

Rodney West | Local Paths (Greenways) Plan

JUNE 2019



Contents

1.0 Introduction	5
1.1 Purpose of the document	6
1.2 Strategic fit	6
1.3 What is a greenways plan?	8
1.4 Greenways Design Guide	10
1.5 Auckland context	13
2.0 Method	15
2.1 The process	16
2.2 Consultation summary	16
3.0 Greenways Mapping	19
3.1 Long term aspirational greenways with additional future planning overlays	20
3.2 Proposed Priority Routes	21
3.3 Proposed Greenway Network Detail Plans – Reference Plan	22
3.4 Proposed Greenway Network Plan Map 1 of 6: Waitoki and Wainui	23
3.5 Proposed Greenway Network Plan Map 2 of 6: Helensville, Parakai and Kaukapakapa	24
3.6 Proposed Greenway Network Plan Map 3 of 6 Dairy Flat and Coatesville	25
3.7 Proposed Greenway Network Plan Map 4 of 6: Woodhill and Waimauku	26
3.8 Proposed Greenway Network Plan Map 5 of 6: Coatesville	27
3.9 Proposed Greenway Network Plan Map 6 of 6: Muriwai and Taupaki	28
4.0 Future Development	29
4.1 Future development	30
4.2 Best practice for implementation	30
4.3 Stakeholder funding and information	30
4.4 Working with Mana Whenua – Treaty partners	30
References	32
Appendices	35
A. Analysis mapping	37
B. Case studies	51
C. Priority greenway projects	56
D. Consultation summary	69



1.0 Introduction

1.1 Purpose of the document

Purpose

This draft document outlines the long-term greenways plan for Rodney West. It covers the Rodney Local Board area west of State Highway One (SH1) and north to and including Wainui and Kaukapakapa. This document is intended to provide a vision and guidance for use by the local board, council departments, council-controlled organisations, community groups, private developers and other interested parties. The Rodney West greenways plan outlines the long-term greenways plan for this area, with a view to outlining priority projects for funding and implementation over the coming years.

Visionary document

Greenways plans like this have been developed throughout the world, with those in Portland, Oregon being one of the most successfully implemented. Auckland's greenways plans are a series of linked, visionary plans being driven from the 'ground up' by local boards, with the long-term aim of greatly improving walking, cycling and ecological connections across the region.

Guiding document

On adoption of this greenways plan, the local board will set out a series of priority projects and look for opportunities to fund and create these connections. Over the coming years, the council will develop Open Space Network Plans for each of the local board areas, of which the greenways plan will become a chapter. The network plans will sit under the council's Open Space Strategy, providing high level direction specific to each local board area for improvements to the open space network.



1.2 Strategic fit

Links to the Auckland Plan

The Auckland Plan sets the council's long-term strategic direction and proposes a vision to create the world's most liveable city. It helps integrate planning for improved transport, environmental protection, land use, housing growth and economic development, benefiting from one authority being responsible for all coordination.

The Auckland Council adopted the Auckland Plan 2050 in June 2018. The plan poses six desired outcomes which are:

Belonging and participation

All Aucklanders will be part of and contribute to society, access opportunities, and have the chance to develop to their full potential.

Māori identity and wellbeing

A thriving Māori identity is Auckland's point of difference in the world – it advances prosperity for Māori and benefits all Aucklanders.

Homes and places

Aucklanders live in secure, healthy, and affordable homes, and have access to a range of inclusive public places.

Transport and access

Aucklanders will be more easily able to get to where they want to go more easily, safely and sustainably.

Environment and cultural heritage

Aucklanders preserve, protect and care for the natural environment as our shared cultural heritage, for its intrinsic value and for the benefit of present and future generations.

Opportunity and prosperity

Auckland is prosperous with many opportunities and delivers a better standard of living for everyone.

The accessibility, integration, recreational and environmental outcomes fostered by the greenways network makes a strong contribution to several of these desired outcomes.

The Rodney West greenways plan draws on priorities and directives from several chapters in the Auckland Plan, including:

Chapter 5: Auckland's recreation and sport

Priority 1: Provide quality opportunities for all Aucklanders to participate in recreation and sport.

Directive 5.1: Encourage all Aucklanders, particularly children and young people to participate in recreation and sport.

Chapter 7: Auckland's environment

Priority 1: Value our natural heritage.

Priority 2: Sustainably manage natural resources.

Priority 3: Treasure our coastlines, harbours, islands and marine areas.

Chapter 12: Auckland's physical and social Infrastructure

Priority 2: Protect, enable, align, integrate and provide social and community infrastructure for present and future generations.

Directive 12.8: Maintain and extend the public open space network ... walkways and trails and recreational boating facilities in line with growth needs.

Chapter 13: Auckland's transport

Priority 3: Prioritise and optimise investment across transport modes.

Links to other initiatives

In developing this greenways plan, several related council and non-council initiatives have been investigated and, where possible, included in the network:

- former Rodney District Council plans including the 2007 Draft Bridleway Strategy and current Auckland Council documents such as the Auckland Plan 2050
- the Rodney Local Board Plan (2017)
- Auckland Cycle Network (ACN) November 2015, prepared by Auckland Transport (AT)
- Nga Haerenga – the New Zealand Cycle Trail.

Local board aspirations

Each local board plan reflects what elected members have heard from their community. Feedback gained both formally and informally has been instrumental in shaping these plans and they provide a touchstone for the aspirations of each area's community.

Successful implementation of this greenways plan has the potential to deliver on several of the desired outcomes in the Rodney Local Board Plan (2017), including but not limited to:

- We can get around easily and safely
- Communities are influential and empowered
- Parks and sports facilities that everyone can enjoy
- Our harbours, waterways and environment are cared for, protected and healthy.

Outcome: We can get around easily and safely

Our transport infrastructure keeps pace with the needs of our communities. Our growing townships have the same choices for quality public transport as the rest of Auckland.

The greenways network will simplify access to friends, neighbours and educational, recreational and commercial opportunities on foot, by bike or on horseback. You have told us that our transport systems need further development because not everyone travels by car. Greenways can provide the community with attractive walking and cycling routes to parks, schools, town centres, recreation centres, community facilities and public transport services. This network increases not only personal enjoyment of localities but has spin off benefits for the health and wellbeing of those people actively using the network. It also has the potential to see a greater uptake and usage of our recreational facilities.

Outcome: Communities are influential and empowered

Our communities influence local decision-making. They are empowered and enabled to act and take the lead on community projects and in the planning for their areas.

Not only has community input played a key role in shaping this plan, its implementation can also provide opportunities for participation by community and interest groups implementing it on a project basis. Some projects are already underway by collaborating landowners and their plans are reflected in this document. Communities and interest groups will be able to pick up individual greenway projects and bring their efforts and initiative to put these parts of the network into place. These actions can promote the use of greenways in the community, building momentum to achieve a whole network.

Outcome: Parks and sports facilities that everyone can enjoy

Our local parks and sports facilities cater to a wide range of sporting and recreational interests. They are easily accessible, connecting our towns, villages and growth areas.

With urban development spreading in from the east, protecting and developing recreational opportunities becomes increasingly important if quality of life is to be maintained. The greenways plan provides a connected recreational network, allowing residents to move safely through and between their existing open spaces. This access has benefits for the health and well-being of those people actively using the network, as well as offering an opportunity for people to get out and meet others from their local community. Increased use of existing recreational facilities in Rodney may be another effect.

Outcome: Our harbours, waterways and environment are cared for, protected and healthy

Our harbours and the rivers and streams that feed them are healthy and thriving natural marine environments. Our stormwater and wastewater services are reliable, well maintained and environmentally friendly, minimising downstream environmental impacts.

Building the walking and cycling routes contained in this plan is one tool that can assist our ambition to protect and enhance our waterways and harbours by providing improved access to and along them. Greenways also feature a planting component and planting our waterways can reduce the flow of contaminants and sediment entering the streams and into the Kaipara Harbour.

Rodney Local Board Plan Outcomes

➤ We can get around easily and safely

Our transport infrastructure keeps pace with the needs of our communities. Our growing townships have the same choices for quality public transport as the rest of Auckland.

➤ Communities are influential and empowered

Our communities influence local decision-making. They are empowered and enabled to act and take the lead on community projects and in the planning for their areas.

➤ Parks and sports facilities that everyone can enjoy

Our local parks and sports facilities cater to a wide range of sporting and recreational interests. They are easily accessible, connecting our towns, villages and growth areas.

➤ Our harbours, waterways and environment are cared for, protected and healthy

Our harbours and the rivers and streams that feed them are healthy and thriving natural marine environments. Our stormwater and wastewater services are reliable, well maintained and environmentally friendly, minimising downstream environmental impacts.

Roads, paths and public transport enable us to get around easily and safely

We can get around easily and safely

Our transport infrastructure keeps pace with the needs of our communities. Our growing townships have the same choices for quality public transport as the rest of Auckland.

WHAT WE WANT TO ACHIEVE	KEY INITIATIVES	LOCAL BOARD ROLE	OTHER KEY AGENCIES
Our communities are well connected by safe and healthy walkways, cycleways and bridleways.	Work on realising Rodney's greenways plans, including working with our key stakeholders to complete our plans, identify priority areas, and design and build the greenways.	Advocacy and decision maker/funder	NZTA, Auckland Transport and community groups
	Advocate for all new developments to include high-quality footpaths, walkways, bridleways and cycleways options.	Advocacy	NZTA and developers

1.3 What is a greenways plan?

Definition

The aim of a greenways plan is to provide cycling, bridle and walking routes which are safe and pleasant, while also improving local ecology and access to recreational opportunities. To achieve these aims, greenways may cross existing areas of parkland and follow road connections between localities and parks. This network will link together areas of housing and employment, open spaces, town centres, recreational facilities, places of interest and transport hubs.

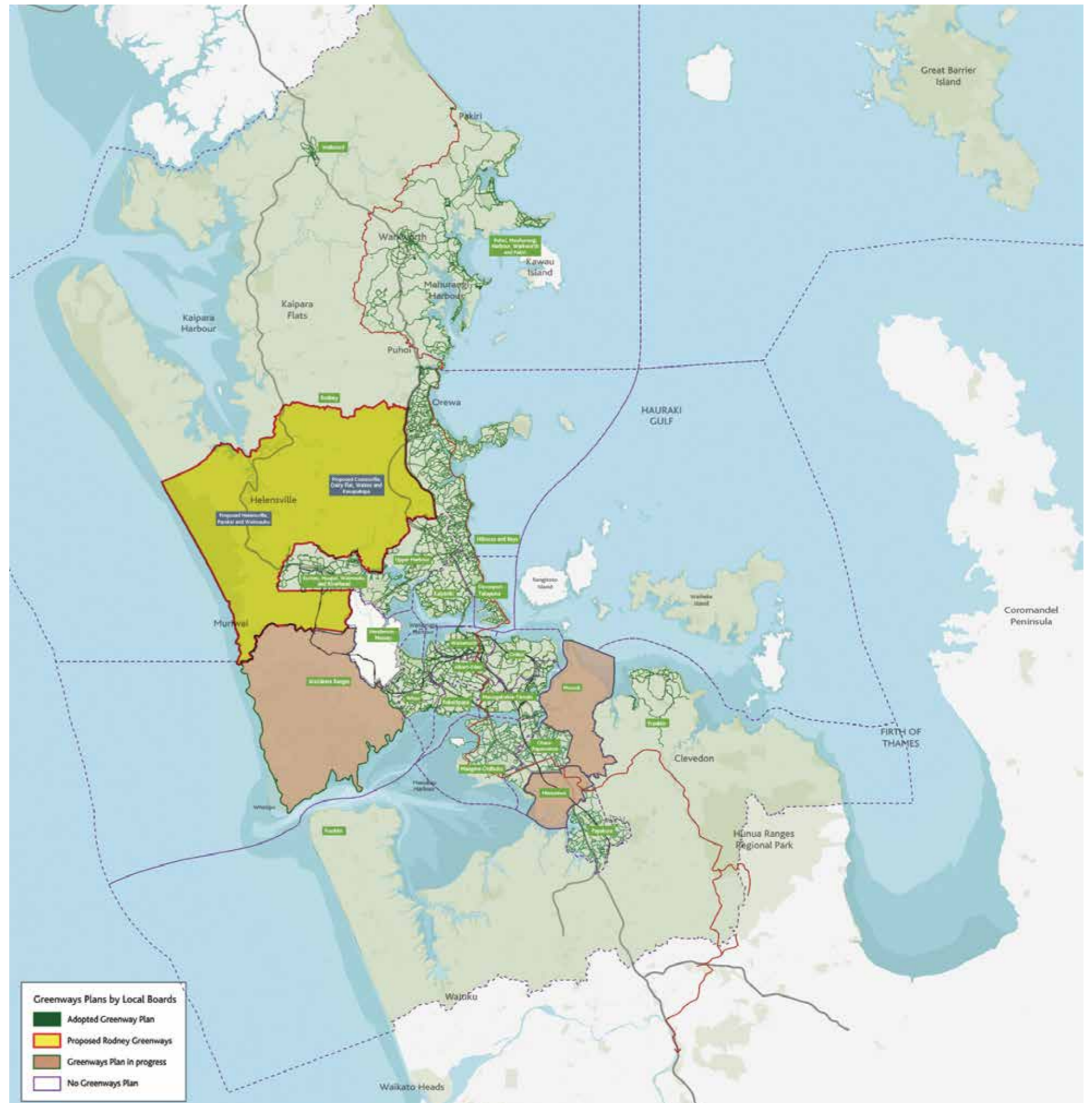
Implementation of the greenways plan will better connect Coatesville, Helensville, Dairy Flat, Muriwai and Taupaki to the neighbouring Kumeu and Huapai, Orewa, Silverdale, Upper Harbour areas and to Waitakere. Greenways will also connect to regional walking and cycling proposals for the greater Auckland area. The adjoining map shows other greenway plans under development or adopted by participating local boards. Each board sets their own greenways definition for their respective areas, based around a common aim.

The Rodney greenways plan seeks to create a future network of greenways that will provide safe and enjoyable ways for people to get around, get active, and get engaged with the community and their environment.

The network of greenways identifies the location and opportunity to:

- improve walking connections
- improve cycle connections
- improve bridle connections
- improve recreation opportunities
- improve ecological opportunities
- improve access to streams and waterways.

While it is hoped that the entire greenways network might be available for cycling and bridleways, in some places site constraints may mean that this is not achievable. Issues such as slope, vegetation, archaeological or ecological constraints may affect these uses and will be assessed on a project by project basis. In these cases, the greenway route would become a walking and/or ecological route only.





Connections in open spaces



Connections in streets and transport corridors



Streams and ecological areas



Benefits of a Greenway

There are many benefits to developing greenways, including:

- **Recreational** – improving people’s access to indoor and outdoor recreation and enjoyment close to their home;
- **Environmental** – Reducing our reliance on fossil fuels by providing attractive and safe alternative transport choices, improving stormwater quality and reducing flooding events through low impact design measures, and by enhancing ecosystems, habitat sources and ecological niches;
- **Social** – Providing improved opportunities for people to get out of their cars and meet their neighbours, to be engaged with a diverse range of communities and to connect with their local community facilities;
- **Health** – Providing improved opportunities for activity and fitness;
- **Education** – Providing opportunities to learn about the plants, wildlife, ecology, history of the landscapes that people pass through; and
- **Economic** – Improving local employment opportunities as areas become more desirable for businesses and shoppers. Greenways routes have often become tourist destinations for both international and local visitors.

What the greenways might look like

The appearance of the network will vary depending on its location and purpose. For instance, a path that runs through parkland may look and function quite differently to one next to a road or in an urban environment while serving the same purpose. These images show what the network could look like in a variety of settings, including:

- parks and reserves and forested areas
- alongside streams or ecological corridors
- slow-speed traffic environments and on transport corridors.

Surface treatments may vary depending on the location of the path, its slope and the existing character of an area. It is also important that the network is marked with appropriate locating and way-finding signs or markers to allow people to orientate themselves.

These aspects are considered within the 'Local Path Design Guide', which sets out a consistent toolbox to be used in design and construction. Following the guide will ensure that as greenways are built across the Auckland region, they will be recognisable due to their consistent look and feel.

1.4 Greenways Design Guide

Positioning greenways in west Rodney's walking and cycling Network

Also known as the Greenways Design Guide, the Local Path Design Guide was developed by Auckland Transport and Auckland Council to provide best practice guidance for designing and developing greenways networks through our neighbourhoods and across the Auckland region. The greenways

plans (such as this document) detail where the routes are to go, while the design guide describes their look and feel. It details the desirable width of connections, the materials to be used, methods of crossing roads, of calming traffic, and it also spells out the minimum ecological aspects of the routes as

well. Together, these two documents will form the backbone of the ongoing delivery of greenways in the Rodney area, and ensures that they connect in a logical manner to surrounding areas. Note that the pictures on this spread are pulled directly from the Design Guide, meaning that the images are not local.

Express Path – Street

Express Paths are cross-city connections that provide for both walking and cycling separated from vehicles. They are major cycleways on busy streets that provide for faster movement than Local Paths and create links to major centres and form the base structure of the cycleway network.

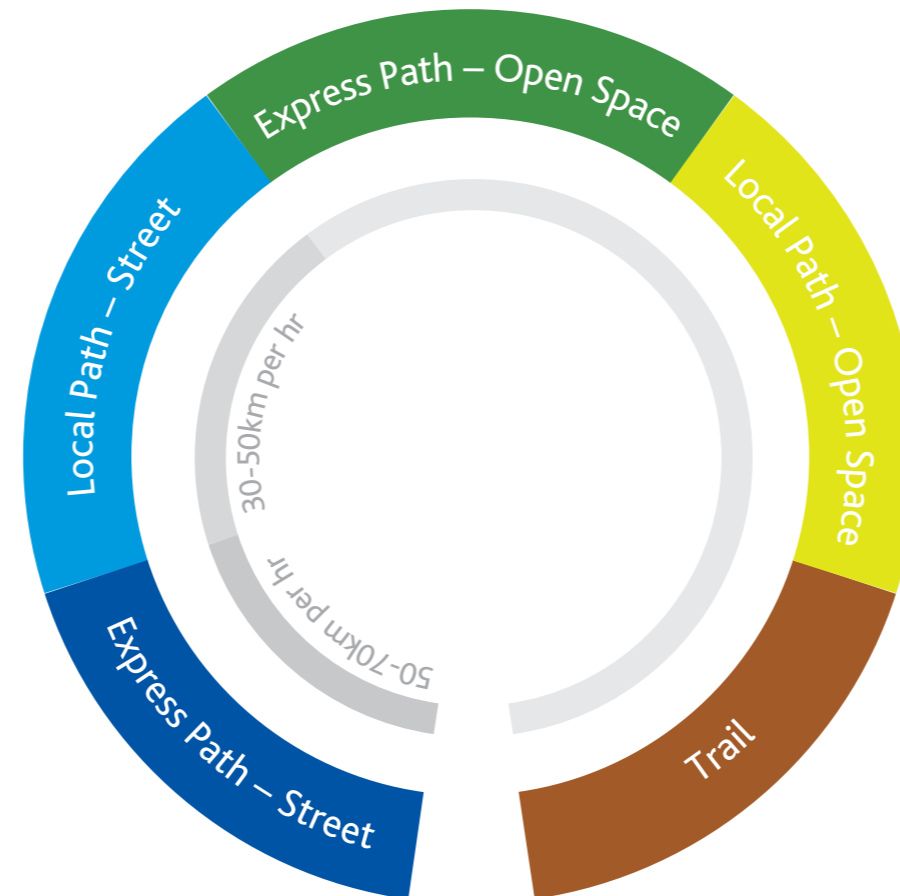
Vehicle Volume (ADT): 2,000–15,000+
Vehicle Speed (km/h): 40-60
Arterial Road Crossings: 50-100 per hour
Accessibility + Safety: MoJ 7 Qualities of Safe Spaces
Green Infrastructure: Impervious surface <90%

Local Path – Street

Local Paths are both on and off-street, and are designed to create safe and pleasant neighbourhoods that encourage walking and cycling for local trips. The naming of these paths provide the opportunity to reflect local places, names, land marks and connection to mana whenua.

An on-street Local Path has pedestrians accommodated on footpaths with streets that are safe enough to cycle on without the need for separated cycle lanes. Traffic calming tools, pavement markings and signage are used to improve safety for all street users.

Vehicle Volume (ADT): 1,000 ideal, 2,000 max
Vehicle Speed (km/h): 30-50
Arterial Road Crossings: 50-100 per hour
Accessibility + Safety: MoJ 7 Qualities of Safe Spaces
Green Infrastructure: Impervious surface 70-90% / Tree canopy coverage greater than 30-40%



Express Path – Open Space

An off-road major connection that provides for both walking and cycling separated from vehicles. They connect people to major centres and form the base structure of the cycleway network.

Vehicle Volume (ADT): n/a
Vehicle Speed (km/h): n/a
Arterial Road Crossings: n/a
Accessibility + Safety: MoJ 7 Qualities of Safe Spaces
Green Infrastructure: Open Space green or coastal infrastructure

Local Path – Open Space

Local Paths are both on and off-street, and are designed to create safe and pleasant neighbourhoods that encourage walking and cycling for local trips. Off-road Local Paths run through parks and open spaces and accommodate both cyclists and pedestrians. Together with on-street Paths, they are designed to create linkages to local centres, parks, schools and transport links including Express Paths.

Vehicle Volume (ADT): n/a
Vehicle Speed (km/h): n/a
Arterial Road Crossings: n/a
Accessibility + Safety: 20km/h design speed / 20metre sight lines and stopping distance
Green Infrastructure: Continuous canopy with grass and assorted low level planting

Trail – Walking only

A trail is distinct from a Local Path in that it is found in rural or bush settings and is primarily for recreation. A trail can also be a bush walk, which due to topography would not be shared by cyclists. Trails are not generally intended to form a connection between destinations, and often run in loops. Many trails will connect to Local or Express Paths, but may also allow for horse-riding alongside walking and cycling.

Vehicle Volume (ADT): n/a
Vehicle Speed (km/h): n/a
Arterial Road Crossings: n/a
Accessibility + Safety: MoJ 7 Qualities of Safe Spaces
Green Infrastructure: Park land/ water systems/ self-regenerating forest

Based on the Auckland Local Path Design Guide 2017



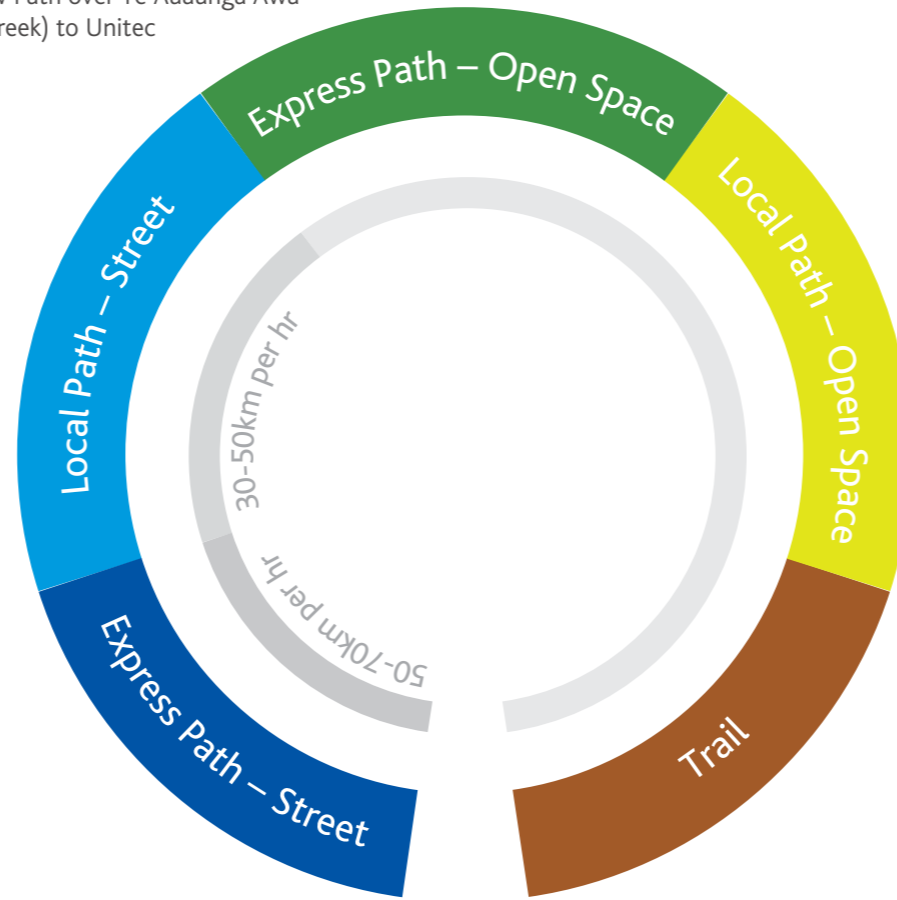
Waterview Path over Te Auaunga Awa (Oakley Creek) to Unitec



Orakei Basin



Dominion Rd parallel cycle routes



Puketapapa Path, Mt Roskill War Memorial Park



Beach Road Cycleway



Horse trail, Dome Forest, Warkworth



Tamaki Drive Cycleway



Northwestern Cycleway



Henderson Creek / Opanuku Stream



Watercare Coastal Walkway, Mangere



1.5 Auckland context

This part of the Rodney Local Board takes in the established rural settlements of Helensville, Parakai, Muriwai, Coatesville, Dairy Flat and Taupaki. The map shows the study area within its wider regional context. Between 20 and 35 kilometres north of Auckland's CBD, it is connected by the State Highway 16 (SH16) and the North Island main trunk railway line in the west and Dairy Flat Highway and SH1 in the east. The western settlements are largely outside Auckland's urban fringe, retaining a mostly rural character; although the adjacent Kumeu/Huapai area has a considerable area zoned Future Urban and conversion of small pockets of farmland to housing is possible. In Dairy Flat and Wainui there is considerable development already underway, with a significant area of land zoned Future Residential.

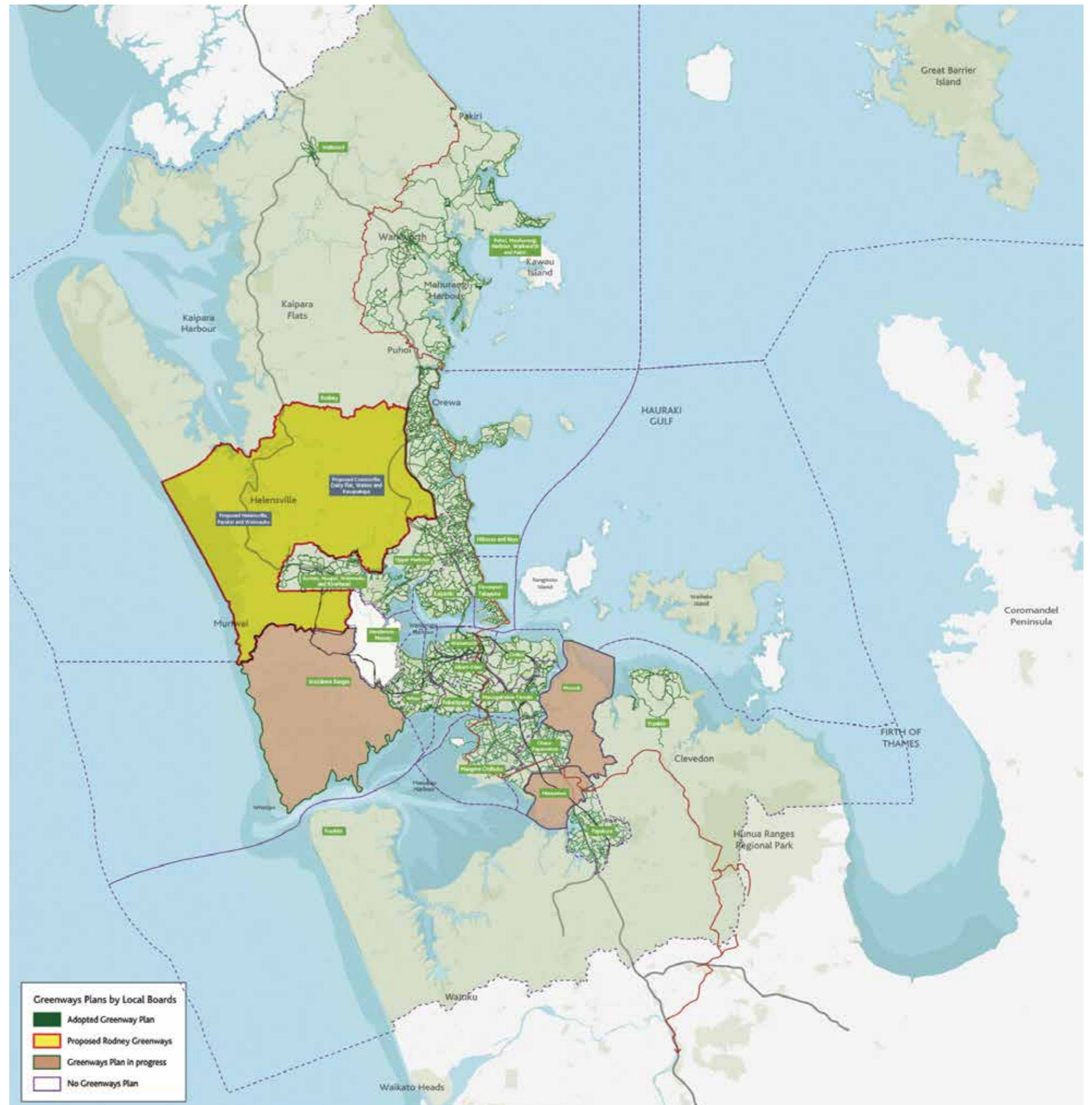
Broader transport connections

As Auckland grows, pressure on land available for both residential and employment development increases. The Dairy Flat/Wainui area is zoned for urban growth and both planning and physical work is underway.

This plan was developed using the knowledge available at the time, but also in recognition of impending release of further work that was not yet available. This forthcoming work focussed on the Wainui area and particularly related to the transport network in that vicinity. Discussions held with those preparing this work confirmed that this plan was not incompatible with what was due for release.

Broader walking and cycling connections

The 'Kaipara Missing Link' is part of Nga Haerenga, the New Zealand Cycle Trail. It is listed as a Heartland Trail cycle touring route and joins Dargaville with central Auckland, travelling the Kaipara Harbour from Pouto Point to Parakai by boat. From Helensville, the route follows Wishart Road and the Old North Road to Taupaki Road and Red Hills Road. The greenways plan recognises this significant national cycle trail and provides a basis for upgrading where appropriate.

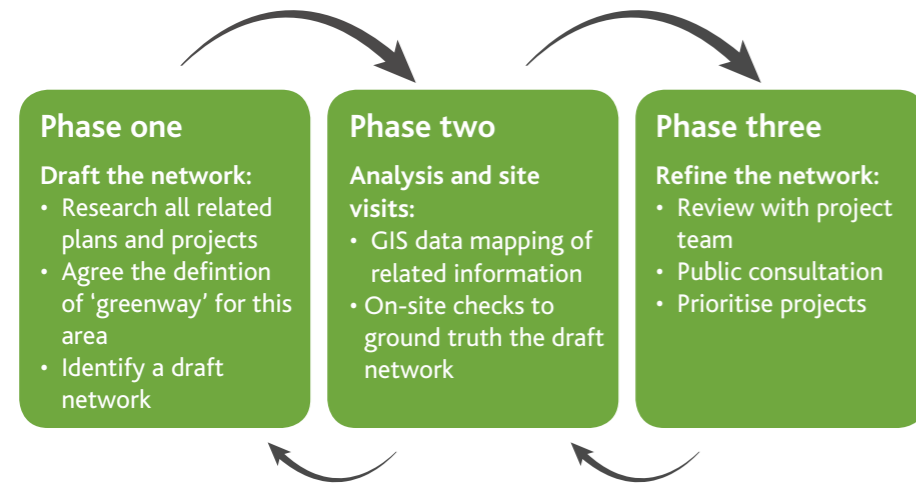




2.0 Method

2.1 The process

The West Rodney greenways plan was developed using a three-stage process, with feedback loops, as outlined below:



Phase one – Stocktake, key stakeholder consultation and network draft

As a first step, all planning documents relevant to the area were reviewed. The Rodney Local Board Plan (2014) was reviewed to gain an understanding of the desires of the community as well as the projects planned for implementation over the coming years. After this, the definition of what a greenway is was discussed and agreed with the local board. The local board set up a working party, which met to review the plan as it developed.

Next, a desktop study was carried out to map a draft series of routes. This network linked up existing parks, streets, schools, town centres and community facilities and the like. Ecological improvements were also considered, by connecting significant areas of bush / planting, with the vegetated areas along streams, rivers, and coastal edges. This draft gave an understanding of the broad landscape patterns within the area and was used to guide phase two of the process.

Phase two – Analysis and targeted consultation

Following the initial desktop mapping, draft routes were overlaid with geographic information systems (GIS) data (refer appendices), sourced to ensure that the network made appropriate connections to all local destinations, such as schools, community facilities, town centres and transport nodes. Consultation material was then prepared for presentation in targeted consultation.

Targeted Consultation – Phase One

Between June and September 2018 several sessions and discussions were held with community groups known to have an active interest in greenways and with members of the public at drop in sessions. Discussions were held with the Coatesville Residents Association, who provided useful input as well as primary schools and scouts. A workshop was held with Auckland Transport (AT), New Zealand Transport Agency (NZTA) and various council officers to improve awareness of the project and to gain information on current and planned projects that could affect the greenways plan.

- drop in session – Helensville War Memorial Hall
- drop in session – Kaukapakapa Memorial Hall
- drop in session – Coatesville Settlers Hall
- NZ Horse Network and Coatesville Pony Club
- Ngā Maunga Whakahii o Kaipara (Woodhill Forest)
- Dairy Flat School
- Wainui School.

At these sessions, the draft routes were provided and general feedback on their alignment was received. The feedback was then collated and the draft routes revised prior to wider community engagement. Follow-up discussions were held with several people who expressed specific interest at the drop-in sessions. These discussions were useful especially regarding identification and use of paper roads for recreation.

Wider Consultation – Phase Two

Public consultation was open from 17 September to 14 October 2018 on the Auckland Council's "Have your say" website where the public could view the draft routes and submit online feedback (refer to Appendix – Section D for the online survey results).

The feedback from these sessions and the "Have your say" web page was then incorporated into the final network plans shown in Section 3. This local knowledge was also very valuable in determining the proposed priority routes (Appendix Section C).

As full construction of this network cannot be funded at this stage, the local board has identified priority sections. These priority sections are based on community desire, costs, benefits, constraints and opportunities, often coordinated with other local projects – including those by Auckland Council, Council Controlled Organisations and external stakeholders, such as NZTA, Department of Conservation and Community Groups.

2.2 Consultation summary

Overall

In general, there is much support for greenways in the study area, with 76 percent of online submissions 'strongly agreeing' with the creation of the Rodney Local Board greenways network. There was an emphasis placed on the importance of new walkway and cycleway linkages within new residential development as the area intensifies. The need to retain 'green space' and protect areas of native bush was also a concern.

Safety was a major concern, for school children, recreational walkers and cyclists as well as horse riders. Many roads have little or no shoulder and deep drainage ditches alongside. As well as reducing safety for anyone not in a motor vehicle, use of these roads can be daunting for non-motorised users. Traffic volumes, speeds and lack of care and courtesy by drivers were mentioned by many respondents. The opportunity for children to walk to school safely in Kaukapakapa was a major concern raised by parents.

People noted that links would support local businesses such as wineries, cafés and accommodation providers. The community identified several key gaps at both a local and broader scale, including:

- no footpaths on local roads popularly used for exercise such as Inland Road and Wishart Roads, Helensville
- footpaths or walkways to key destinations including the A&P Showgrounds in Helensville
- easier access to paper roads for recreational use
- additional residential developments south of SH16 at Kaukapakapa will mean more children needing to cross this major road to get to school, a severance issue
- bridle routes south and west of Parakai
- opportunities to provide for users of the Kaipara Missing Link ride
- better links from Muriwai to the Goldies Bush walk.

Walkways

There was an emphasis on the need for safe, connected walkways through reserves, along the coast and riverbanks (Kaipara and Kaukapakapa rivers), the town centres and to schools. The community drew or wrote down their favoured routes on the maps or provided comments on the online feedback forms. All suggestions have been used to inform and revise the location of greenways network. The comments included:

Cycleways

Cycling by bunches of road cyclists is popular in this area, although the high traffic speeds and blind corners on the country roads make for an environment that can be difficult to share. Feedback in relation to road safety will be shared with Auckland Transport to help develop the Auckland Cycle Network (ACN). Most connections are not well developed between communities and cycling is only possible on the road network. Mapping from consultation showed new, safe connections between centres, these included:

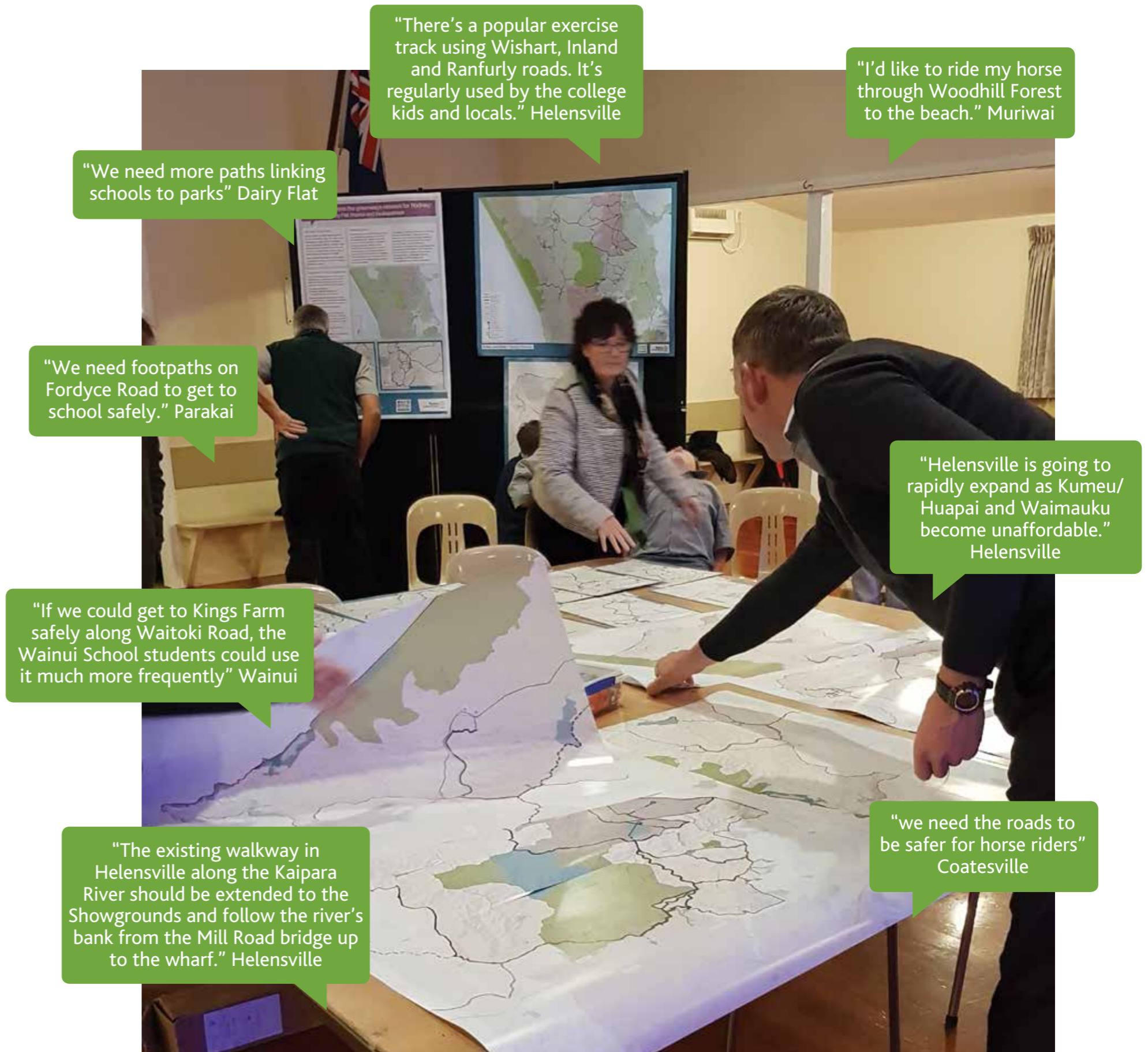
- Kaipara River from Waimauku to the Woodhill Forest
- Wishart Road and Old North Road between Helensville and Taupaki.

Bridleways

Bridleways were well supported in the feedback, especially outside the urban and future urban areas. There is a need for destination bridleways as the main roads are too trafficked and many lack the space for riders within the road corridor. Wide, safe verges away from the traffic are preferred by riders.

Feedback was received from local organisations, members of the local community and residents of the wider Auckland area. Submissions generally supported the proposed routes as appropriate recreational and commuter links for the community and for their associated health, social, ecological and safety benefits. The routes were refined to reflect the feedback provided by community, resulting in the overall West Rodney greenways network plan in Section 3.

Following confirmation of the proposed greenway network, priority routes were identified for delivery and/or advocacy. Greenways plans are long-term visions to be implemented over the next 20 plus years and prioritising projects helps the local board to focus on achieving sections of the plan within its three-year term. Project priorities are based on several factors, including costs, benefits, constraints, timing and related opportunities, such as work being carried out by other agencies, or acquisitions becoming available.





3.0 Greenways Mapping

3.1 Long term aspirational greenways with additional future planning overlays

This map shows the completed greenways vision adopted by the Rodney Local Board, including both the priority sections as well as the longer-term routes. This vision is aspirational and will be reviewed on a regular basis as priority sections are completed and as other related projects are finished.

The greenways network is shown as it relates to Auckland Unitary Plan zoning. Showing the urban growth zones, future road network and other long-term planning overlays. The greenways plan area has concentrated areas zoned for urban growth, but the remainder will inevitably experience pressure on infrastructure as subdivision occurs, leading to increased population and travel demand.

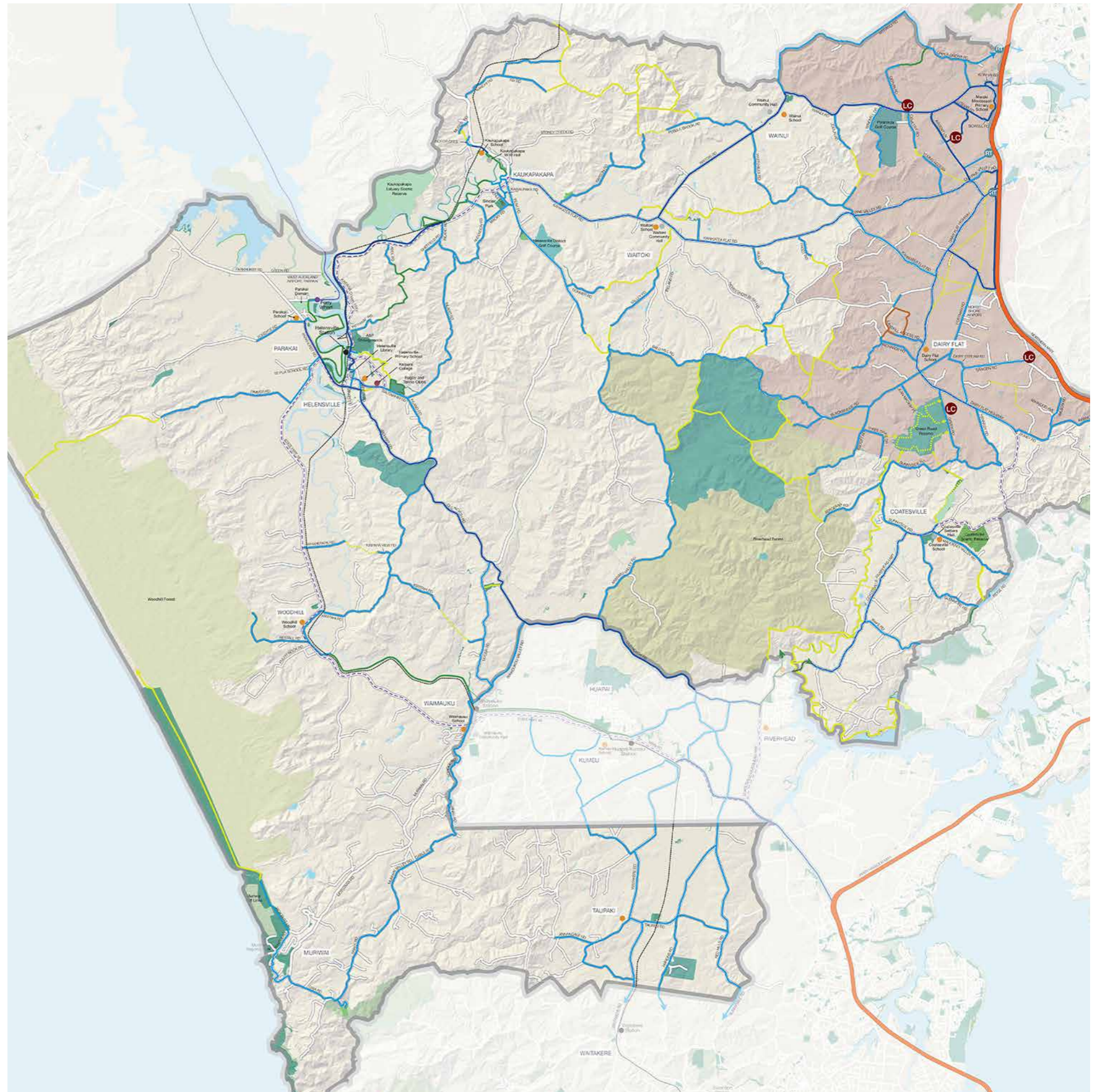
To present this plan at a legible scale the area has been broken down into a series of six enlarged maps, covering Helensville, Parakai and Kaukapakapa; Waitoki, Wainui and Dairy Flat; Woodhill and Waimauku; Coatesville; Muriwai and Taupaki.

Most greenways set out in the map are proposals. Where there are existing or partially established facilities, they might require an upgrade to meet the greenways criteria. Featured in this network is the Kaipara Missing Link, a part of Nga Haerenga the national cycle trail. This route is often used by school groups and connects Dargaville to Auckland CBD and includes a boat trip on the Kaipara Harbour.

This plan makes considerable use of existing sealed roads. This is due to the low density of the plan area and that use, in the next few years at least, will likely be quite low. Some of these roads may already have footpaths, but others may require new walking, cycling or bridleway connections to be established as sharing the roads may not be desirable due to high traffic speeds and volumes.

A “future greenway” type is also included, that shows possible connections in the future growth areas. The exact location of the greenway routes can be reviewed once the layout of the growth areas is determined.

The level of detail included in greenways plans for adjacent areas such as the Kumeu, Huapai, Waimauku and Riverhead greenways plan has not been included at this point due to the size and scale of the plan area. Those issues are covered in the priority mapping in Appendix C.



LEGEND

Proposed Greenways 2019:

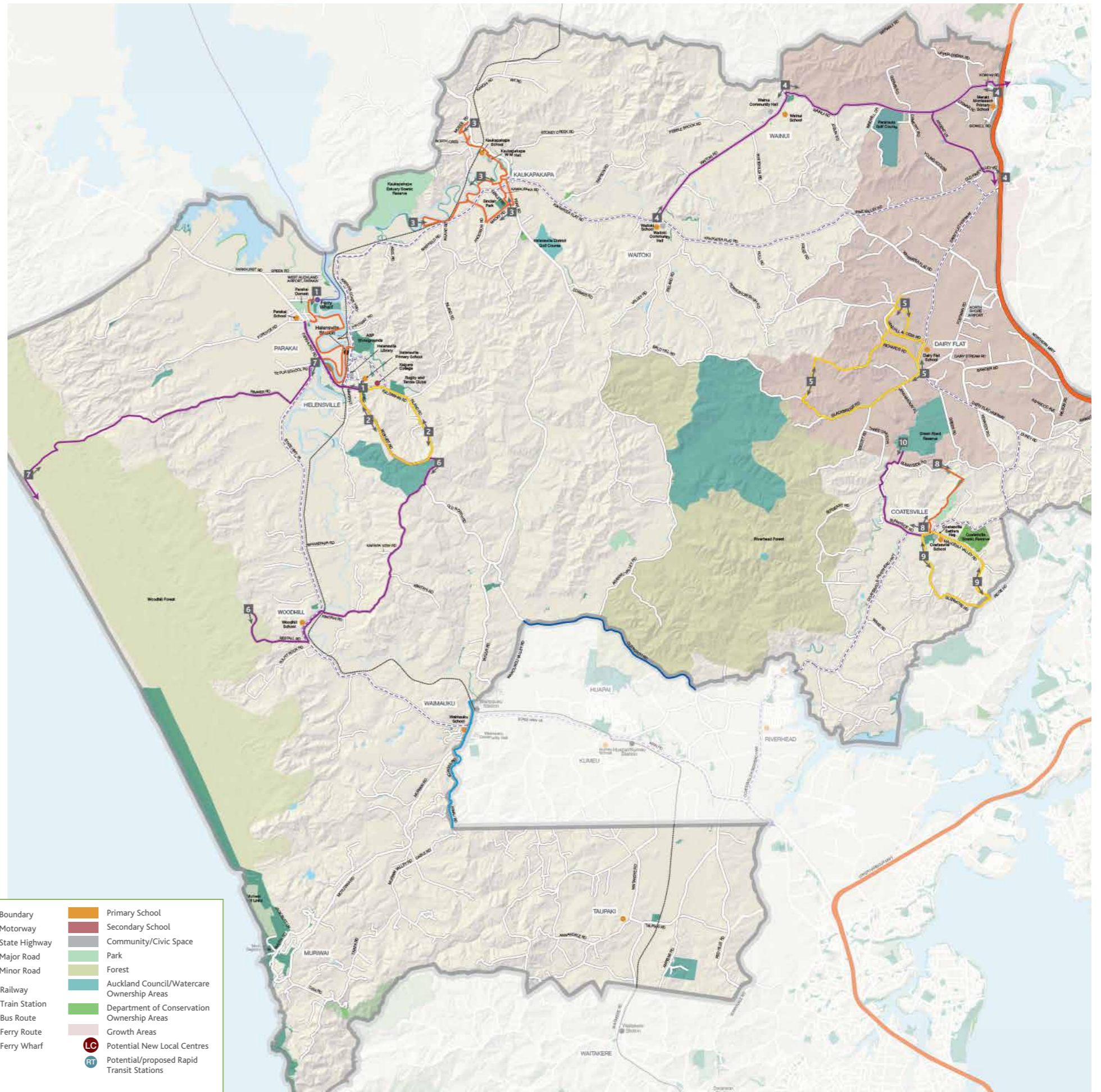
1. Express Path – Street	Boundary	Primary School
2. Local Path – Street	Motorway	Secondary School
3. Express Path – Open Space	State Highway	Community/Civic Space
4. Local Path – Open Space	Major Road	Park
5. Trail – Walking only	Minor Road	Forest
	Railway	Auckland Council/Watercare Ownership Areas
	Train Station	Department of Conservation Ownership Areas
	Bus Route	Growth Areas
	Ferry Route	Potential New Local Centres (LC)
	Ferry Wharf	Potential/proposed Rapid Transit Stations (RT)

Scale: 0 1km 2km 5km

3.2 Proposed priority routes

This greenways plan presents a long-term vision. To help deliver projects on the ground, several priority routes have been identified as outcomes of the consultation phase. These priorities should help to deliver some quick results for implementation or advocacy over the next 3-5 years; subject to availability of funding. All these routes may not be delivered unless funding is available, but this map gives an indication of where attention should be focussed in the short term. Further detail is contained in Appendix C.

In Appendix C the priority routes are divided into two types of sections, based on the approach to be taken in a project phase: complex and straightforward delivery. Straightforward delivery sections are marked with a solid line, which means the ownership status, topography and environment enables a relatively fast evaluation. Complex delivery means land ownership, AT negotiations or topography makes evaluation necessary by these agencies in a project phase. In Appendix C, these complex delivery sections are marked with dashed lines.



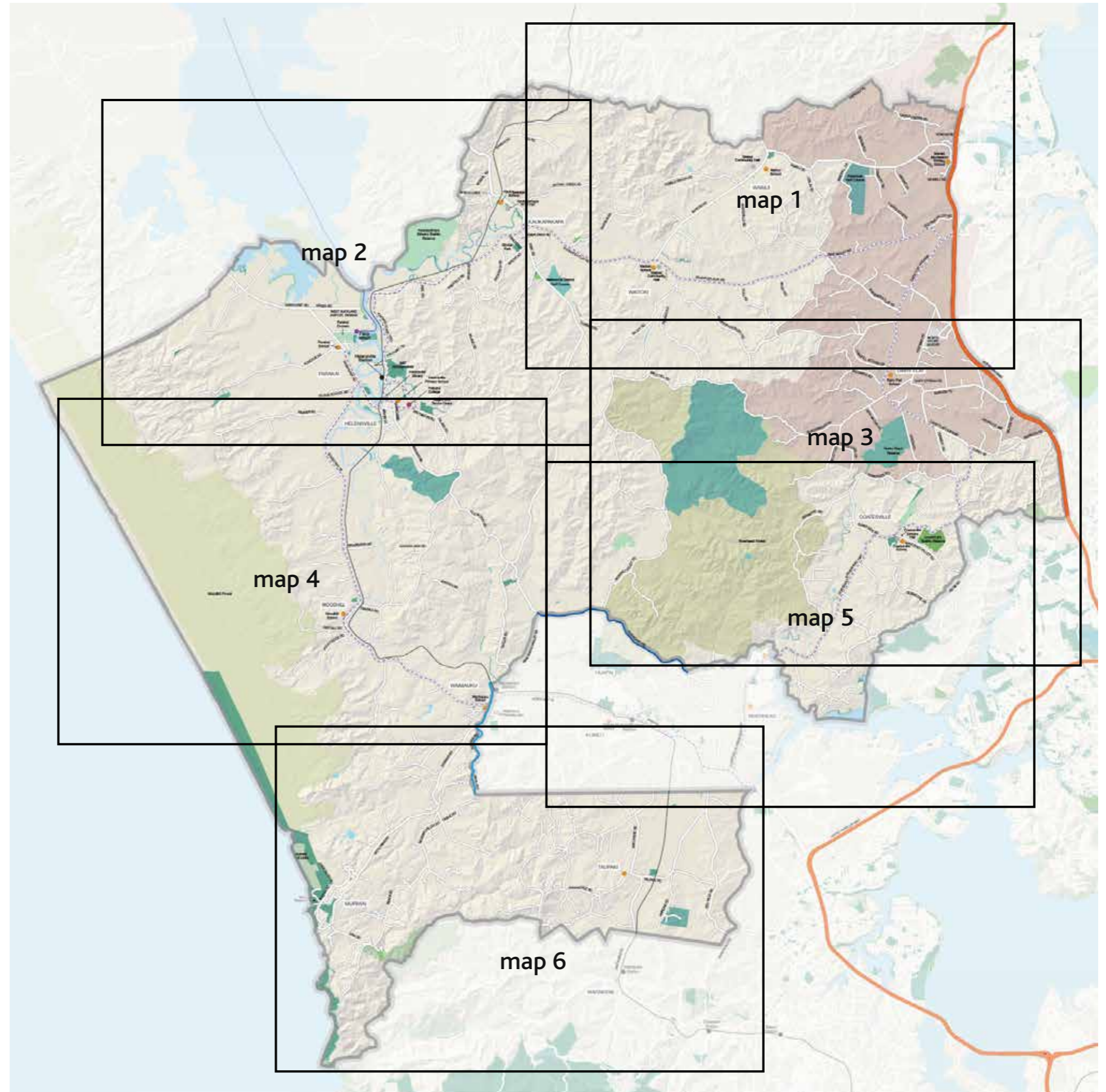
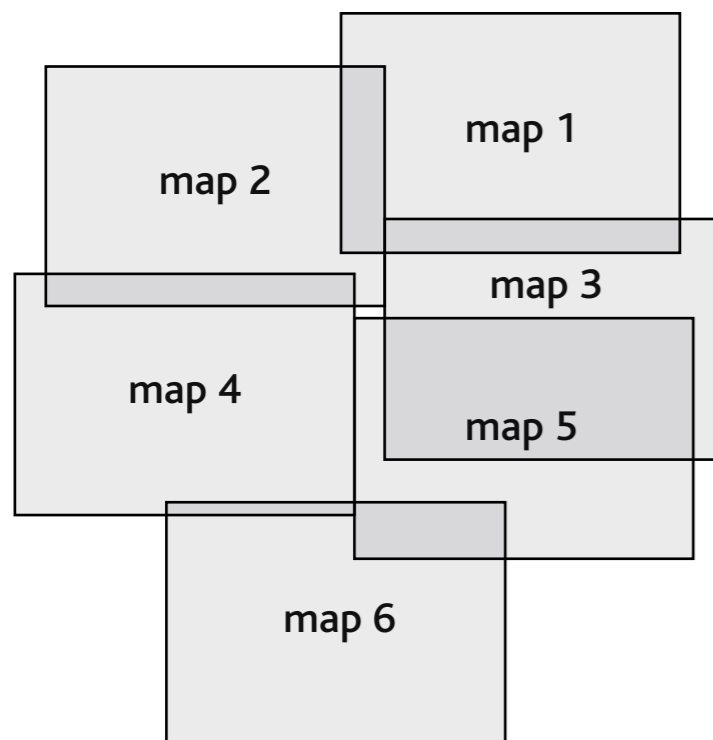
LEGEND			
Proposed Greenways 2019:			
	Destination to destination		Boundary
	Township loop		Motorway
	Exercise loop		State Highway
			Major Road
			Minor Road
			Railway
			Train Station
			Bus Route
			Ferry Route
			Ferry Wharf
	Parakai to Helensville		Primary School
	Helensville exercise loop		Secondary School
	Kaukapakapa		Community/Civic Space
	Wainui		Park
	4.1 – Stage 1: Wainui School, Whitehills Road to Kings Farm Reserve		Forest
	4.2 – Stage 2: Weranui Road		Auckland Council/Watercare Ownership Areas
	4.3 – Stage 3: Waitoki Road, Whitehills to Waitoki		Department of Conservation Ownership Areas
	Dairy Flat		Growth Areas
	Kiwitahi Road		Potential New Local Centres
	Rimmer Road to Muriwai Beach		Potential/proposed Rapid Transit Stations
	Coatesville Scenic Reserve		
	Coatesville exercise loop		
	Coatesville to Green Road Reserve		

3.3 Proposed Greenway Network detail plans – reference plan

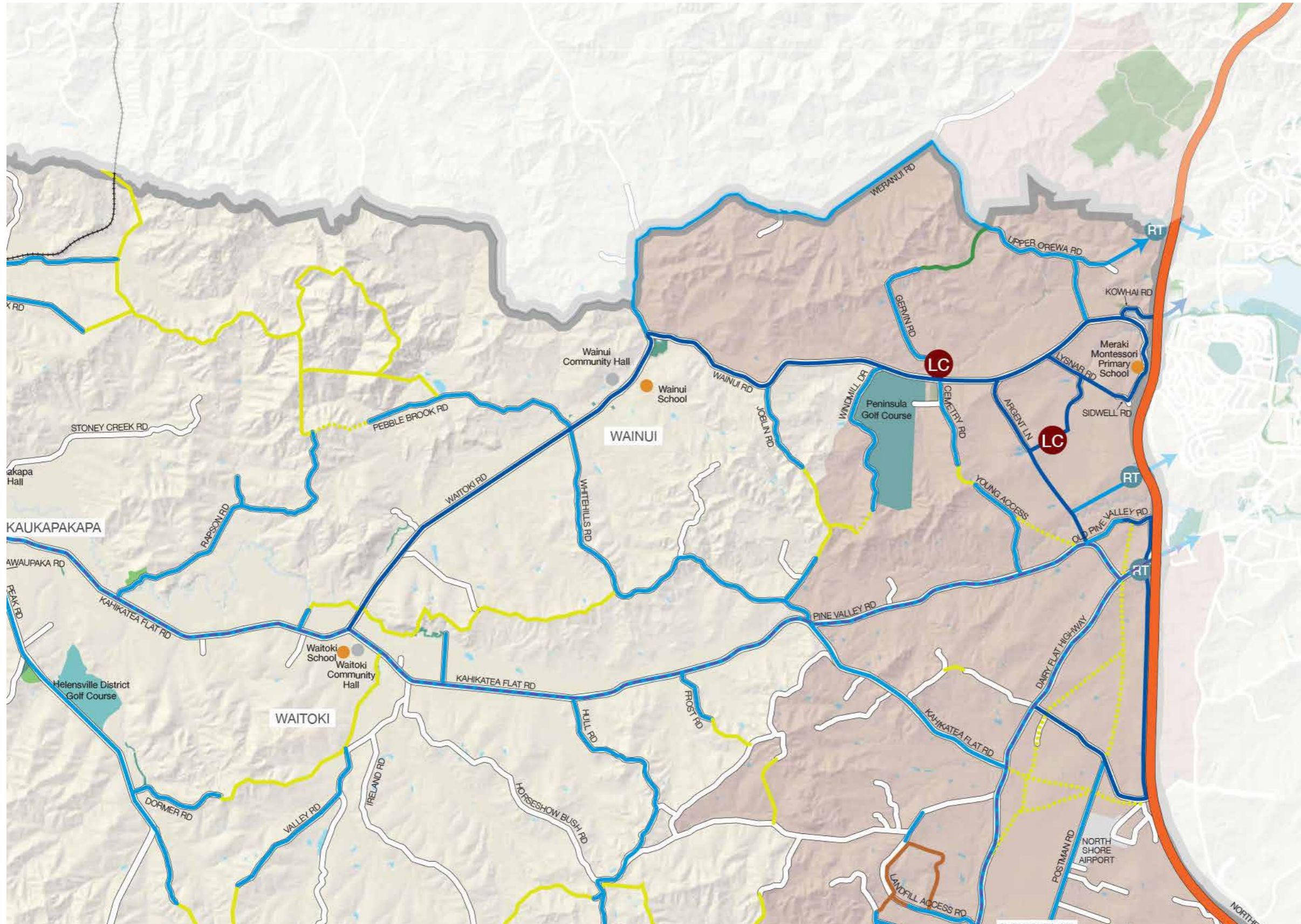
To present this plan at a legible scale, six more detailed maps have been prepared, covering:

- Map 1 Waitoki and Wainui
- Map 2 Helensville, Parakai and Kaukapakapa
- Map 3 Dairy Flat
- Map 4 Woodhill and Waimauku
- Map 5 Coatesville
- Map 6 Taupaki

These maps can be viewed on the following pages.



3.4 Proposed Greenway Network Plan Map 1 of 6: Waitoki and Wainui



LEGEND

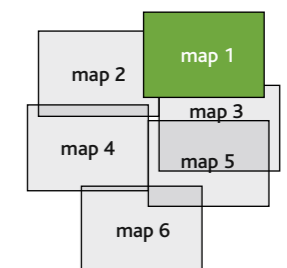
Proposed Greenways 2019:

- 1. Express Path – Street
- 2. Local Path – Street
- 3. Express Path – Open Space
- 4. Local Path – Open Space
- 5. Trail – Walking only

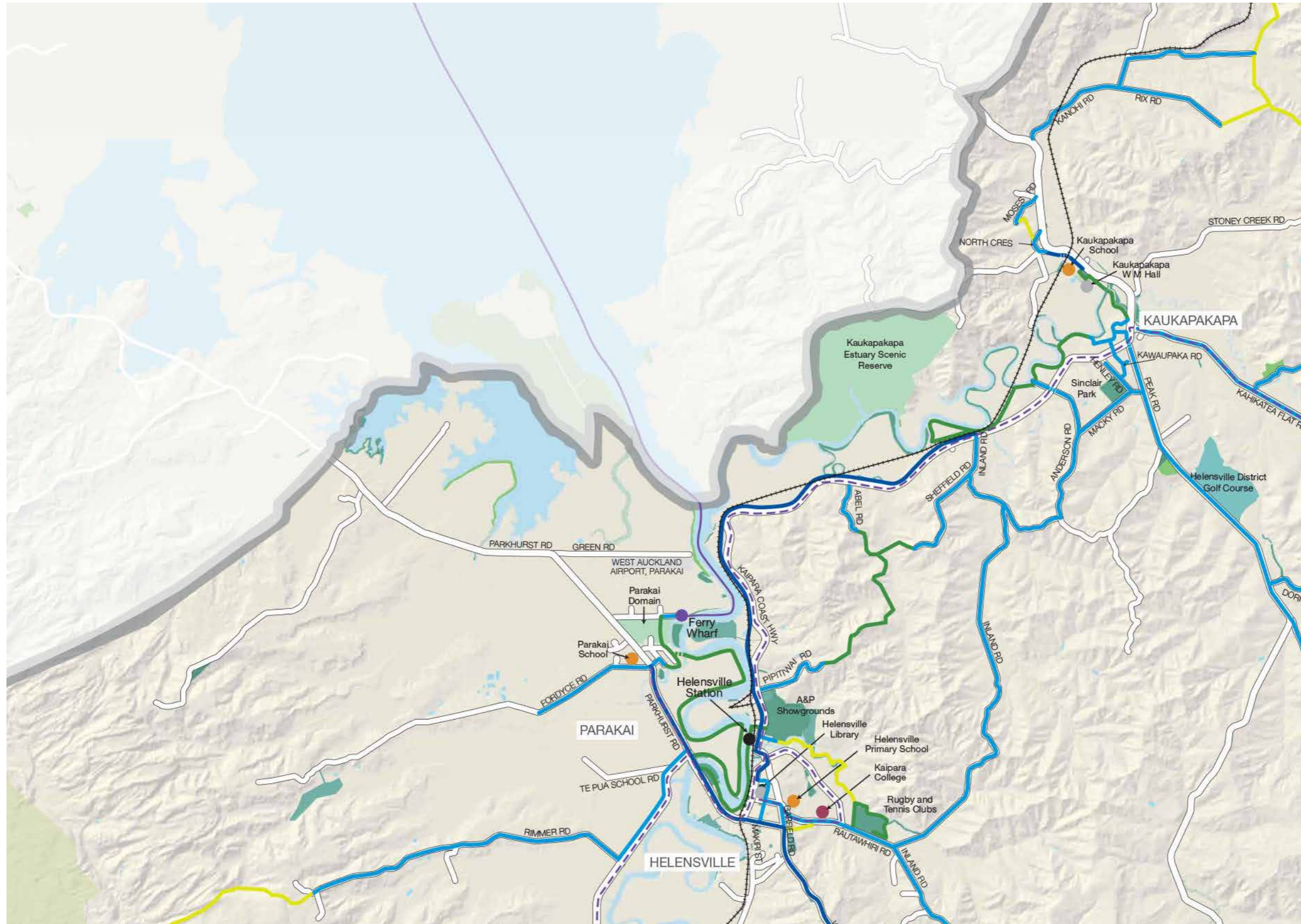
- Local Path – Open Space (route to be defined)
- Boundary
- Motorway
- State Highway
- Major Road
- Minor Road
- Railway
- Train Station
- Bus Route
- Ferry Route
- Ferry Wharf
- Primary School
- Secondary School
- Community/Civic Space
- Park
- Forest
- Auckland Council/Watercare Ownership Areas
- Department of Conservation Ownership Areas
- Growth Areas
- Potential New Local Centres
- Potential/proposed Rapid Transit Stations

Scale: 0 500m 1km 2km

Given the rate of change in this area, interested parties should consult the Auckland Unitary Plan section 1544, Wainui Precinct; the Draft Silverdale West Dairy Flat Area Structure Plan and any subsequent draft or adopted plans or proposals for the vicinity.



3.5 Proposed Greenway Network Plan Map 2 of 6: Helensville, Parakai and Kaukapakapa



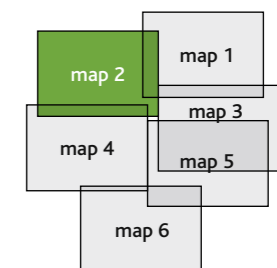
LEGEND
Proposed Greenways 2019:

1. Express Path – Street
2. Local Path – Street
3. Express Path – Open Space
4. Local Path – Open Space
5. Trail – Walking only

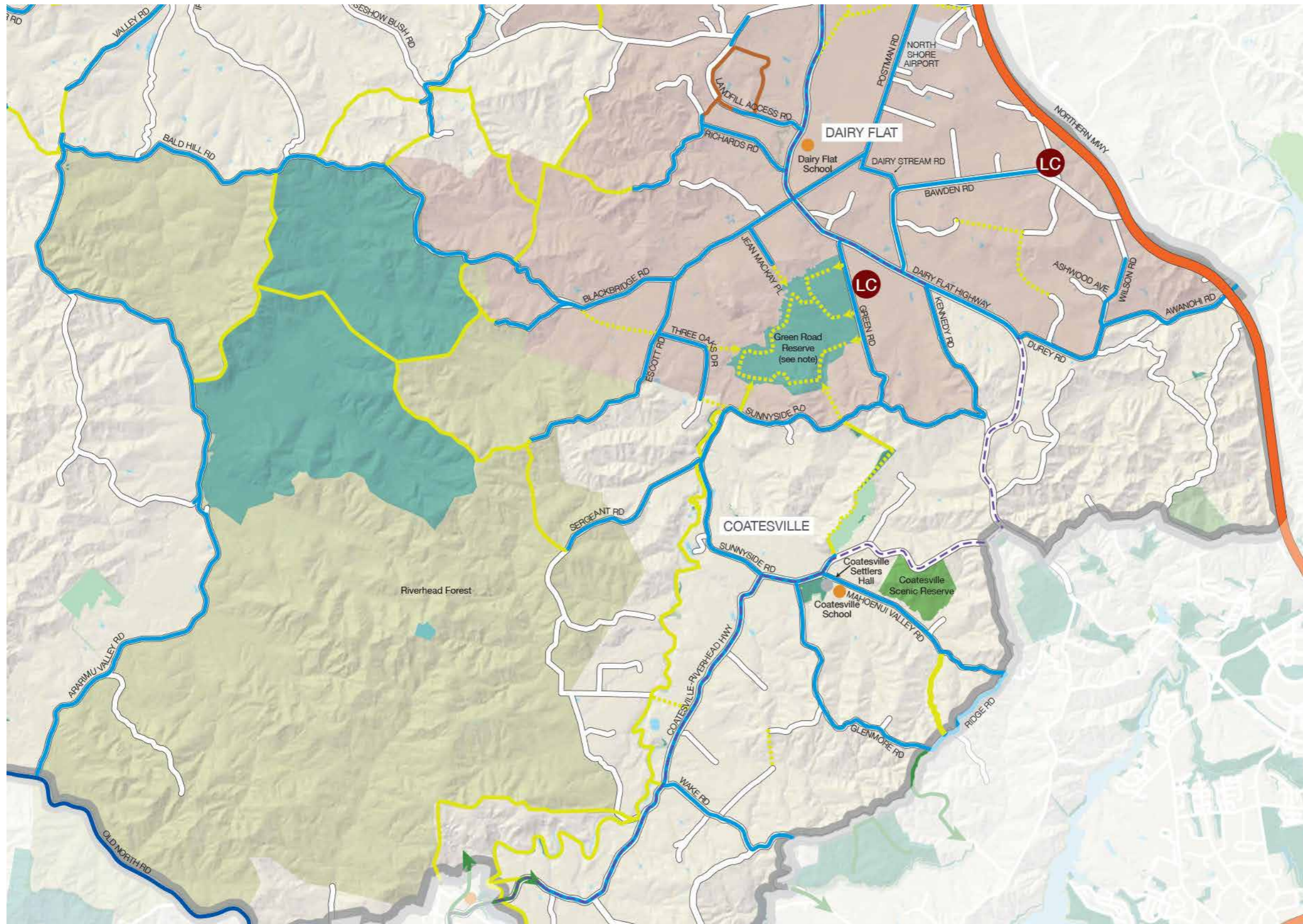
Local Path – Open Space (route to be defined)

- Boundary
- Motorway
- State Highway
- Major Road
- Minor Road
- Railway
- Train Station
- Bus Route
- Ferry Route
- Ferry Wharf
- Primary School
- Secondary School
- Community/Civic Space
- Park
- Forest
- Auckland Council/Watercare Ownership Areas
- Department of Conservation Ownership Areas
- Growth Areas
- Potential New Local Centres (LC)
- Potential/proposed Rapid Transit Stations (RT)

Scale: 0 500m 1km 2km



3.6 Proposed Greenway Network Plan Map 3 of 6 Dairy Flat and Coatesville



LEGEND

Proposed Greenways 2019:

1. Express Path – Street
2. Local Path – Street
3. Express Path – Open Space
4. Local Path – Open Space
5. Trail – Walking only

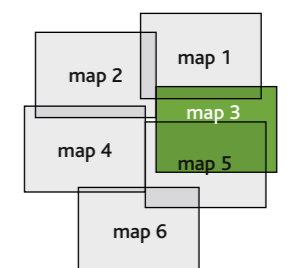
Local Path – Open Space (route to be defined)

- Boundary
- Motorway
- State Highway
- Major Road
- Minor Road
- Railway
- Train Station
- Bus Route
- Ferry Route
- Ferry Wharf
- Primary School
- Secondary School
- Community/Civic Space
- Park
- Forest
- Auckland Council/Watercare Ownership Areas
- Department of Conservation Ownership Areas
- Growth Areas
- Potential New Local Centres (LC)
- Potential/proposed Rapid Transit Stations (RT)

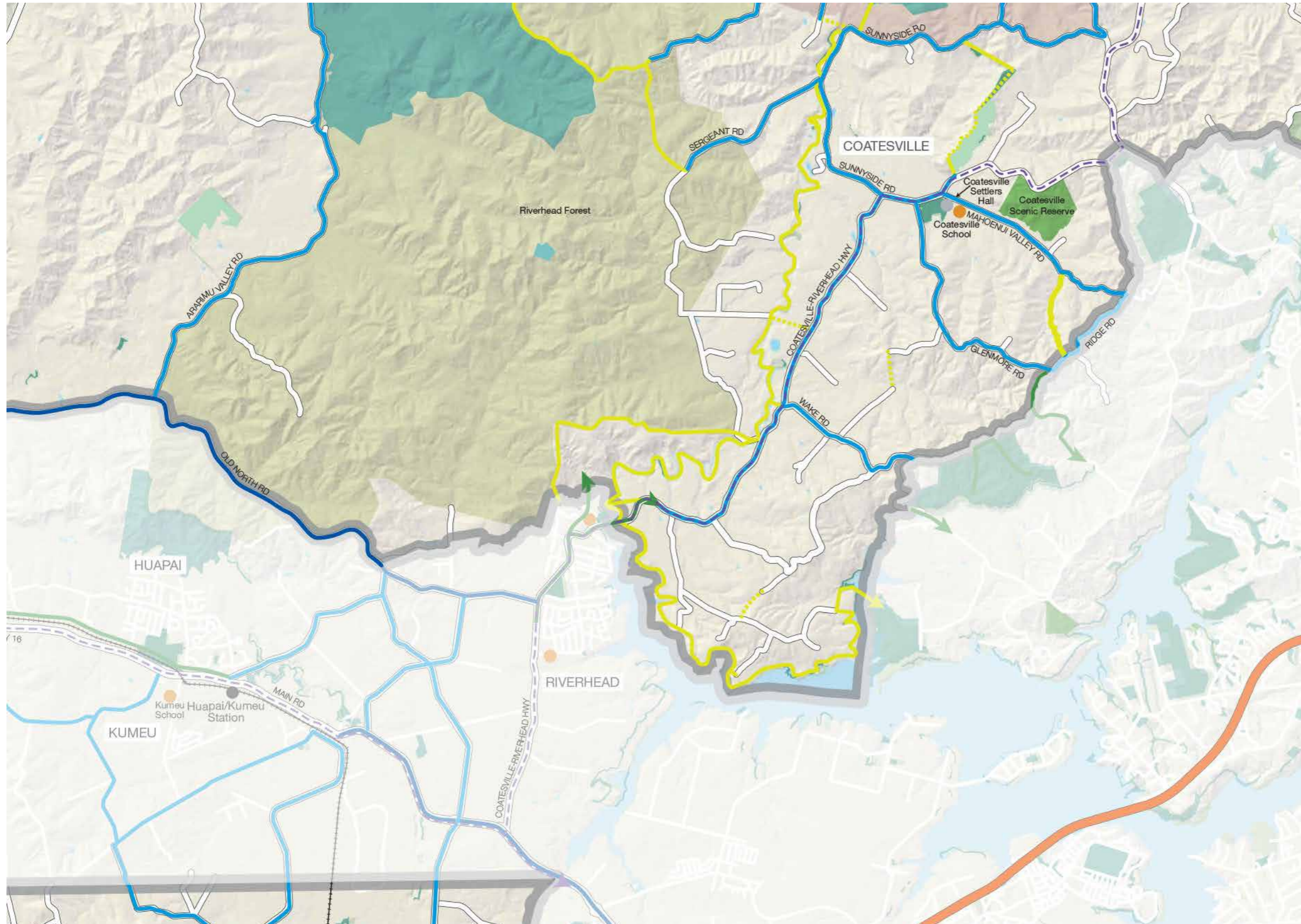
Scale: 0 500m 1km 2km

Given the rate of change in this area, interested parties should consult the Auckland Unitary Plan section 1544, Wainui Precinct; the Draft Silverdale West Dairy Flat Area Structure Plan and any subsequent draft or adopted plans or proposals for the vicinity.

The Green Road Masterplan will define the internal circulation for Green Road Reserve.



3.8 Proposed Greenway Network Plan Map 5 of 6: Coatesville



LEGEND

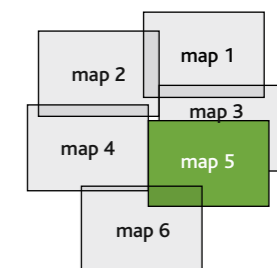
Proposed Greenways 2019:

1. Express Path – Street
2. Local Path – Street
3. Express Path – Open Space
4. Local Path – Open Space
5. Trail – Walking only

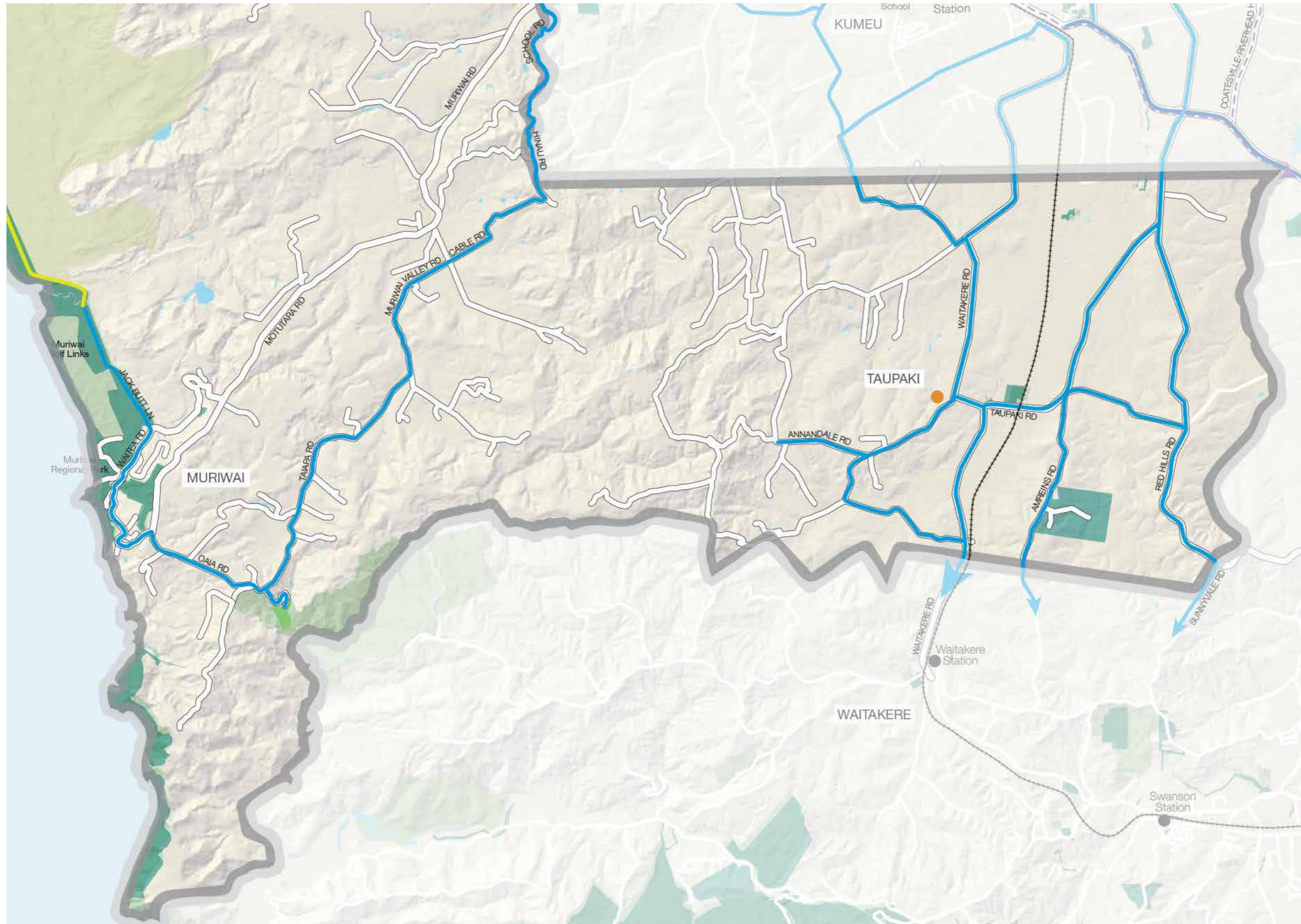
----- Local Path – Open Space (route to be defined)

- Boundary
- Motorway
- State Highway
- Major Road
- Minor Road
- Railway
- Train Station
- Bus Route
- Ferry Route
- Ferry Wharf
- Primary School
- Secondary School
- Community/Civic Space
- Park
- Forest
- Auckland Council/Watercare Ownership Areas
- Department of Conservation Ownership Areas
- Growth Areas
- LC Potential New Local Centres
- RT Potential/proposed Rapid Transit Stations

Scale: 0 500m 1km 2km



3.9 Proposed Greenway Network Plan Map 6 of 6: Muriwai and Taupaki



LEGEND

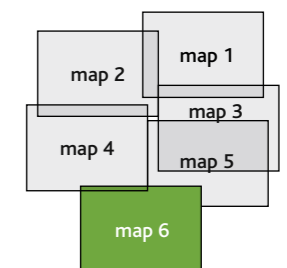
Proposed Greenways 2019:

1. Express Path – Street
2. Local Path – Street
3. Express Path – Open Space
4. Local Path – Open Space
5. Trail – Walking only

Local Path – Open Space (route to be defined)

- Boundary
- Motorway
- State Highway
- Major Road
- Minor Road
- Railway
- Train Station
- Bus Route
- Ferry Route
- Ferry Wharf
- Primary School
- Secondary School
- Community/Civic Space
- Park
- Forest
- Auckland Council/Watercare Ownership Areas
- Department of Conservation Ownership Areas
- Growth Areas
- Potential New Local Centres (LC)
- Potential/proposed Rapid Transit Stations (RT)

Scale: 0 500m 1km 2km



4.0 Future Development

4.1 Future development

The Rodney West greenways plan will be implemented over time to help achieve the outcomes envisaged in the Rodney Local Board Plan 2017. Implementation of this plan may include the upgrade of existing walking and cycling routes (both on road and off road), as well as the creation of new connections within open space or on paper roads, through designation areas, and/or via partnerships with non- council parties. Physical works may include the upgrade of existing footpaths or roads to meet the requirements set out in the design guide. They may also include the creation of entirely new routes, and in all cases should be supported by improved planting and ecological measures.

Successful construction of greenways requires co-ordination and commitment from the Rodney Local Board in collaboration with Auckland Council and Council-Controlled Organisations (CCOs), as well as key related public and utility organisations such as the NZTA, KiwiRail, Watercare, Transpower and Vector. Participation by community groups, local businesses or schools will also greatly assist with the delivery of the network.

The following section gives an overview of the future development and implementation of this greenways plan over the next 10 years, including best practice for implementation, stakeholder involvement, funding availability and related case studies.

4.2 Best practice for Implementation

Successful implementation of the greenways plan relies on co-ordination between Auckland Council's Parks, Biodiversity, Stormwater and Community Policy and Planning departments, as well as Auckland Transport. Detailed planning for each of the individual projects to be designed and constructed over the coming years must take into consideration best practice guidelines, which include:

- Local Path (Greenways) Design Guide (Auckland Council and Auckland Transport)
- Auckland Council's Auckland Design Manual, which includes:
- Auckland Transport's Code of Practice
- Auckland Council's Stormwater Code of Practice
- Auckland Council's Parkland Design Guidelines
- Auckland Council's Te Aranga Principles.

Related 'best practice' documents such as "Bridging the Gap – NZTA Urban Design Guidelines", "Caring for Archaeological Sites" (DoC) and "National Guidelines for Crime Prevention through Environmental Design (CPTED)" (Ministry of Justice) should be taken into account. So too should all relevant Unitary Plan controls and area specific policies, for example, those relating to the North Shore Airport.

4.3 Stakeholder funding and information

Ongoing community engagement, stakeholder collaboration and partnerships are key to the successful implementation of the Rodney West greenways.

Likely stakeholders include:

- Neighbouring local board areas
- Auckland Tourism, Events and Economic Development (ATEED)
- Cycle Action Auckland
- YES Disability
- Operators of community facilities, including schools
- Ministry of Education
- Department of Conservation
- Housing New Zealand
- Local residents, community and service groups and business associations
- Forest and Bird.

Grass-roots community involvement is very important to ensure the ongoing success of the greenways plan and of the greenways facilities once in place. Local knowledge-sharing and volunteering are needed to provide community ownership, care and responsibility. Community involvement could take the form of planting/weed clearance days, 'adopt a stream/street' groups, fund raising, lobbying and artistic input.

Funding has been allocated for roading improvements in the local board area in Auckland Council's Long-Term Plan (LTP) for the next ten years, and some of these funds will be used to implement the greenways. Other funding avenues include Auckland Transport and the NZTA's regional cycleways fund. In addition, the local board has planned open space projects to assist with implementation of the priority sections of this plan.

The maps contained in Appendix C break down the prioritised projects in more detail, to assist with budgeting, advocacy and programming.

4.4 Working with Mana Whenua – Treaty partners

The Rodney Local Board will work with Mana Whenua to implement this greenways plan, with the guidance of the Te Aranga Principles, these are:

- 1. Rangatiratanga:** The right to exercise authority and self determination within one's own iwi / hapū realm.
- 2. Kaitiakitanga:** managing and conserving the environment as part of a reciprocal relationship, based on the Māori world view that we as humans are part of the natural world.
- 3. Manaakitanga:** the ethic of holistic hospitality whereby mana whenua have inherited obligations to be the best hosts they can be.

4. Wairuatanga: the immutable spiritual connection between people and their environments.

5. Kotahitanga: unity, cohesion and collaboration.

6. Whanaungatanga: a relationship through shared experiences and working together which provides people with a sense of belonging.

7. Mātauranga: Māori / mana whenua knowledge and understanding.

It is understood that these principles are for initial guidance only and in no way replace the need for individual Mana Whenua consultation on every project.

In support of the above principles, there is opportunity to share narratives wherever the greenways routes follow historic trails, for Mana Whenua to share narrative and explore creative expression.

Improving freshwater quality, restoring the health of the natural environment and avoidance of wāhi tapu sites and toanga is a baseline objective of the Rodney greenways and this aligns closely with the 'world view' of the Te Aranga Principles.

The process of developing this plan from aspirational to planning and design to physical implementation requires the support of Mana Whenua, through working relationships and strengthened early and regular engagement, including liaison through the Mana Whenua Northern Iwi Forum, local iwi representatives and marae. This principle was fully supported at the initial consultation phases, where details of the West Rodney greenways was presented to the Mana Whenua Northern Iwi Forum (May 2018). Several iwi representatives noted their interest in early engagement as and when priority routes are put forward for feasibility, investigation and design.

Worthy of note is the ownership of two significant land parcels within the West Rodney greenways study area:

1. Woodhill Forest – Ngati Whatua O Kaipara

2. Riverhead Forest – Te Kawerau ā Maki

Resourcing of iwi engagement will be achieved through the setting of work programme budgets and delivered through Auckland Council's project framework.



Old Helensville Post Office, State Highway 16



References

Auckland Council. (2018). *The Auckland Plan 2050*.

Auckland Council. (2016). *The Auckland Unitary Plan*.

Auckland Council. (2014). *Measuring Auckland's Population Density*.

Auckland Council. *Cultural Heritage Inventory*.

Auckland Council. *Geospatial data*.

Auckland Council and Auckland Transport. *Local Path Design Guide REV 1.2*.

Auckland Transport (2015). *Auckland Cycle Network: Existing and proposed*.

Cameron, E., Hayward, B. & Murdoch, G. (1997). *A field guide to Auckland: Exploring the region's natural and historic heritage*. Auckland, NZ: Randon House.

New Zealand Government. (2019). *Te Ara: The encyclopaedia of New Zealand*. Retrieved from teara.govt.nz

New Zealand Walking Access Commission. (2018). *Walking access strategy 2017 – 2022*.

Rodney District Council. (2007). *Adopted bridleways strategy 2007*.

Rodney Local Board. (2017). *The Rodney Local Board plan 2017*.



Appendices



A. Analysis Mapping



Auckland context

This map shows the study area in the context of the Rodney Local Board area and the wider Auckland region. The Rodney Local Board has by far the largest physical area of all local boards within the Auckland region and for this reason, its greenways plans are split into several smaller areas. Mapping the entire area at once would be extremely unwieldy and the data presented would be at an unreadably small scale.

Roughly 25 kilometres north of Auckland's CBD, the study area is bounded by the Tasman Sea coast in the west and State Highway One in the east. The Waitakere Ward provides a southern boundary, with the Albany Ward to the east, while the northern boundary is formed by a line roughly from Wainui Road through Gatfield Road and across through the northern part of the Woodhill Forest (see map).

With low population density throughout, the area's largest settlement is Helensville, with smaller residential areas in Parakai, Muriwai, Kaukapakapa, Waitoki and Coatesville. Significant urban growth is underway in Wainui and Dairy Flat. While most of the plan area is zoned Rural Production, there is a considerable area of mixed rural and lifestyle blocks feature throughout. Riverhead and Woodhill forests cover a substantial area and combine active forestry with a mix of recreational activities.

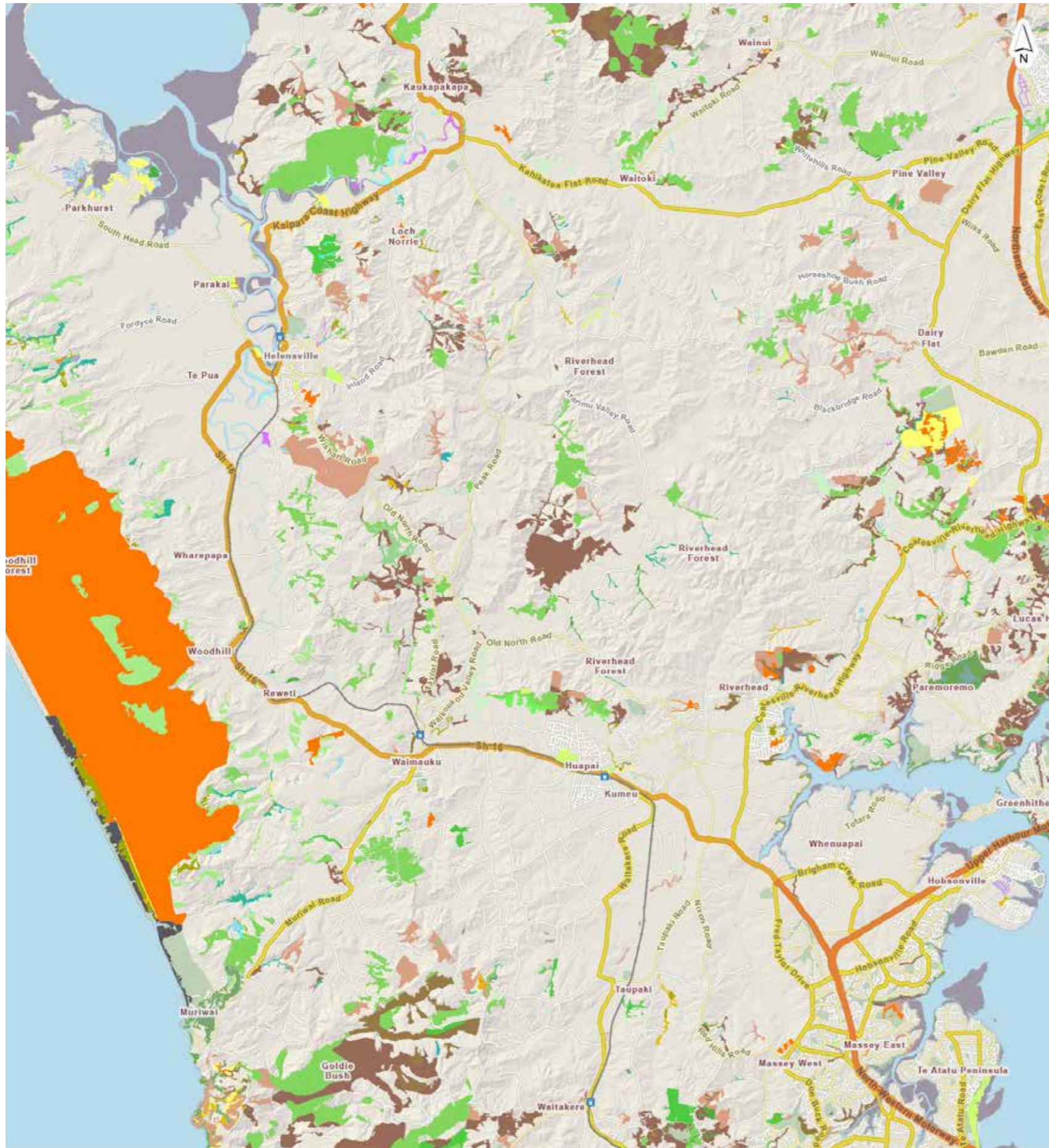
As well as the two forests, there are parks and reserves scattered around the area which include a mix of grassed parks and forested reserves. These include the Muriwai Regional Park, Goldie Bush, Helensville River Reserve, Coatesville Scenic Reserve, Coatesville Recreation Reserve, Muriwai Beach Domain and the forthcoming Green Road reserve. Active recreational opportunities include pools at Parakai Springs, Woodhill Mountain Bike Park and the Silverdale Pony Club.

The Rodney landscape has several major features which define it from a greenways perspective:

- A mix of terrain from the river flats of Helensville to the steeper hills of Riverhead forest
- Roads that are often narrow and winding with deep stormwater runoff ditches each side, yet still have 100 kph speed limits
- Low density settlement, with lifestyle blocks along many roads, but with bigger, undivided holdings away from the roads
- A significant length of coastline along Muriwai Beach, with major waterways of the Kaipara and Kaukapakapa Rivers and riparian margins along creeks and waterways, including the Rangitopuni Stream.
- Significant ecological and landscape features, including dense tracts of native forest.

The low population and some of the lengthy sections of road involved mean that the greenway design standards developed for the more urban sectors of the Auckland region may not apply in the short term at least. However, those standards clearly apply in the new developments in the eastern growth zones.

Rodney Local Board's area connects to the Waitakere Local Board to the south west, Upper Harbour Local Board to the south east and Hibiscus and Bays Local Board area to the east.



Ecology and landscape

Much of the ecological significance of the plan area is due to its open space and rural landscape. While much of the land is pasture, Woodhill and Riverhead forests are significant tracts of planted exotic forests, but the central hill country is peppered with areas of forest and scrub land, often in gullies or on steeper hillsides. Present in the complex landscapes of inland Rodney are an increasingly diverse mix of pastoral farming, forestry, vineyards, numerous remnants of indigenous forest, production activities and scattered agricultural and residential buildings on rolling terrain.

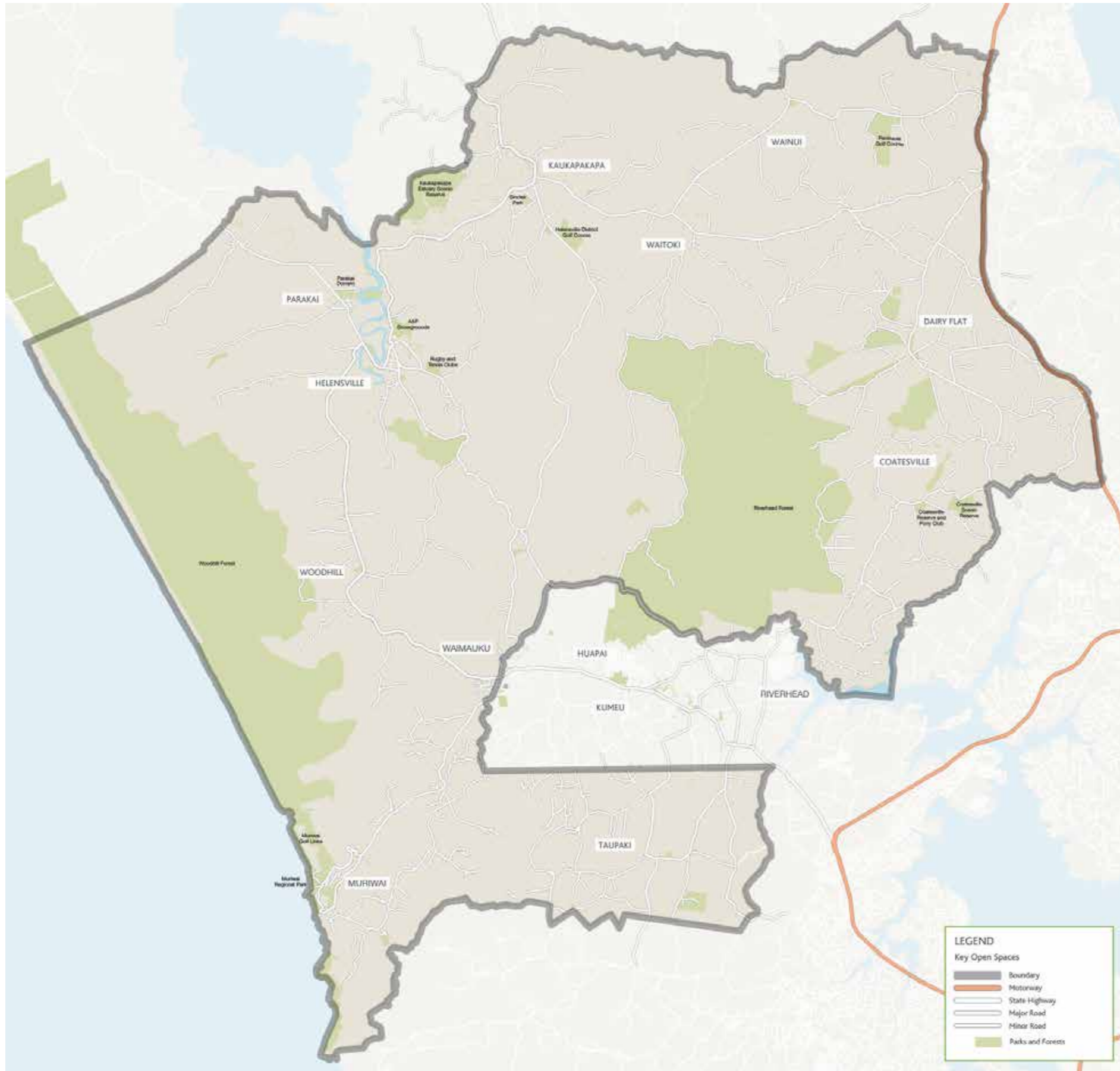
The Kaipara Harbour is one of three areas in the Auckland Region which has national and international ornithological significance, attracting tens of thousands of birds each year from the South Island and from the arctic and subarctic regions. Regular movements of birds occur between the Kaipara and Manukau harbours and the Firth of Thames. With its extensive tidal flats, mangroves and salt marshes, the Kaipara is an important feeding area for waders such as godwit, South Island pied oystercatcher, wrybill and pied stilt. The harbour and shore areas also support pied shag, white-faced heron, red-billed gull, caspian and white-fronted terns, mallard duck, cattle egret, welcome swallow and white heron. The black stilt and fairy tern are seen occasionally.

However, for this part of Rodney, coastal areas feature less prominently than the land. Sites within the study area are considered to have outstanding natural character. This means these areas are highly valued for their natural scenic qualities and natural features or values overshadow human modification to the landscape. Under the Unitary Plan, more restrictive rules apply to the potential development and use of these areas.

At Kaukapakapa the northern banks of the Kaukapakapa River feature a prominent escarpment and ridge. The ridgeline is almost entirely vegetated in semi-mature and mature native forest with the western margins flanked by exotic forestry. These land uses do not disrupt the integrity of the underlying landforms, vegetation cover or the overall cohesion of the river environment. The remnant vegetation and the colonies of mangrove within the river and intertidal margins emphasise and enhance the interplay between the folded landforms, its gullies and the intertidal flats and sinuous patterns of the Kaukapakapa River.

One of New Zealand's three onshore gannet colonies is on Otakamiro Point in Muriwai. This prominent headland is comprised of exposed sedimentary cliffs and rocky shoals at the southern end of Muriwai beach. The mix of starkly exposed sedimentary cliffs, windswept and stunted native scrub, flax, remnant coastal forest and mature pohutukawa are further enhanced by the fleeting qualities resulting from atmospheric conditions, time of day and year and the tide and extensive wildlife.

While most of the plan area is zoned Rural Production, there is a considerable area of mixed rural and lifestyle blocks feature throughout. Riverhead and Woodhill exotic forests cover a significant area and combine active forestry with a mix of recreational activities. As well as the two forests, there are parks and reserves scattered around the area which include a mix of grassed parks and forested reserves.

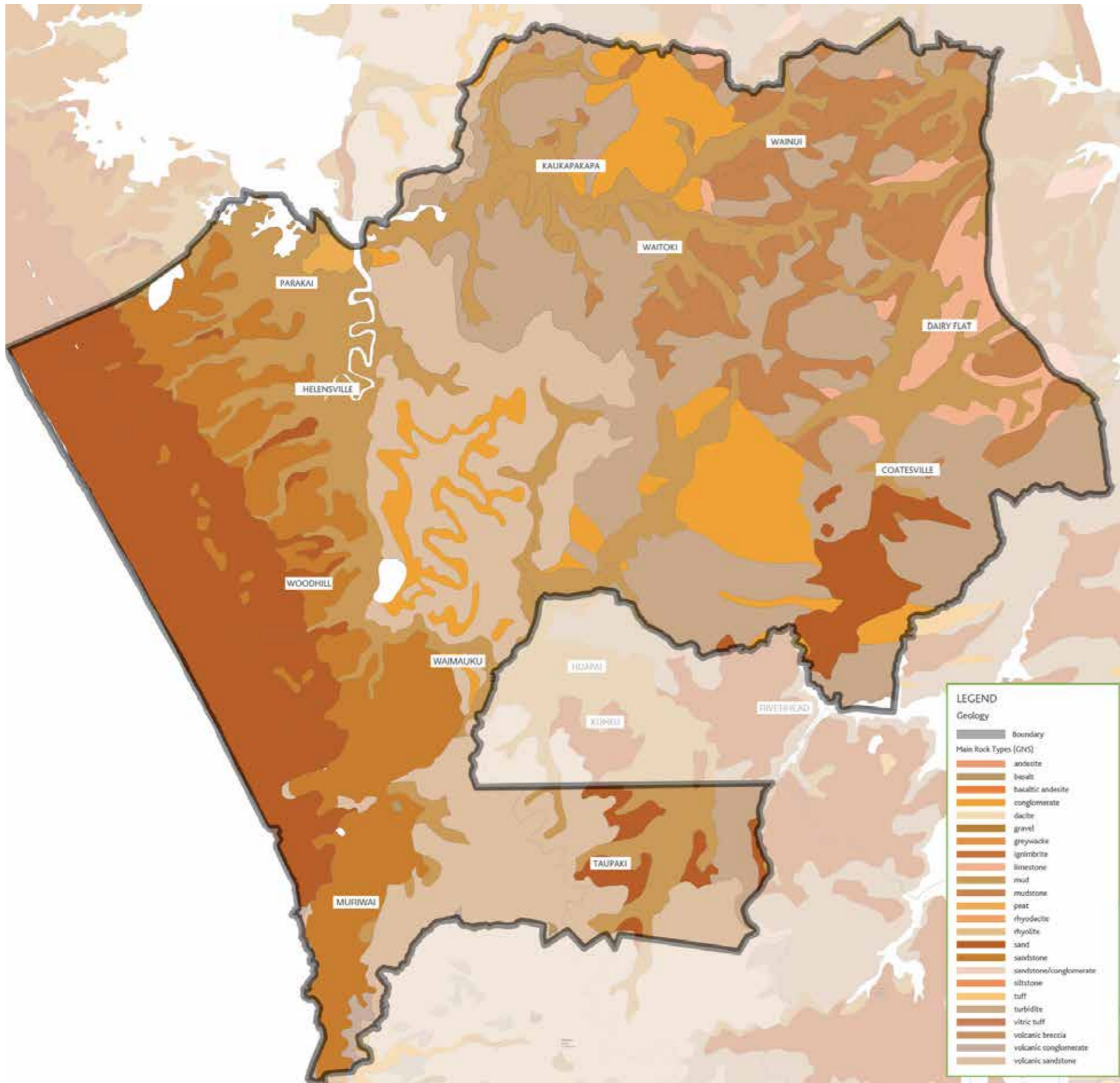


Key open spaces

This map shows all land zoned open space within the Auckland Unitary Plan and is an important resource as greenways often link areas of open space together. Based on land area alone, there is relatively little open space, although considering the low population density and rural character of this area, provision starts to balance out.

Most of the townships are served by local parks, the Muriwai Regional Park and several golf courses provide open space and the two forests also provide recreational opportunities. The developing urban area in the north-east will have reserve contributions and amenity areas and the future Green Road reserve is close by. Open spaces will be developed over time, as residential use grows and the greenways plan offers a conceptual direction for new developments of the context that their open space provision could evolve in.

The low density of open space shown on the map presents challenges in developing a greenways network, as it puts much greater emphasis on road connections, or on negotiating easements/access arrangements with developers or landowners. Where any routes are shown across non-council owned land, these are indicative only and simply signal an interest that may be further discussed by council if property discussions come up.



Geology

While the underlying geomorphology of the Auckland urban area is heavily influenced by its volcanic history, in this area the soils are older and from sedimentary or alluvial origins, with more recent significant land form creation from dunes on the coastal fringes.

In the Miocene era, sediments were deposited in the 'Waitematā Basin' a submarine formation extending from the North Waikato to Whangarei. This underwater landform collected sand and mud from eroding landforms including the Manukau volcanoes, and the giant Waitakere Volcano further west. This sediment was dominated by silts and muddy sands with some coarser grained sediments.

As the basin sunk, the sediments were buried to greater depths. The basin is thought to have subsided to depths of between one and three kilometres. The sediments infilling the basin were compressed, consolidated and in places cemented to form a thick sequence of inter-bedded weak siltstone and muddy sandstones. Between 15-17 million years ago, this area was uplifted via tectonic activity and this geological sequence is now collectively referred to as the Waitematā Group. Residual soils of the Waitematā Group are made up of mudstone and sandstone, and while relatively fertile, are also soft and readily eroded.

The Kaipara and Waitakere volcanoes (both to the west of the current coastline) erupted around 15 to 22 million years ago and later in this period the Auckland area was uplifted out of the sea. In the following ten million years, this uplifted area eroded and around ten million years later was uplifted again and tilted to the west. This tilt is still evident in the drainage pattern to the north of the study area, where the Hotoe River runs from south east of Wellsford to the Kaipara.

A band of low-lying alluvial soils runs from Kumeu to Helensville and is likely to have been formed via stream erosion and deposition processes in the last two million years. Much of this material may originate from the Taupo eruption with later accumulation from the sediment load in the waters. These soils are a mix of mud, sand and gravel (often with organic matter).

Two million years ago the Kaipara Harbour was a large bay, but pumice and quartz material from the central North Island volcanoes, combined with iron oxides from Taranaki volcanoes were washed up the coast and deposited north from Te Henga to form the two sand dune barriers that formed the Kaipara and Manukau harbours. The solidified dunes reach inland as far as SH16 at Woodhill and Wharepapa.



Hydrology and catchments

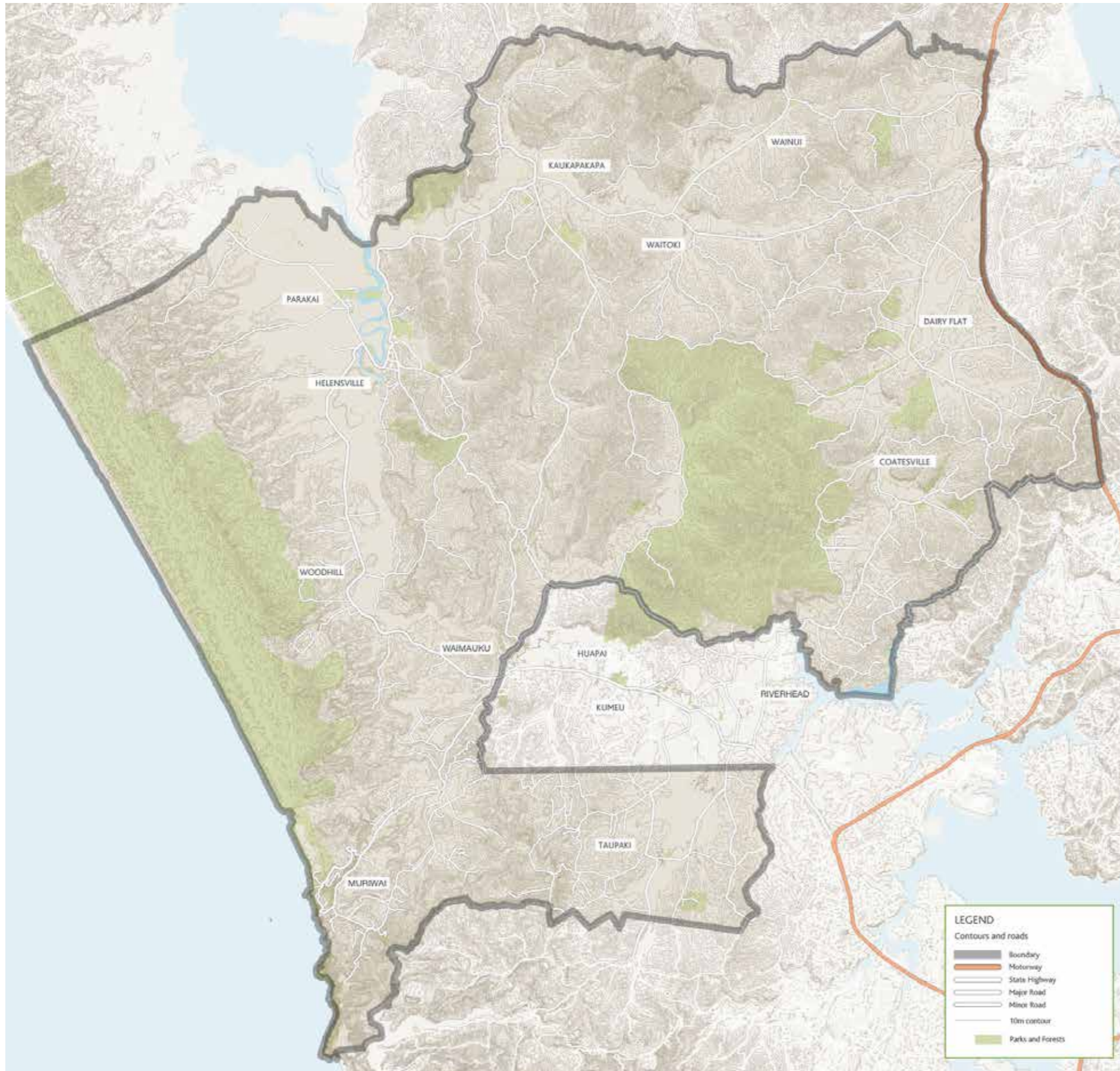
This map shows flood prone areas, flood plains, and flood sensitive areas as well as the existing permanent watercourses. The primary waterways within the area include the Kaipara and Kaukapakapa rivers, which drain into the Kaipara Harbour, the Kumeu River, which is a tributary of the Kaipara, the Rangitopuni Stream which flows to the Paremoremo Creek and the Upper Waitemata Harbour. Weiti Stream, John Stream and Dairy Stream all contribute to the Weiti River into the Hauraki Gulf.

With a dense network of streams throughout the hills of west Rodney, there are very many small localised areas that are prone to flooding. Within the plan area there are a number of urban areas which, usually for historical reasons, have development within the 100-year floodplain of adjacent rivers. These areas are subject to flooding and include parts of Helensville, Waimauku, Kaukapakapa, Taupaki, and Waitoki.

The greenways network can follow streams and their tributaries for several reasons, including:

- greenways projects along waterways offer opportunities to enhance local ecology, including riparian planting, habitat restoration and daylighting/renaturalisation, all of which have great potential in strengthening Auckland's network of ecological corridors.
- riparian planting provides more absorption of overland rainwater runoff, which reduces pressure on peak flows and therefore reduces flooding frequency downstream
- riparian planting also acts as a filtration system, improving water quality as pollutants from overland flows are removed
- the relatively consistent slope of waterways means that they are good 'connectors', offering comfortable, high amenity pedestrian and cycle routes to travel between places
- well planned planting and pedestrian/cycle facilities will ensure that greenways along waterways will be highly used, which will in turn provide increased stewardship by users alerting authorities of incidents of pollution, dumping etc.
- there are educational benefits of opening up and restoring our stream corridors, to tell the stories of local ecology to our communities and this in turn can further increase stewardship
- these areas were highly valued by mana whenua and restoring and telling the stories of these places helps connect us to our past, and honour/respect our heritage.

There are many volunteer organisations throughout Auckland who are committed to improving the natural environment along our waterways. It is strongly recommended that the council and Council Controlled Organisations (CCOs) continue to work together with these volunteer organisations for delivery and stewardship of any specific greenways projects involving waterway restoration.

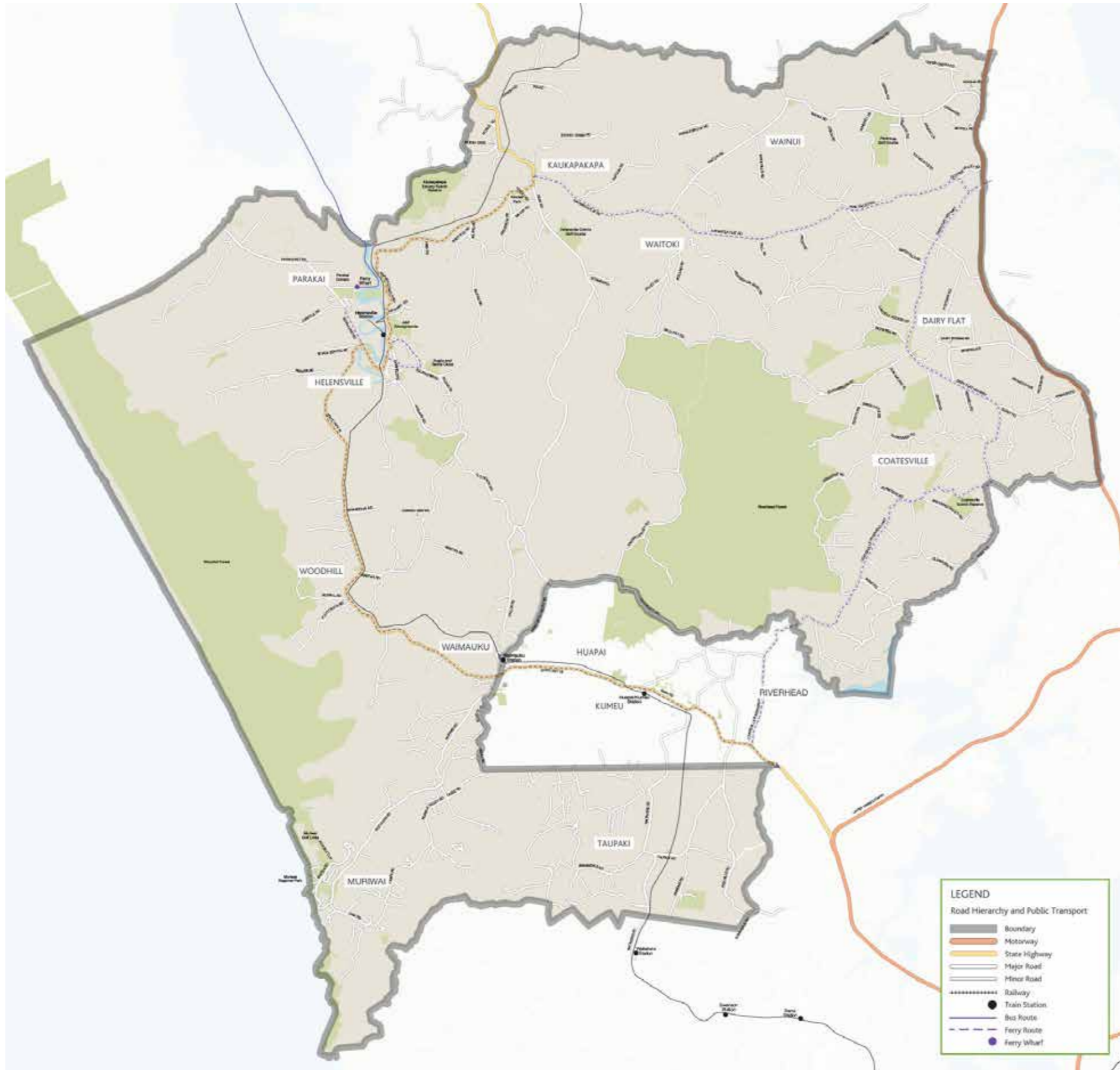


Topography

The study area is primarily hilly inland country with a lengthy coast strip, a large expanse of flattish land from Dairy Flat up through the Rangitopuni Stream and areas of flat land along serpentine river flats. There is an extensive stream network running through valley floors and in places hillside gradients can be 20 to 30 percent. The larger townships are located on flatter terrain or on the coast.

Off road greenway paths will encounter a range of gradients and conditions, ensuring these routes are usable may require some thought. Further investigation will be required at a detailed stage to determine the feasibility of providing 'all ability' cycle access in the steeper sections of the study area. Walking only tracks may need to be constructed if conditions make cycling too difficult.

The topography, coupled with the relatively sparse population distribution, acts as a limit on the range of choices for greenways routes. As road builders have reached a compromise between the most direct routes between destinations and follow avoiding extreme gradients, in this plan they are favoured as shared routes for the slow modes and vehicular traffic.



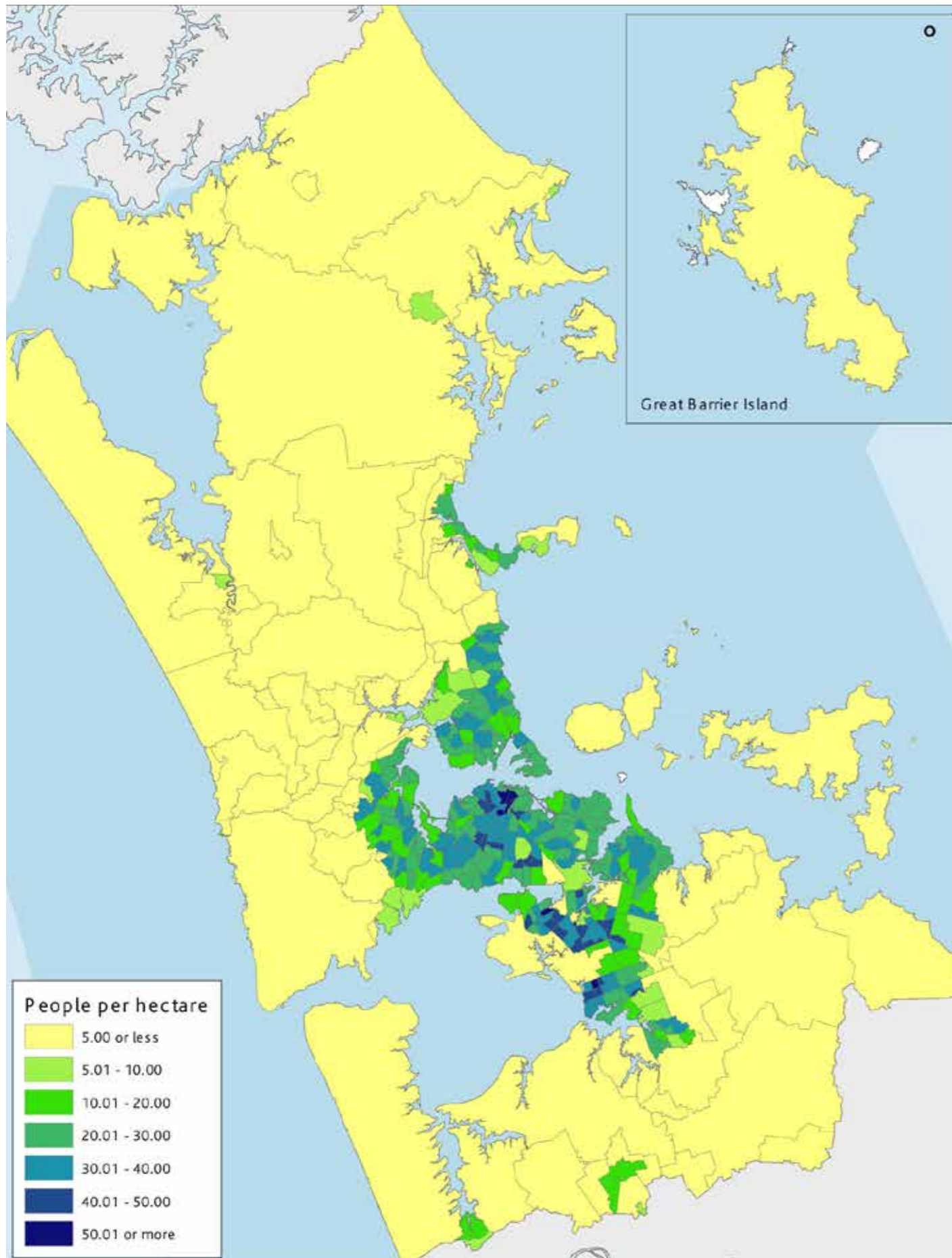
Road hierarchy and public transport

The existing road network has been considered when determining the greenways routes, in order to create safe, desirable and high-amenity environments, encouraging use by as many Aucklanders as possible. As noted earlier, the low ratio of reserve land to the large scale of the plan area means that use of public roads for several of the greenways routes is necessary. Many of these roads are quite busy and provide for a range of transport uses including private cars and heavy trucks carrying a range of goods, notably quarried material for construction purposes. Careful consideration needs to be given where the greenways network intersects or runs along these roads, to ensure safe facilities are provided for all users.

One particular issue for the study area is this use of higher speed rural roads in developing residential areas and increasing residential use in previously rural localities. Significant safety improvements will be required in part to reduce speeds, which presents an opportunity to enhance the amenity of the greenways network where routes overlap. Despite much of this area being popular with "roadie" bunch rides, which leads to occasional media attention, currently the Auckland Cycle Network does not indicate any current or planned cycle routes in the plan area.

Minor or local roads are slower speed environments with lower traffic flows and typically provide more desirable greenway connections. While these tend to be prioritised when planning greenway routes, careful consideration at the design stage will still be required to ensure adequate passive surveillance and increase driver awareness of pedestrians, cyclists and recreational users. The classification of roads also affects the potential for street 'greening' initiatives to support the greenways network. Methods for providing safe crossing points will also be affected by the road hierarchy - for instance, un-signalised crossings may not be permitted on arterial roads.

Apart from school buses, public transport services are few and service frequencies are low. The main routes serve Helensville and Dairy Flat, but forthcoming services will link Helensville to the Hibiscus Coast busway station and a new Westgate to Albany service will follow the Coatesville-Riverhead Highway. Although rail to Kumeu/Huapai has been the subject of popular discussion, current rail services travel only as far as Swanson, well short of the plan area. While this low level of service is quite understandable, with the travel distances dictated by the area, the private motor vehicle remains the mode of choice for many.

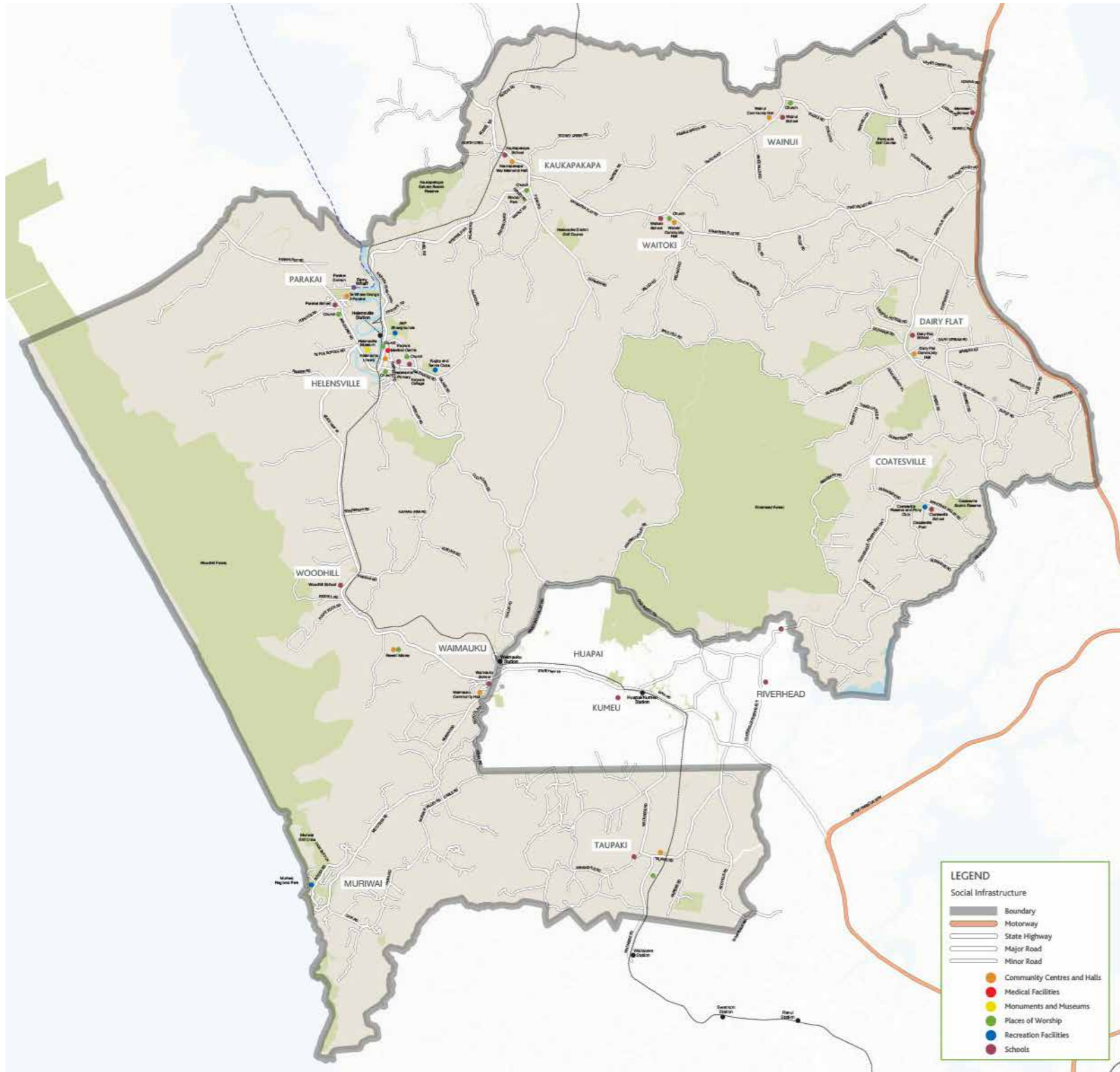


Population Density

This map shows the Auckland region's population density according to the 2013 census. The map was sourced from a 2014 Auckland Council document and shows population density by census area unit. It indicates that the Rodney West greenways plan area is amongst the least densely settled areas in the region, with five or fewer people per hectare. The exception is the Helensville/Parakai area, which is still lightly settled with five to ten people per hectare. Townships at Muriwai and Kaukapakapa are followed by clusters of population at Taupaki, Coatesville and Waitoki. This picture will change as the Dairy Flat/Wainui zone develops, but it's likely that there will be only incremental change over the wider area in the short term.

The low population density poses some challenges for greenways planning in terms of finding viable routes through areas of low population which may present road safety challenges. However, when planned properly these connections can provide some of the most scenic and potentially popular routes and can draw significant numbers of people to an area, promoting economic activity.

Population distribution is important in greenways planning as it shows where potential users will be coming from and it is logical to focus efforts in these areas (in addition to providing strategic regional connections, which are not as influenced by proximity to housing). In general, as a city intensifies, residential section sizes become smaller, and residents require recreation facilities beyond their backyard. While this can be perceived as a negative impact of intensification, if well planned, these public open spaces can help build communities by providing locations and facilities where people can come together and meet.



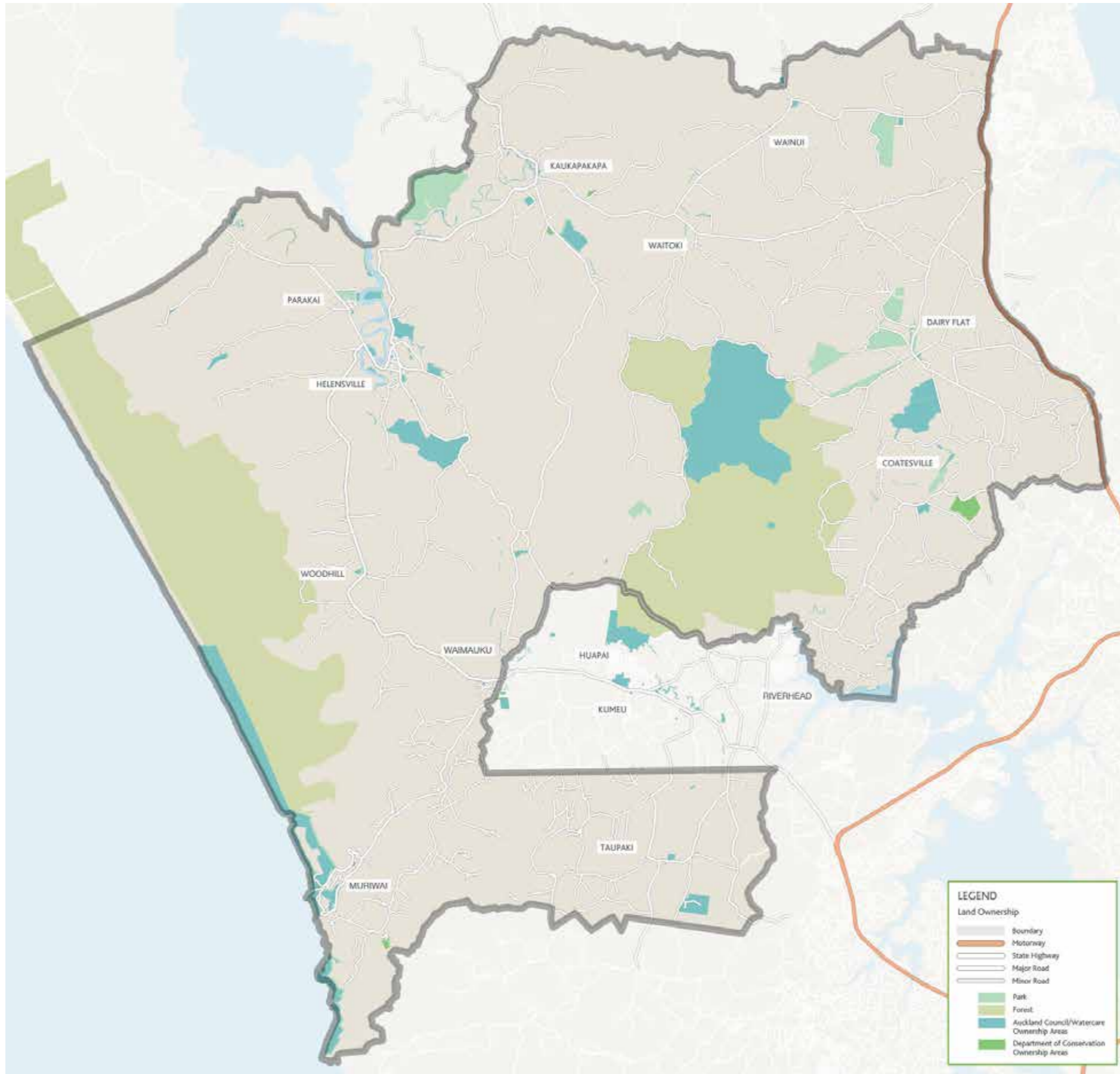
Social infrastructure

This map shows community facilities in the study area, including community centres and halls, places of worship and recreation facilities. Other community facilities sometimes noted here are historic monuments/museums.

Schools and other community facilities are critical locations for the greenways plan, providing both an opportunity to create connections, while also providing valuable destinations in their own right. These facilities are visited frequently and providing safer, higher amenity and more accessible connections has great potential to reduce reliance on private vehicles.

Safe walking and cycling access to schools is of particular benefit, as it encourages parents to let children travel actively to school, improving fitness, gaining an appreciation of the natural environment and locking in good habits for later life. In the more spread out, lower density settlements, cycling can become a viable active travel mode, giving the user the ability to cover ground more quickly than walking.

Any easement proposal within the boundaries of a community facility would need to be firstly consulted with the landowner or leaseholder and needs to be carefully considered to ensure the safety of users and minimise risk of property damage. Some accesses may need to be limited to certain times of day for these reasons.



Land ownership

This map shows land within the study area that is in some form public or community ownership. This information is important, as it is generally easier to form connections on publicly-owned land than on privately-owned property.

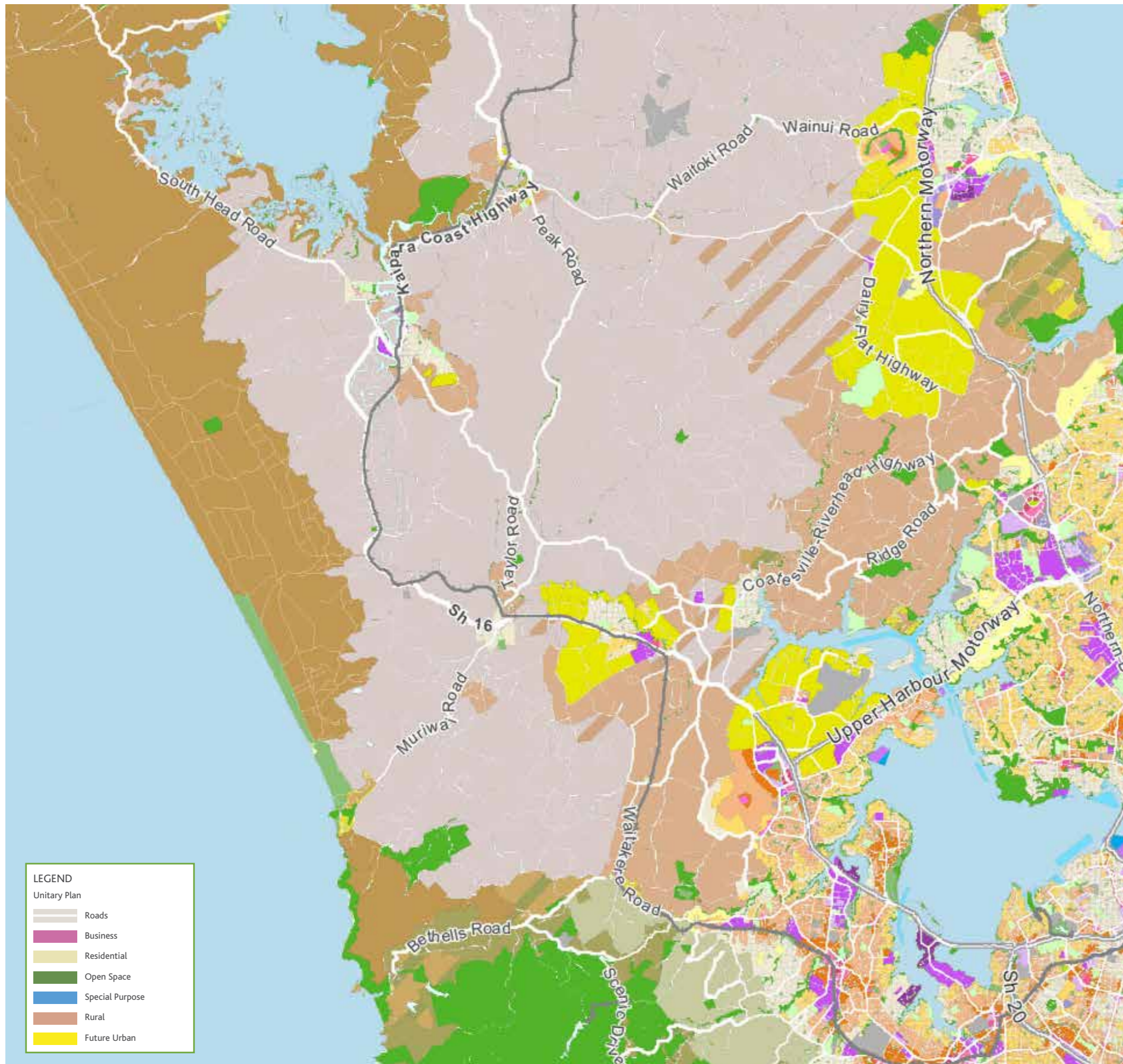
Publicly-owned land within the study area features two main types of ownership:

Auckland Council: This land may be available for greenway connections, dependent on the current or proposed usage of the site.

- Council Controlled Organisations include Watercare Services Ltd, Auckland Transport,
- Panuku (Development Auckland), Regional Facilities Auckland and Auckland Tourism,
- Events and Economic Development (ATEED).

Crown: This land is owned by the Crown and may include commercial forests, leased pastoral land, conservation land (administered by DoC) and marine and coastal areas.

Schools: The map shows the most important locations of primary and secondary education. The most significant institution is Kaipara College in Helensville, as teachers and students commute from adjacent communities to the school every weekday.



Unitary plan

This map shows Auckland Council Unitary Plan zoning, which became operative in 2016. Zoning in the study area can be summarised as:

Business Zone: Relates to commercial and industrial activities, including retailing, servicing, offices, warehousing, manufacturing and research. orientated activities.

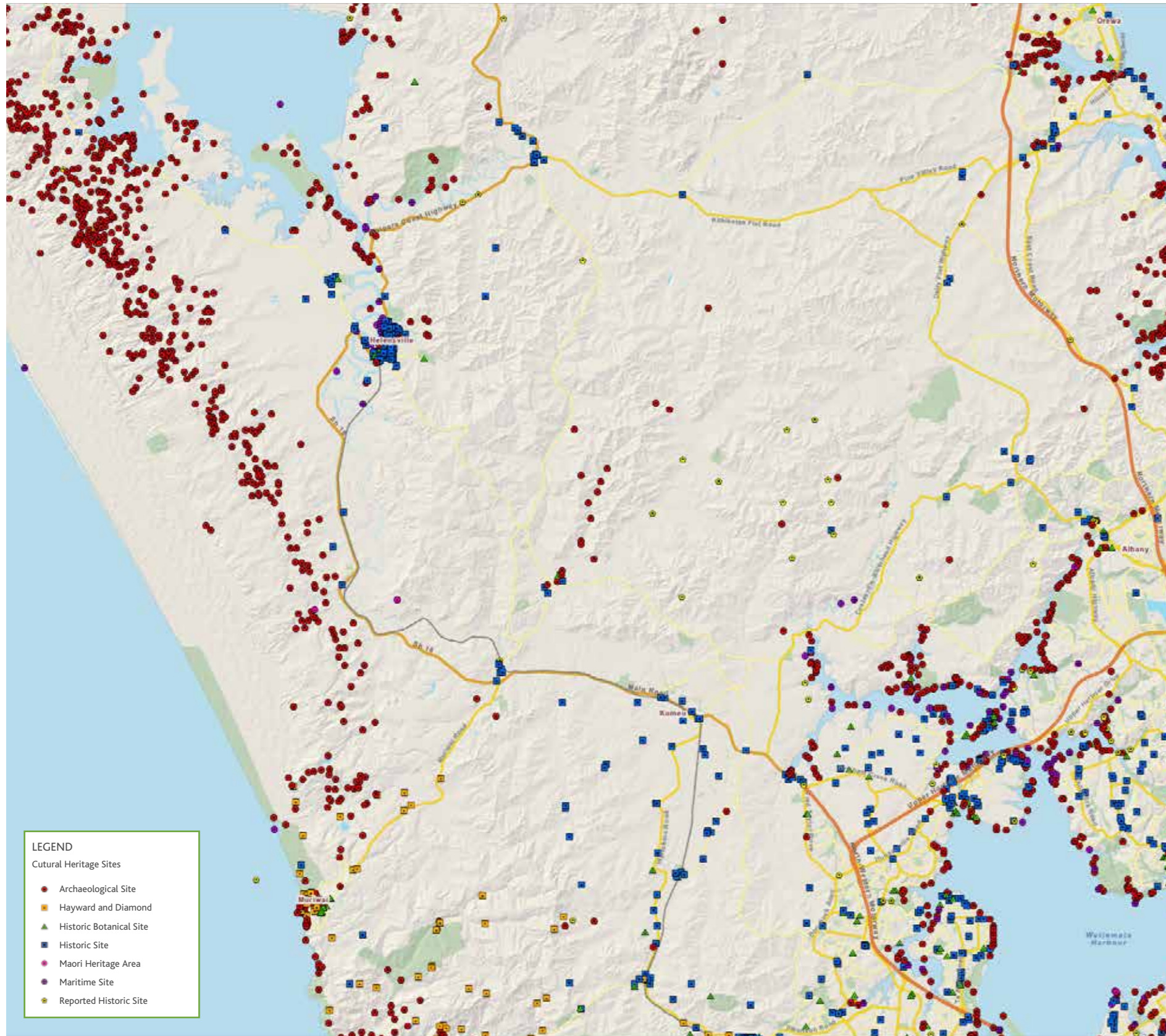
Residential Zone: Relates to areas that are predominately but not exclusively used for residential activity.

Open Space Zone: Relates to a range of open space used for recreation activities, and conservation and visual purposes, and applies to both public and privately-owned land.

Special Purpose Zone: Relates to sites or areas that require special treatment and are of particular consequence to the community's well-being, health and safety but do not conform to the provisions of the standard zones.

Rural Zone: Is the largest land use and relates to rural activities including rural production, rural character and amenity, rural industry and services. Rural areas may include areas of ecological significance as well as countryside living.

Future Urban Zone: This zone is applied to land located on the periphery of existing residential areas (Wainui and Dairy Flat), which council has determined is suitable for future urban development. This is a transitional zone, which provides for the land to be used for rural activities until development can take place, following a structure plan and plan change process. A structure plan or plan change can be initiated by council, an individual, group or partnership (source; Unitary Plan). This zoning has potential to create some significant land use change, most noticeably consenting the development of the Milldale project. While the result will be a more urban feel to these areas, development allows greenways to be integrated seamlessly into new neighbourhoods and delivered at no direct cost to the ratepayer.



LEGEND
Cultural Heritage Sites

- Archaeological Site
- Hayward and Diamond
- ▲ Historic Botanical Site
- Historic Site
- Maori Heritage Area
- Maritime Site
- Reported Historic Site

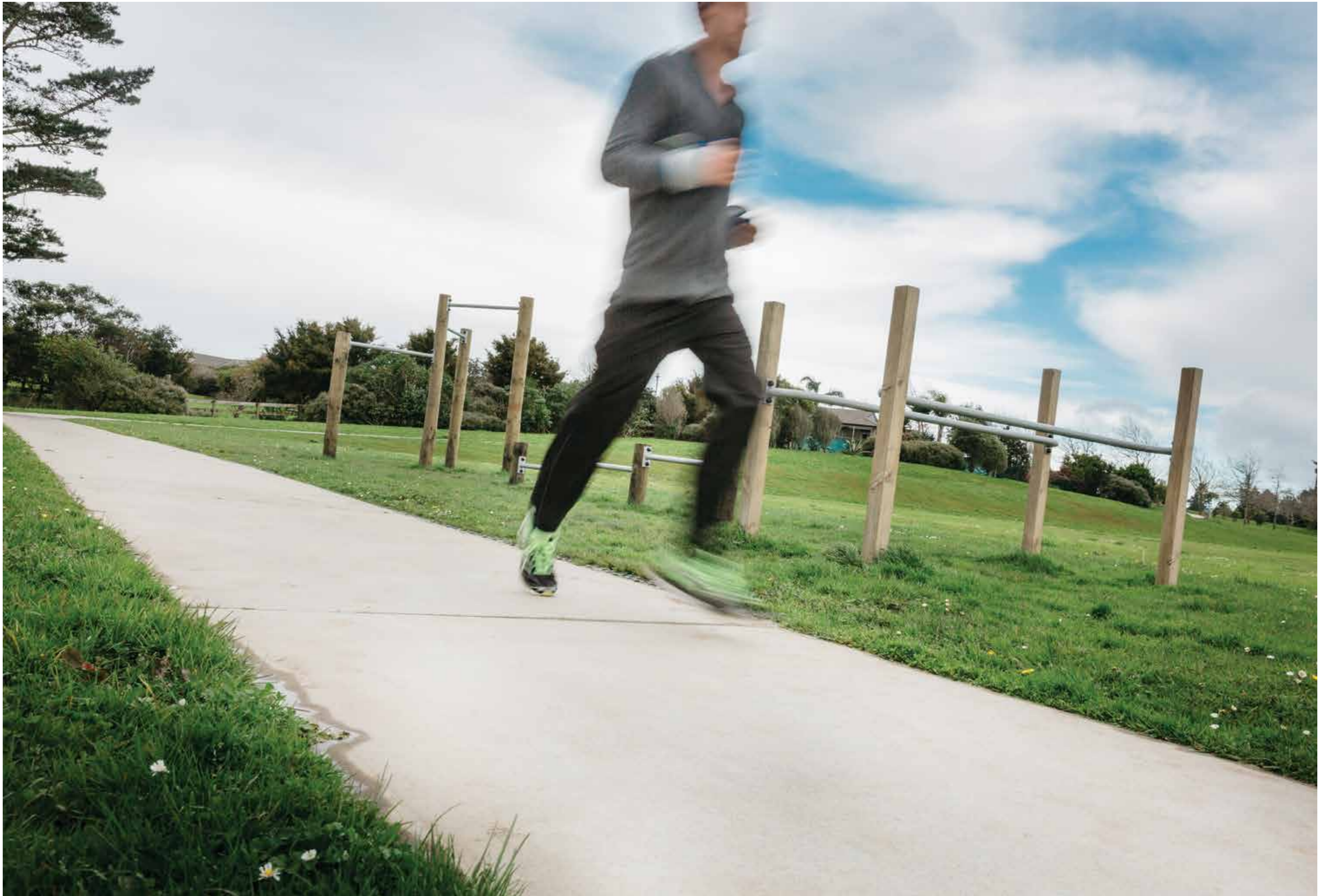
Cultural Heritage Inventory

This map shows sites that were identified by the Cultural Heritage Inventory (CHI) that was created by the former Auckland Regional Council. The CHI was established to promote sustainable management of our cultural heritage by providing easy access to relevant information and should be used as a resource when developing the network.

CHI sites are classified as follows:

- Archaeological Sites – e.g. midden and pa sites;
- Historic Botanical Sites – e.g. specimen trees;
- Built Heritage Sites – e.g. typically early European buildings;
- Maritime Sites – e.g. shipwrecks, wharfs, boat sheds; and
- Reported Historic Sites – e.g. known locations of battles.

Compared to other parts of Auckland, there are a relatively high number of recorded archaeological sites within the study site. Many of these sites are clustered along the western coastal dune area, the Kaipara Harbour edge and the Ararimu Stream, illustrating the significance of these areas to Maori. The coastal margins typically being desirable for occupation and food gathering. The built heritage sites suggest early European settlements were located in Helensville and Waiuku.



B. Case Studies

B.1 Lloyds Crossing, Portland (USA)

Lloyds Crossing in Portland is a brownfields redevelopment site in the central city area, with the aim of:

"Developing a conceptual design for a sustainable, financially feasible, mixed-use development project that will catalyse future private development in the district.. Following conceptual master planning, a stakeholder engagement process is now underway, to create the 'Lloyd Green District'"

Co-conveners of the stakeholder group are the Mayor of Portland, Council President Metro and Multnomah County Commissioner. Forming the "Lloyd Green District," the group includes sponsors (Portland Development Commission, METRO, City of Portland and Lloyd TMA/BID), invited property owners, employers and developers in the proposed district area and other local and state agencies and civic organizations.

Their goal is to:

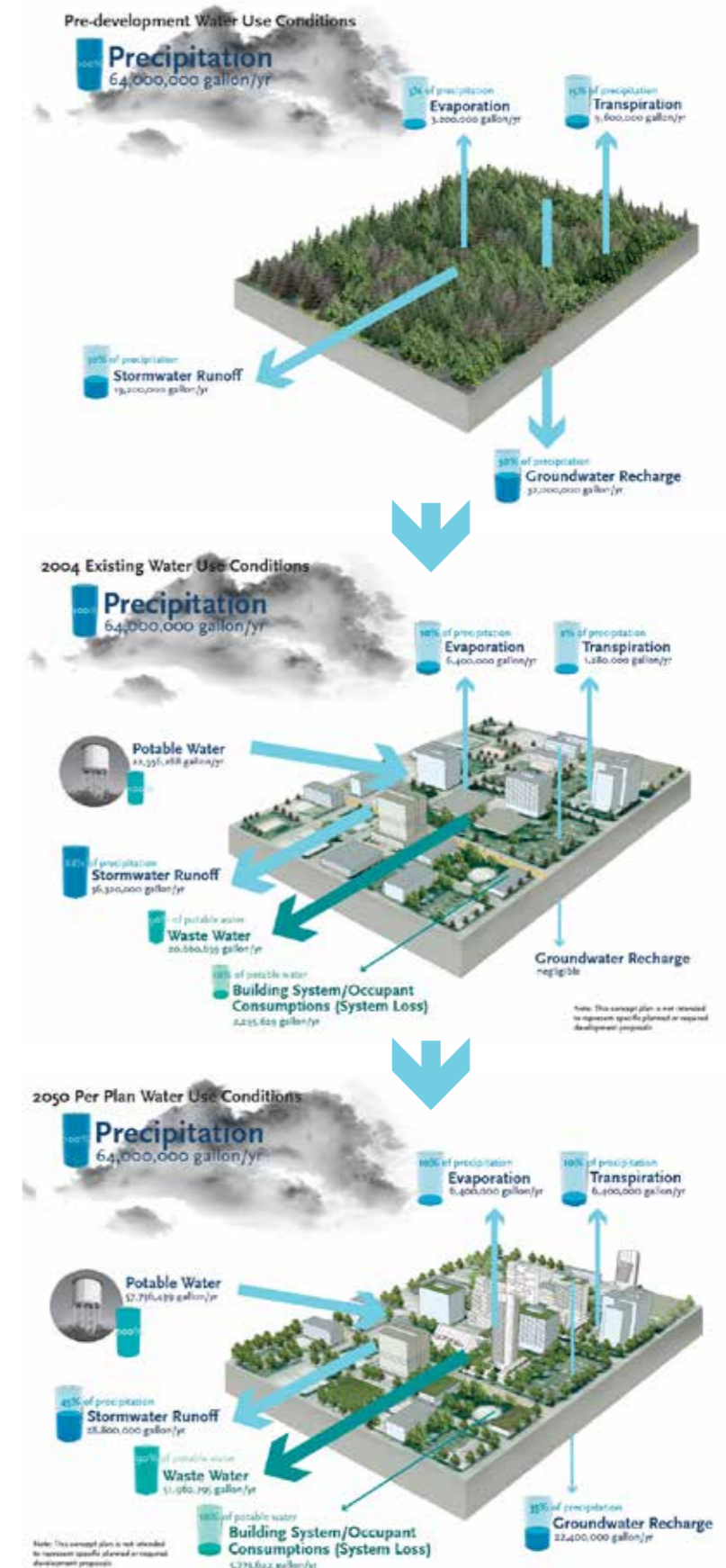
"create a premier sustainable multi-use development district within an urban center." The District "will become a lifestyle community of choice for residents, workers, and visitors, and a showcase demonstrating Portland's leadership in creating economically viable earth-friendly development."

This will become one of the first redevelopments under Washington State's developing programme of Climate Benefit Districts - a programme which aims to:

- support the creation of "green jobs";
- support livable, diverse and affordable urban neighbourhoods;
- reduce the impact of urban development on the environment;
- capture the innovations and life cycle cost savings for district level energy and infrastructure solutions;
- rebuild and reinvest in communities in ways that reduce the demand for driving;
- help public and private interests to work together in developing healthy, vibrant urban communities aimed at achieving carbon reduction goals;
- send a clear policy signal to attract desirable private investment and coordinate public action from multiple levels of government; and
- give communities the means to meet major environmental and economic challenges while remaining responsive to local conditions and opportunities.



2050 Habitat Conditions



B.2 Portland Green Streets (USA)

Portland has been designing and building Green Streets for many years. Their consistent monitoring has proven that they successfully reduced peak stormwater flows and runoff volumes. The images to the right show a variety of Green Streets in Portland that have been successfully implemented.

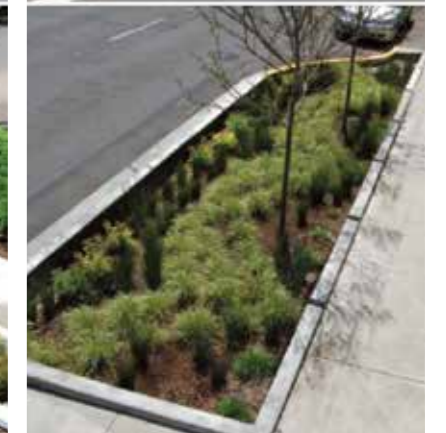
Green Streets convert impervious street surfaces into green spaces that capture stormwater runoff and allow the water to permeate through the ground as plants and soil remove pollutants. Green Streets help to create attractive open spaces, streetscapes, provide ecological urban habitats, and help to connect neighbourhoods, open spaces, schools and other areas within the city.

The city of Portland is:

"Committed to green development practices and sustainable stormwater management. Green Streets are an innovative, effective way to restore watershed health. They protect water quality in rivers and streams, manage stormwater from impervious surfaces, and can be more cost efficient than new sewer pipes. Green Streets offer many benefits that sewer pipes can't."

Green Streets offer the following benefits:

- convert stormwater from a waste diverted into a pipe, to a resource that replenishes groundwater supplies;
- 80 percent plus of storm water volume to be infiltrated on site;
- add urban green space and wildlife habitat;
- reduce stormwater in the sewer system;
- save money on wastewater pumping and treatment costs;
- use plants and soil to slow, filter, cleanse, and infiltrate runoff; and
- design facilities that aesthetically enhance the neighbourhood livability and property values.



B.3 Jellicoe Street, Auckland (NZ)

Jellicoe Street features over 600m² of purpose-built rain gardens. Run-off from over 9000m² of the surrounding roads and surfaces flows into the rain gardens. Other key objects for the project include:

- integrate best practice stormwater design and the efficient use of water resources;
- re-use existing structures and infrastructure where possible
- generate renewable energy on site;
- preserve coastal water quality and protect waterfront ecologies;
- protect air quality and reduce traffic congestion;
- improve permeability and establish pedestrian priority and safety;
- facilitate better access and circulation between transport modes;
- enable visual connections through the precinct to the water; and
- promote pedestrian and cycle activity.

This new initiative in a high-use area has proven to be a great way to educate visitors and residents about the merits of low traffic speed, shared space environments and 'green' infrastructure approaches.



B.4 Greenpark, Thames Valley (UK)

This new industrial development is an exemplary model of best-practice industrial/commercial development. It is acknowledged that retrofitting an existing industrial zone (such as that found in Papakura) is a significantly more difficult task than greenfield development, but this case study shows a range of solutions which can be employed to improve conditions for workers, visitors and the environment. Solutions employed at Greenpark include:

Landscaped parkland:

- a network of cycleways;
- nature trails; and
- paths running around the banks of the stormwater treatment wetlands.

Community life:

- frequent, comfortable buses to bring people into Green Park from Reading Station or nearby town centres;
- well-maintained, well-lit walkways make it easy to get around the park;
- cafés and restaurants;
- health club;
- a day nursery; and
- acres of natural parkland.

Event hosting:

- Events throughout the year, attract workers and nearby residents alike, and these include a range of organised annual events and one off events, including the Reading half-marathon and the Corus Triathlon. Longwater Lake also hosts regular angling competitions.

Green energy (wind and solar):

- The development generates 2.3 megawatts of clean energy, enough to power around 1200 homes.

Green Park fast track:

- A fleet of low emission eco-friendly buses. These are among the first in the UK to meet the stringent 'Euro 4' European emission standards and produce significantly lower levels of carbon dioxide and nitrogen oxide than regular fleets.
- Buses include full wireless access and a real time information system for maximum passenger comfort and security.



C. Priority Greenway Projects

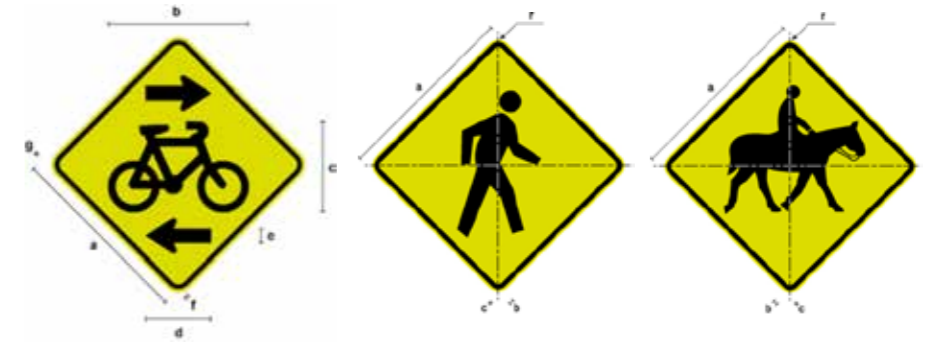
Priority Greenway Projects

The following pages describe the proposed priority greenway routes for West Rodney. The order of these suggestions does not imply an order of priority, as each project could be implemented in whole or part when the opportunity arises. This may be dependent on funding becoming available or a community group or other interest may elect to investigate and construct them.

Footpaths may exist along some parts of these proposals particularly in residential areas, but they might require upgrading to be suitable for more intensive use. Due to the low-density nature of the area, many of the proposals do run along existing roads, even if they do not have footpaths. Although these roads are fully sealed, they require upgrading through extended shoulders or new paths, as sharing the road may present risk to users due to traffic speeds and volumes, driver attitudes and the lack of any dedicated walking or cycling facilities.

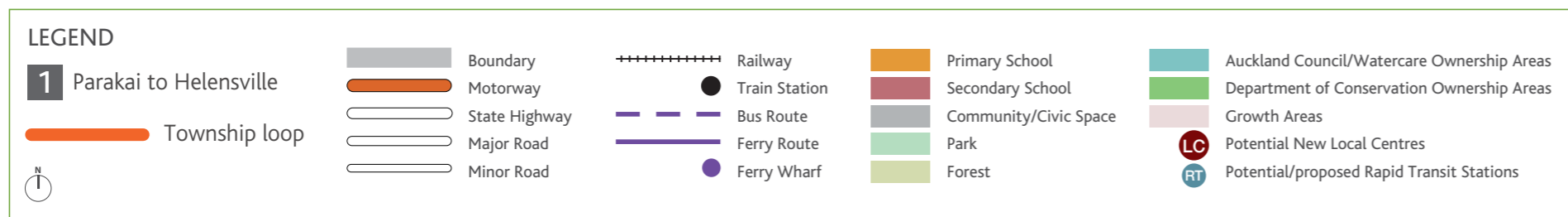
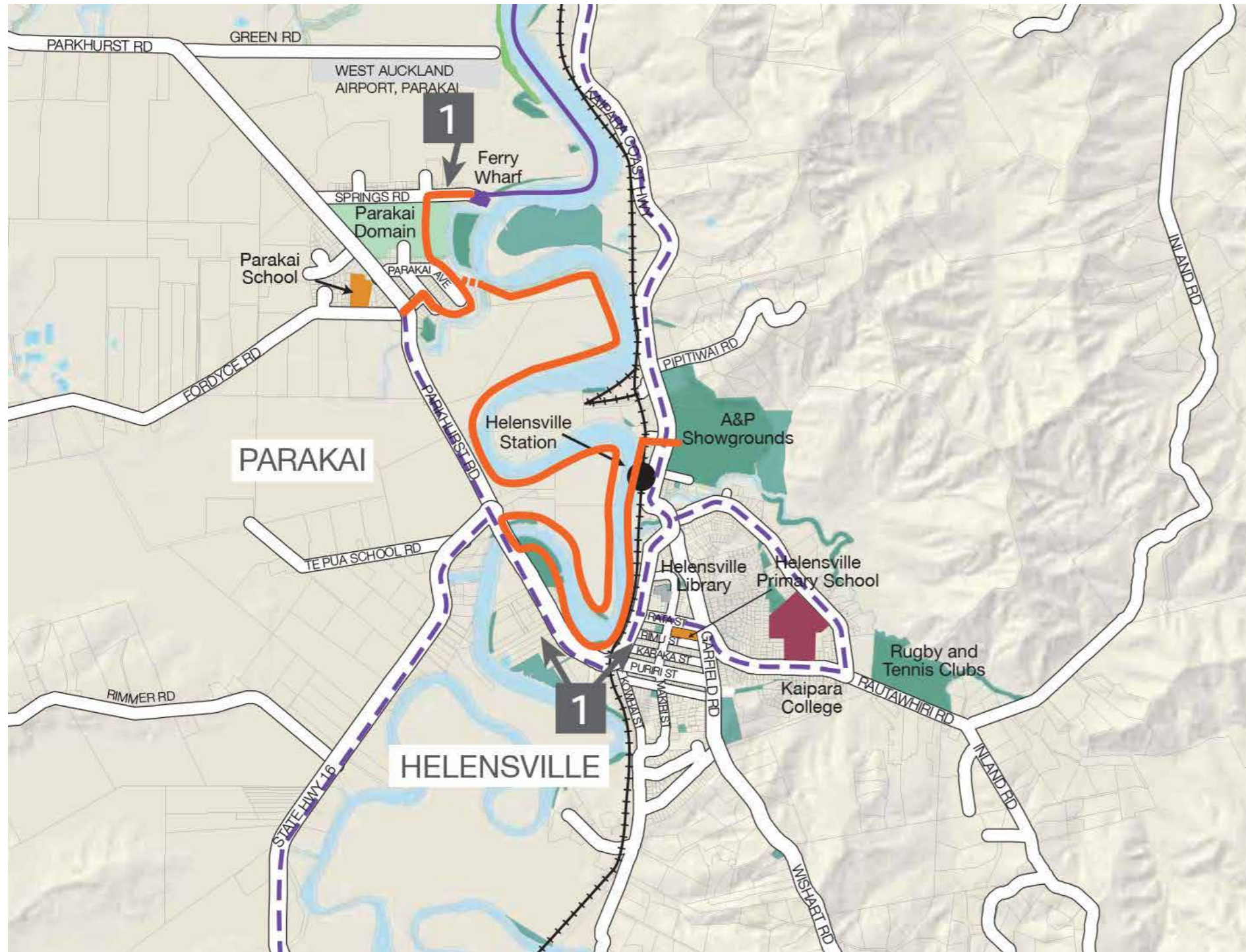
The routes are marked according to the 'wagon wheel' descriptions described in Section 1.4 of the principal document, with those categories repeated in the map legend. Some routes may be shown as 'potential greenway', i.e. possible greenway connections in the future growth areas. The exact location and alignment of these greenway routes can be determined while planning the layout of the growth areas, consequently a general alignment is more appropriate at this stage.

As noted earlier, the unique characteristics of this area mean that the urban focussed standards of the Local Path Design Guide may not be appropriate and a more tactical approach might be employed at the design stage. Possible solutions are seal extensions, paths and trails at less than three metres in width and strategically placed warning signs and road markings indicating the legitimate presence of other road users, i.e., at approaches to crests or blind corners.



Priority Greenway Projects

1 Location Parakai to Helensville Links



Description

This collection of routes serves several purposes, they connect Parakai to Helensville, form a part of the Kaipara Missing Link national cycle route and adjoins two other priority greenway proposals. Helensville and Parakai are the most highly built up part of the study area and almost all the on-road sections here have footpaths, although some may need upgrading. The proposed riverbank path would primarily have recreational use, most likely on foot, with a bridge link to the township being requested at the Helensville drop-in session. The feasibility of this suggested bridge would have to be considered in the context of the upstream moorings at the Kaipara Cruising Club and the consequent river traffic.

Ecology and cultural considerations

- As this is an established local service centre, the function of greenways here is largely to support local activity. Trips to school and work, for retail visits and recreational use will predominate.
- Opportunities for planting along the banks of the Kaipara could enhance the current mown fields and provide a basis for additional fixtures and activities, such as benches or picnic sites.

Constraints

- There is an anomalous 100 kph speed limit on the section of SH16 from just south of the Kaipara River bridge to just north of the Parkhurst road roundabout. While this limit applies for only 250 metres and it is unlikely that vehicles would travel at 100 kph over the bridge, the width of the bridge is constrained and the footpath width is not generous. Cyclists may feel intimidated crossing the bridge on the road, particularly in the presence of heavy vehicles. The Rodney Local Board and/or local community might consider advocating for a more appropriate speed limit on the section of road.
- The stability of the riverbank soils may present a potential challenge for the riverbank paths, as the outside curves of the banks of serpentine rivers like the Kaipara can be subject to erosion.

Opportunities

- Potential for infrastructure to support travelwise activities at Helensville and Parakai schools.
- Support for and leverage off the Kaipara Missing Link route.
- Supporting active modes for travel to work and school.

Potential new or improved facilities

Preliminary design investigations would need to be carried out to determine the best approach for developing these greenway projects. With low traffic volumes (5-600 aadt) on Helensville's side streets, road sharing/awareness facilities like sharrows may prove more appropriate than installing cycle lanes, hence no costings have been given.

- On road path upgrades or treatments – 4,500m (approx).
- Off road path construction or upgrades – 8,200m (approx).
- Boardwalk or bridging – 360m (approx.) Includes potential footpath widening on the Kaipara River bridge.

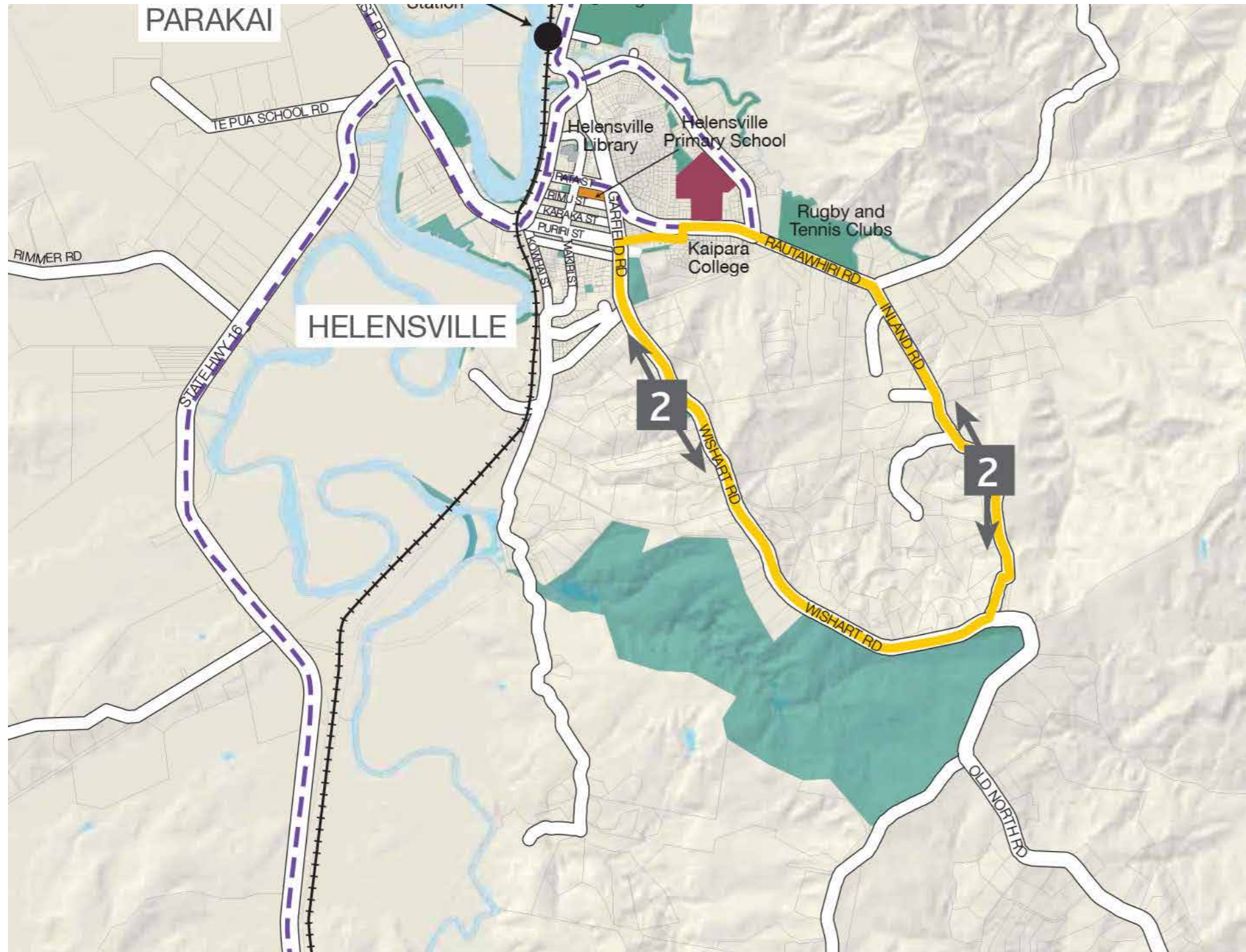
Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.

Priority Greenway Projects

2

Location
Helensville loop route



Description

This proposal arose from the Helensville drop in session, where it was highlighted as a popular fitness route for both Kaipara College students and members of the public. The following considers it primarily as a running or walking path, but a one and a half metre gravel path could also be used by mountain bikes.

Ecology and cultural considerations

- Being largely within the road reserve, this route should have little additional impact on landscape or heritage values, construction of the paths may give opportunities to address any localised drainage issues.

Constraints

- Sections of Inland Road and Wishart Road have drainage ditches or limited shoulder width along both sides of the road, however, in places they are straight with good sightlines.
- A path would have to switch from one side of the road to the other in places to ensure adequate space was available, in places these crossings would be close to corners and/or crests in the road.

Opportunities

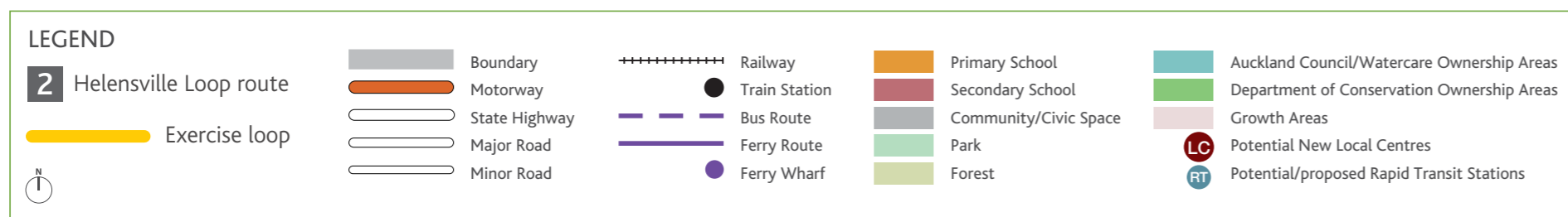
- There appears to be enough shoulder along much of the route to install a walking/running track and there are footpaths on at least one side of the road within Helensville.
- Path construction could be staged to first address the safety concerns along the route, taking advantage of areas where conditions are more benign.

Potential new or improved facilities

- On road path upgrades – 7,000m (approx).
- Off road path construction or upgrades – nil.
- Boardwalk or bridging – nil.

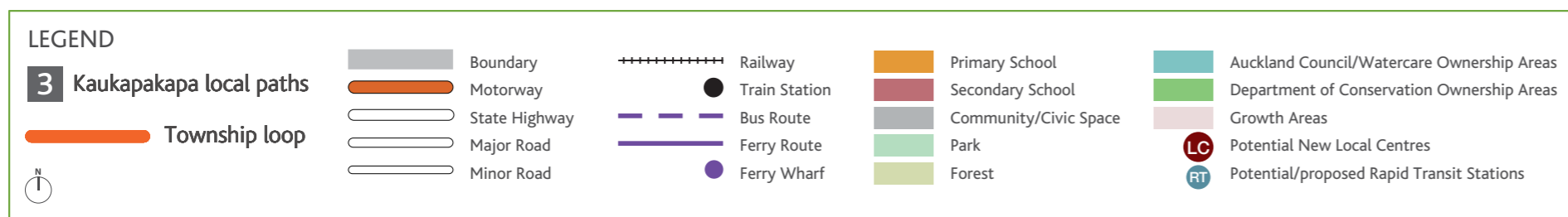
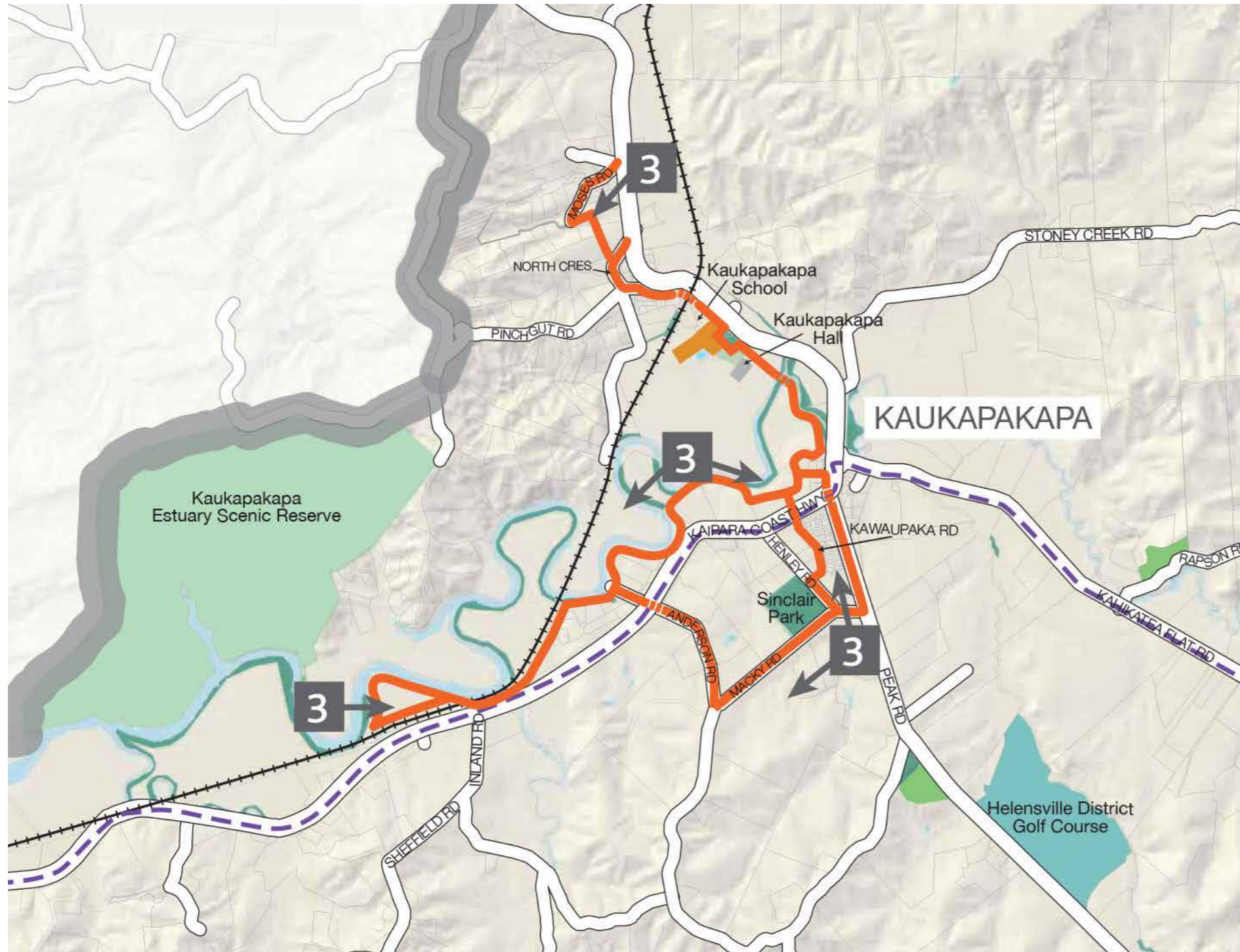
Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund, individual LTP line item, volunteer/partnership work (planting), partnership with local businesses/sponsorship/advocacy.



Priority Greenway Projects

3 Location Kaukapakapa local paths



Description

Kaukapakapa is one village but has two distinct northern and southern precincts roughly a kilometre apart, separated by a major intersection of the Kaipara Coast Highway (SH16) and Kahikatea Flat Road. Kaukapakapa School, the community hall, general store and fire station are all in the northern section. Recent developments along Moses Road and new subdivisions on the south side of Kaukapakapa, including Peak Village, Kaipara Meadows and Riverview Estate mean that the village is experiencing population growth.

Kaipara Coast Highway is State Highway 16 and along with the North Island Main Trunk railway line and the Kaukapakapa River, defines the layout of Kaukapakapa. In the "village" at the north, the speed limit is 50 kph, while south of there and through the Peak Village/Punganui vicinity it is 100 kph. Feedback from the Kaukapakapa drop-in session strongly emphasised a desire in the Peak Village neighbourhood to allow their children to walk safely to and from school and the development of greenways in the area is strongly supported to achieve this desire.

Ecology and cultural considerations

- Opportunities for planting along the Kaukapakapa riverbanks with suitable native species.

Constraints

- The 100 kph speed limit through the southern section is seen by the community as a major barrier as their children need to cross the road from Peak Village to walk to school safely.
- The footpath on the Punganui Stream bridge is arguably on the wrong (inland) side and the alignment of the railway next to it present issues for extending greenways to the west.

Opportunities

- The proactive engagement of several landowners means that greenways orientated work has already taken place in the area and some completed subdivision work supports active travel.
- Low traffic counts on SH16 south of Inland Road (c. 3,800 2017) suggest that limiting traffic speeds would have minimal impact.
- The Rodney Local Board could advocate a lower speed limit from the Kaukapakapa Village south to Inland Road, extending the 50 kph limit from the village would allow a pedestrian crossing to be installed, possibly by signalling Peak Road, or at the Riverview Estate entrance, which could then link to the path from Peak Village.
- There is a strong desire in the community to enhance the edges of the Kaukapakapa River with appropriate and sensitive planting, which would help stabilise the river banks.

Potential new or improved facilities

- On road path upgrades – 6,200m (approx).
- Off road path construction or upgrades – 5,000m (approx).
- Boardwalk or bridging – 460m (approx) includes potential footpath duplication by the Punganui Stream bridge.

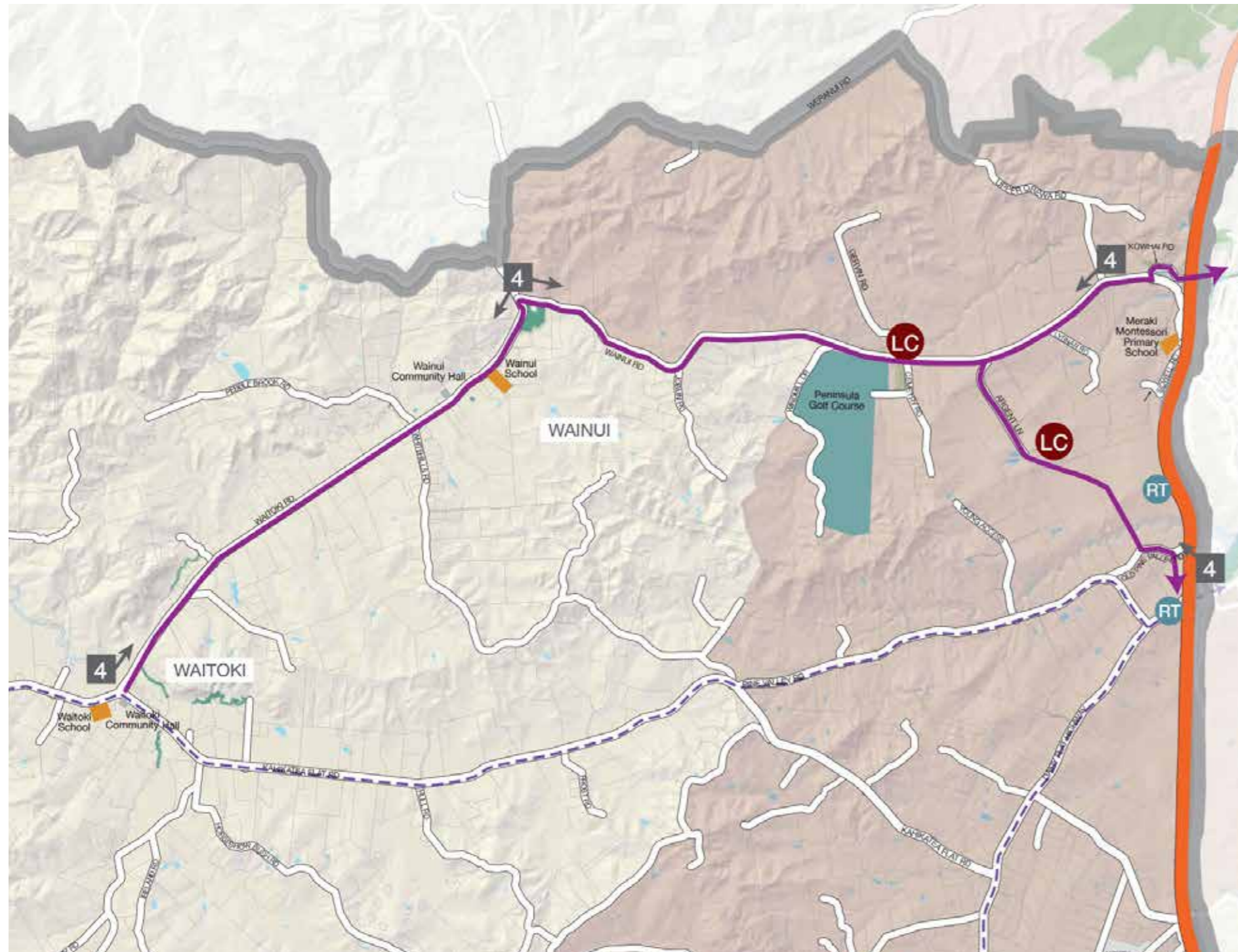
Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund, individual LTP line item, volunteer/partnership work (planting), New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses and landowners, sponsorship/advocacy.

Priority Greenway Projects

4

Location Waitoki to Milldale via Wainui



LEGEND

4 Waitoki to Milldale via Wainui

Destination to Destination

	Boundary		Railway		Primary School		Auckland Council/Watercare Ownership Areas
	Motorway		Train Station		Secondary School		Department of Conservation Ownership Areas
	State Highway		Bus Route		Community/Civic Space		Growth Areas
	Major Road		Ferry Route		Park		Potential New Local Centres
	Minor Road		Ferry Wharf		Forest		Potential/proposed Rapid Transit Stations

Description

This route would eventually link the villages of Waitoki and Wainui with the planned new local centre at Milldale, along with potential park and ride facilities close to the Dairy Flat Highway motorway interchange. With a proposed 3,500 homes, as well as attracting trips, Milldale will generate recreational travel into rural Rodney, with Riverhead Forest within easy reach. However, this route already shows high use on the Strava cycling heatmap, which suggests that it is a priority for upgrading. For cycling use extending the sealed shoulders would likely be the preferred option.

Three stages are suggested for this route;

- Wainui School to Wainui Road and Kings Farm Reserve: teachers at Wainui School commented that they would make greater use of Kings Farm reserve if there was a safe path from the school to the reserve.
- Wainui Road to Milldale: with drainage ditches and the road edges falling away in places, Wainui Road does present some challenges for greenways development in the road space and future upgrading of the corridor should consider extensions to the sealed shoulders.
- Waitoki Road, Kahikatea Flat Road to Wainui School: another higher use cycling route, Waitoki Road has negligible shoulders beyond the painted edge lines. The road is mostly straight with good sight lines, but occasional bridges with guardrails form pinch points, a particular issue with the amount of truck traffic related to the Haruru Road quarry.

Ecology and cultural considerations

- This route is almost wholly within the road corridors, little or no incremental issues arise, in places there may be opportunities for environmental enhancement through planting or landscaping.

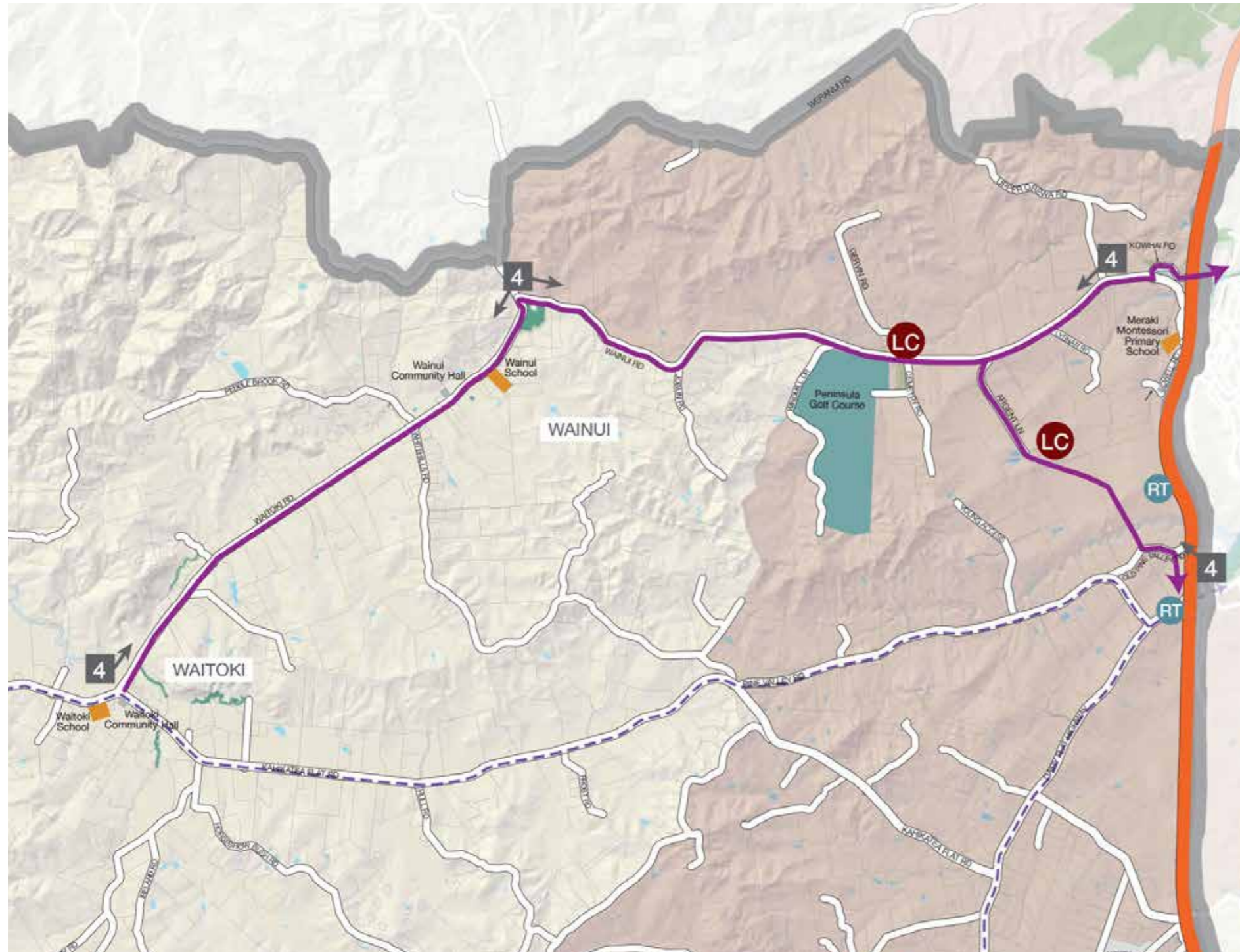
Constraints

- These are very long sections of road with varying conditions, as such the cost of greenways treatments could possibly outweigh anticipated benefits, but conflict points could be targeted.
- Consequently, the methods to be applied will have to be decided during the assessment and design phases and some sections of the route may not need any action, as they may be considered to meet the needs of anticipated users as they stand.
- Implementation could be staged to first address the safety concerns along the route, taking advantage of areas where conditions are more benign.

Opportunities

- Stage one has the potential to be undertaken as a project by the Wainui School community.
- Route construction could be staged to first address the safety concerns along the route, taking advantage of areas where conditions are more benign.
- A tactical approach to on-road improvements has the potential to improve road safety by managing or mitigating conflicts between drivers and bunch cyclists.

Priority Greenway Projects **4** continued



Potential new or improved facilities

Stage 1 – Waitoki Rd from Wainui School gate to Kings Farm reserve

- On road path upgrades – 500m (approx).
- Off road path construction or upgrades – nil.
- Boardwalk or bridging – 100m (approx) two sections of this route have steep banks where forming a path may prove difficult, boardwalk construction may prove more cost effective than building up the ground to suit.

Stage 2 – Wainui Rd to Milldale

- On road path upgrades – Wainui Road 7500m, alignments of remainder uncertain so not assessed.
- Off road path construction or upgrades – nil.
- Boardwalk or bridging – not assessed.

Stage 3 – Waitoki Rd from Kahikatea Flat Road to Wainui School

- On road path upgrades – 5,200m (approx).
- Off road path construction or upgrades – nil.
- Boardwalk or bridging – nil.

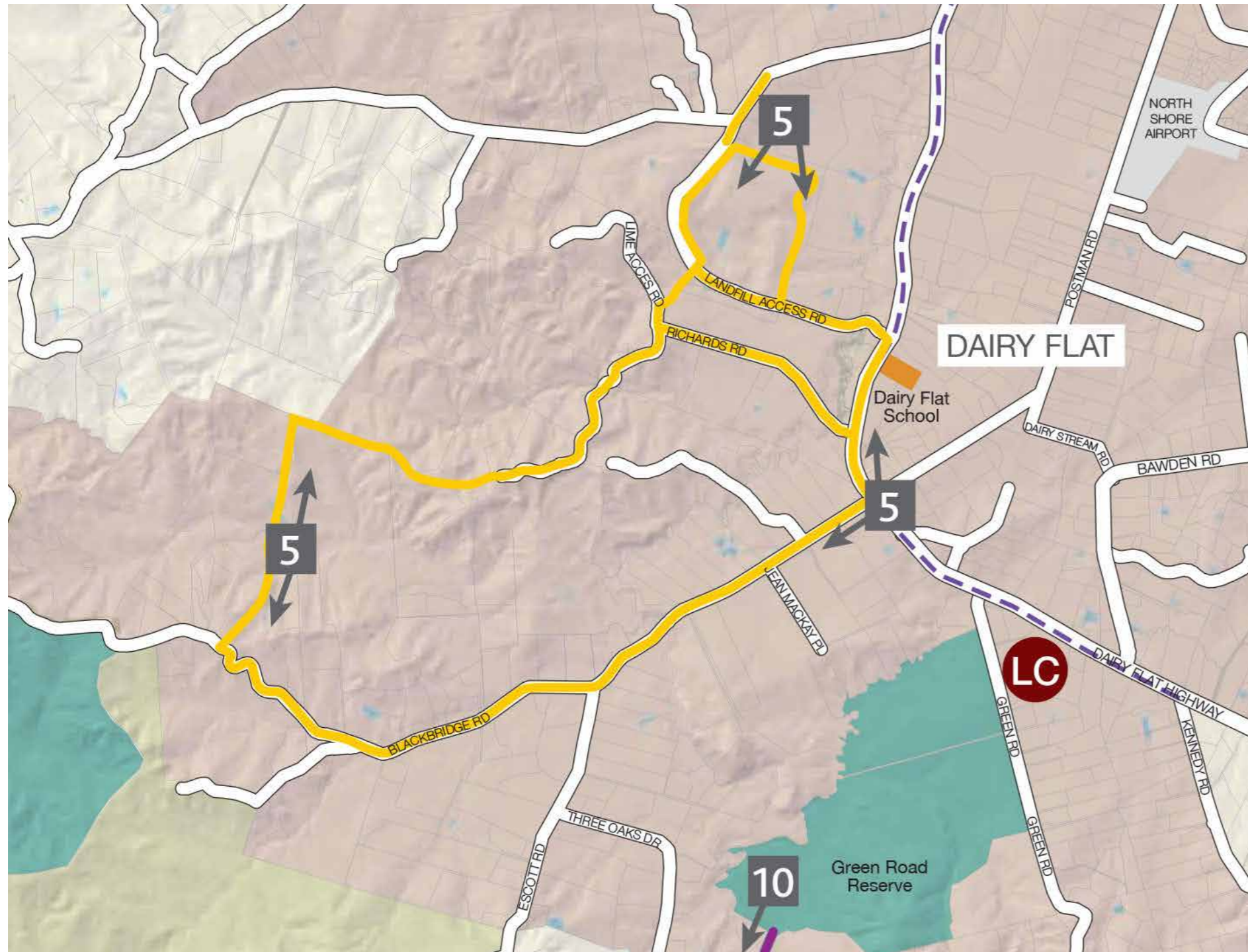
Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.

LEGEND				
4 Waitoki to Milldale via Wainui	Boundary	Railway	Primary School	Auckland Council/Watercare Ownership Areas
Destination to Destination	Motorway	Train Station	Secondary School	Department of Conservation Ownership Areas
	State Highway	Bus Route	Community/Civic Space	Growth Areas
	Major Road	Ferry Route	Park	Potential New Local Centres (LC)
	Minor Road	Ferry Wharf	Forest	Potential/proposed Rapid Transit Stations (RT)

Priority Greenway Projects

5 Location Dairy Flat trails



Description

This collection of on and off-road routes forms out and back loops and is orientated more towards bridleway users, while maintaining a broader greenway focus. The route proposes using paper roads to connect Richards Road to Blackbridge Road, connected to a lower priority link through to Horseshoe Bush Road. The route includes the Dairy Flat Pony Club's planned bridle trail.

Ecology and cultural considerations

- As the paper roads are on modified countryside, they should have little adverse impact.

Constraints

- In places Blackbridge Road has steep banks on both sides and limited opportunity for seal widening, structures in some form may be needed for safety in these areas.
- Some sections of Richards Road have limited visibility and high banks or cuttings.
- A steep section of Richards Road where the road is sealed may need to have a formed path constructed alongside to avoid conflicts with vehicles on the incline.
- Private driveways appear to have been constructed on the paper roads in places on Richards Road and Blackbridge Road.

Opportunities

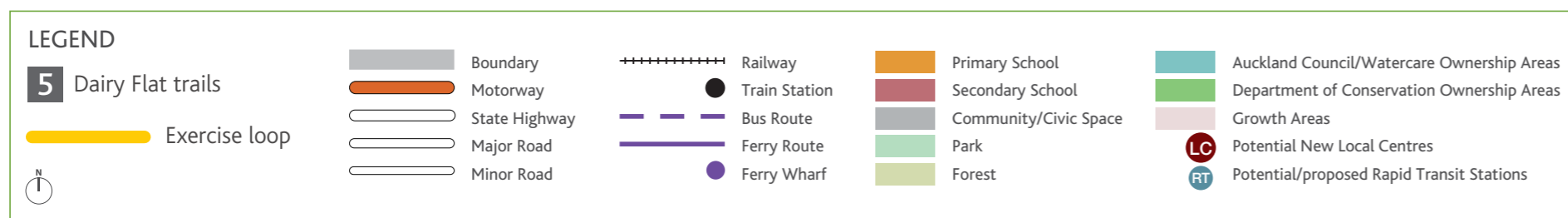
- Use of paper roads and quiet cul-de-sacs enables horse riders to avoid or minimise conflicts with drivers.
- Sections of Richards Road have very wide verges, due in part to the narrow cross section of the gravel road.

Potential new or improved facilities

- On road path upgrades – 9,300m (approx).
- Off road path construction or upgrades – 4,930 (approx).
- Boardwalk or bridging – not assessed, may be needed to provide paths through very narrow road sections.

Funding and delivery options

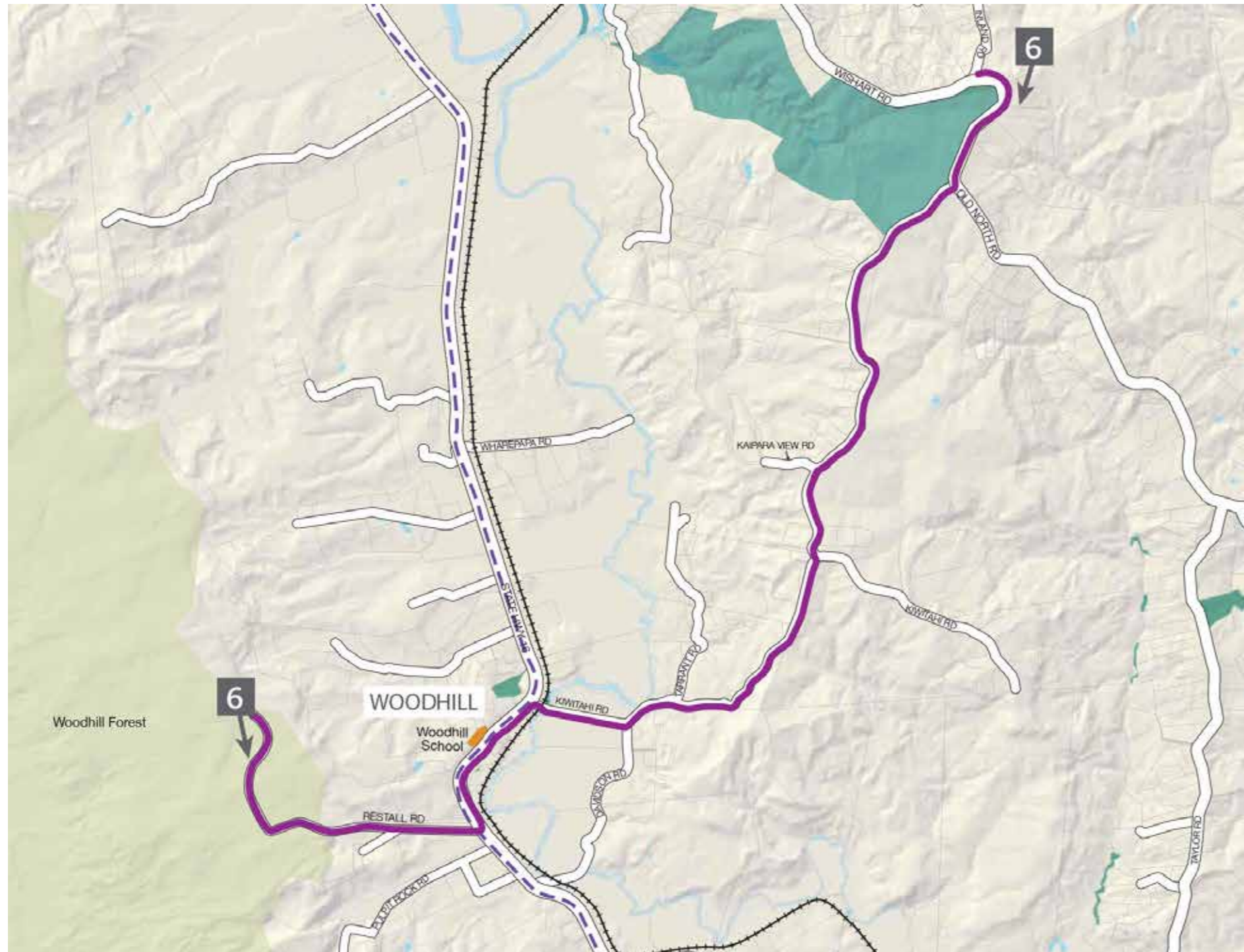
Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.



Priority Greenway Projects

6

Location
Helensville to Woodhill



Description

This route links Helensville to Woodhill Forest and offers some lovely views over the Kaipara River valley. It starts on Old North Road at its intersection with Inland and Wishart roads (priority route 2) and carries on through open countryside on KIWITAHU Road, crossing SH16 to Restall Road, passing the Equestrian Park to the Mountain Bike Park. Roughly one and a half kilometres of KIWITAHU road is unsealed and there are some sections that are essentially single lane, which are nevertheless present quite attractive surroundings.

Ecology and cultural considerations

- As this route is almost wholly within the road corridors, little or no incremental issues arise, in places there may be opportunities for environmental enhancement through planting or landscaping.

Constraints

- Much of this route is unsealed, meaning cyclists would need to be advised to ride mountain bikes or touring/gravel bikes.
- A section of KIWITAHU Road is narrow with a steep bank on one side and guard rails on the other, it has no lane dividing line and offers little scope for widening; it's on a steep slope so cyclists travelling north would be quite slow compared to motorised traffic, potentially causing conflict.

Opportunities

- Provides an opportunity to connect Helensville to Woodhill, providing an alternative to motorised transport.

Potential new or improved facilities

- On road path upgrades – 7,200m (approx).
- Off road path construction or upgrades – nil.
- Boardwalk or bridging – not assessed, may be needed to provide paths through very narrow road sections.

Funding and delivery options

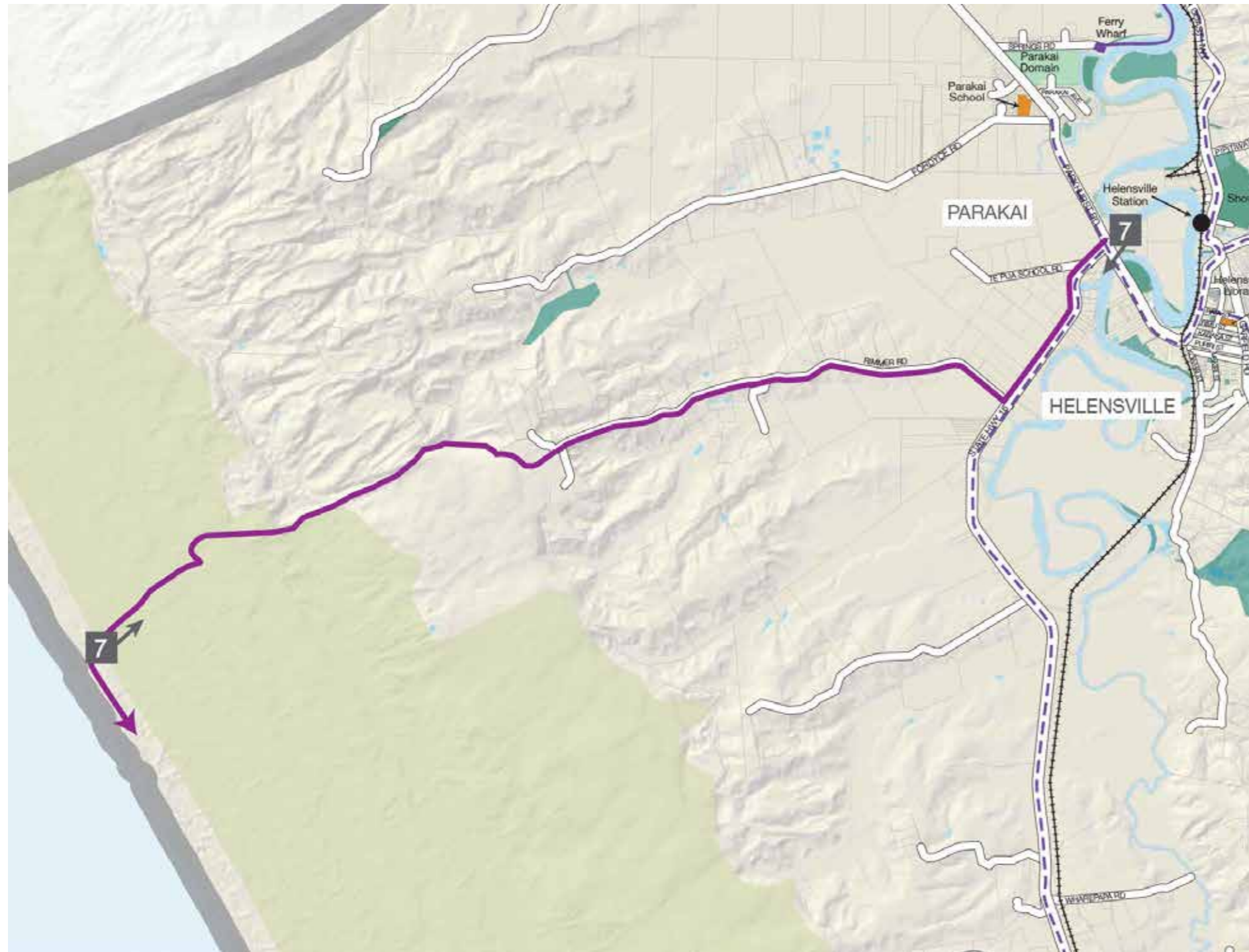
Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.

LEGEND				
6 Helensville to Woodhill	Boundary	Railway	Primary School	Auckland Council/Watercare Ownership Areas
Destination to Destination	Motorway	Train Station	Secondary School	Department of Conservation Ownership Areas
	State Highway	Bus Route	Community/Civic Space	Growth Areas
	Major Road	Ferry Route	Park	Potential New Local Centres (LC)
	Minor Road	Ferry Wharf	Forest	Potential/proposed Rapid Transit Stations (RT)

Priority Greenway Projects

7

Location
Parakai to Muriwai Beach trail



Description

Horse riders at the Helensville open day requested this route, to enable them to ride on Muriwai Beach.

Ecology and cultural considerations

- This route is almost wholly within the road corridors, little or no incremental issues arise, in places there may be opportunities for environmental enhancement through planting or landscaping.

Constraints

- While the shoulders of SH16 between Parakai and Rimmer Road are relatively generous when compared with many of the roads in the area, a 100 kph limit applies on this road. Whether this limit is appropriate is questionable, given the number of dwellings and kerb crossings. A 60 kph limit might be more appropriate.
- Need for trail to cross Rimmer Road several times.
- Potential conflicts with 4WD and motorcycle users on forest roads.

Opportunities

- Lower speed limits would improve safety, particularly for horses and riders, as well as residential amenity on Rimmer Road.
- Existing forest roads may require little upgrading to be fit for purpose.

Potential new or improved facilities

- On road path upgrades – 6,000m (approx).
- Off road path construction or upgrades – 5,200m (approx).
- Boardwalk or bridging – nil.

Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.

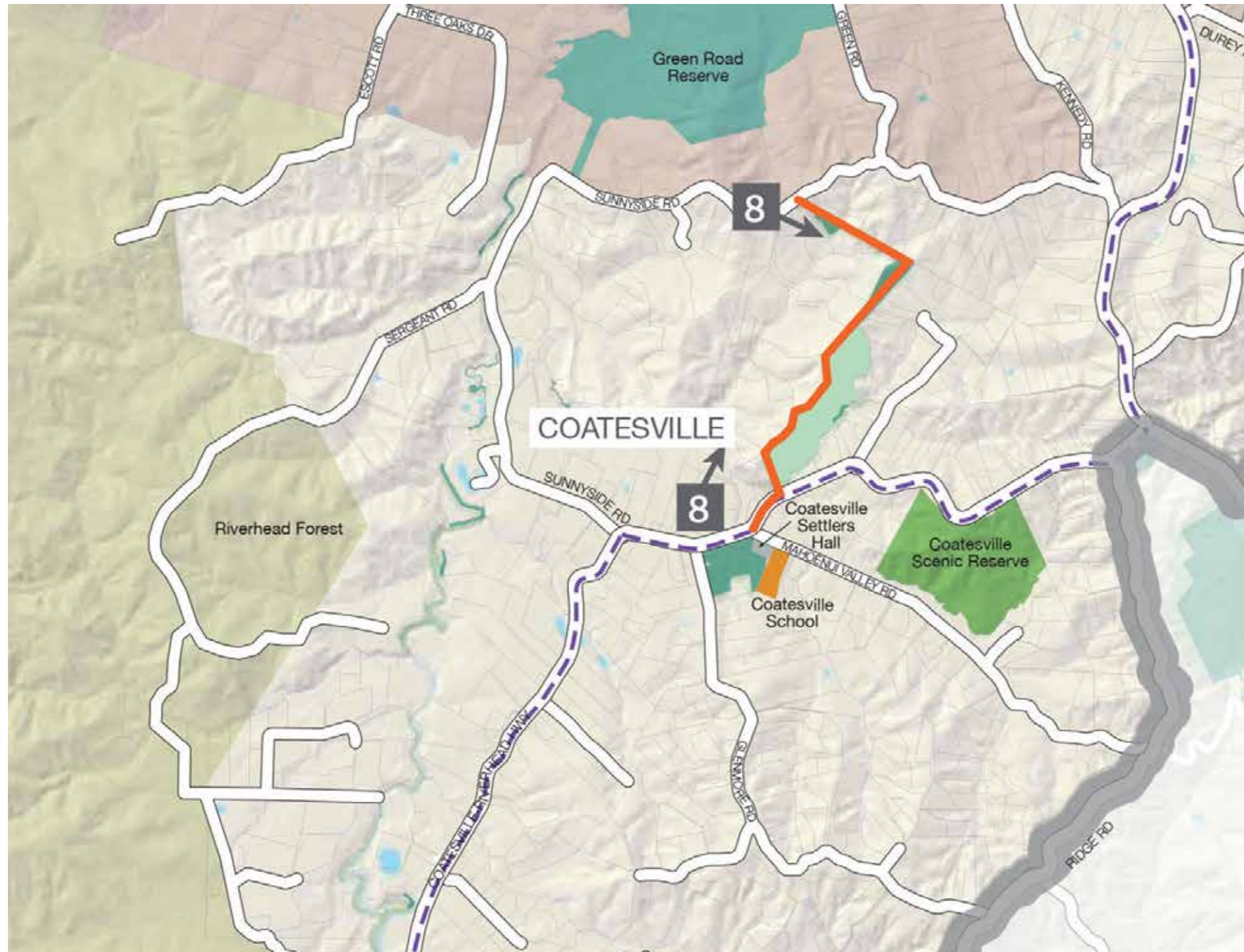
LEGEND

4 Parakai to Muriwai Beach trail	Boundary	+++++ Railway	Primary School	Auckland Council/Watercare Ownership Areas
Destination to Destination	Motorway	● Train Station	Secondary School	Department of Conservation Ownership Areas
	State Highway	--- Bus Route	Community/Civic Space	Growth Areas
	Major Road	● Ferry Wharf	Park	Potential New Local Centres (LC)
	Minor Road		Forest	Potential/proposed Rapid Transit Stations (RT)

Priority Greenway Projects

8

Location
Coatesville Scenic Reserve trail



Description

When the Green Road reserve is established, this path will provide an attractive and valuable link through some established native forest between the reserve and Coatesville. This land was gifted to Rodney District Council and it is understood that at that time there was an established path from Coatesville Riverhead Highway to Sunnyside Road. As such, restoration of the path should be relatively straightforward and knowledge of the path's alignment is still in the community.

Ecology and cultural considerations

- This project could open up pleasant native forest surroundings for the community.

Constraints

- Access points are narrow and could cause conflict with adjacent landowners.

Opportunities

- Project could be staged with the native forest path opening first, then a second on-road stage to the reserve.
- As this appears to be a straightforward restoration of an existing path, it might be undertaken as a community project.

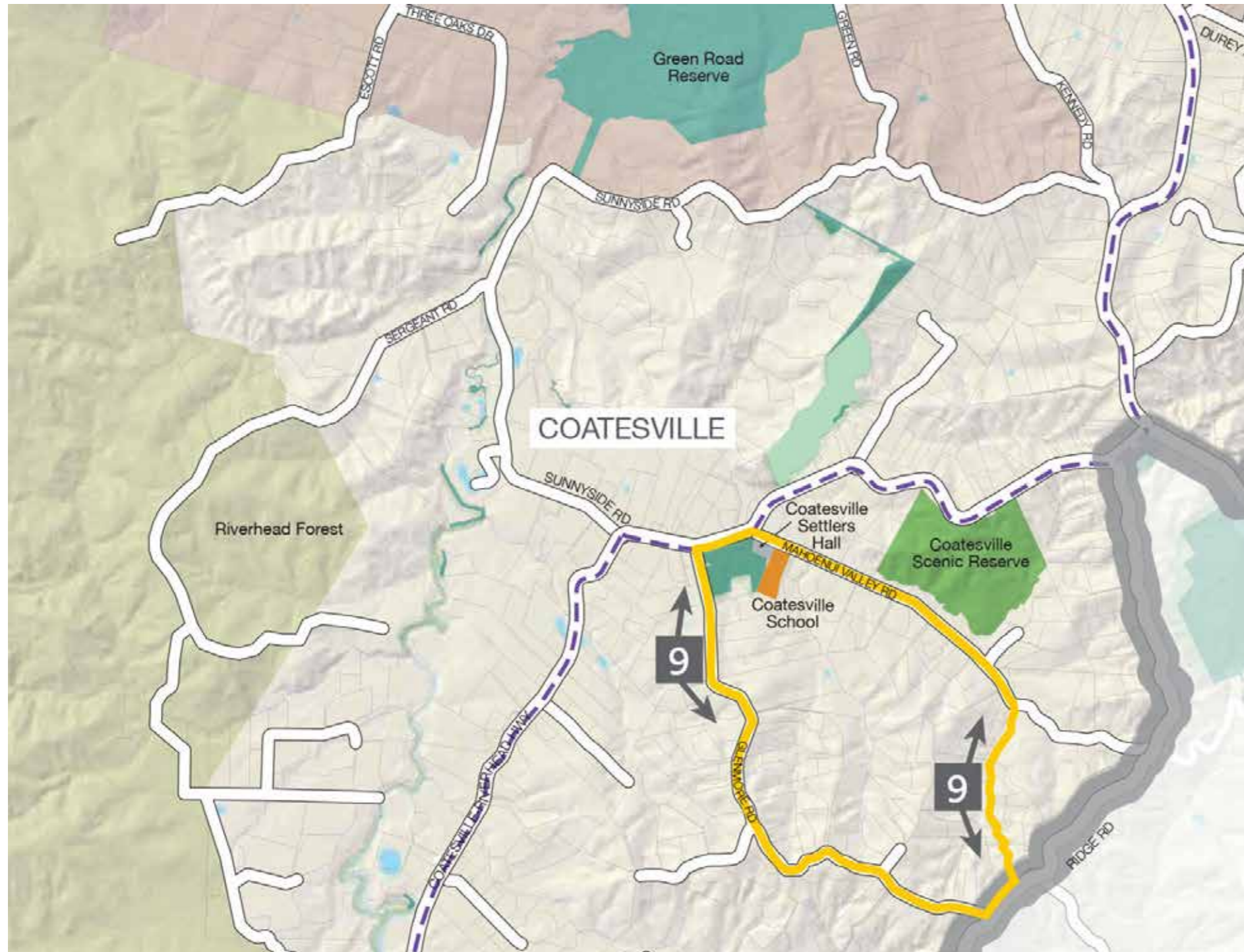
Potential new or improved facilities

- On road path upgrades or treatments – 1,400m (approx), possible second stage.
- Off road path construction or upgrades – 2,400m (approx).
- Boardwalk or bridging – nil.

Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.

LEGEND				
8 Coatesville Scenic Reserve trail	Boundary	+++++ Railway	Primary School	Auckland Council/Watercare Ownership Areas
Reserve Trail	Motorway	● Train Station	Secondary School	Department of Conservation Ownership Areas
	State Highway	--- Bus Route	Community/Civic Space	Growth Areas
	Major Road	— Ferry Route	Park	Potential New Local Centres (LC)
	Minor Road	● Ferry Wharf	Forest	Potential/proposed Rapid Transit Stations (RT)



Description

This is another route requested by the community as a popular exercise loop, beginning and ending in Coatesville. Most of it is on road, but a cross-country section on paper roads avoids the intersection of Mahoeni Road and Ridge Road, which the local community considers hazardous.

Ecology and cultural considerations

- As the bulk of the route is on public roads and the landscape for the remainder is modified, there should be few if any issues with this project.

Constraints

- Possible objections from adjacent landowners.

Opportunities

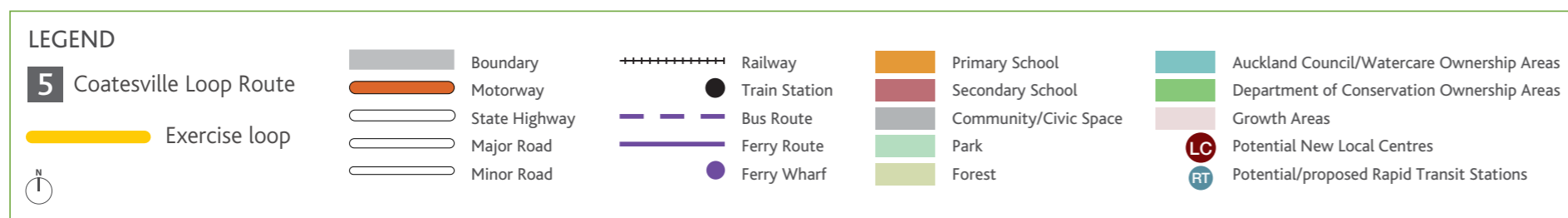
- Path construction could be staged to first address the safety concerns along the route, taking advantage of areas where conditions present few issues.

Potential new or improved facilities

- On road path upgrades or treatments – 5,800m (approx).
- Off road path construction or upgrades – 8,200m (approx).
- Boardwalk or bridging – 360m (approx) includes potential footpath widening on the Kaipara River bridge.

Funding and delivery options

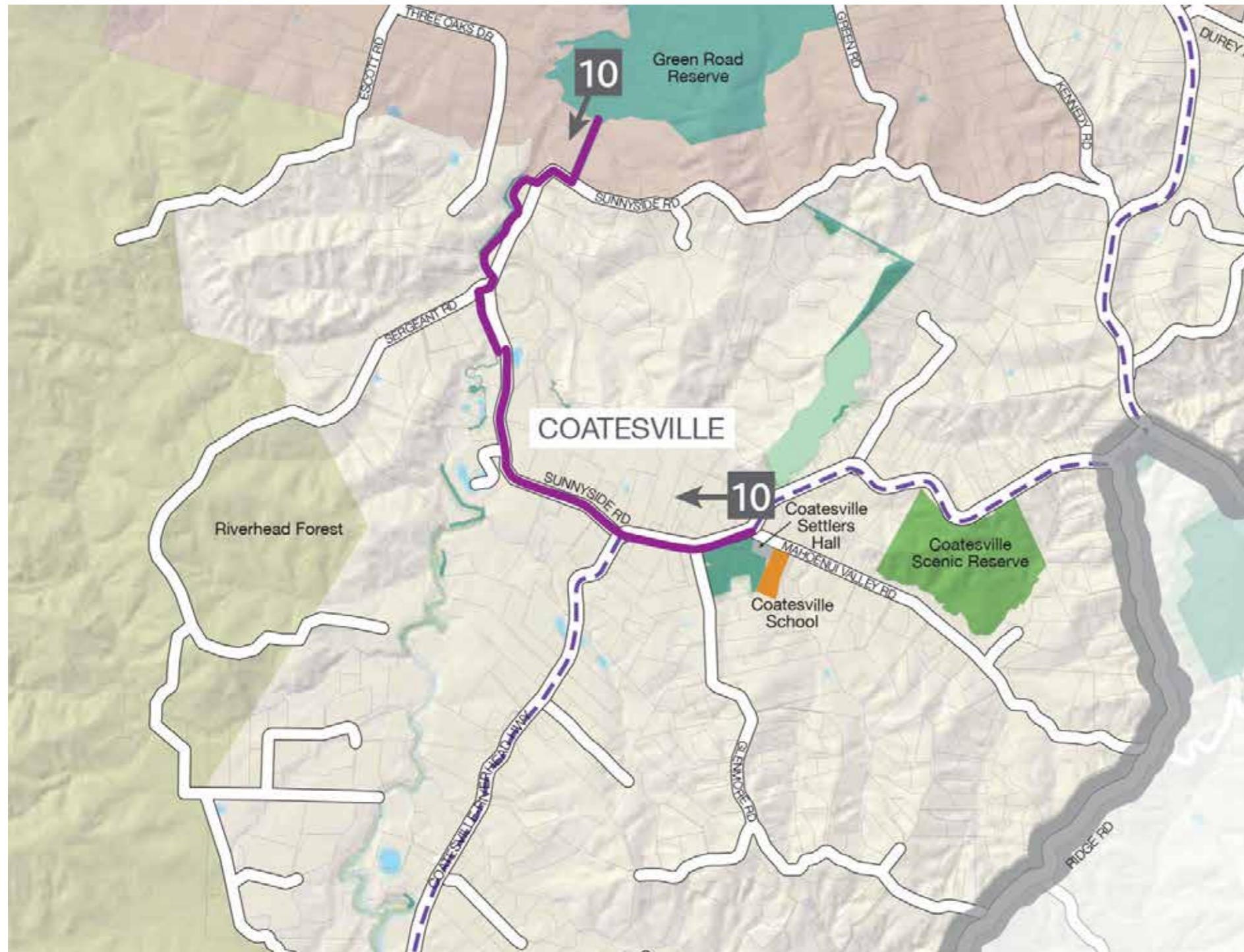
Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.



Priority Greenway Projects

10

Location
Coatesville to Green Road Reserve Path



Description

As well as providing for a link to the Green Road Reserve from the Riverhead vicinity, this route gives an alternative access to the Coatesville Scenic Reserve path. It follows the Coatesville Riverhead Highway to Sunnyside Road, where an access strip connects the reserve.

Ecology and cultural considerations

- This route is mostly on road, but a possible alternative section could follow the Rangiponui Stream in part and have native planting to enhance that environment.

Constraints

- A pair of narrow bridges on Sunnyside Road adjacent to Robinson Road could require additional pedestrian structures.

Opportunities

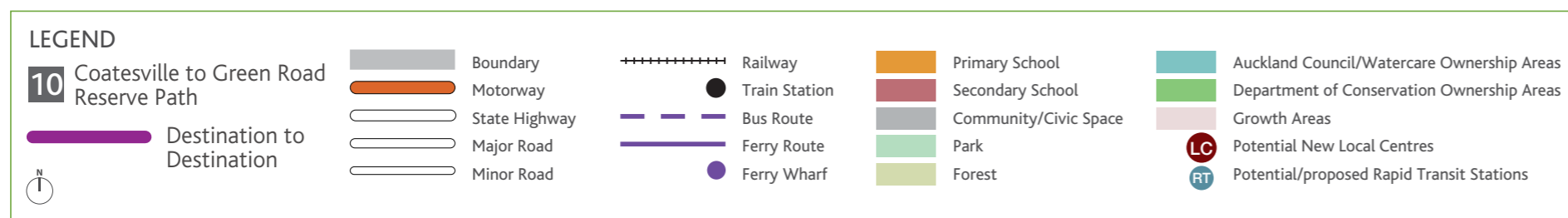
- Existing paths on Coatesville Riverhead Highway provide an attractive example for extending the path along Sunnyside Road.
- Path construction could be staged to first address the safety concerns along the route, taking advantage of areas where conditions are more benign.
- The riparian strip along Rangiponui Stream north from Robinson Road could provide an attractive alternative to an on-road path, these options would have to be considered during the assessment and design phases and a decision on the preferred alignment.

Potential new or improved facilities

- On road path upgrades – 1,700m (approx).
- Off road path construction or upgrades – 500m (approx) if the Rangiponui Stream option was preferred.
- Boardwalk or bridging – 70m (approx) potential footpath bridges or clip-ons for the Rangiponui Stream bridges, these would need to be constructed to a suitable standard for horse traffic.

Funding and delivery options

Parks Growth Programme (Greenways), Locally Driven Initiatives CAPEX, Local Board Transport Capital Fund individual LTP line item, volunteer/partnership work (planting), AT Cycle Network Funding, New Zealand Transport Agency Urban Cycleways Fund, partnership with local businesses/sponsorship/advocacy.



D. Consultation Summary

D. Consultation summary

Public consultation was open from 17 September to 14 October 2018 on the Auckland Council's "Have your say" website where the public could view the draft routes and submit online comments. The survey asked eight questions on the proposals and requested personal information and the respondent's greenway related activities.

Thirty-eight responses were received and analysed with the results summarised below. What follows is based solely on the online feedback received through the submission process.

Residence of submitter

Respondents were asked which local board area they lived in, this table shows the distribution.

Local Board	number	%
Hibiscus and Bays	2	5
Rodney	33	89
Upper Harbour	1	3
Don't know	1	3
Did not state	1	3
Total	38	100

Submission source

Was their response from an individual or an official spokesperson for an organisation?

Individual/Organisation	number	%
Individual	35	92
Organisation	3	8
Total	38	100

Organisation name

Coatesville Pony Club 1
NZ Horse Network 2

Three organisation responses (8%) from a total of 38

Demographic information

The following tables and graphs show the demographic information that submitters provided. Of the 38 total submissions, 37 (97%) provided complete information and where applicable calculations are based on that number.

Stated gender	number	%
Female	31	84
Male	6	16
Total	37	100

Stated age group	number	%
14 years or under	1	3
15 – 24 years	0	0
25 – 34 years	3	8
35 – 44 years	7	19
45 – 54 years	10	27
55 – 64 years	12	32
65 – 74 years	4	11
75 years and over	0	0
Total	37	100

Stated ethnicity	number	%
NZ European	35	92
Maori	1	3
Samoan	0	0
Tongan	0	0
Asian	0	0
Indian	0	0
Other	2	5
Prefer not to state	0	0
Total	38	100

Greenways related activities

Submitters were asked to describe what greenways related activities they participated in.

Activities	number	%
Walk regularly for everyday activities	2	5
Recreational walking	6	16
Recreational cycling	3	8
Recreational horse riding	20	53
None currently, but would with better facilities	2	5
Other	5	13
Total	38	100

Feedback on consultation questions

Q4A: In principle, I support the creation of a greenways network for the Rodney Local Board.

Answer	number	%
Strongly disagree	5	13
Agree	3	8
Strongly agree	29	76
Don't know/NA	1	3
Total	38	100

Q4B: Comments in response to Q 4A (the following are verbatim and have not been edited)

(15 responses – 39%)

Very important for future generations as the city expands. Thank heaven for the forward thinking of early citizens which gave us such special areas as Cornwall Park, coastal walkways etc!

I need somewhere safe I can road my dog, the road is too dangerous.

Not exactly sure what I'm Day I'm supporting, documents are not totally clear of exactly what council is offering.

Safety requirement given the increased traffic and speeds on local roads.

Great idea. We need more space a to exercise, walk and ride horses. Helensville is going to rapidly expand in the near future as Kumeu/Huapai and Waimauku become unaffordable. Investment in the North west is badly needed.

As Auckland is becoming more and more built somewhere safe needs to be offered for us and our children to ride. We live rurally and have for many years we used to be able to ride in farmers fed and on our quite roads but that is no longer possible with farms being subdivided and built on and roads getting too busy. Therefore I feel Auckland Council needs to give us a safe place to ride.

I walk on the country roads it is not safe it would be amazing for paths along one side of Coatesville Riverhead highway from sunny side road thru to Boric for walkers and horses and bikes to be extremely safe we have just moved here and it is extremely dangerous due to speed and terrible drivers when walking.

It would be great to have the ability to walk safely in our area which has high-speed rural roads.

As more subdivision occurs in the area, with no provision made for footpaths or bridleways the roads are increasingly dangerous for residents who have for many years enjoyed cycling, walking their dogs and riding along what was once quiet country roads. It is imperative these greenway areas are set aside for these activities to continue safely before the opportunity is gone due to subdivision.

It will make it safer for us to walk abs ride in the area. Having sharp, winding, 100km roads makes this risky.

They are becoming a must have, as the roads are getting too busy thus unsafe to ride on.

I hesitate to have them linked over private land as there could be a security issue. Security issues regarding properties located close to these walkways. Properties can be cased for possible burglaries very easily by criminal elements of our society.

Providing better access to Green's Road Reserve.

Provided it accommodates all r creation all users.

We have been waiting for a bridleways network for nearly 20 years!!

Q4C: The proposed greenway routes are generally in the right place

Answer	number	%
Strongly disagree	3	8
Disagree	1	3
Neutral	6	16
Agree	19	51
Strongly agree	6	16
Don't know/NA	2	5
Total	37	100

Q 4D Comments in response to Q4C (the following are verbatim and have not been edited)

(10 responses – 26%)

They appear to link the reserves, Greens Road Park etc. which makes sense.

As above.

I haven't looked a detailed map. We would like somewhere in Wainui to ride please.

I have not seen the maps so cannot comment.

The proposed routes appear to use the best available pathways to traverse the locality and connect with neighbouring areas.

Yup, they look good.

Not through private land.

I would love to see a safe walking/cycling path along Sunnyside Road connecting the new Green Road Park to the Coatesville Reserve and cafes.

Do have concerns regarding individual property security if public access is allowed.

They do not accommodate 'walking trail' anywhere as far as I can see.

Q4E: Are there any changes that you suggest for the proposals, or other routes or projects not shown on the draft maps that you think should be included? (the following are verbatim and have not been edited)

(14 responses – 37%)

Lack of connectivity between Burne Rd/Tender Rd/Richards Rd and Landfill. I see the landfill as a future major recreational opportunity(active). This would provide an existing paper road connection to a wide catchment (future) linking the "northern" end of Dairy Flat with Riverhead Forest and beyond. The triangle created between these 3 roads is a very large, low populated valley with native bush pockets. Currently a missed opportunity. It is unclear whetehr there is a distinction between "cycling" and "mountain biking" as needs are quite different, but complementary.

Valley Road in Waitoki should be walking/cycling/riding only.

Better road verge widening and existing paper roads kept and not lost to development.

Foodpath linking Te Pua School Road to Helensville for children to walk safely to school and so residents can walk safely to public transport.

Wainui. Lots of horses and we have already lost the local pony club due to the road being too dangerous now to cross. It's too busy now with lots of trucks and the land owned by the farmer is being sold off.

please include equestrian and horse trails at Green Road.

I would like to see off road trais in the Coatesville Scenic Reserve – a very under utilized reserve.

The opportunity to be able to use bordering sections of the Riverhead forest when not being milled would also add interest to the walkway.

Nope.

Concentrate on existing council owned land and public road berms.

Yes, I think there needs to be a safe walking/cycling path along Sunnyside Road from the Green Road Park access point on Sunnyside Road to Coatesville Reserve, cafes, pony club and school.

Concern that increased use of TTR will confuse situation as land areas will change and new residents might find the property they purchase will have a walking path through where they wish to place a house.

I strongly opposed TTR and see this as yet another problem when trying to develop the concept of greenways which I do support.

Yes, all those discussed at meeting at Orewa with Don Lawson.

There doesn't seem to be any connection to the large subdivisions being made (or planned around Red Hills Rd). There doesn't seem to be a map at all for Muriwai even though the area is mentioned several times. Creating a greenway/bridleway to connect to Muriwai would be a great tourism and recreation benefit.

Q4F: Creation of more (or improved) local walking and cycling connections through reserves and along streets would encourage me to walk and cycle more overall

Answer	number	%
Strongly disagree	3	8
Disagree	1	3
Neutral	2	5
Agree	12	32
Strongly agree	18	49
Don't Know/NA	1	3
Total	37	100

Q4G: Comments in response to Q4C (the following are verbatim and have not been edited)

(11 responses – 29%)

I, along with my family and friends would make good use of a horse riding track, on of alongside these connections. I think thought should be put into wheather dogs are allowed- I would vote yes but on a leash personally.

Suggest council get out of there cars and try ride walk cycle and ride our narrowing and dangerous roadways, try pushing a pushchair or walk with a child to really get a sense of how crazy town planning is!

The more variety the better. Able to keep some activities separate from each other.

I wouldn't feel afraid to walk if there were paths on the busy road I mentioned above Including riding.

Kinda obvious, really.

The safer people feel the more active they will be.

YES! Both myself and my children would use this all the time, as I am sure would most of the resident families in Sunnyside Road who either hop in the car to get anywhere or take our lives into our own hands walking along Sunnyside Road as it is currently.

Definitely walk along streets although increased development/subdivision means more traffic and possible safety issue for pedestrians.

Walking and cycling and horse riding.

We need to broaden walking and cycling to walking cycling and riding where ever possible. The areas being proposed for greenways are all areas with large equestrian populations; it is dangerous on the roads, and many roadsides have been obstructed by adjacent landowners.

