular visual landscape
- ◆ Significant history of Maori coastal habitation
- ◆ Natural wilderness landscape character
- ◆ High natural character values, despite significant localised modifications to Rangihoua
- ◆ Rangihoua = modest coastal landform comprising a natural mudstone highpoint
- ◆ Significant natural lagoon habitats
- ◆ River mouth subject to changes of location
- ◆ Location of early navigation history
- ◆ Evidence of early protection works to entrain river and maintain the bar open
- ◆ Location of early Pilot Station with flagstaff to communicate with seafarers regarding the tidal state of the bar
- ◆ Location of numerous ship strandings







1885 Survey Plan of Pilot Hill (SO 163 & 165 Hawke's Bay Survey District).



Location of former Pilot Hill Flagstaff

1885 Survey Plan draped over a recent aerial of Rangihoua/Pilot Hill

Note: This image has been generated by merging raster (SO163) and vector data from WDC and LINZ Databases and should not be relied on as accurate survey data. Information and image supplied by Russell McCracken, WDC.







## MYTHOLOGY

On the top of Rangihoua, one is able to view the setting for the unfolding of the Maui/Aotearoa creation korero. As Maui hauled up his fish that is the North Island (Te-Ika-A-Maui), Hawkes Bay (the land) represents the hook (known as Te Matau a Maui (the hook of Maui), with Mahia Peninsula being the barb. However Maui did not catch the fish in its mouth, he foul-snared it on the side. The bluff that is visible from Rangihoua to the north is Whakapunake. This was the landform that snagged Maui's line and the full name of the bluff is 'Te Whakapunake a te matau a Maui-tikitiki-a-Taranga' meaning 'The place where Maui -tikitiki-a-Taranga foul-snared his hook'. The waters of Hawkes Bay are known as Te Whanga a Ruawharo. [Korero: courtesy of Nigel How]

Whakapunake



## NAVIGATION HISTORY

In the 1880s, the Flagstaff on Pilot Hill enabled sea navigators to know when the tide and conditions were suitable for crossing the bar at the mouth of the Wairoa River. The Pilot would investigate conditions by boat and then erect the balls on the mast according to conditions. The first Pilot was Toha Rahurahu, followed by his nephew Davy Jones.

There were six positions for the flags as shown in the photograph below:

**Flood Tide:** Two balls vertical at mast head not less than 6 feet apart.

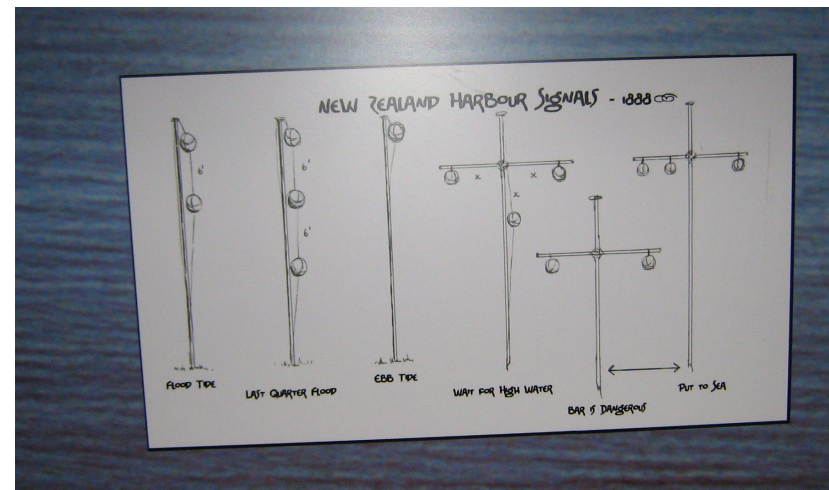
**Last Quarter Flood:** Three balls vertical at mast head with not less than six feet between them.

**Ebb Tide:** One ball at mast head.

**Wait for High Water:** A ball at each yard arm and one on mast, half the length of the yard, below the yard.

**Bar is Dangerous:** Three balls horizontal on yard, two on any side of the mast and one on the other.

**Put to Sea:** Two balls horizontal on either side of mast.



Display - Wairoa Museum

## ARCHAEOLOGY & SURVEY

The Rangihoua Pa site is a recorded archaeological site. It extends over the entire site and was originally much larger. Four hapu are linked to the site.

Lambert T, in 'The Story of Wairoa' 1928, notes:

"The upper stronghold had a different name Rangihoua.... was said to contain 30 acres, whereas now it would be hard to get 5 acres out of it. On top of the bluff stood the common sleeping house of the natives....of considerable size....after the native fashion and called Po-te-Rangi. I may state that the western and northern earthworks of pa Rangihoua are still visible about 3 feet high now. The Heads battle fought about 1827 ...the invaders were signally defeated."

Further on Lambert states:

"The Rangihoua bluff, once the site of a great pa, stood to the left. It had evidently been also used extensively as a kumara ground, to judge by the large quantity of beach shingle carried up there."



In 1987, an archaeologist, Niven, undertook some archaeological investigations that revealed 4 middens along the bluff edge and a 1 metre square concrete pad that was about to drop off the edge (presumably the foundation of the Flagstaff). Niven notes that the flat area has eroded considerably since Lambert wrote. The (southern) flat area is now about 0.1 hectare or a quarter of an acre".

From 1880 the site was the location of a Pilot Station. The Plan survey dating from 1885 shows the location of the flagstaff (Page7). The location of the flagstaff today has been explored using the survey plan draped over an aerial giving an approximate position. This concurs with the evidence from Niven in 1987, that the concrete slab was about to slump over the edge of the cliff.

[Information provided by Cathryn Barr, Archaeologist, Opus. Report to the Wairoa District Council, February 2010]



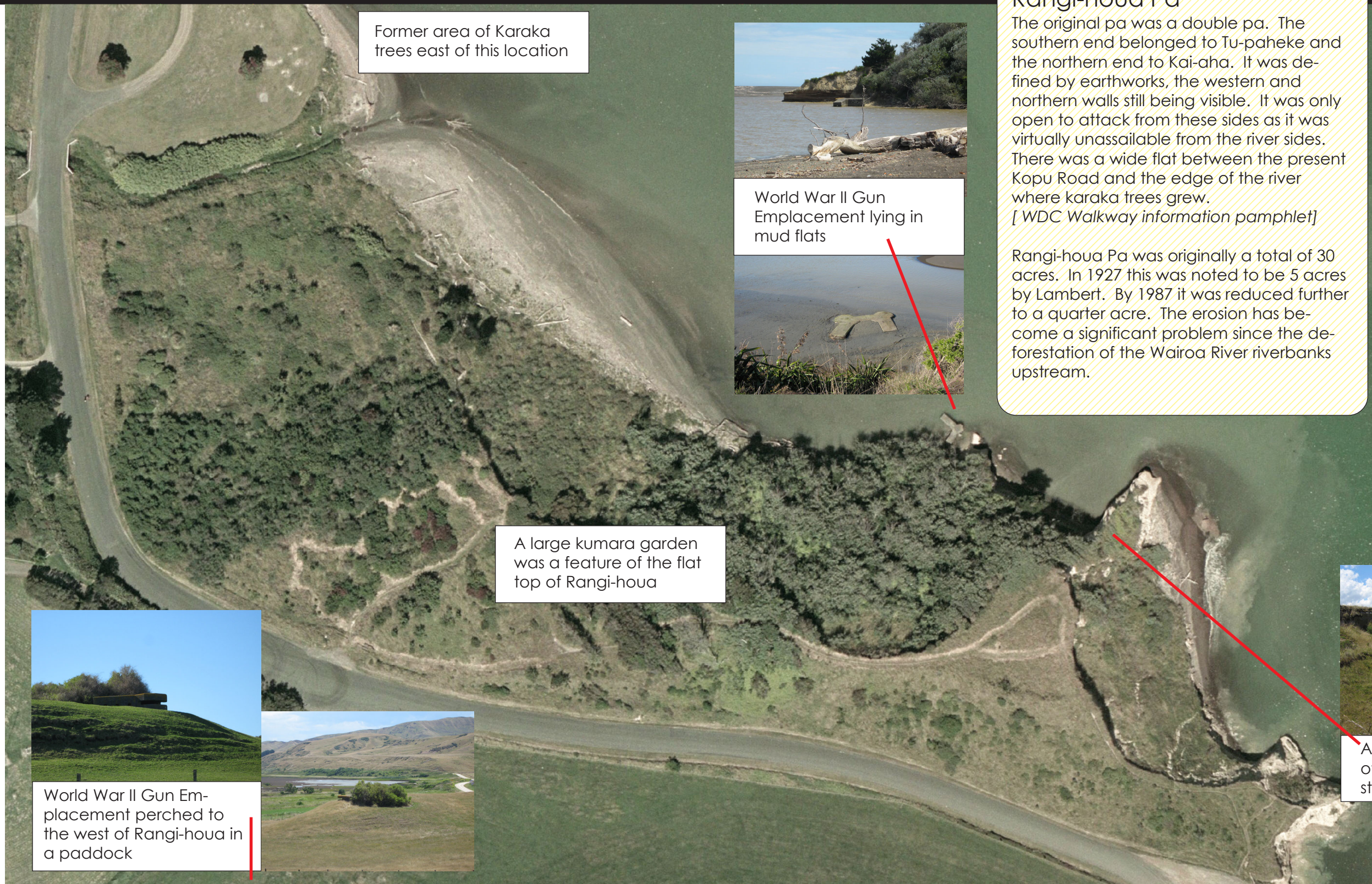


Wairoa River: Photo of successful catch in front of early harbour jetty with flagstaff visible on Pilot Hill in the distant background  
[Photo: Courtesy of Wairoa Museum]



Early Flagstaff Photograph





Former area of Karaka trees east of this location



World War II Gun Emplacement lying in mud flats



**Rangi-houa Pa**

The original pa was a double pa. The southern end belonged to Tu-paheke and the northern end to Kai-aha. It was defined by earthworks, the western and northern walls still being visible. It was only open to attack from these sides as it was virtually unassailable from the river sides. There was a wide flat between the present Kopu Road and the edge of the river where karaka trees grew.  
*[WDC Walkway information pamphlet]*

Rangi-houa Pa was originally a total of 30 acres. In 1927 this was noted to be 5 acres by Lambert. By 1987 it was reduced further to a quarter acre. The erosion has become a significant problem since the deforestation of the Wairoa River riverbanks upstream.

A large kumara garden was a feature of the flat top of Rangi-houa



World War II Gun Emplacement perched to the west of Rangi-houa in a paddock

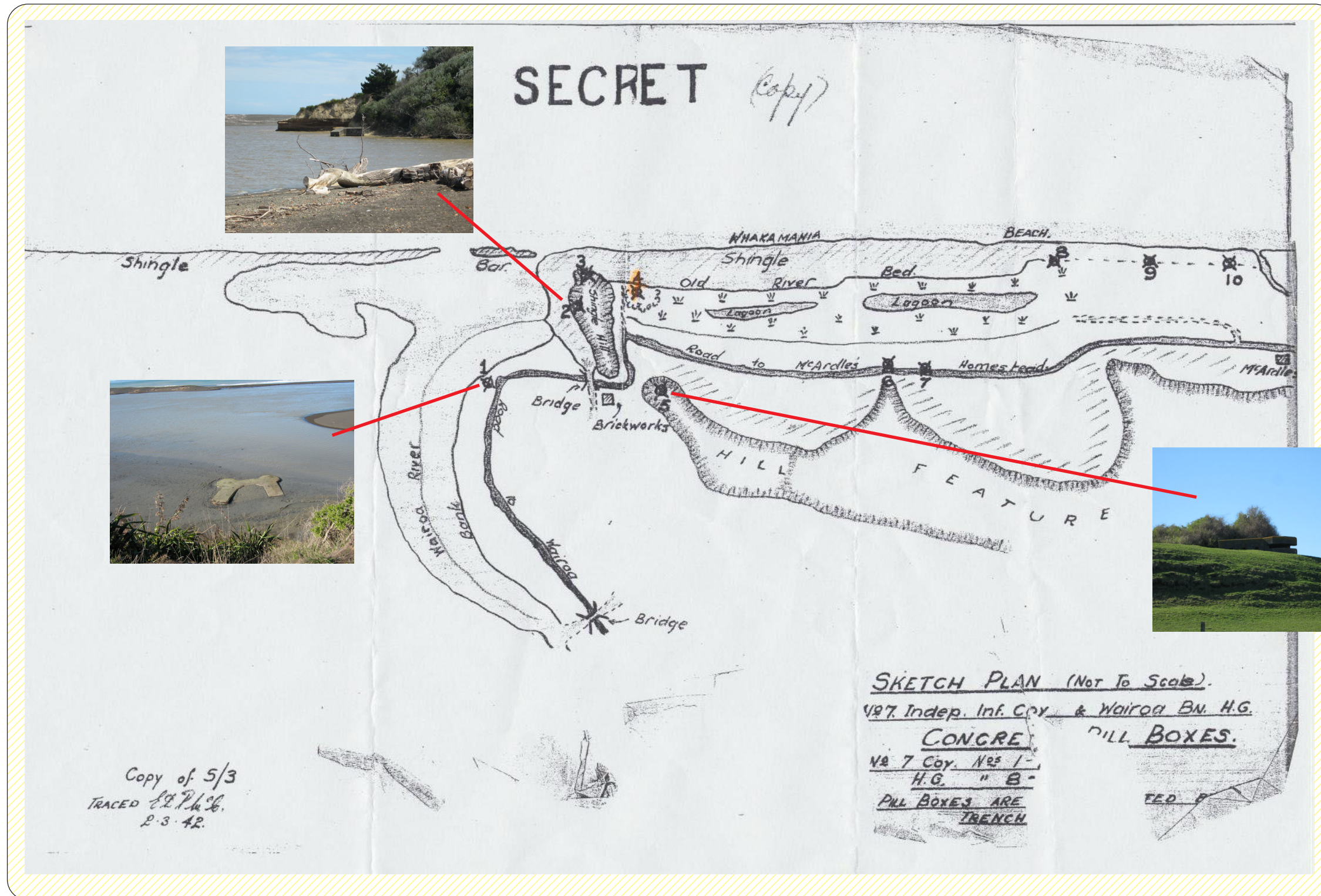


Approximate location of historic Pilot Hill flag staff



Rangi-houa - Sites of Heritage Significance - Early Maori occupation to World War II





[Photo: Courtesy of Wairoa Museum]

### 1942 Location Map of 7 Wairoa Pill Boxes

Correspondence regarding the construction of the Wairoa Pill Boxes has been made available from the National Archives courtesy of Nan Trueman, historian, Gisborne.





# Pilot Hill looks on patiently as the ages pass

**AS THE** new Wairoa Township River Walkway snakes its way along Kopu Road towards Pilot Hill Wairoa people have been asking where the name Pilot Hill came from.

The question was handed over to staff at the Wairoa Museum and research associate Nigel How discovered the origin of the name and two other names the iconic hill has had over its lifetime.

I am Rangihoua.

In the beginning, when the earth and sky were parted, was when I came into being. I existed quietly in the depths of the ocean — part of the flank of a great stingray, nestled peacefully in the darkness of the ocean floor.

In the time of humans, a great one they called Maui, foul-snared this giant stingray at what the humans now call Whakapunake, and hauled my kin and I out of the murky depths into the world of light and air.

Thus my contact with humans began.

A green cloak of pohutukawa, kouka, harakeke and their other siblings was gifted to my kin and I by the Lord Tane. Tupapeke came to visit, a friend from the depths of the ocean also, and decided to stay with me.

Tupapeke my eternal companion, with huge claws like a crab who lives under the now hidden flat top rock at my side. Before long, the descendants of Maui came and settled on the backs of my kin and I — on the hills, mountains, flats, beaches and

ravines of Te-Ika-A-Maui.

I witnessed the arrival of the sacred vessel Takitimu, which had carried a cargo of gods and holy knowledge to our shores. The high priest Ruawharo scattered sands from Hawaiki at my feet, at a place from then on known as Tahuna-mai-Hawaiki to the humans.

The bones of royal and aristocratic offspring of the great one Maui were brought to this place to rest for eternity.

## Penning the past

by Nigel How

These humans gave me my first name — Rangihoua — and settled upon my back. My cloak was cut and burnt, my flesh of soil dug into to create defensive barriers against human attack.

For many years I cradled these children of Maui, these creations of Tane. I listened to their song, sighed at their tears and tolerated their efforts to shape me to their will.

I found delight as humans were born upon my back. I murmured with amusement as the feet of young ones tickled my rough skin.



□ Pilot Davey Jones atop Rangihoua (Pilot Hill).



□ The Te Aroha enters the Wairoa.

I sighed at the sounds of lovers making music in the night.

I mourned when blood was spilled upon me in times of war.

These children of Maui became my charge, and I became a life-source for them all. They learned to live in tune with my kin and I, and adapted to sustain themselves as well as us.

It was not that long ago, that another branch of Tane's descendants came in great ships, not unlike giant birds floating on the sea.

These fair-skinned humans came with a hunger.

At first this was appeased by the hunting of the great tahora (whales), to which those whom I cradled began to partake in as well.

But the hunger was insatiable, it kept growing and knew no bounds.

The harakeke (flax) was slaughtered for trade.

The forests levelled to make way for animals from distant lands.

A strange thing to me called money became desirable to most.

This hunger knew no bounds — it was a hunger of possession, of owning and of selfishness.

It was at this time I was given my second name by the humans — 'The Heads'.

Funny that — since the time we arose from the sea I had always been at the foot of the Wairoa waters, for it is where water ends its freshwater journey and begins its saltwater travels.

This back to front name is amusing to me, just like the fair-skinned descendants of Lord Tane who travelled to these lands.

The trade brought with it many vessels carrying precious cargo for the humans. They seemed to need so much more than the land already provided for them.

In turn, these vessels, one carrying the name of Lord Tangaroa, departed from Wairoa, laden with the fruits of this land which had been ripped from me and my kin.

These vessels were fragile creatures, and a system of flags was introduced to show what condition the bar was in for crossing.

Toha Rahurahu was the first to do this on my back, then his nephew Davy Jones.

The flags fluttered like colourful butterflies in the wind, sending their given message to the vessels and the humans aboard them.

Pilots they called them and this is how

I was given my third name by the humans — Pilot Hill.

As time moved on and the humans grew in numbers, again I was cut into, huge concrete structures weighing down upon my back — the humans were scared of a threat which did not come.

The gentle waters of the Tawhara dried up to form a stagnant, smelly drain — I learned from my kin that the humans had forced the Tawhara through other lands alien to her. I witnessed the death of the shell-fish beds at the hand of a thing called pollution, and no longer do I hear the deafening delight that is the morning praise of the birds to the Lord Tane for all we have been blessed with.

The eight-tailed eels are no longer to be found in Whakamahia as she dries out slowly and painfully. We all are feeling the effects of the humans' greed.

An alien plant to us, called a pine tree, was planted on my back.

A foreign tree this — poisoning my soil with ammonia and causing my skin of soil to itch.

Thankfully these were removed, and the humans have endeavoured to restore my cloak to how it was, though they seem to have forgotten at the moment.

Their memory is short. The Wairoa, with which I had peacefully co-existed, was also forced into unnatural shapes by the humans.

In its fury the Wairoa thrust herself this way and that — gouging at my sides.

The Wairoa has never overcome the shock of trying to be tamed, and continues to wreak havoc when she can.

She is unnaturally powered by great volumes of water which come when the rain falls — never have I seen so much water.

My kin from inland tell me their cloaks have been torn at and ripped also, and they too, like me, are unable to grasp the tears of Rangī and send them gently on their way to the sea.

My smile is sad, but it is tinged with amusement.

After being wrenched from the depths of the ocean by humankind, it is their selfish and destructive habits that see me slowly returning to my original sea-bed home piece by piece.

I hear now from my kin inland that the humans intend to bring a whariki (mat) to me made of hard earth. As I sit here I wonder what that will bring me.

## Pilots they called them and this is how I was given my third name — Pilot Hill.

humans have endeavoured to restore my cloak to how it was, though they seem to have forgotten at the moment.

Their memory is short.

The Wairoa, with which I had peacefully co-existed, was also forced into unnatural shapes by the humans.

In its fury the Wairoa thrust herself this way and that — gouging at my sides.

The Wairoa has never overcome the shock of trying to be tamed, and continues to wreak havoc when she can.

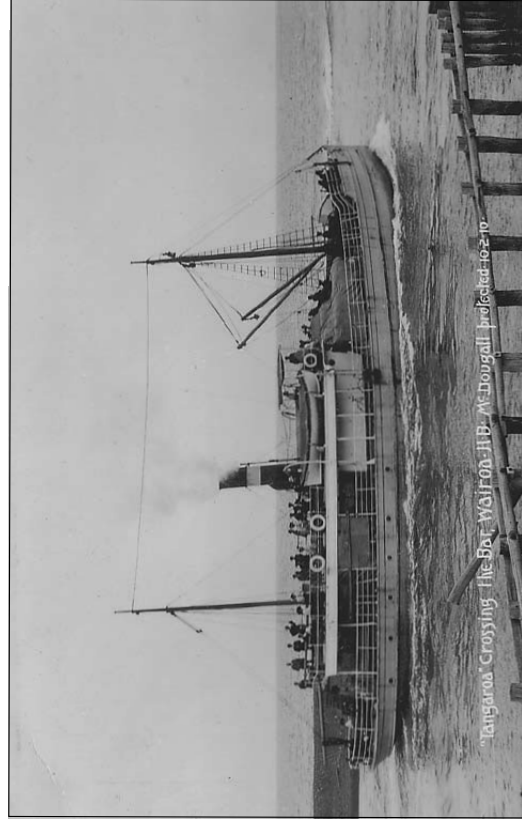
She is unnaturally powered by great volumes of water which come when the rain falls — never have I seen so much water.

My kin from inland tell me their cloaks have been torn at and ripped also, and they too, like me, are unable to grasp the tears of Rangī and send them gently on their way to the sea.

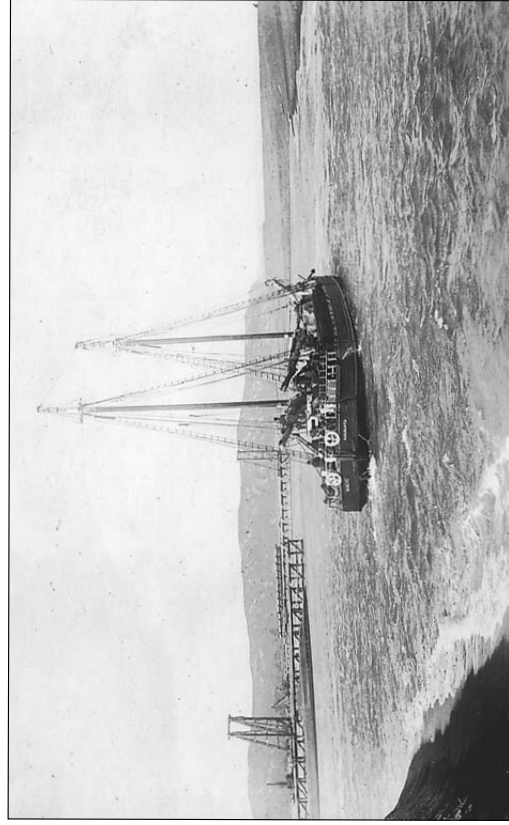
My smile is sad, but it is tinged with amusement.

After being wrenched from the depths of the ocean by humankind, it is their selfish and destructive habits that see me slowly returning to my original sea-bed home piece by piece.

I hear now from my kin inland that the humans intend to bring a whariki (mat) to me made of hard earth. As I sit here I wonder what that will bring me.



□ The Tangaroa leaves the Wairoa and enters Te Whanga a Ruawharo, 1910.



□ The Magic crosses the Bar into the Wairoa.



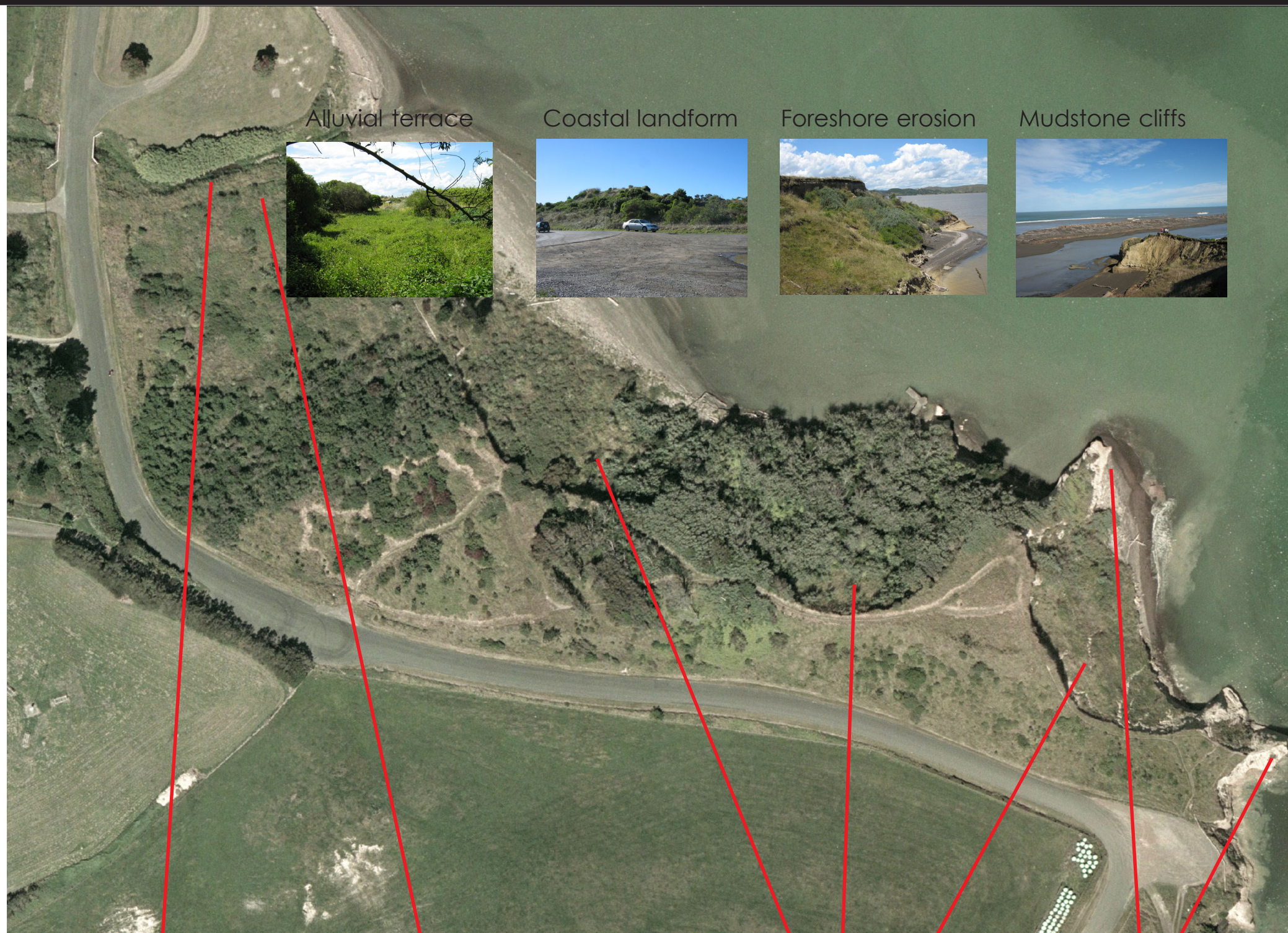




SECTION 2 : RANGI-HOUA/PILOT HILL - SITE ANALYSIS







Alluvial terrace

Coastal landform

Foreshore erosion

Mudstone cliffs

Tauhara Stream

A small alluvial terrace flanks the western side of the Tauhara Stream

3 Areas of foreshore erosion causing slumping

Cliffs of papa mudstone rock

**Ecological District**  
Rangi-houa lies within the Waihua Ecological District.

**Geology**  
The Geology of the land around the subject site comprises silt-stone and mudstone. These are visible where there are eroding cliffs at Pilot Hill.

A barrier beach has been thrown up by the sea against the low-lying coast east of Wairoa. The Wairoa River flows through this barrier creating an ever-changing river mouth. Two coastal lagoons are natural features close to the the Wairoa River mouth.

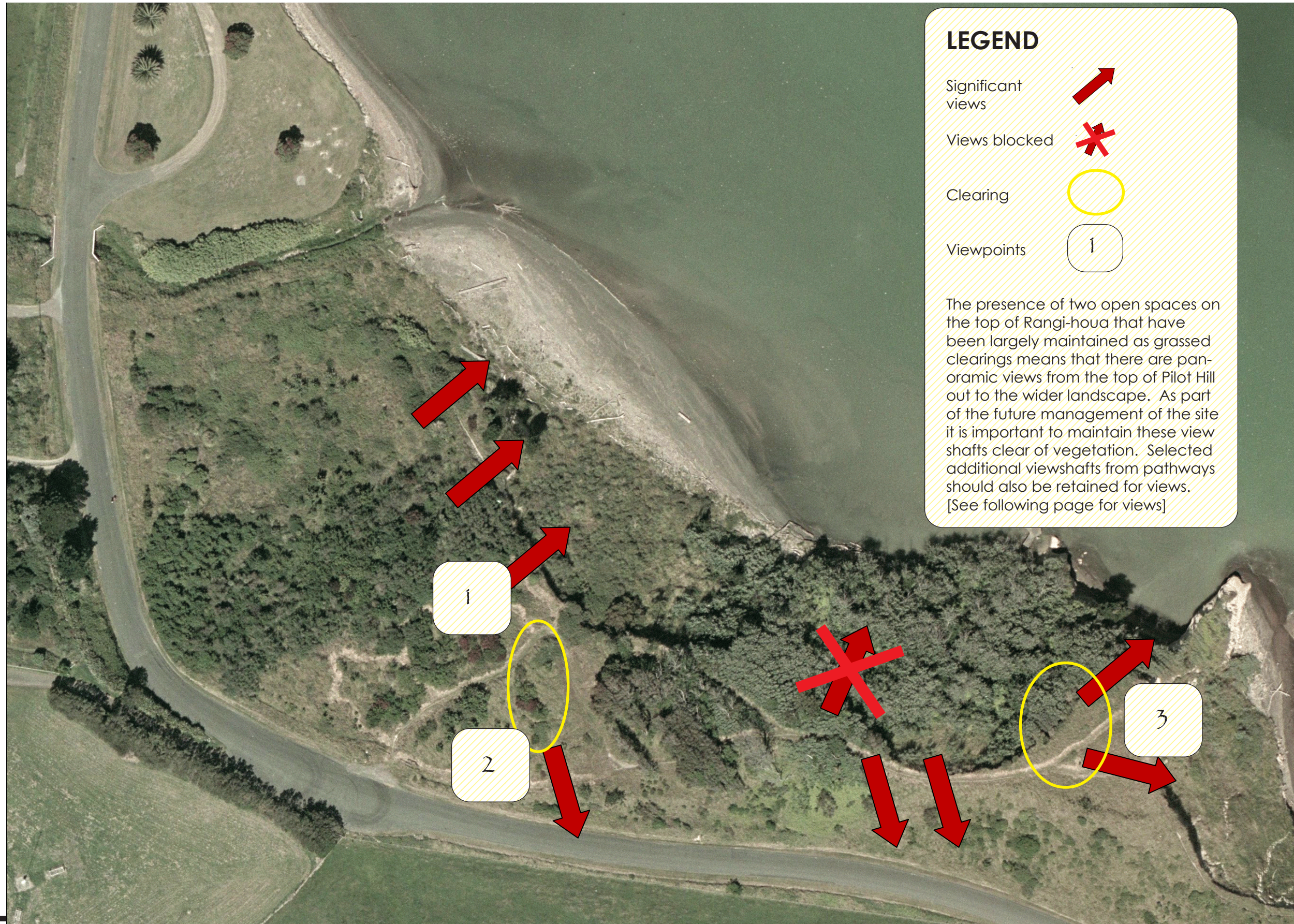
Wetlands form part of the natural eco-system of the coastal lagoons.

**Climate**  
The Waihua Ecological District has generally warm climate with moderate rainfall. Northerly winds predominate and funnel down the Wairoa River. However the site is prone to strong south-east wind events.

**Vegetation**  
The site lies within the coastal maritime bioclimatic zone where coastal species capable of tolerating salt winds originally predominated. Most original native vegetation is now cleared.







**LEGEND**

- Significant views
- Views blocked
- Clearing
- Viewpoints

The presence of two open spaces on the top of Rangihoua that have been largely maintained as grassed clearings means that there are panoramic views from the top of Pilot Hill out to the wider landscape. As part of the future management of the site it is important to maintain these view shafts clear of vegetation. Selected additional viewshafts from pathways should also be retained for views. [See following page for views]



The Visual Landscape





1

EAST



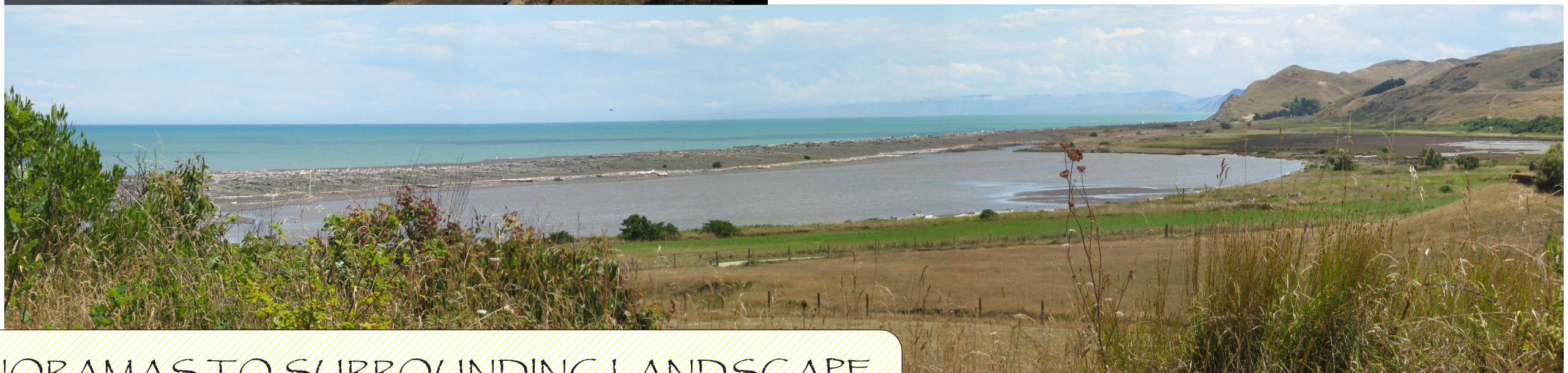
2

SOUTH



3

WEST



PANORAMAS TO SURROUNDING LANDSCAPE







Council Reserve providing foreshore access and car parking (eastern). This area is recommended as parking for those wishing to walk up to the Pilot Hill Reserve. A short walk up the hill along the new Walkway will lead the pedestrian to the main entrance, but this information needs to be signposted in the car park.



The path at the southern end is a steep winding track. In places it goes very close to the bluff edge.

Vehicle access to the Site along Whakamahi Road. No car parking in the immediate vicinity of the main entrance.

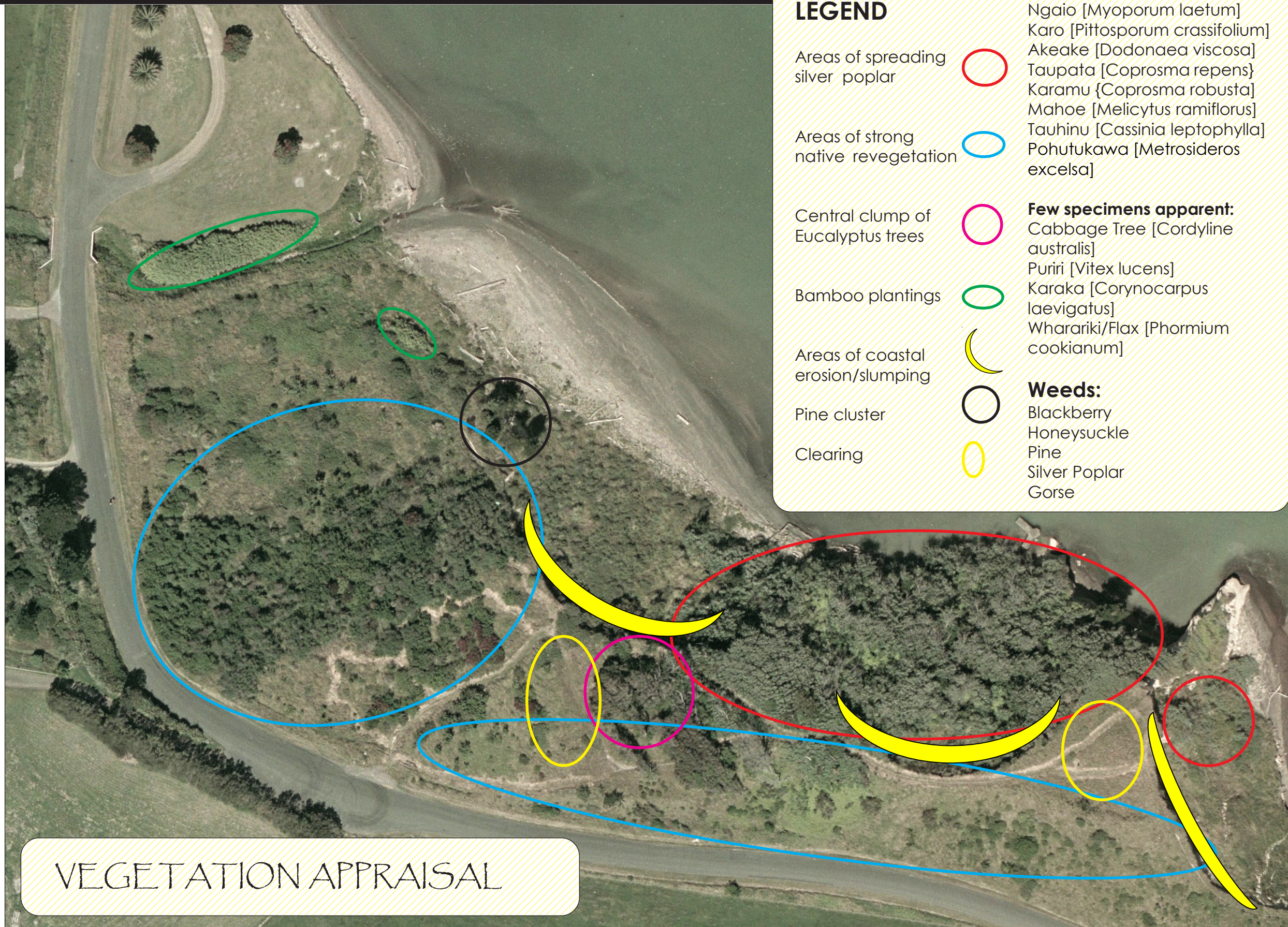


The western car park is an informal layby and leads into private land which is sometimes used unwittingly by the public for parking



SITE ANALYSIS:- CIRCULATION & PARKING





**LEGEND**

Areas of spreading silver poplar



Areas of strong native revegetation



Central clump of Eucalyptus trees



Bamboo plantings



Areas of coastal erosion/slumping



Pine cluster



Clearing



**Re-vegetation Species:**

- Ngaio [Myoporum laetum]
- Karo [Pittosporum crassifolium]
- Akeake [Dodonaea viscosa]
- Taupata [Coprosma repens]
- Karamu [Coprosma robusta]
- Mahoe [Melicytus ramiflorus]
- Tauhinu [Cassinia leptophylla]
- Pohutukawa [Metrosideros excelsa]

**Few specimens apparent:**

- Cabbage Tree [Cordyline australis]
- Puriri [Vitex lucens]
- Karaka [Corynocarpus laevigatus]
- Wharariki/Flax [Phormium cookianum]

**Weeds:**

- Blackberry
- Honeysuckle
- Pine
- Silver Poplar
- Gorse



VEGETATION APPRAISAL





View west towards Whakamahi Road showing revegetation

Approximately 10 years ago, the Wairoa District Council decided to fell the pines that covered Pilot Hill and to commence planting the site in native trees. A project was led by Council staff but involved PEP workers who did the planting.

# REVEGETATION



View towards maturing karo and pohutukawa at entrance





# INVASIVE PLANTS



## DISCUSSION

The SILVER POPLAR undoubtedly has ground stabilising characteristics, but at some cost to the remaining natural environment. In the coastal location at Rangihoua it threatens to engulf the native plantings that have established strongly on the northern and western sides of the hill. The strongest presence of poplar is on the slumped ground to the east and the south of the hill.



New area of silver poplar on southern slumped ground could be eradicated in favour of a mass planting of wharariki

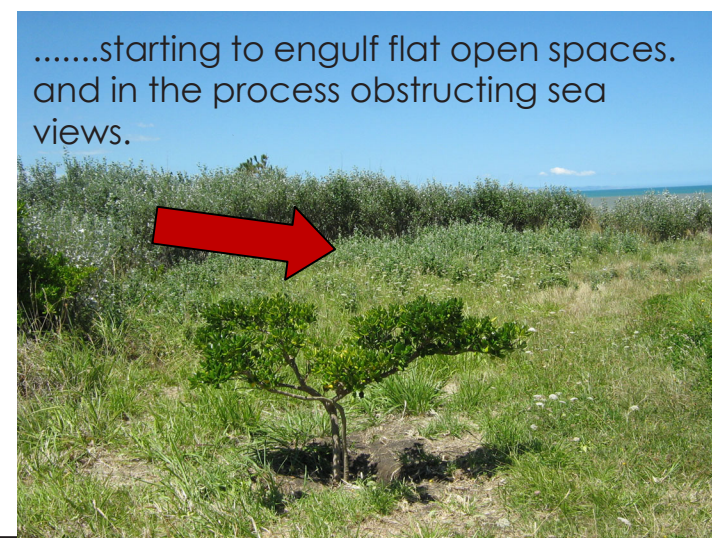


Silver poplar spreading west across central path engulfing new native plantings



Silver poplar is seen spreading up the bank and.....

## SILVER POPLAR



.....starting to engulf flat open spaces, and in the process obstructing sea views.



The poplar has started to encroach across the mid-path to the west of the site moving into areas where there are natives.

With hindsight, other solutions to land stability might have been considered such as mass plantings of the native wharariki. Possible management solutions are discussed on Page 35.





# INVASIVE PLANTS cont'd



EUCALYPTUS

**DISCUSSION**

The EUCALYPTS on site may have just started to become a seeding problem - there are a number of smaller ones along the western margin.

**SUGGESTED MANAGEMENT**

Discussion has taken place regarding the culling of the eucalypts and this is supported.







SECTION 3 : RANGI-HOUA/PILOT HILL - FUTURE MANAGEMENT







PART A : RANGI-HOUA/PILOT HILL:- DEVELOPMENT CONCEPTS





# THE WALKWAY



**WAIROA TOWNSHIP**  
**RIVER WALKWAY & CYCLEWAY**  
 PEDESTRIAN & CYCLE PATH SITE LOCATION PLAN

## History of the walkway

In 2008 the Wairoa District Council initiated a project to construct a walkway from Marine Parade along the main street of Wairoa east around Spooner Corner and then south as far as the mouth of the Wairoa River. The walkway has now been extended to travel up Pilot Hill and finishes near the entrance to Pilot Hill. It is a great asset for the people of Wairoa in terms of recreation, heritage, fitness opportunities as well as showcasing its considerable riverside amenities. Its completion has raised questions about the potential nature of improvements to internal Pilot Hill pathways and a project has unfolded to enhance the landscape within Pilot Hill for public enjoyment.



Regional Council erosion protection works 2009



Construction of the Pilot Hill leg of the walkway in 2009



The end of the Walkway at the entrance to Pilot Hill

The next few pages will explore what Pilot Hill might look like in the future.....





**MASTER PLAN - CIRCULATION**  
 ENTRANCE, PATHWAY ALIGNMENT & CARPARKS

### Entrance

The Pilot Hill walkway ends near the main entrance to the site. The first section of proposed pathway from the entrance to the Area A1 should be of a significant width as the main route into the site (say 2.5 metres). It is anticipated that this portion of the pathway will be wheelchair and motor scooter accessible. Remaining pathways will be a narrower gauge, but still wider than the present paths (say 1.2-1.5 metres).

### Vehicle/motorbike exclusion

It is a recommendation of the Walkway Committee that the site be off-limits for vehicles and motor bikes. Enforcement of this measure is not straightforward and is an on-going part of concept development and discussion.

### Site Pathways/Circulation

In general, the routes followed by the pathways are straightforward and appropriate. However, the location of them close to the slumped edges in places creates an unsafe aspect to pedestrian passage. It is recommended that in areas where this occurs (as shown by the re-aligned pathways on the plan) the pathways are re-routed approximately 1-2 metres inland.

There are additional pathways that are currently nearly impassable, which have some merit in terms of views offered. One of these follows down the edge of the hill from Area A1 north-east to the eastern car park. From this vantage point there are good views possible out to the WWII gun emplacement in the mud flats.

### Car parks

#### +Eastern carpark

Separate concept plans have been prepared for the eastern car park and are included in Part B of this document beginning on Page 32.

#### +Western informal carpark

The car park at the western side of Pilot Hill is not well formed. It also makes use of a layby to the west that is on private land. As and when budget permits, it would be appropriate to improve the layout of this area.

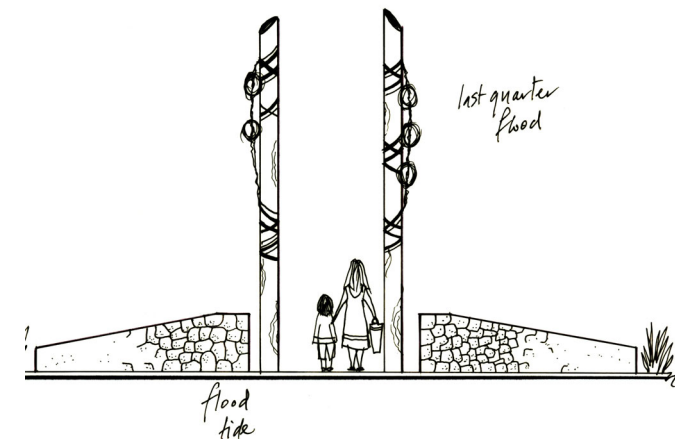
### Archaeology & Construction

The recommendation from the archaeologist is that methods of pathway construction should involve construction building on top of the landscape wherever possible, rather than deep excavation. No site work should take place in this archaeological site without the appropriate archaeological authority from the NZ Historic Places Trust.



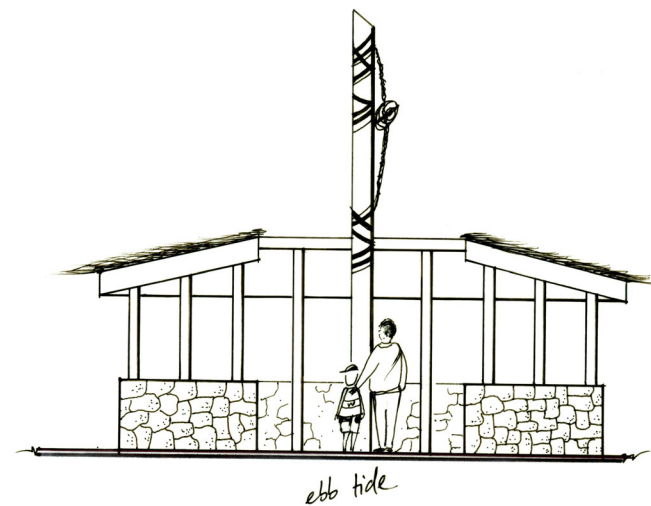
The western carpark below Pilot Hill





AREA D: THE ENTRANCE

**AREA D: THE ENTRANCE**  
 The curved walls that mark the entrance are built of stone, if possible from near Whakapunake. Two pou flank the sides and represent contemporary sculptural interpretations of 2 of the 6 pilot hill flagstaff encoded messages. Timber, steel, copper and rope will form materials for the pou (to be designed by local Maori), which form a link with maritime themes associated with the site.



AREA A2: LOOKOUT & SHELTER

**AREA A2: LOOKOUT & SHELTER**  
 This area lies to the south of Rangihoua and enjoys outstanding views over the mouth of the Wairoa River and the ocean. A small curved shelter nestles next to a young pohutukawa and provides seating and shade for walkers. Interpretive panels regarding the history of the site flank the walls at the back. Another of the 6 pou arises through the centre of the shelter.

**LANDSCAPE MASTER PLAN**  
 ENTRANCE, LOOKOUTS, SEATING & SHELTER DESIGN

Flagstaff Signals:  
 Interpreted as 6 Pou placed throughout the Rangihoua site





AREA A1: GARDEN OF LOST BOTANY

### AREA A1: GARDEN OF LOST BOTANY

To celebrate the former kumara garden that was known to have been present on the top flat terrace in the early Rangihoua pa site, and to provide education regarding lost native plants, it is proposed to plant the area surrounding this clearing with native plants that are now rare in this area and would have once been abundant. At each end of this northern of the two clearings, there is a raised platform area with seating for people to enjoy the stunning views. The clearings will be surrounded by round smooth limestone boulders.

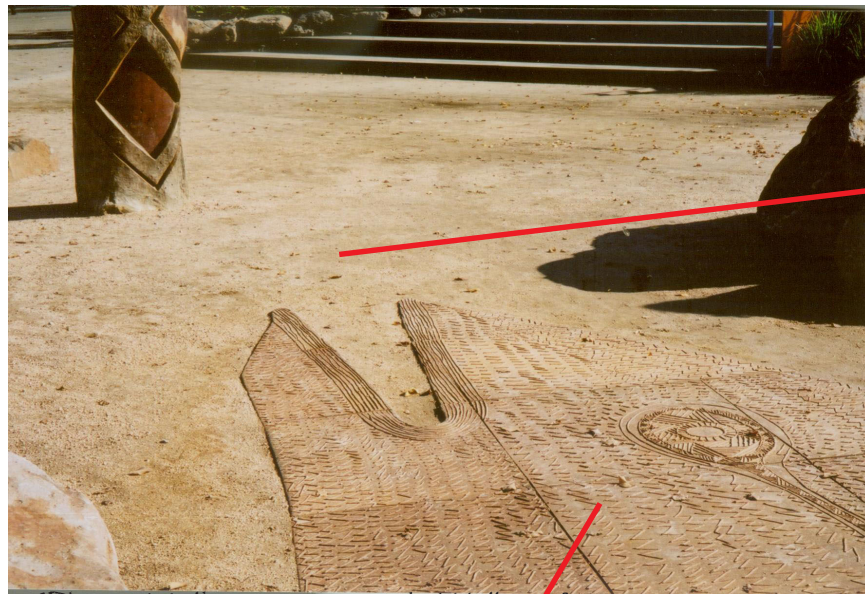


### HEBE TAIRAWHITI

It is not commonly known that Tairawhiti has its very own hebe! it was first recognised as a distinct species by Mrs E. A. Hodgson of Wairoa in the 1940s. It was observed by her in Whakamahi Bush, Wairoa, facing the sea in 1934. And later by others in other Wairoa coastal bush. The largest population of it is along the Makarori coastal cliffs north of Gisborne.

# OPEN SPACE DESIGN & LOOKOUTS





[Photo: Melbourne Riverside Walkway]

### Sand

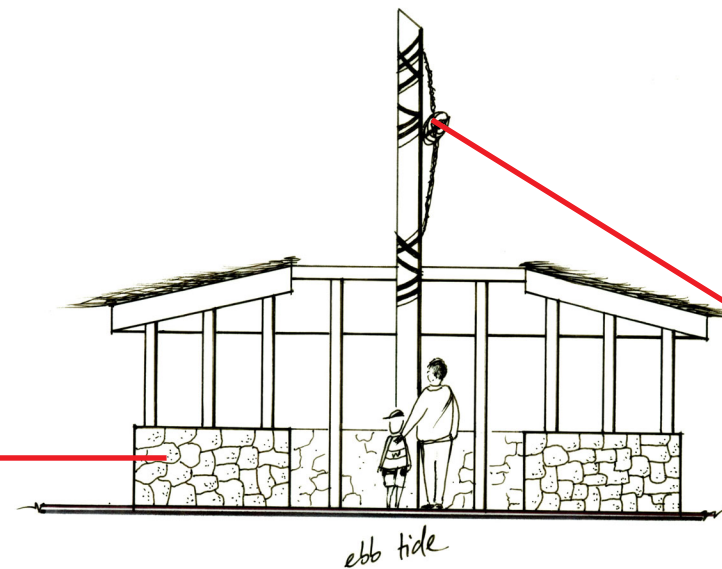
The early story about the tohunga Ruawharo arriving on the Takitimu waka provides some rich history regarding the early arrival of ancestors to the Mahia and Wairoa areas. He apparently brought sand from Hawaiki and left some of it at Opoutama and some of it at the Wairoa River mouth. Sand could be used as a ground treatment within the lookout shelter forming a symbol of this korero.

### Steel carved plate

This medium becomes an attractive way of telling Maori mythological stories, for example the Maui creation myth and its link to Hawkes Bay, Mahia and Whakapunake - all visible from this location. A designed plate representing this mythology could lie on the ground in front of the lookout building.

### Rock

The choice of rock as a material provides a linkage to the Whakapunake bluff, visible from Pilot Hill. The Maui creation korero talks about the bluff Whakapunake that snagged Maui's hook. Rock is chosen as a construction material at the entrance to the site and as the base of the lookout shelter.



### Timber & Rock

Timber and rock are materials that have been mooted for the design and construction of the seats for Pilot Hill. The attached example is from the Waioeka

### Timber Pou, Rope & Canvas

The pou references the flagstaff which became an important symbol of navigation communication at Pilot Hill. Rope and canvas are common navigation materials but were also part of the construction materials for the canvas balls and the flagstaff hoist. Rope-linked bollards could line the walkway from the entrance to the central clearing.



## Materials as Symbols: Navigation Themes & Heritage Mythology





PART B : RANGI-HOUA/PILOT HILL:- CARPARK CONCEPTS







Panorama showing Regional Council shore protection works. Note unsafe intersection of vehicle access to reserve and new walkway

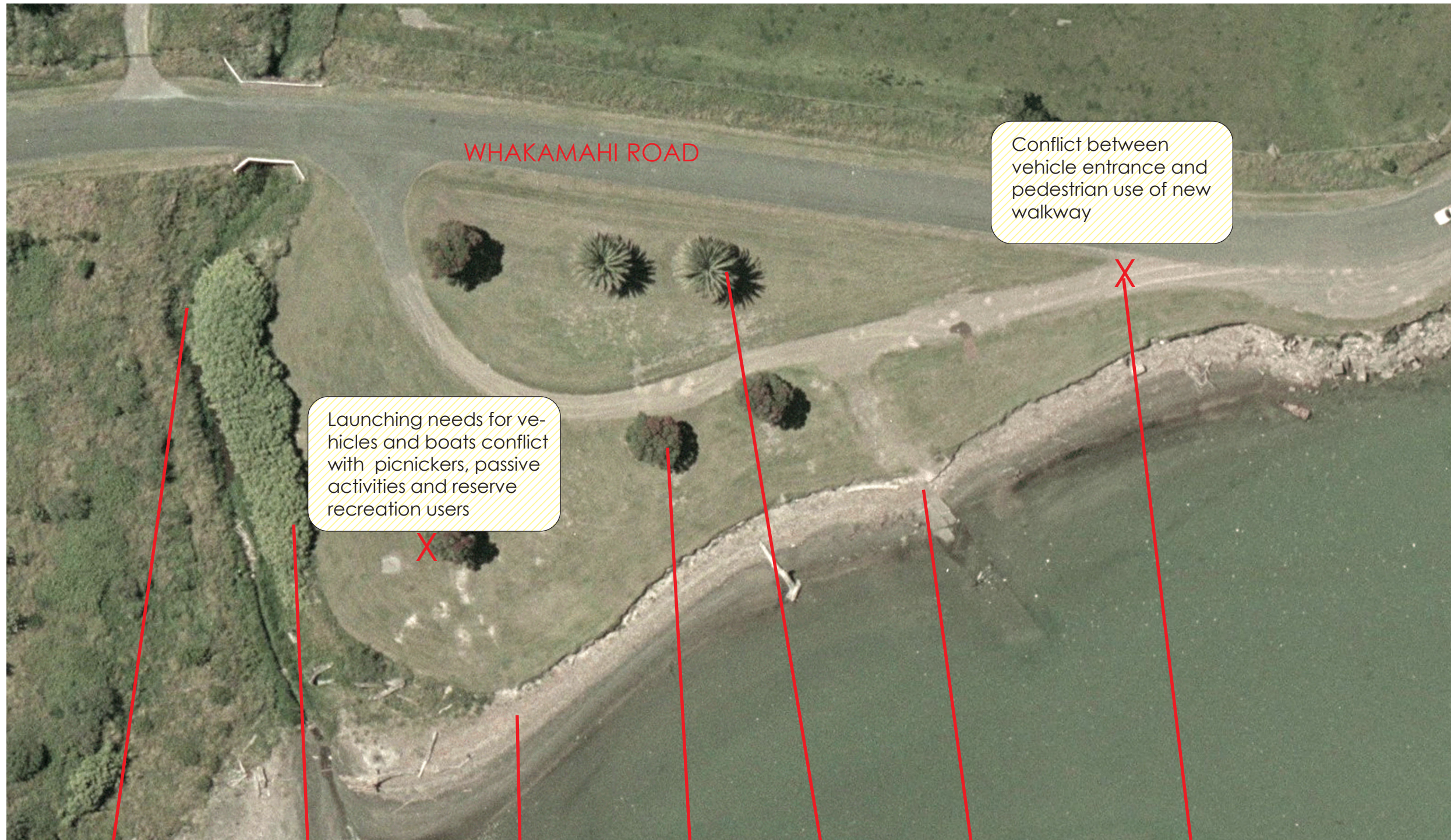


Panorama showing poor condition of car park surfaces in winter

Panoramas showing Car Park & Walkway (east side of Rangihoua)







WHAKAMAUI ROAD

Conflict between vehicle entrance and pedestrian use of new walkway

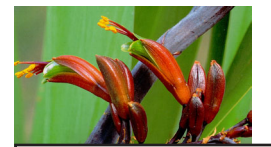
Launching needs for vehicles and boats conflict with picnickers, passive activities and reserve recreation users

- Tauhara Stream channelised into a drain
- Wide planting of baamboo
- Current location of boat launch area
- 4 Pohutukawa trees
- 2 Phoenix palms
- Former location of boat launch area
- Wide vehicle entrance now in conflict with new walkway



# RANGI-HOUA EASTERN RESERVE & CAR PARK: SITE ANALYSIS





LEGEND

	Cadastral boundary
	Low fence or bollards
	Walkway
	Beach ridge
	Sandy beach
	Seats & picnic tables

Pilot Hill Car Park - CONCEPT 1 - Re-aligned Thru' Road





LEGEND

	Cadastral boundary
	Low fence or bollards
	Walkway
	Beach ridge
	Sandy beach
	Seats & picnic tables

Pilot Hill Car Park - CONCEPT 2 - Single Entrance/Exit Road





PART C : RANGI-HOUA/PILOT HILL - VEGETATION MANAGEMENT







### Gardens of Lost Botany (A)

These two picnic clearings are to be kept as open grassed spaces for passive recreation and picnics. As a celebration of earlier native vegetation that would have been present in this coastal site, and recollecting the significant kumara garden that maori enjoyed on the terrace tops, a concept is proposed for the planting of rare coastal Tairawhiti species encircling these open spaces.

### Silver Poplar Control (B)

Initially it was thought that it would be a significant gain if the silver poplar could be eradicated. However on reviewing this option it was seen as a large, if not impossible task. However it is recommended that the current encroachment of the silver poplar into the native planted areas and the southern open space be contained on a regular management basis. This would involve a 4 metre wide swathe being sprayed to keep it clear of encroaching roots. The silver poplar is already starting to enclose much of the site obstructing views. Where appropriate the silver poplar should be retained at lower heights to maximise retention of views.

It is recommended that the area of silver poplar on the southern slumped margin (Area B1) be eradicated if it is not too late and that the area is stabilised with a mass planting of mountain flax (Phormium cookianum). (There is already a small area planted with this flax).

### Walkway Margin Enhancement (C)

The margin of new native plantings along the edge of the new walkway is in a rough condition since the concrete contractors have been involved. It is suggested that the aesthetics of a 5 metre margin could be enhanced by debris clearance and spot replanting in spaces with cabbage trees and flaxes.

### Tauhara Stream Enhancement (E)

The Tauhara Stream was significant to Maori and springs in the area had healing qualities. It appears to have been channelised and is in a degraded condition. A small alluvial terrace alongside the stream has the potential to be planted to enhance the stream. Suggested species include kahikatea and native toe toe, accompanied by low-growing native species (hebe, muehlenbeckia etc).

### Viewpoint Maintenance (F & A)

The concept plan on this page highlights areas of significant views - some which are narrow viewshafts; others more panoramic in nature. Some are currently open views, others are encroached by random plantings. It is suggested that significant viewpoints are located on site and managed in a coordinated way for retention of visual openness to the outstanding seascapes and landscapes beyond.



Phormium cookianum along southern slumped land



# MASTER PLAN - Vegetation Recommendations





The plants selected for the rare species garden are based on research into Department of Conservation Recommended Areas for Protection, and in particular areas that are within the Wairoa coastal landscape. It is recommended that the plant schedule be discussed with staff from DoC before final plant selection occurs.

*New Zealand Journal of Botany*, 1996, Vol. 34: 51–56  
0028–825X/96/3401–051 \$2.50/0 © The Royal Society of New Zealand 1996

51

### *Hebe tairawhiti* (Scrophulariaceae): a new shrub species from New Zealand

BRUCE D. CLARKSON  
Manaaki Whenua - Landcare Research  
Private Bag 3127  
Hamilton, New Zealand

PHIL J. GARNOCK-JONES  
School of Biological Sciences  
Victoria University of Wellington  
P. O. Box 600  
Wellington, New Zealand

Eagle (1982) pl. 320 as *Hebe* sp. (n), and has also been widely referred to by the tag name *Hebe* "Wairoa" (e.g., Cameron et al. 1993). Field, garden, and herbarium observations made at various times between 1991 and 1994 form the basis of this account.

#### TAXONOMY

*Hebe tairawhiti* B. D. Clarkson et Garn.-Jones sp. nov. Fig. 1–2

DIAGNOSIS: Frutex vel arbuscula hermaphrodita usque ad 4.5 m alta; *Hebes strictae* affinis, a qua imprimis differt foliis longis angustis sessilibus, e basi lata gradatim angustatis, in costa lata paginae abaxialis luteis, a colore laminae viridi discedentibus; a *H. parviflora* differt laminis longioribus, lobis corollae erectis vel erectopatentibus, angustis.

**Abstract** A new species of *Hebe*, *H. tairawhiti*, is described from New Zealand. It is a large shrub or small tree with a local distribution centred on the East Coast (Tairawhiti) region of the North Island and is considered threatened.

**Keywords** Scrophulariaceae; *Hebe*; *H. stricta*; *H. parviflora*; *H. tairawhiti*; taxonomy; New Zealand flora

#### INTRODUCTION

The genus *Hebe* Comm. ex Juss in New Zealand consists of almost 100 species, of which some 20 remain undescribed (Garnock-Jones & Clarkson 1994). Most of the undescribed taxa are found in the North Island (Eagle 1982). This paper describes a new species of *Hebe* from the East Coast region of the North Island which was first recognised as a distinct species by Mrs E. A. Hodgson of Wairoa in the 1940s (A. P. Druce, CHR 165760). Druce (1977) gave the first written justification for its recognition, and R. C. Creswell and N. Potts referred to it by the tag name *Hebe* "Ahimanu" (Hair 1967: 345) (R. C. Creswell pers. comm. 1992). It was illustrated in

Hermaphrodite shrub or small tree up to 4.5 m tall. Distinguished from other members of the *H. stricta* complex by long, narrow, sessile leaves which taper evenly from a broad base and on the abaxial surface have a broad yellow midrib which contrasts with the green lamina; distinguished from *H. parviflora* by longer leaves and erect or erecto-patent narrow corolla lobes.

HOLOTYPE: New Zealand, Gisborne, Makorori Beach, mudstone cliff shrubland, B. D. Clarkson, 10 May 1994, CHR 454678. Isotypi AK, NZFRI, WAIK.

DESCRIPTION: Hermaphrodite shrub or small tree up to 4.5 m tall. Old stems brown; branches erect; mature branchlets red-brown to black, green when young, glabrous; internodes 7–15 mm long. Leaf bud sinus absent. Leaves sessile, recurved; lamina linear to linear-lanceolate, tapering evenly from broad base, subcoriaceous, dull green with broad yellow midrib above, pale green beneath, 60–150 × 6–11 mm; hairs sparse: microscopic eglandular hairs along margins and minute glandular hairs covering adaxial surface; apex acute; base abruptly cuncate; midrib thickened beneath; margin entire or with very obscure distant teeth, yellow, rounded, not thickened. Inflorescence

B95013  
Received 3 April 1995; accepted 14 September 1995

Lost botanical diversity: 1940 Mrs E A Hodgson from Wairoa provides first evidence of a newly-discovered *Hebe* species, now called *Hebe Tairawhiti*.

[*Hebe Tairawhiti* (Scrophulariaceae): a new shrub species from New Zealand. Clarkson Bruce D, Garnock-Jones, Phil J. NZ Journal of Botany 1996, Vol. 34: 51-56]

#### COMMON NAME BOTANICAL NAME HABITAT

#### Existing species (Stage 1 completed)

Karaka	<i>Corynocarpus laevigatus</i>	Coastal Tree
Ngaio	<i>Myoporum laetum</i>	Coastal Tree
Pohutukawa	<i>Metrosideros excelsa</i>	Coastal Tree
Tauhinu, Cotton wood		<i>Cassinia leptophylla</i> Shrub
Karo	<i>Pittosporum crassifolium</i>	Coastal tree
Akeake	<i>Dodonaea viscosa</i>	Coastal tree
Taupata	<i>Coprosma repens</i>	Coastal shrub
Karamu	<i>Coprosma robusta</i>	Coastal shrub
Wharariki, Mountain Flax	<i>Phormium cookianum</i>	Coastal cliffs
Ti kouka, Cabbage tree	<i>Cordyline australis</i>	Coastal tree

#### Recommended species for 'lost species' garden

Whau, Corkwood	<i>Entelea arborescens</i>	Shrub
Hebe	<i>Hebe Tairawhiti</i>	Shrub
Wharangi	<i>Melicope ternata</i>	Tree
Pohuehue	<i>Muehlenbeckia complexa</i>	Vine
Pimelea	<i>Pimelea tomentosa</i>	Shrub
Toe toe	<i>Cortaderia fulvida</i>	Shrub
Koromiko	<i>Hebe stricta</i> var <i>macroura</i>	Shrub
Lancewood	<i>Pseudopanax crassifolius</i>	Tree
	<i>Chionochloa flavicans</i>	Grass
	<i>Senecio banksii</i> or <i>Brachyglottis banksii</i>	

#### Proposed Stage 2 Recommended species:

Karaka	<i>Corynocarpus laevigatus</i>	Coastal cliffs
Wharariki, Mountain Flax	<i>Phormium cookianum</i>	Coastal cliffs
Ti kouka, Cabbage tree	<i>Cordyline australis</i>	Margin of Whakamahi Road Margin of Tauhara Stream
Toe toe	<i>Cortaderia fulvida</i>	Margin of Whakamahi Road Margin of Tauhara Stream
Kahikatea Puka, Shining broadleaf	<i>Dacrycarpus dacrydioides</i>  <i>Griselinia littoralis</i> 'Puka'	Tauhara Stream margin  Shrub

SUGGESTED SPECIES FOR RE-VEGETATION OF RANGIHOUA PILOT HILL



PAGE 36

eastern earth  
LANDSCAPE ARCHITECTS e la





End of Report

---



eastern earth **e la**  
LANDSCAPE ARCHITECTS

---