



TE HIKU O TE IKA OPEN SPACES REVITALISATION MASTERPLAN

APRIL 2020



"NAKU TE ROUROU NAU TE ROUOU, KA ORA AI TE IWI."

WITH YOUR BASKET AND MY BASKET, THE PEOPLE WILL LIVE.

*This proverb beautifully articulates us as Northern folk, capturing the true meaning of Hākari and Kaitaia.
Design that represents this strength and grace. BJ NATANAHIRA, Indigenous Artist, Te Rarawa*



Hec Busby, Te Rarawa & Ngati Kahu



*Gateway Feature Artwork,
Indigenous Artist, BJ
Natanahira, Te Rarawa*

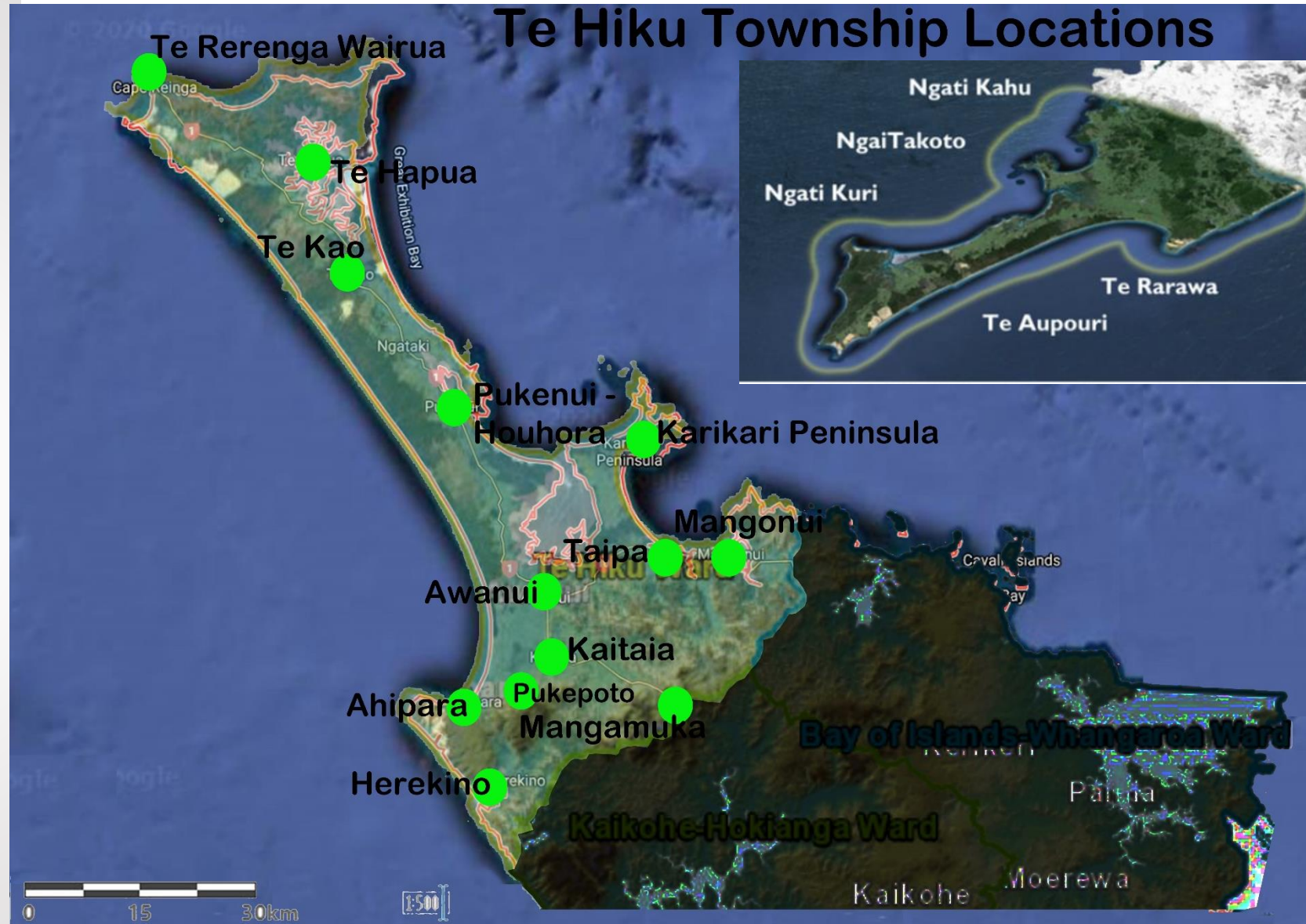


Rapine & Sobieski Murray, Ngati Kuri & Te Rarawa

Te Hiku o Te Ika

Te Hiku has a history rich in culture and heritage, however the townships lack identity, connectivity, and have high levels of social and economic deprivation. The story of Te Hiku o te Ika and its five Iwi are interesting and unique to the rest of the New Zealand, and it is proposed to create a character, connection, and an identity for this area of NZ by giving effect to the Te Hiku o te Ika Revitalisation Masterplan. The masterplan concept was initiated by the Kaitaia Business Association and is a collaboration of many different stakeholders within Te Hiku.

The works will be completed by the Far North District Council (FNDC), the Kaitaia business Association (KBA), the Northland Regional Council (NRC), and the five Te Hiku Iwi, to create employment and vibrant town centres.



Principles

Te Hiku o Te Ika Revitalisation Plan is considered in the context of its three core principles, People, Economic Opportunity, and cultural Celebration.

The proposal also incorporates sustainable environmental principles such as providing the shared paths for alternative transport options, riparian margin plantings, coastal dune plantings, and tree plantings along the shared path and within open spaces.

PRINCIPLES

(Ngā Wariu)



People (Ka tauawhi i te tangata)



Economic Development (Ka tauawhi i te āheinga ōhanga)



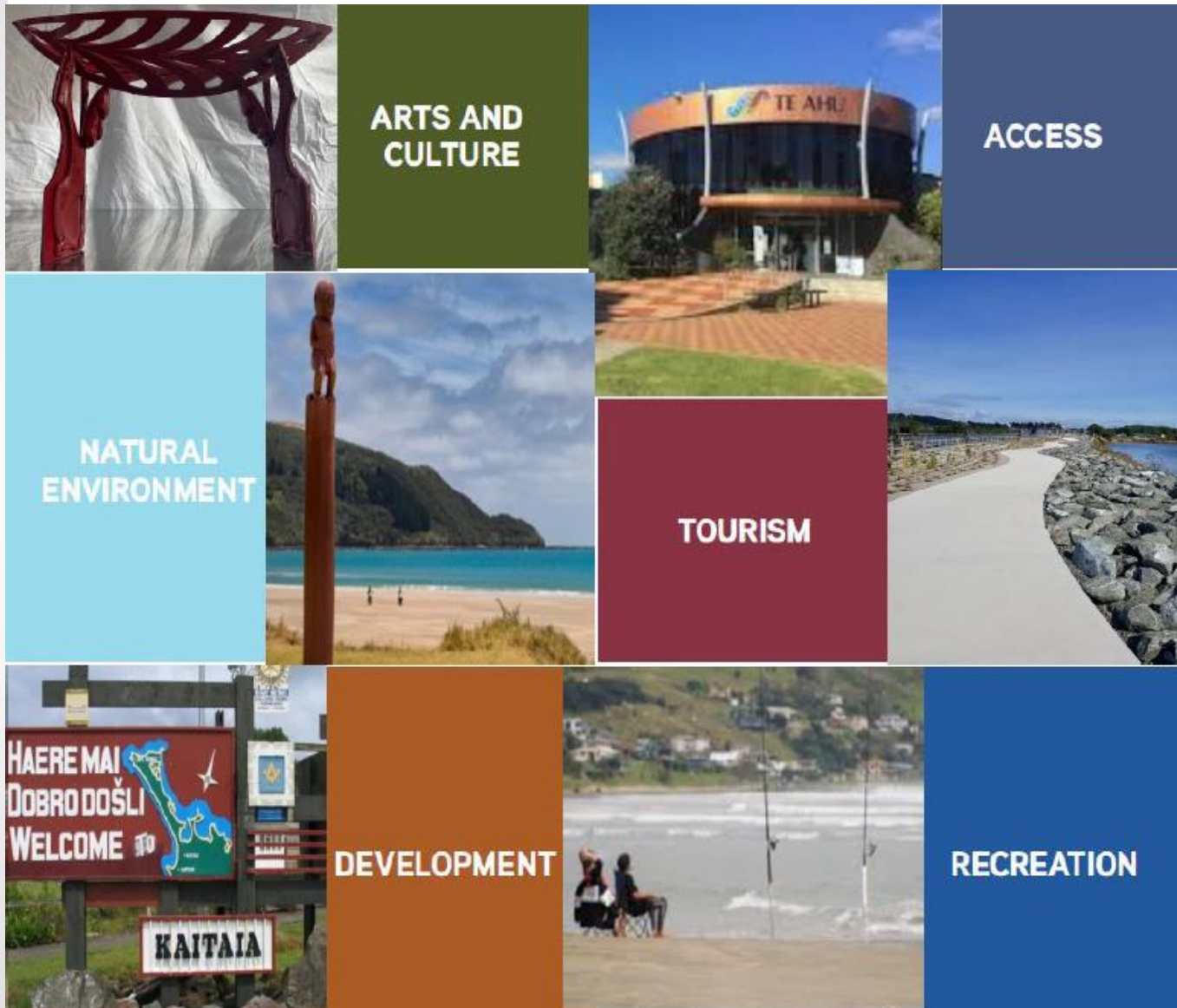
Cultural Celebration (Ka whakanuia ngā momo ahurea kato)

Plan Themes

Te Hiku o Te Ika Revitalisation Plan is considered in the context of its three core principles, People, Economic Opportunity, and cultural celebration.

The Vision and Principles of the Plan are underpinned by six themes. Many projects have been developed from the themes and the themes are included in the projects for each of the site locations.

PLAN THEMES



Masterplan Collaboration Project

The masterplan proposes local iwi to provide large cultural features/artwork (7-8m tall) at the gateway entrances to the Te Hiku townships, and within the town centres to create a sense of identity and sense of place for the Te Hiku area. Each iwi group will provide the artwork features, and also plaques within the open spaces, streetscapes, and long the shared path(s) to tell the stories and history of each local iwi.

The works will be undertaken within Council owned or administered land (FNDC land, road reserve, and public reserves), and includes investment and revitalisation of green open spaces within key sites along the shared path/cycle trail to create a vibrant space to attract residents and visitors to spend time and encourage economic development within the Te Hiku town centres.



Example of a shared path – Source Taipa Bridge



Example Source – Taipa Bridge (Ngati Kahu)

Masterplan Regional Context Map

The masterplan proposes to create to link the main town centres of Te Hiku o Te Ika to create connectivity, and a sense of character and place.

Te Hiku currently does not have any cycle trails, or shared paths. The masterplan includes works to create a cycle trail/shared path to link the townships of Ahipara, Kaitaia, and Awanui, to Te One Roa a Tohe (90-mile beach), which connects these areas to Te Rerenga Wairua (Cape Reinga). The end goal of the masterplan cycleway/shared path would be to also link Taipa/Mangonui to Awanui, however this part of the shared path is proposed at a later stage.

Each iwi group will provide the artwork features and plaques within open spaces, streetscapes, and long the shared path(s) to tell the stories and history of each local iwi.

Regional Context Map

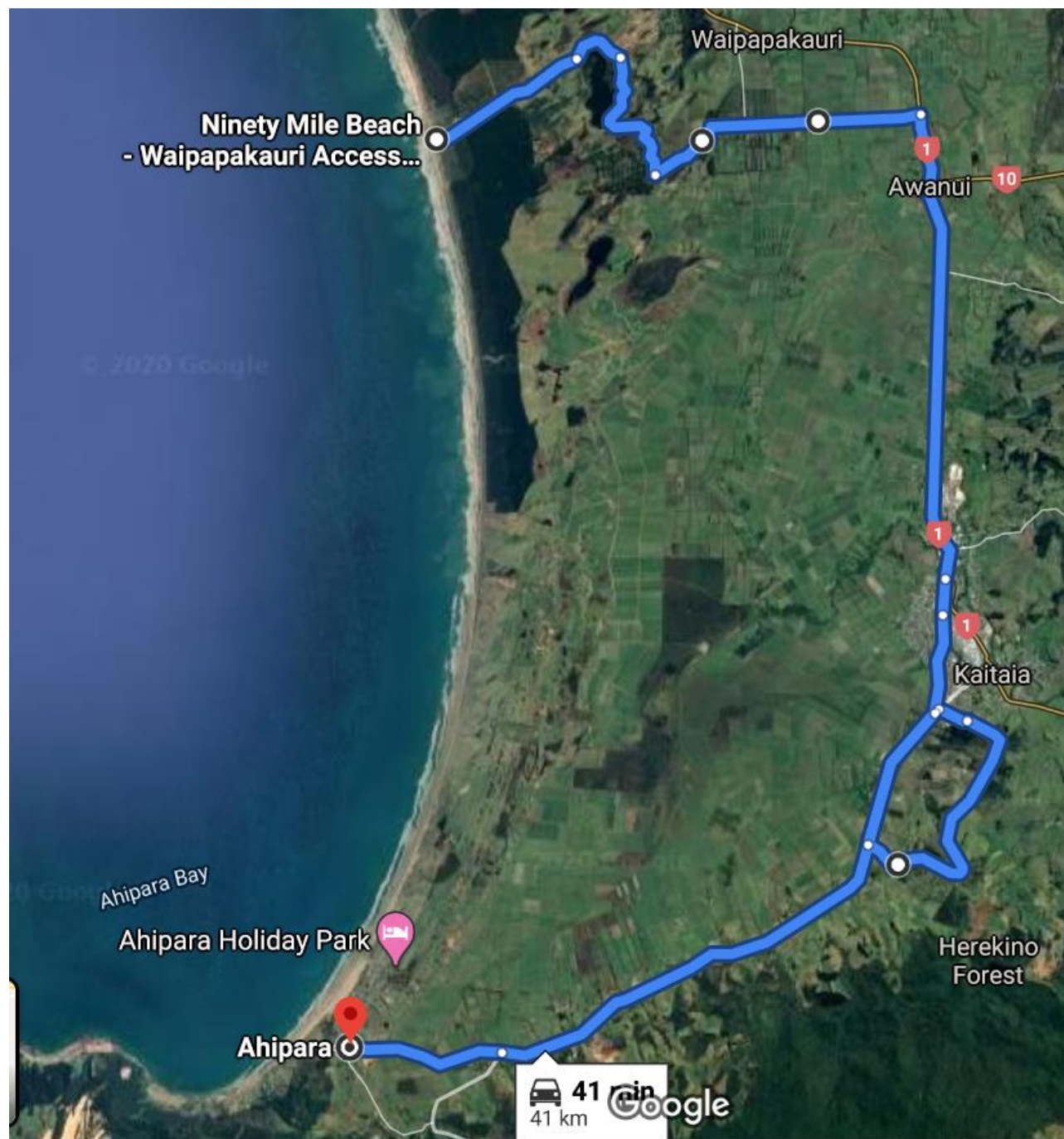


Te Hiku Shared Paths /Cycle Trail

Unlike most areas of New Zealand Te Hiku currently does not have any shared paths or cycle trails. The Proposal includes a Shared Path that links the Te Hiku Townships from Ahipara to Kaitaia (via Kaitaia Awaroa Road to Ahipara), Kaitaia to Awanui (via SH1), and Awanui to Waipapakauri Ramp (Te One Roa a Tohe/90 mile Beach), via Spains Road, and around Lake Ngatu following the road reserve.

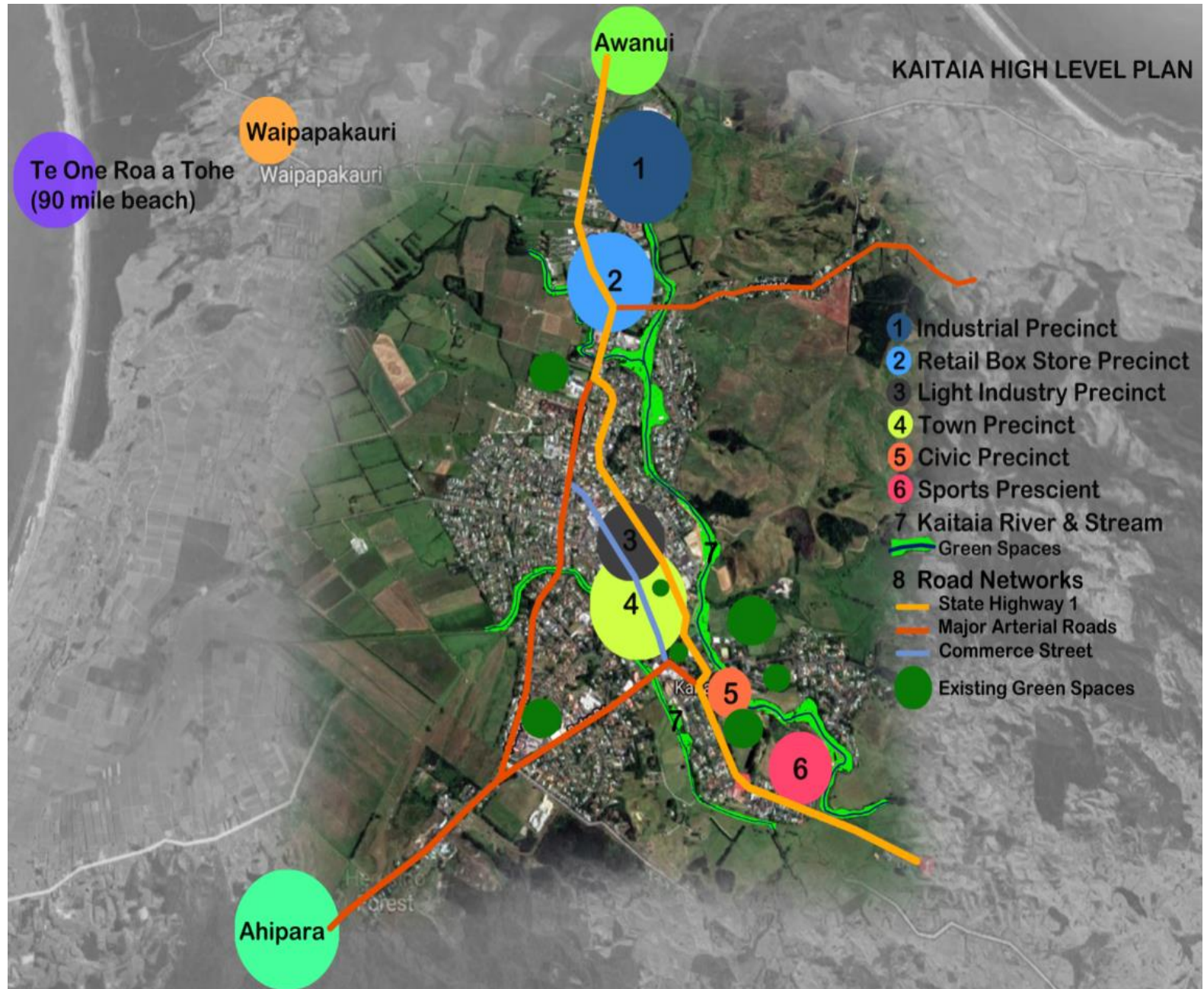


Example of a shared path – Waterview Auckland



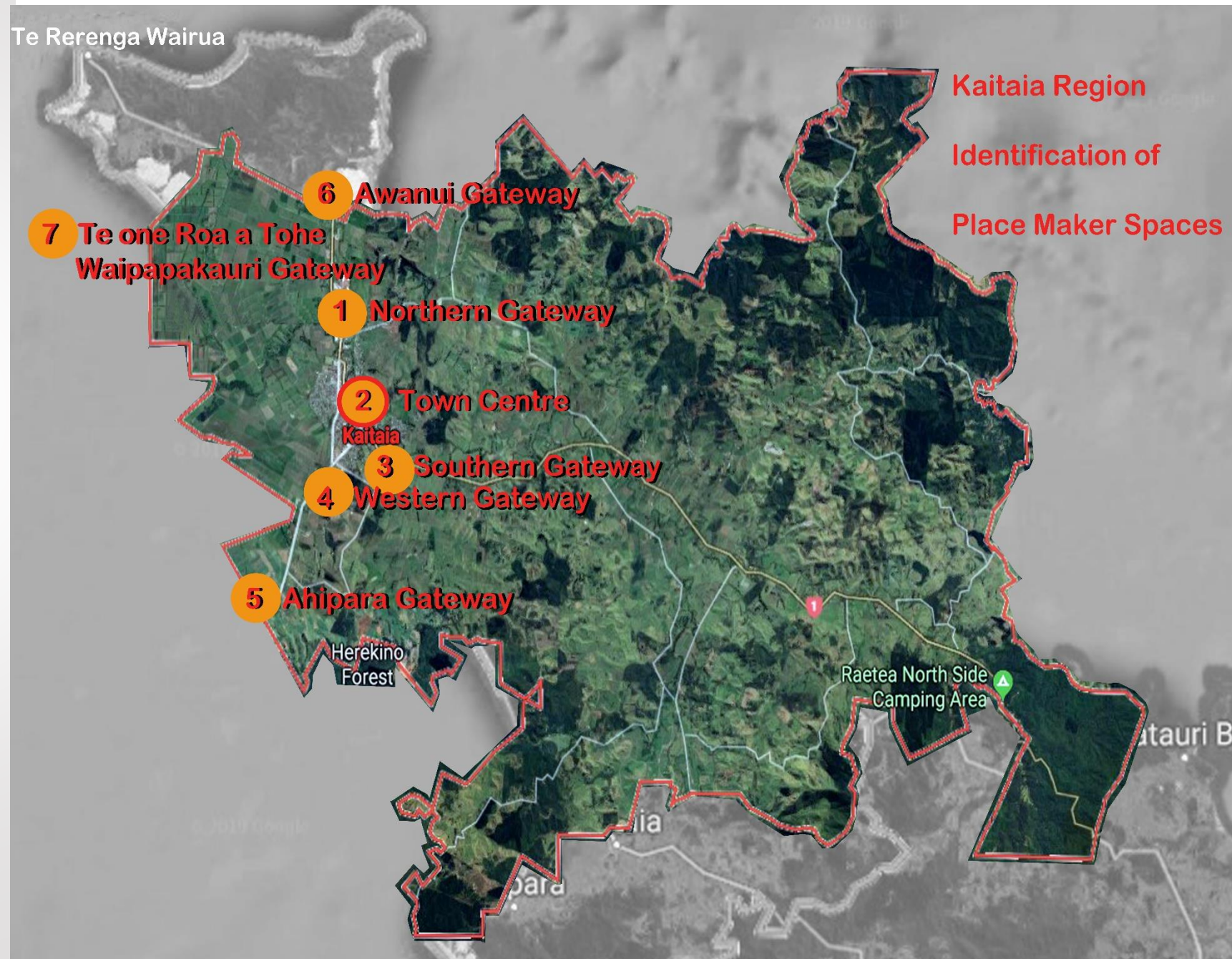
Kaitaia Township

The masterplan includes works within centralised precincts within the township and along the Awanui River to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



Kaitaia Township

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes large (7-8m high) proposed cultural art features works within the northern and southern gateways, and the town centre, to create vibrant spaces that have character and cultural identity, and to facilitate vibrancy within the town centre to facilitate improved economic development.



Kaitaia Township Market Square

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes works within centralised precincts within the township and along the Awanui River to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



Kaitaia Township Town Square

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes works within centralised precincts within the township and along the Awanui River to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved



**Artificial mounded
turf...sand dune**



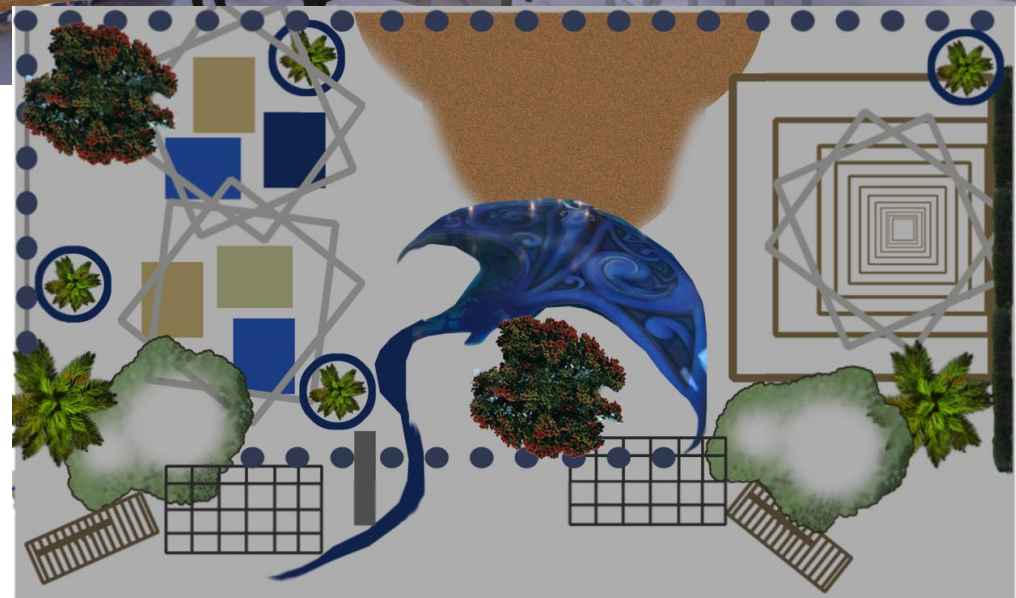
**Informal seating
+ play**



**Park shelter
Aluminium avalon**



**Aluminium art
Aluminium avalon**



Kaitaia Township Streetscape

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes works within the town centre streetscape to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



Raised traffic calming areas
of slow shared space



Commerce Street transformed into a calm safe public space with a mixed use town main street, slow vehicle access to parking and shopping. Tall palms frame existing buildings. Bollards along the entire street frontage created by iwi functional art. Art installations at focal points, new seating, drinking fountains recycle bins beside existing rubbish bins. All power transformer boxes to be painted by local artist. History trail story boards linking to all past people. Overhead street lighting creates a vibrant safe town centre after dark transforming Commerce Street into an attractive functional place.

Photo montage
Commerce Street
Kaitaia

The town centre would have areas of slow Traffic and shared Space creating places to linger and enabling People to move freely About town.
A Placemaking move giving safe slow traffic through the town centre.
However, it is often faster and easier to park and take a relaxed walk to your destination.



Streetscape Details

The Proposal will completely change Kaitaia's existing Laneways resulting in more users parking in the large public carpark directly behind Commerce Street.

These Laneways will showcase stories from the past, by way of stories boards.

Dalmatian Lane
Dalmassia

Te Hiku o Te Ika Lane

Coastal Lane

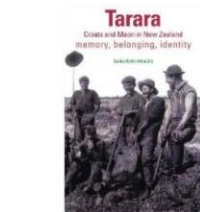
Laneways and Streetscape Details

Development Proposal Connecting Commerce Street To Kaitaia's Market Square



LANEWAYS: Three walkways connecting Kaitaia's main Street

1: Dalmation Lane
Themed to celebrate history of Gum Diggers



2: Te Hiku o Te Ika Lane
Themed to celebrate our history



Streetscape: Seats: Planter Boxes: Street Lights



Safe Lighting



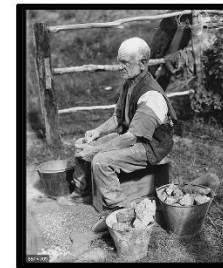
3: Coastal Walkway
Themed to celebrate our Coasts





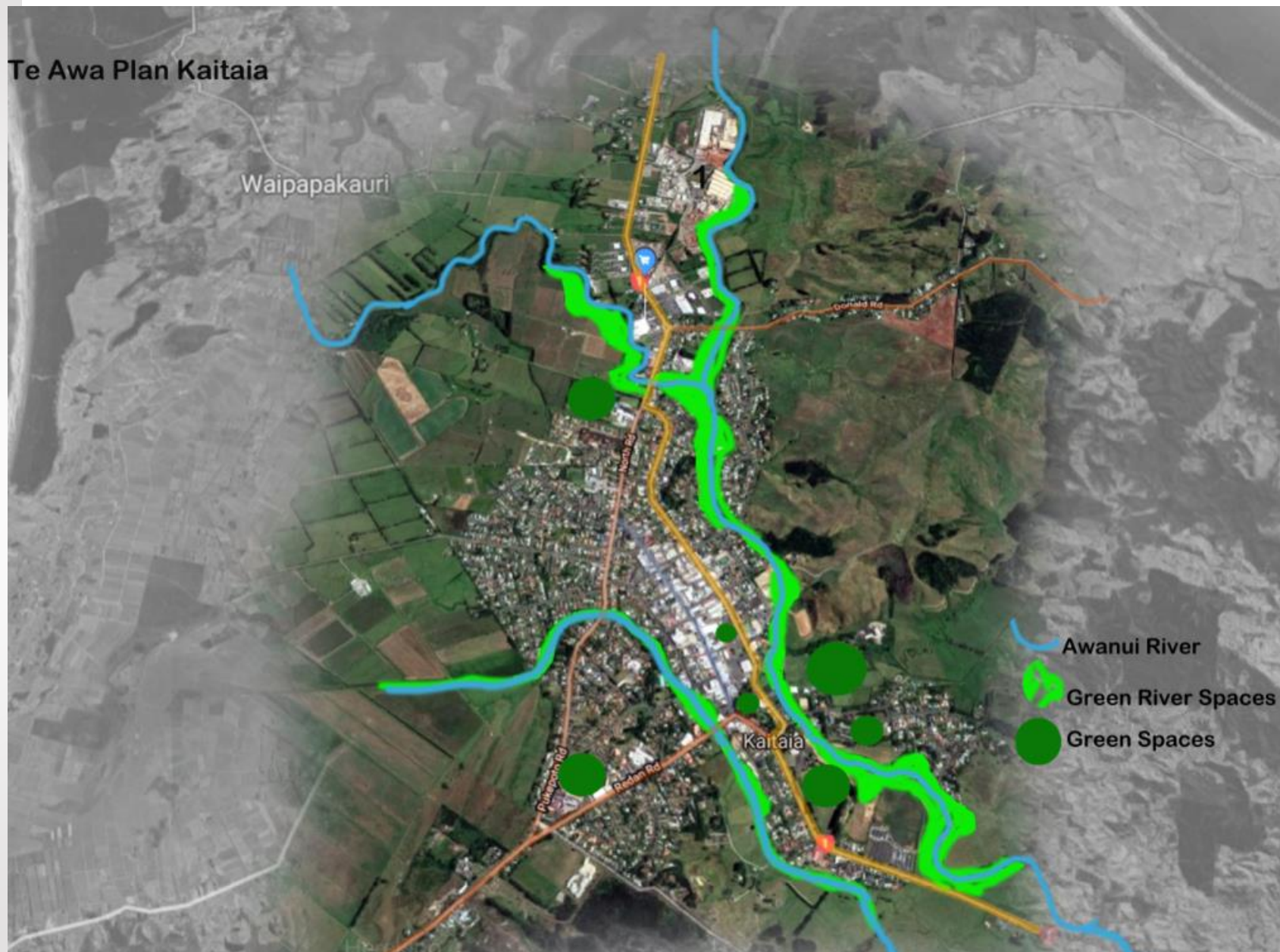
The Gum Digging story features in the Kaitia Market Square

The Story of Gum Digging in the Far North



Te Awa Plan -Kaitaia

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes a shared path along the full length of Kaitaia River/Awanui River (Te Awa). The Te Awa plan is a collaboration between NRC and FNDC, and local Iwi, and will provide art, amenity lighting, and eco sources riparian and feature plantings along the shared path (3460m in length).



Kaitaia Centralised Green Space - Jaycee Park

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes centralised green spaces within the town centre to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.







KEY

- New square concrete Picnic table + seats
- Timber seats general park areas
- Timber seats + bench playground area
- Timber seats for Skate Board area
- Basket ball seat for Basketball Hoop area
- Concrete footpath
- Paved picnic area
- Paved picnic area
- New toilet block in lighthouse building
- New park seating
- New architectural umbrellas X 3 coloured, X 2 in playground + X 1 in skate park
- Drinking fountains X 4 2 X Existing & 2 X New = D.F.
- Shelter + table + seats + barbecue (BBQ) Skateboard park
- Shelter + table + seats + barbecue Playground area in front of toilets
- Old tyre Tractor playground area
- Old boat beside deck in play area
- Timber decks
- Timber boardwalk
- Bark play areas
- Park seats
- Recycling/Rubbish Bins R.B.
- Timber pergola
- New safe walkway/cycleway night lighting along all paths
- Replace all low timber fences with bollards - light house theme



Kaitaia Allen Bell Riverside Park

Kaitaia is the main service centre town for all of Te Hiku. The masterplan includes works within centralised precincts within the township and along the Awanui River to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.

-  Existing Basketball Court
-  New Carpark
-  Public Toilet Block
-  BBQ & Umbrella
-  BMX Pump Track
-  Concrete Pathways
-  Pohutukawa Shade trees



The BMX track runs around the center of the reserve



The reserve will feature both a BMX and Pump Track



Awanui Township

The masterplan includes works within centralised precincts within the Awanui township and along the Awanui River to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



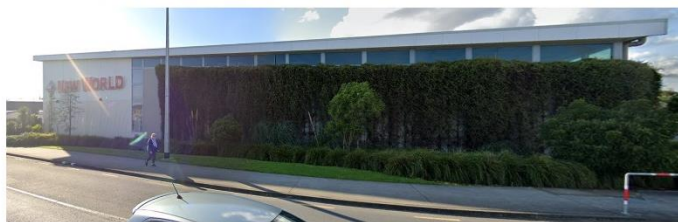
-  Umbrellas
-  Concrete tables
-  Basketball court
-  Concrete path
-  Concrete areas
-  Bollards
-  Timber Wharf
-  Nikau
-  Pohutukawa



Awanui Toilet Block



New World Kumeu
Wire weed (Muehlenbeckia complexa)
Planted May 2015 image Google maps 2019



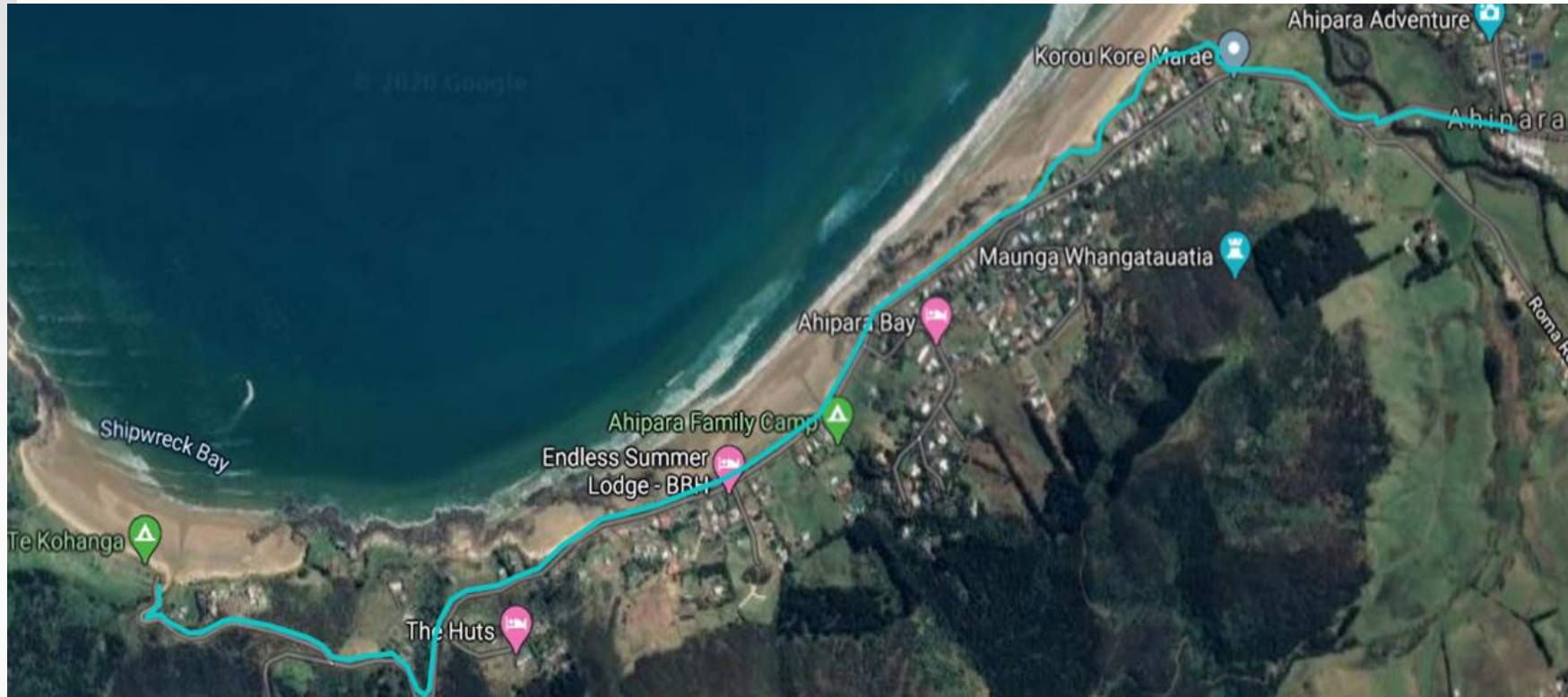
MUEHLENBECKIA COMPLEXA

A steel trace network around 3 sides of toilet block. This structure stepped off the building approx.800mm, provides access to maintain building. A steel gate locks access to this space.

Plant muehlenbeckia complexa in garden bed in front of the structure. The old wharf poles feature historical images mounted at the top of poles. The plants require approximately 3 -4 years to achieve good growth cover. Grasses such as Oioi to be planted in front of Wire weed climber.

Ahipara Coastal Shared Path

The masterplan includes a shared path from the Ahipara Entrance along the Ahipara Foreshore. The shared path provides improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



Ahipara Tasman Heights Shared Path

The masterplan includes works along the Ahipara Foreshore, to provide improved connections, restoration planting of the dunes, to improve carparking provision, and to create centralised vibrant spaces to facilitate improved economic development.



12/04/2020
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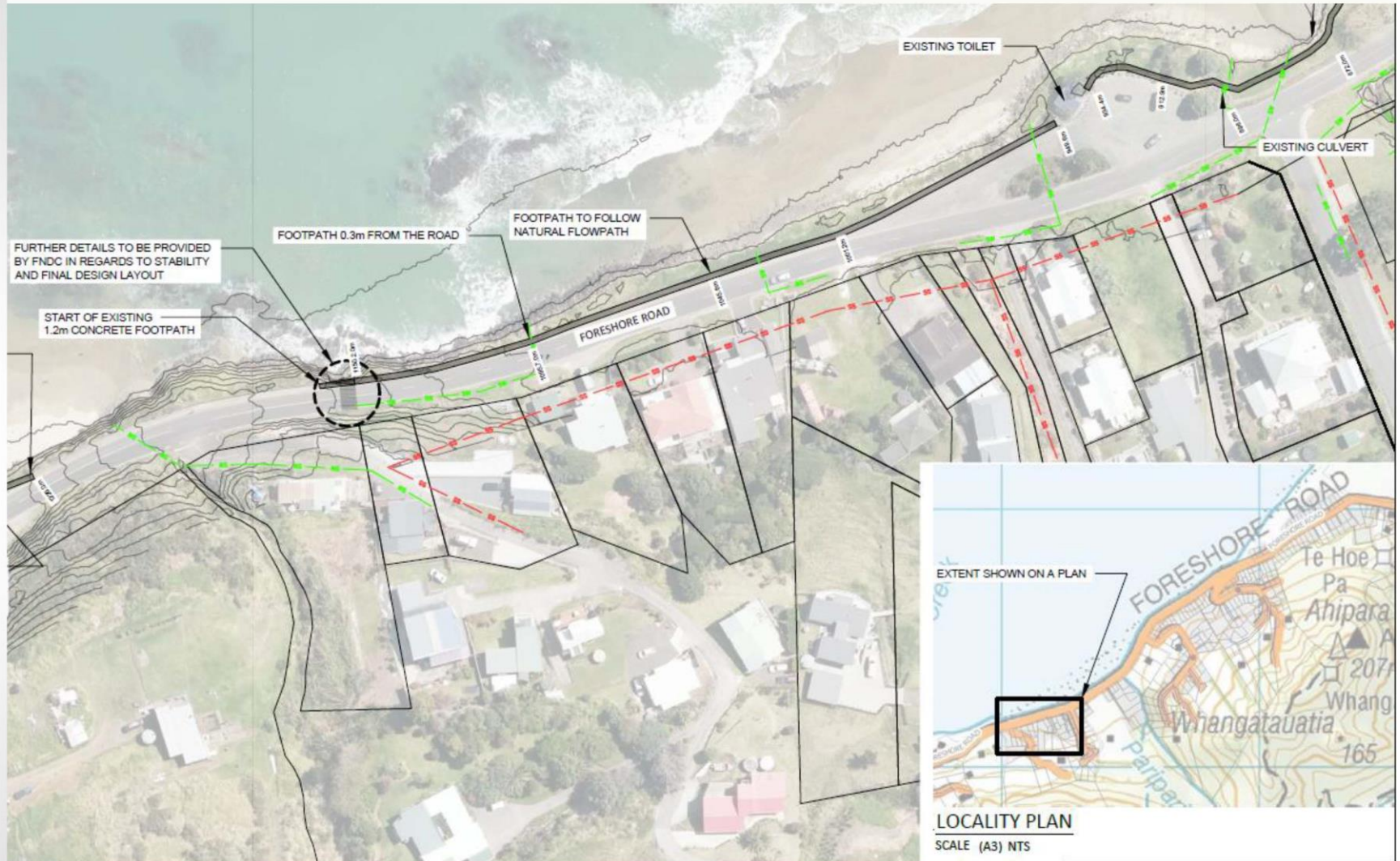
Ahipara Foreshore

The masterplan includes works within centralised precincts within the township and along the Ahipara Foreshore, to provide improved connections within the township and to create centralised vibrant spaces to facilitate improved economic development.



Ahipara Shared Path

The Proposal includes a Shared Path via Kaitaia Awaroa Road to link Kaitaia to Ahipara. Detailed design of the Foreshore Road shared path has already been completed.

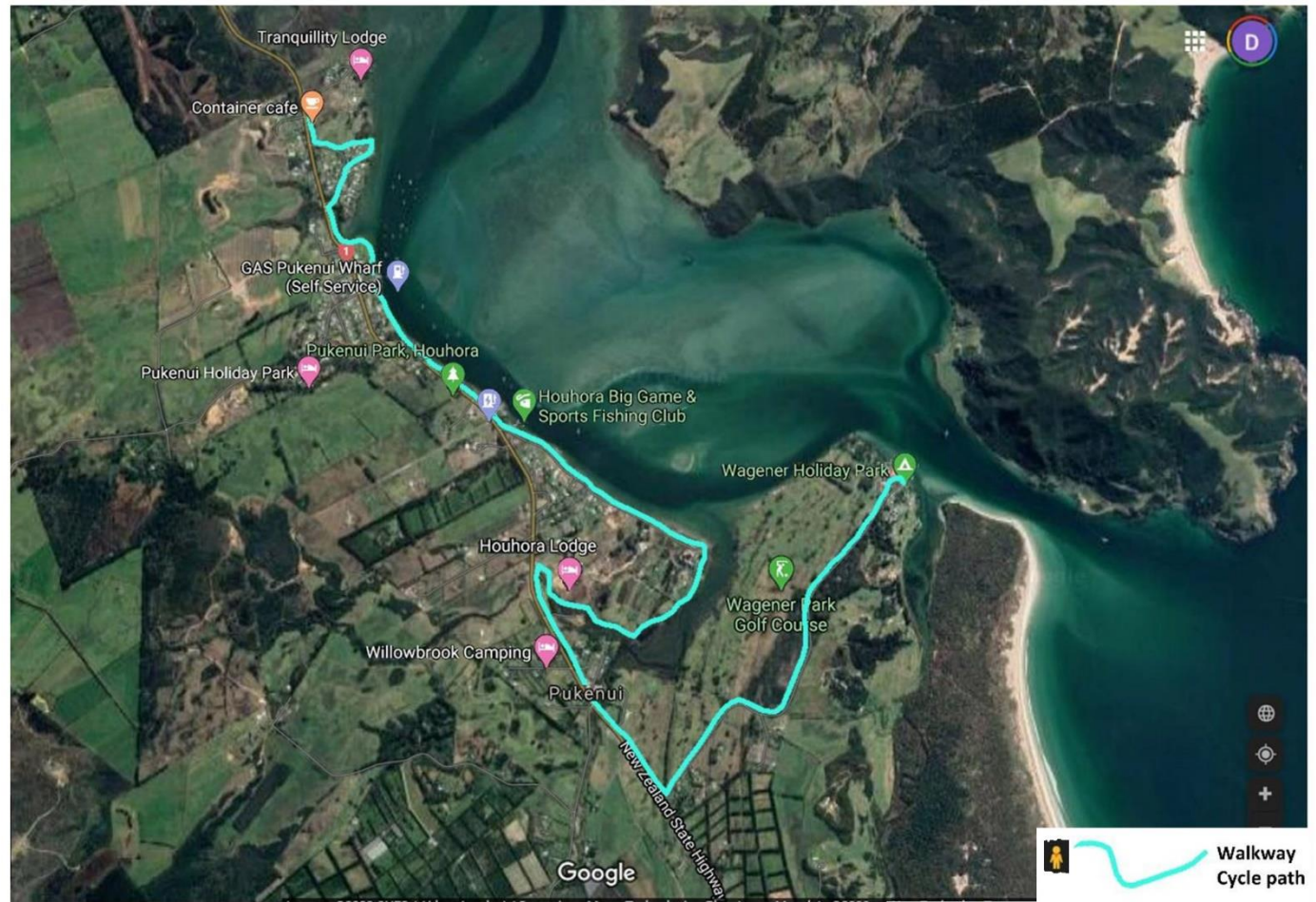


Awanui To Waipapakauri Ramp shared path

The Proposal includes a Shared Path from Kaitaia to Awanui, and Awanui to Waipapakauri Ramp (Te One Roa a Tohe/90 mile Beach), via Spains Road, and around Lake Ngatu following the road reserve. via Kaitaia Awaroa Road to Ahipara. Detailed design of the path will be completed, and the works are proposed as part of Stage 3.



Pukenui & Houhora Shared path
Waterfront Walkway



Lake Waiporohita
Unique Sand Dune Lake in
Te Hiku

Planting Lake Waiporohita, Karikari Peninsula



Existing plantings (planted 2019)

Balance area of Riparian planting to complete Lake Waiporohita



Lake Waiporohita

Community Consultation

The Proposal included consultation and collaboration with many stakeholders including the Te Hiku Community Board, Community Group Shine on Kaitaia, Awanui Ratepayers Association, the Kaitaia Business Association, the Northland Regional Council, and Te Hiku Iwi.

NZTA undertook a Township Plan for Awanui as part of an NZTA initiated project. The Ahipara Community Plan, the Kaitaia Community Plan, and the Awanui Community Plan were also used as references for community direction.

Further consultation will occur with stakeholder groups and the public following the detailed design of the staged projects.



Community Consultation Post Lockdown

Consultation continued once NZ returned to Level 1 post Covid 19 Lockdown. Pac n Save Kaitaia was selected as it is the busiest retail location in Kaitaia. Saturday's Kaitaia Market is a long running event with a great mix of locals and visitors. We had a great response to the plans here.

Further consultation has occurred via zoom hui's along with Face-Book 'What's happening Kaitaia'. The electronic noticeboard at Te Ahu Centre is featuring the plans for June and July 2020.



Great positive interest from many locals who took time out from shopping to talk about the ideas in these plans on display in Pack' n Save Kaitaia.

Kaitaia's Saturday Market
Consultation

Kaitaia's Saturday Market

Many questions with some great feedback from our families.

"This will be a good idea to have in the middle of town Somewhere safe for families to hang out".



TE HIKU O TE IKA OPEN SPACE REVITALISATION

| Project Name | Project description |
|--|--|
| Te Hiku Sports Hub Shared Use Path | 2.2m wide shared use path to connect the Te Hiku Sports Hub with Te Ahu Ahu - creating a loop connection |
| Te Hiku Sports Hub Boardwalk | 2.2m wide shared use path (boardwalk) to connect the Te Hiku Sports Hub with Te Ahu Ahu - creating a loop connection |
| North Park Drive to Whangatane Drive Shared Use Path | 2.5m wide shared use path providing a transportation and connectivity link |
| Ahipara - Foreshore Road Footpath from Toilets to Panorama Lane section | 1.5m wide footpath to provide a safe pedestrian connectivity link |
| Panorama Lane Safety Improvements | Improve the sightlines for vehicles and pedestrians on Foreshore road and Panorama Lane. |
| Ahipara - Shared Coastal Path Open Spaces and car parking improvements | Coastal seating, shade sails, bbq's, sealing and angle park marking of carparking areas. |
| Ahipara - Shared Coastal Path and Dune plantings from Reserve opposite Korou Kore Marae to Tasman Heights | 2.2m wide footpath to provide a safe pedestrian connectivity link along the coastal reserve |
| Ahipara - Foreshore Road Footpath from Toilets to Tasman Hights section | 2.2m wide footpath to provide a safe pedestrian connectivity link |
| Ahipara - Foreshore Road Footpath from Panorama Lane to Shipwreck Bay | 1.5m wide footpath to provide a safe pedestrian connectivity link |
| Kaitaia-Awaroa Road Safety Improvements, including forming/concreting the existing Okahu Road Loop walking track | Installation of Road Safety Barriers and construction of a 1.5m wide concrete footpath connecting Kaitaia with Ahipara (11040m) |
| Footpath along SH1 - Kaitaia to Awanui | Construction of a 1.5m wide concrete footpath connecting Kaitaia with Awanui (4500m) |
| Footpath along SH1 - Kaitaia to Awanui | Construction of a 1.5m wide footpath that will be a combination of Concrete and metal track connecting Awanui with Waipapakauri Access Ramp (12106m) |

TE HIKU O TE IKA OPEN SPACE REVITALISATION

| | |
|--|--|
| Kaitaia Footpath Renewals | Renewing all of Kaitaia Footpaths to a safer, wider and mobility accesable user friendly pedestrian network. (20000m) |
| Shared Path River Path, Riparian Planting, and Amenity Lighting | Walkway along the full length of kaitaia that is a collaboration with nrc and Fndc, and local Iwi for art, amenity lighting, and eco sources plantings. (3460m) |
| Iwi Cultural Gateways | streetscape gateways and town centre art feature(s), and plaques for local Iwi cultural stories relative to each Te Hiku township: Te Rarawa, Te Aupouri, Ngai Takoto, Ngati Kuri, Ngati Kahu |
| Kaitaia Town Square | This space is one of the identified spaces as a key site to revitalising the town to create spaces that encourage revitalisation and create spaces that people want to spend time and therefore encourage the local economy within the township. |
| Streetscape Works- Kaitaia, Awanui, Pukepoto, Ahipara, and Waipapakauri Ramp | Funding is proposed to revitalize the streetscapes to create vibrant spaces that align with the character and identity of each township. |
| Kaitaia Market Square & Street Art | This space is one of the identified spaces as a key site to revitalising the town to create spaces that encourage revitalisation and create spaces that people want to spend time and therefore encourage the local economy within the township. |
| Awanui SH10 Gateway Reserve | new funding for playground upgrades and also renewals funding of the park, tif funding application for new car parking area within this park. Nzta township plan already completed for awanui. |

| | |
|----------------------------|--|
| Jaycee Park Redevelopment | shared path to link to the kaitaia Main Street, a new half court bball court, a feature toilet that shows local character of a coastal theme |
| Centennial Park Skate Bowl | Renewals of the Skate Bowl |
| Allen Bell Pump BMX Track | This is a 2.5ha park area that links directly to the river shared path. It is Proposed to include a bmx pump track within this park to provide for utilising the existing park space and to build on the use of the shared path along the river to be used by bicycles |
| Allen Bell Toilet block | It is proposed to include a toilet for the shared path users within this park, as there will be a need for toilet facilities for other users. |
| Professional Fees | Professional Fees over project duration |

PLANTING (Te whakatō)

1

Native plantings contribute to existing species these plants provide links to existing bush areas. This will result in increased biodiversity, restored wetlands, improved water quality and an increase in the range of flora and fauna. This contributes to the ecological value of the region.

2

Native species will be used to respect their role in Te Ao Maori and the prominent way they feature in our lived experience.

Eco-sourced plants will maintain the genetic diversity and help keep the unique character of the Te Tai Tokerau landscape.

3

Landscape planting plans are designed to enhance the proposed developments and contribute to the amenity values of the site.

Planting Profiles

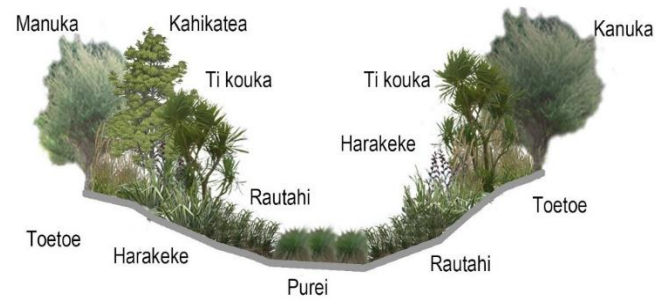
Featuring plants of Te Hiku

The overall aim is to establish a cover of native species that could be expected to occur naturally in areas such as this.

The ecological aim will be to match a species environmental tolerance to the site where it is established. Once the initial planting is established the birds attracted to the area will bring in more seeds that will further increase sustainable diversity over that initially planted.

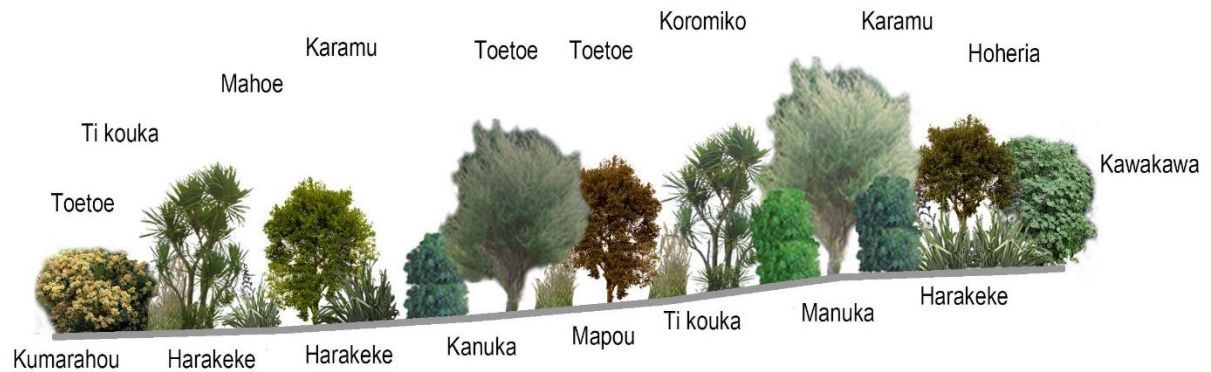
ECOLOGICAL BENEFITS

The planting of native bush species will create a range of habitats for both flora and fauna, improve water quality and be an enhanced sustainable native landscape, with environmental benefits.



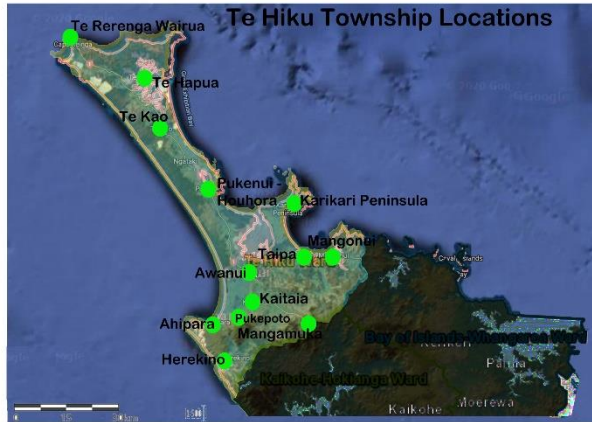
Wetland Planting Profile

Forest diversity to be planted once the pioneer species are established.
Forest diversity species; Kauri, Karaka, Kahikatea, Rimu, Kohekohe, Totara, Puriri, Taraire



Pioneer Planting Profile

Planting Details Te Hiku Township Gateways



Coastal Toetoe: *Austroderia toetoe*



Oioi : *Apodasmia similis*



Renga renga lily: *Arthropodium bifurcatum*



Spinifex: *Spinifex sericeus*



Oioi : *Apodasmia similis*



Karamu : *Coprosma repens* Poor Knights Coastal Toetoe: *Cortaderia splendens*



Pinga: *Desmoschoeus spiralis*



Harakeke: *Phormium tenax*



Karamu : *Coprosma repens* Poor Knights



Coastal Toetoe: *Cortaderia splendens*



Coastal Coprosma: *Coprosma acerosa*

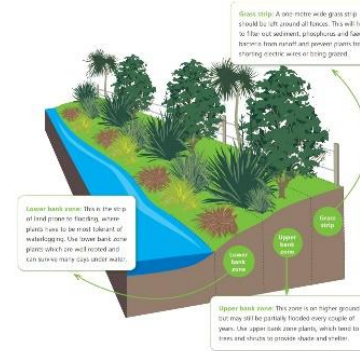
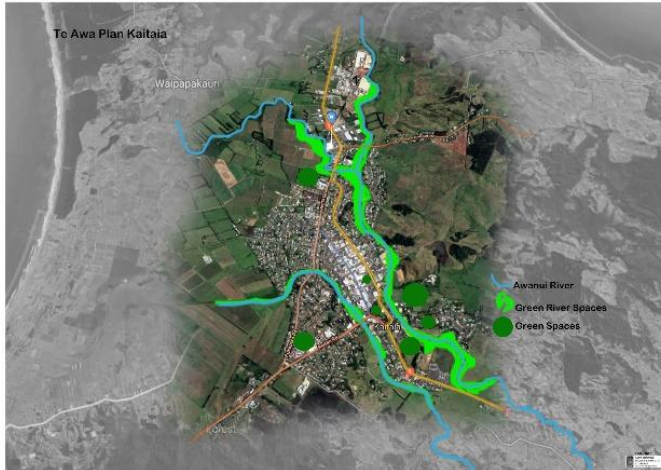
| Botanical Name | Common Name | Plant Size | Centres | Numbers, Based 48m ² |
|------------------------------------|------------------|------------|---------|---------------------------------|
| <i>Apodasmia similis</i> | Oioi | Pb8 | 1m | 48 |
| <i>Arthropodium bifurcatum</i> | Renga renga lily | Pb8 | .5m | 96 |
| <i>Austroderia toetoe</i> | Toe toe | Pb8 | 1.5m | 32 |
| <i>Coprosma acerosa</i> | Coastal coprosma | Pb8 | .75m | 60 |
| <i>Coprosma repens</i> Poor knight | Creeping karamu | Pb8 | 1m | 48 |
| <i>Cortaderia splendens</i> | Coastal Toe toe | Pb8 | 1m | 48 |
| <i>Ficinia spiralis</i> | Pinga | Pb8 | .75m | 60 |
| <i>Phormium tenax</i> | Harakeke | Pb8 | 1.5m | 32 |
| <i>Spinifex sericeus</i> | Spinifex | Pb8 | 1m | 48 |

Where practical plant species that naturally occur in these areas have been selected for planting around each carved iwi gateway features. All plants will be from either the Ahipara or Aupouri ecological district grown from seeds eco source by nurseries.

12/06/2020

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Planting Details Te Awa Awanui



Riparian Zone Management Planting [N R C]

Table of Riparian Plants

Tolerates key: ☀ Full sun 🌬 Wind 🌊 Salt wind ❄ Frost hardy 🐾 Poorly drained soil (boggy) 🏠 Dry soil conditions

Benefits key: 🐦 Attracts birds 🐝 Attracts bees 🌳 Slope stabilisation 🌿 Filters runoff 🌳 Shade 🐟 Fish habitat

| Plant name | Type | Tolerates | Benefits | Size (height x width) |
|-------------------------------------|-------|-----------|----------|-----------------------|
| Lower bank zone | | | | |
| Space 1-1.5 m between plants | | | | |
| Cabbage tree (tī kōkō) | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 10 x 3 m |
| <i>Cordyline australis</i> | | | | |
| Pūkiō | Sedge | ☀ 🌊 ❄ 🐾 🏠 | 🌿 🐟 | 0.75 x 1 m |
| Cane sedge | | | | |
| Cutty grass (rautahi) | Sedge | ☀ 🌊 ❄ 🐾 🏠 | 🌿 🐟 | 0.75 x 1 m |
| Cane penstemon | | | | |
| Giant umbrella sedge (upkotangata) | Sedge | ☀ 🌊 ❄ 🐾 🏠 | 🌿 🐟 | 1.2 x 2 m |
| <i>Cyperus ustulatus</i> | | | | |
| Jointed wire rush (kōi) | Rush | ☀ 🌊 ❄ 🐾 🏠 | 🌿 🐟 | 0.5 x 1 m |
| <i>Abrotanum amabile</i> | | | | |

| Upper bank zone | | | | |
|-------------------------------------|------------------|-----------|-------|-------------|
| Space 1.5-2 m between plants | | | | |
| Flax (harakeke) | Other | ☀ 🌊 ❄ 🐾 🏠 | 🌿 🐟 | 2 x 2 m |
| <i>Phormium tenax</i> | | | | |
| Kāramū | Shrub/small tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 4 x 1.5 m |
| <i>Corymbia rostrata</i> | | | | |
| Black matipo (kōwhiri) | Small tree/tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 8 x 3 m |
| <i>Pittosporum tenuifolium</i> | | | | |
| Kahikatea* | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 40-60 x 4 m |
| <i>Caryocarpus dioxylobus</i> | | | | |
| Kānuka | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 8 x 3 m |
| <i>Leptospermum ericoides</i> | | | | |
| Karo | Small tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 10 x 4 m |
| <i>Pittosporum crassifolium</i> | | | | |
| Koromiko | Shrub | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 1.8 x 1 m |
| <i>Nyctea strata</i> | | | | |
| Lowland ribbonwood (manatu) | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 10 x 3 m |
| <i>Rapanea repens</i> | | | | |
| Mahoe | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 10 x 3 m |
| <i>Melicope ramiflora</i> | | | | |
| Mānuka | Small tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 4 x 1.5 m |
| <i>Leptospermum scoparium</i> | | | | |
| Mingimingi | Shrub | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 4 x 1.5 m |
| <i>Coprosma persea</i> | | | | |
| Totara | Tree | ☀ 🌊 ❄ 🐾 🏠 | 🌳 🌿 🐟 | 20 x 4 m |
| <i>Podocarpus totara</i> | | | | |

*Plant these species into existing vegetation or two to three years after initial plantings so they have shelter to grow.



Pohutukawa :
Metrosideros excelsa



Puriri: *Vitex lucens*

FAST 5 PLANTS FOR NORTHLAND



These five go-to plants are ideal to start your planting with – they are hardy, fast-growing, can be planted straight into pasture. Use eco-sourced plants as they are grown from local wild seed and are best adapted to your climate and soils.

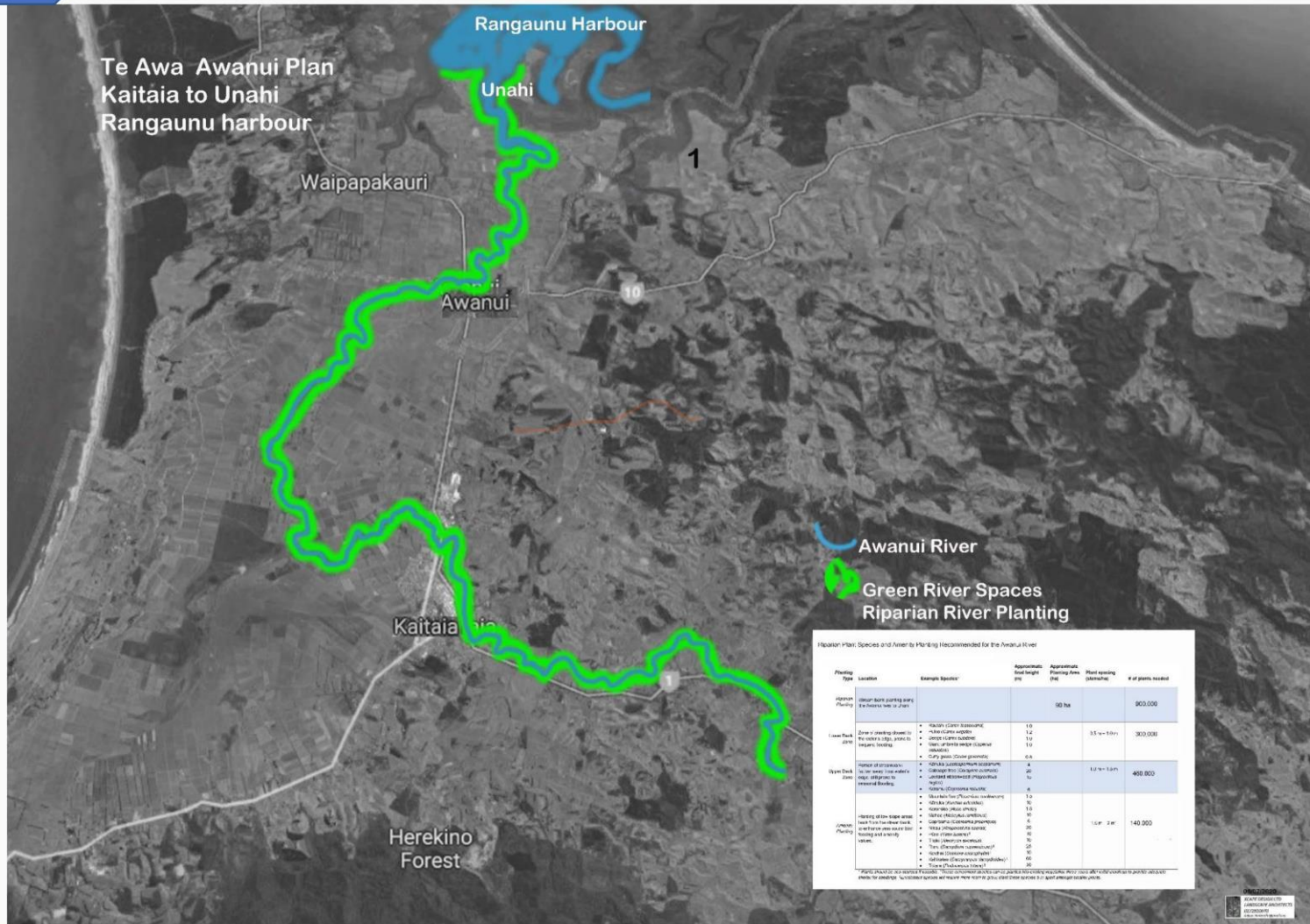
Awanui River edge to be planted using NRC guidelines

Specimen Tree Planting Awanui River Cycle Walkway Path

| Botanical Name | Common Name | Plant Size | Centres | Numbers |
|-----------------------------|-------------|------------|---------|---------|
| <i>Metrosideros excelsa</i> | Pohutukawa | Pb60 | 10m | |
| <i>Vitex lucens</i> | Puriri | Pb60 | 10m | |

22/06/2020

Planting to improve the water quality of the Awanui River



Planting Schedule for the Awa: Awanui River



The Awanui River in the Te Hiku (Far North), the river flows 30km into the Rangauna Harbour the Awanui flows west and then north. There are four upstream rivers which discharge into the Awanui River, they are the Takahue River, Victoria River, Karemuhako River and Tarawhataroa River. Below is a schedule to plant the riparian margins of the Awanui from Kaitaia to the Rangauna Harbour at Unahi.

Riparian Plant Species and Amenity Planting Recommended for the Awanui River

| Planting Type | Location | Example Species* | Approximate final height (m) | Approximate Planting Area (ha) | Plant spacing (stems/ha) | # of plants needed |
|-------------------|---|--|---|--------------------------------|--------------------------|--------------------|
| Riparian Planting | Stream bank planting along the Awanui river to Unahi | | | 90 ha | | 900,000 |
| Lower Bank Zone | Zone of planting closest to the water's edge, prone to frequent flooding. | <ul style="list-style-type: none"> Rautahi (<i>Carex lesssoniana</i>) Pukio (<i>Carex virgate</i>) Sedge (<i>Carex subdola</i>) Giant umbrella sedge (<i>Cyperus ustulatus</i>) Cutty grass (<i>Carax geminata</i>) | 1.0 1.2 1.0 1.0 0.8 | | 0.5 m – 1.0 m | 300,000 |
| Upper Bank Zone | Portion of streambank farther away from water's edge, still prone to seasonal flooding. | <ul style="list-style-type: none"> Kānuka (<i>Leptospermum scoparium</i>) Cabbage tree (<i>Cordyline australis</i>) Lowland ribbonwood (<i>Plagianthus regius</i>) Karamu (<i>Coprosma robusta</i>) | 4 20 15 6 | | 1.0 m – 1.5 m | 460,000 |
| Amenity Planting | Planting of low-slope areas back from the streambank to enhance year-round bird feeding and amenity values. | <ul style="list-style-type: none"> Mountain flax (<i>Phormium cookianum</i>) Kānuka (<i>Kunzea ericoides</i>) Koromiko (<i>Hebe stricta</i>) Mahoe (<i>Meliccytus ramiflorus</i>) Coprosma (<i>Coprosma propinqua</i>) Nikau (<i>Rhopalostylis sapida</i>) Pūriri (<i>Vitex lucens</i>)[†] Titoki (<i>Alectryon excelsus</i>)[†] Rimu (<i>Dacrydium cupressinum</i>)[†] Kōwhai (<i>Sophora microphylla</i>)[†] Kahikatea (<i>Dacrycarpus dacrydioides</i>)[†] Tōtara (<i>Podocarpus totara</i>)[†] | 1.5 10 1.8 10 6 20 10 10 25 10 60 30 | | 1.5 m – 2 m [‡] | 140,000 |

* Plants should be eco-sourced if possible. [†]These enrichment species can be planted into existing vegetation three years after initial plantings to provide adequate shelter for seedlings. [‡]Enrichment species will require more room to grow; plant these species 5 m apart amongst smaller plants.

Lake Waiporohita
Unique Sand Dune Lake in
Te Hiku

Planting Lake Waiporohita, Karikari Peninsula



Existing plantings (planted 2019)

Balance area of Riparian planting to complete Lake Waiporohita



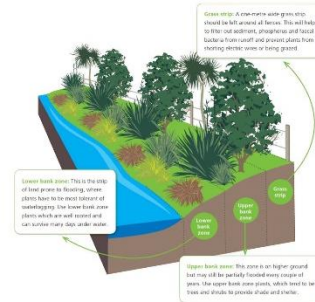
Lake Waiporohita

Planting of Riparian plants creates improved water ways and habitats

Planting Lake Waiporohita, Karikari Peninsula



Riparian Zone Management Planting [N R C]



Riparian Plant Species and Amenity Planting For Lake Waiporohita

| Planting Type | Location | Example Species* | Approximate final height (m) | Approximate Planting Area (ha) | Plant spacing (stems/ha) | # of plants needed |
|-------------------|---|--|---|--------------------------------|--------------------------|--------------------|
| Riparian Planting | Lake Waiporohita planting 1 meter away from fences, around the entire area. | | | 2.58 ha | | 25,863 |
| Lower Bank Zone | Zone of planting closest to the water's edge, prone to frequent flooding. | <ul style="list-style-type: none"> Rautahi (<i>Carex lessoniana</i>) Pukio (<i>Carex virgate</i>) Sedge (<i>Carex subdola</i>) Giant umbrella sedge (<i>Cyperus ustulatus</i>) Cutty grass (<i>Carax geminata</i>) | 1.0 1.2 1.0 1.0 0.8 | 1.29 ha | 0.5 m – 1.0 m | 12,932 |
| Upper Bank Zone | Portion of streambank farther away from water's edge, still prone to seasonal flooding. | <ul style="list-style-type: none"> Kānuka (<i>Leptospermum scoparium</i>) Cabbage tree (<i>Cordyline australis</i>) Lowland ribbonwood (<i>Plagianthus regius</i>) Karamu (<i>Coprosma robusta</i>) | 4 20 15 6 | 2.58 ha | 1.0 m – 1.5 m | 25,863 |
| Amenity Planting | Planting of low-slope areas back from the streambank to enhance year-round bird feeding and amenity values. | <ul style="list-style-type: none"> Mountain flax (<i>Phormium cookianum</i>) Kānuka (<i>Kunzea ericoides</i>) Koromiko (<i>Hebe stricta</i>) Mahoe (<i>Meliccytus ramiflorus</i>) Coprosma (<i>Coprosma propinqua</i>) Nikau (<i>Rhopalostylis sapida</i>) Pūriri (<i>Vitex lucens</i>)[†] Titoki (<i>Alectryon excelsus</i>)[†] Rimu (<i>Dacrydium cupressinum</i>)[†] Kōwhai (<i>Sophora microphylla</i>)[†] Kahikatea (<i>Dacrycarpus dacrydioides</i>)[†] Tōtara (<i>Podocarpus totara</i>)[†] | 1.5 10 1.8 10 6 20 10 10 25 10 60 30 | 2.58 ha | 1.5 m – 2 m [‡] | 8000 |

* Plants should be eco-sourced if possible. [†]These enrichment species can be planted into existing vegetation three years after initial plantings to provide adequate shelter for seedlings. [‡]Enrichment species will require more room to grow; plant these species 5 m apart amongst smaller plants.

Market Place Square

Design Scheme Elements...

Creating connections...
vision...,hope... love...
within Te hiku



Photo montage Market Place Square
Features an outdoor stage
Highlights local beaches and art panels
Locally carved painted post
Provides a place to sit and eat connect
with friends enjoying what the Kaitaia
market gives to locals plus visitors.

Planting Details Kaitaia Town Square



| Botanical Name | Common Name | Plant Size | Centres | Numbers Based 48m ² |
|--|------------------|------------|---------|--------------------------------|
| <i>Apodasmia similis</i> | Oioi | Pb8 | .75m | 45 |
| <i>Arthropodium bifurcatum</i> | Renga renga lily | Pb8 | .5m | 165 |
| <i>Canna Wyoming</i> | Orange canna | Pb8 | .5m | 72 |
| <i>Coprosma repens</i> Poor knight | Creeping karamu | Pb8 | .3m | 30 |
| <i>Ficinia spiralis</i> | Pingao | Pb8 | .75m | 35 |
| <i>Metrosideros excelsa</i> Maori princess | Pohutukawa | Pb150 | C | 2 |
| <i>Libertia grandiflora</i> | Libertia | Pb8 | .3m | 60 |
| <i>Rhopalostylis sapida</i> Kermadec | Nikau | Pb150 | C | 5 |

Pohutukawa trees in pots are underplanted with renga renga lily. Nikau are underplanted with Pingao.



Pohutukawa:
Metrosideros excelsa
'Maori Princess'



Renga renga lily:
Arthropodium bifurcatum



Nikau:
Rhopalostylis sapida Kermadec



Pingao: *Desmoschoeus spiralis*



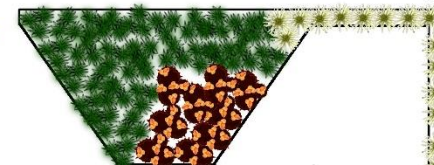
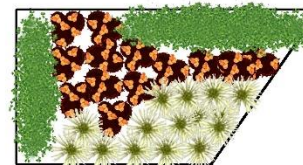
Orange Canna:
Canna Wyoming



Libertia:
Libertia grandiflora

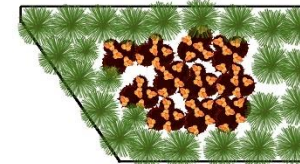
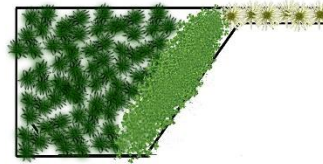


Creeping Karamu:
Coprosma repens Poor knight



Oioi:
Apodasmia similis

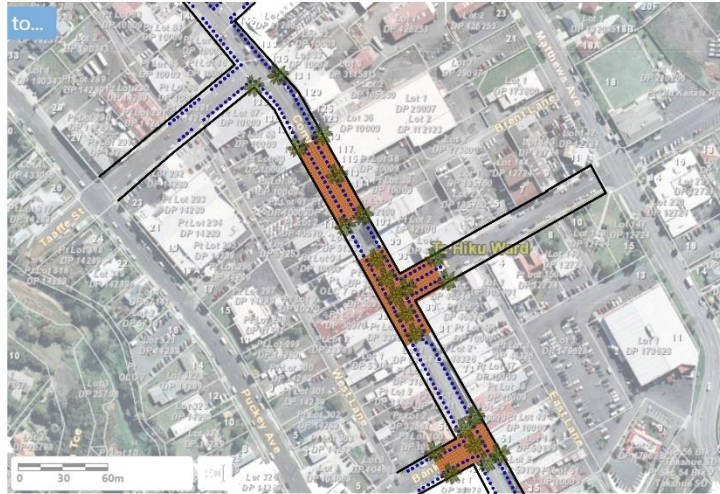
Existing Commerce Street gardens in front of old Pac n Save - retain the current specimen trees replant additional species into gardens and mulch.



16/06/2020

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Planting Details Commerce Street Kaitiāia



| Botanical Name | Common Name | Plant Size | Centres | Numbers ² Based 48m ² | |
|-----------------------------|-------------|-----------------------------|---------|--|---|
| <i>Apodasmia similis</i> | Oioi | Pb8 | 1m | 100 | |
| <i>Canna Wyoming</i> | Canna | Pb8 | .5m | 20 | |
| <i>Coprosma repens</i> | Poor knight | Pb8 | .3m | 10 | |
| <i>Howea forsteriana</i> | Kentia palm | Transplant 5m tall | .4m | 22 | |
| <i>Metrosideros excelsa</i> | Octopussy | Standard weeping Pohutukawa | Pb12 | 1m | 5 |
| <i>Metrosideros excelsa</i> | Tahiti | Shrub Pohutukawa | Pb12 | 1m | 8 |
| <i>Primelea prostrata</i> | Pinatoro | Pb8 | .5m | 20 | |
| <i>Rhopalostylis sapida</i> | Kernadec | Nikau | Pb250 | .5m | 5 |



Each planter will feature either a Nikau or Pohutukawa;
Under planted with single layer of either Oioi, Pinatoro
outer edge with the creepers either Karamu or Pinatoro.
The *Metrosideros Tahiti* can be planted as main plant (4x per planter).



Nikau:
Rhopalostylis sapida Kernadec

Pohutukawa :
Metrosideros excelsa 'Octopussy'



Kentia Palm:
Howea forsteriana



Canna:
Canna Wyoming



Oioi :
Apodasmia similis



Pohutukawa :
Metrosideros Tahiti



Karamu :
Coprosma repens
'Poor Knights'

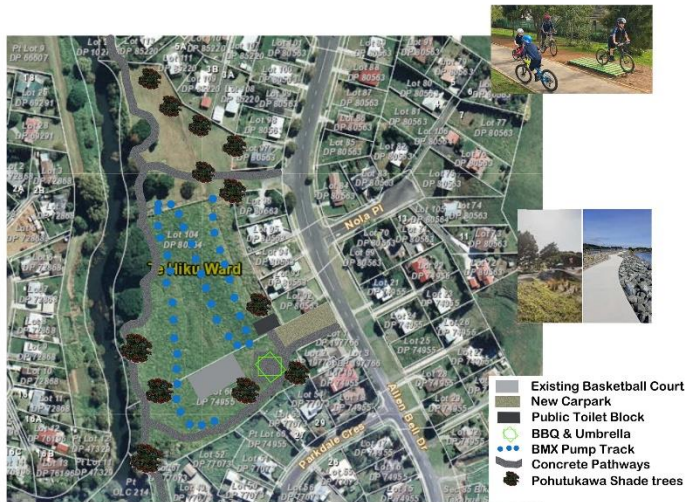


Pinatoro:
Primelea prostrata

19/06/2020

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Planting Details Allen Bell Park Kaitia



Specimen Tree Planting Allen Bell Park

| Botanical Name | Common Name | Plant Size | Centres | Numbers Based 48m ² |
|-----------------------------|-------------|------------|---------|--------------------------------|
| <i>Metrosideros excelsa</i> | Pohutukawa | Pb60 | 10m | 18 |
| <i>Vitex lucens</i> | Puriri | Pb60 | 10m | 10 |



Pohutukawa : *Metrosideros excelsa*



Puriri: *Vitex lucens*



Riparian Zone Management Planting [N R C]

Awanui River edge along the park is to be planted using NRC guidelines

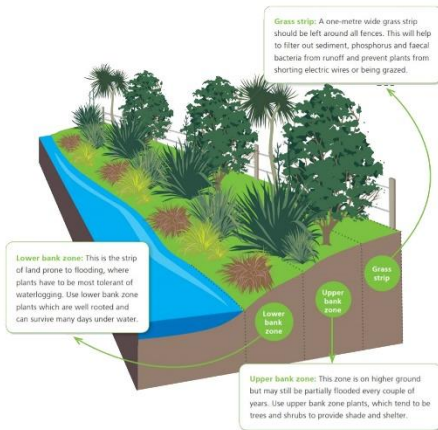


Table of Riparian Plants

Tolerates key: ☀ Full sun 🌬 Wind 🌊 Salt wind ❄ Frost hardy 🌱 Poorly drained soil (boggy) 🏠 Dry soil conditions

Benefits key: 🐦 Attracts birds 🐝 Attracts bees 🌳 Slope stabilisation 🌿 Filters runoff 🌞 Shade 🐟 Fish habitat

| Plant name | Type | Tolerates | Benefits | Size (height x width) |
|-------------------------------------|-------|-----------|----------|-----------------------|
| Lower bank zone | | | | |
| Space 1-1.5 m between plants | | | | |
| Cabbage tree (tī kōkōka) | Tree | ☀ 🌊 🌱 🌿 🏠 | 🌞 🐟 | 10 x 3 m |
| <i>Cordyline australis</i> | | ☀ 🌊 🌱 🌿 🏠 | 🌞 🐟 | |
| Pukio | Sedge | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | 0.75 x 1 m |
| <i>Carex secta</i> | | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | |
| Cutty grass (nautahi) | Sedge | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | 0.75 x 1 m |
| <i>Carex geminata</i> | | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | |
| Giant umbrella sedge (upokotangata) | Sedge | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | 1.2 x 2 m |
| <i>Cyperus ustulatus</i> | | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | |
| Jointed wire rush (ioia) | Rush | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | 0.5 x 1 m |
| <i>Apodisma similis</i> | | ☀ 🌊 🌱 🌿 🏠 | 🌿 🐟 | |

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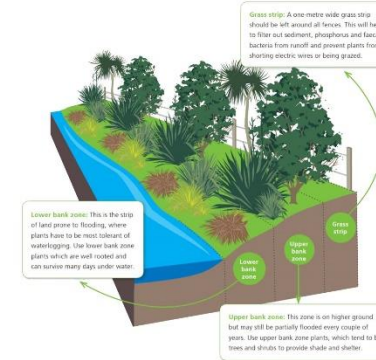
Planting Details Matthews Park Kaitiaia : Te Awa Awanui



- Lower river bank Zone
- Riparian pioneer species
- Upper river bank Zone

Riparian Zone Management Planting [N R C]

Awanui River edge to be planted using NRC guidelines



Riparian Plant Species and Amenity Planting Recommended for the Awanui River

| Planting Type | Location | Example Species* | Approximate final height (m) | Approximate Planting Area (ha) | Plant spacing (stems/ha) | # of plants needed |
|---|---|--|------------------------------|--------------------------------|--------------------------|--------------------|
| Riparian Planting | Stream bank planting along the Awanui river to Unahi | | | 1.4 ha | | 40,500 |
| Lower Bank Zone | Zone of planting closest to the water's edge, prone to frequent flooding. | • Rautahi (<i>Carex lesssoniana</i>) | 1.0 | | 0.5 m – 1.0 m | 29,000 |
| | | • Pukio (<i>Carex virgate</i>) | 1.2 | | | |
| | | • Sedge (<i>Carex subdola</i>) | 1.0 | | | |
| | | • Giant umbrella sedge (<i>Cyperus ustulatus</i>) | 1.0 | | | |
| Upper Bank Zone | Portion of streambank farther away from water's edge, still prone to seasonal flooding. | • Kānuka (<i>Leptospermum scoparium</i>) | 4 | | 1.0 m – 1.5 m | 7500 |
| | | • Cabbage tree (<i>Cordyline australis</i>) | 20 | | | |
| | | • Lowland ribbonwood (<i>Plagianthus rugosus</i>) | 15 | | | |
| Amenity Planting | Planting of low-slope areas back from the streambank to enhance year-round bird feeding and amenity values. | • Karamea (<i>Coprosma robusta</i>) | 6 | | 1.5 m – 2 m [†] | 4000 |
| | | • Mountain flax (<i>Phormium cookianum</i>) | 1.5 | | | |
| | | • Kānuka (<i>Kunzea ericoides</i>) | 10 | | | |
| | | • Koromiko (<i>Hebe stricta</i>) | 1.8 | | | |
| | | • Mahoe (<i>Melicoytus ramiflorus</i>) | 10 | | | |
| | | • Coprosma (<i>Coprosma propinqua</i>) | 6 | | | |
| | | • Nikau (<i>Rhopalostylis sapida</i>) | 20 | | | |
| | | • Pīriki (<i>Vitex lucens</i>) [‡] | 10 | | | |
| | | • Titoki (<i>Alectryon excelsus</i>) [‡] | 10 | | | |
| | | • Rimu (<i>Dacrydium cupressinum</i>) [‡] | 25 | | | |
| • Kōwhiri (<i>Sophora microphylla</i>) [‡] | 10 | | | | | |
| • Kahikatea (<i>Dacrydium diacryoides</i>) [‡] | 80 | | | | | |
| • Tōtara (<i>Podocarpus totara</i>) [‡] | 30 | | | | | |

* Plants should be eco-sourced if possible. † These enrichment species can be planted into existing vegetation three years after initial plantings to provide adequate shelter for seedlings. ‡ Enrichment species will require more room to grow; plant these species 5 m apart amongst smaller plants.

06/07/2020

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PLANTING PHILOSOPHY

The landscape planting design must achieve sustainable land management, along with sustainable development, native biodiversity protection and restoration.

The key function of planting is one of mitigation, with plantings that facilitate the future development on the site. These proposed plantings will accommodate this change. Resulting in the landscape amenity being added to. These new plantings connect with existing landscape character and existing native vegetation in the area.

SITE PREPARATION FOR PLANTING

WEED CONTROL

- All weeds are to be eradicated from the site before any planting takes place.
- Weed control can be either by chemical methods or organic methods (physical control methods).
- It is recommended that the 'herbicide' be used due to its low toxicity levels, its low residual and is suitable to use in waterways.

FENCING

- The planting must be fenced with a stock proof fence if the neighbouring property has stock.

PLANTING

- All planting to occur at the correct time of year, with a minimum of three weeks before planting occurs.
- Planting can only occur once soil moisture levels are sufficient, April – September.
- All plant species for this property are to be eco-sourced (Aupouri Ecological District) to maintain the genetic diversity of local plants keeping the unique character of the Karikari Peninsula (Use plants grown from seeds collected locally from a range of naturally occurring vegetation in that place).
- All planting of plants must be eco-site planted (planting location plants naturally occur).
- All planting to be supervised by a suitably qualified plants person.
- All areas are to be planted as per the landscape plan
- All plantings are to follow the planting procedures.

PLANT SELECTION CRITERIA

- All plants shall be true to type or name (botanical name) as shown on the landscape plan
- All plants shall be healthy, have a form typical for the species or cultivator, be well rooted.
- The root-ball of plants shall be moist throughout the crown shall show no signs of moisture stress.
- All branch unions are to be free of included bark.
- It would be desirable for all plants to be able to stand upright without support.
- Roots, the trees and shrubs are to be free of roots circling the trunk, and free of roots
- The plants are to be free from signs of pest and disease problems and mechanical damage.
- There is to be no presence of any pathogens that may be detrimental to the plant health in the growing medium.
- The growing medium that the plants are to be planted into is to be of a quality and structure that will allow for maximum growth and performance.
- All plants are to be to the specified grade size as per planting schedule.

FERTILISATION OF PLANTINGS

- Apply a slow release granulated NPK fertiliser such as 'Magamp' into each planting hole. Blood & Bone plus compost can be used instead of magamp.
- Use 30 –40g (a small handful) per plant mix with soil to avoid root damage.
- Do Not use fast release nitrogenous fertilisers such as Urea.

ECOLOGICAL MANAGEMENT PLAN

The following table below outlines planting activities, fertilisation programmes.

Weed control applications, which must be undertaken over a five (5) year period from time of planting to an established sustainable area.

Planting should occur in late autumn once soil moisture levels occur, once the construction is completed.

Management Plan

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|------------|-------|------|---------|-----|-----|-----|-----|-----|
| Year1 | @ | | @ | # Ff Mm | # Ff | # Ff | # Ff | @ | Mm | @ | | |
| Year2 | | | @ | Mm | Rp | | | | @ | @ | | |
| Year3 | | | @ | Mm Ff | Rp | | | | | @ | | |
| Year4 | | | @ | Mm | Rp | | | | | @ | | |
| Year5 | | | @ | | Rp Ff | | | | | @ | | |

Management Plan Key

KEY

- # Initial Planting @ Weed Control
- Mm Mulching required [100cm compacted]
- Rp Replacement Planting [replant dead or diseased plants]
- Ff Fertilisation required [slow release granulated fertiliser].

CONCLUSION

The landscape proposals for Te Hiku o Te Ika will visually improve the local environment and contribute to native species throughout Te Hiku.

The landscape proposal will provide an excellent amenity to the site, as well as encouraging bird life into the area having an environmentally positive impact.

The landscape proposals for Te Hiku o Te Ika Open Space Revitalisation Masterplan will complement and transform many public spaces. These landscape proposals will strengthen links with existing bush areas through plant specimen selection giving a sense of belonging to the greater catchment and making a positive contribution to our local environment.

The proposed landscape works will maintain and enhance the visual amenity of the many sites and makes a positive contribution to all of Te Hiku O Te Ika over time.

Delwyn Shepherd

Dip L.D, M.L.Arch





TE HIKU O TE IKA OPEN SPACE REVITALISATION MASTERPLAN

References:

Tai Tokerau Economic Action Plan by Northland Inc

FNDC, Kaitaia Community Plan

FNDC, Ahipara Community Plan

FNDC, Awanui Community Plan

KBA, Kaitaia Business Association Strategic Plan

Ngai Kuri, Te Ara Whanui Strategic document

Te Hiku Iwi Development Trust - Logo used for the Cover Page, Sourced from: <http://www.tehiku.iwi.nz/social-accord>, April 2020