Kāpiti Coast District Council
Pathways Network Plan

Prepared for: Kāpiti Coast District Council

Prepared by: Stantec

Revision schedule

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Part A – Strategic Case

1. Introduction

1.1 Background

The Kāpiti Coast District Council (KCDC) has made great strides over the last 10 years in the development of

the walking and cycling network. The Stride n' Ride Programme[1] has delivered several shared paths and on-road cycleways that have created key commuter connections to busy rail stations, schools, local centres, and the new Kāpiti Expressway cycleway. Now with 90% of physical works completed, it is time to plan for the next phase of improvements.

This Pathways Network Plan builds on the previous work that has been undertaken (**Appendix A**) and provides KCDC with a strategic direction for investing in walking and cycling (and other modes of transport) over the next 10 years of this Plan.

Developing an accessible, safe, and future-proofed walking and cycling network requires strategic planning and investment over time.

The improvements delivered over the next 10 years of this Pathways Network Plan must be reactive and in accordance with network usage, population growth and land use changes in the district.

This Plan facilitates a multi-party approach and provides KCDC, other funding agencies such as Waka Kotahi NZTA, and community/ stakeholder groups with priorities and strategic direction for investment. It also sets the initial context and support for the funding of walking and cycling projects, and associated business cases if/ when required.

The Plan itself has been developed through an evidence-based business case approach, utilising specific transportation data as well as consultation feedback received from stakeholder workshops, key partners, residents and Iwi groups. A 10-year programme of prioritised improvements have been identified, with a focus on promoting active modes as a means of transport rather than just a recreational activity.

Appendix B provides more background information about the district in terms of its geographic, social and economic context.

1.2 Vision, Aim, and Objectives of this Network Plan

In order to accommodate the significant growth expected in the Kāpiti Coast District over the next 30 years, the vision is to create a pathways network in the district that is accessible, safe, and provides connectivity between key origins and destinations.

The aim is to recommend a Preferred Programme of improvement projects that can be implemented over the 10 years of this Pathways Network Plan.

The Pathways Network Plan is underpinned by the following objectives:

1. Improve the extent of coverage of the network to and from the key destinations of town centres, schools, places of employment, railway stations, other commercial areas and surrounding local streets.
2. Improve the safety for active modes users in the district.
3. Consistent investment in the network to provide for its existing users and encourage active travel uptake in a way that responds to development over time.

These objectives are reflective of the problem statements, benefits, and investment objectives developed during the ILM workshops with KCDC (discussed further in **Section 3**).

[1] Building on the previous network plan and subsequent Waka Kotahi NZTA endorsed business cases.

1.3 Stakeholder Engagement

Stakeholder engagement formed a key part of developing this Pathways Network Plan. Stantec worked with KCDC to undertake the following engagement activities:

- A pre-workshop meeting held with KCDC to identify the relevant key stakeholders and investment partners.
- Two stakeholder engagement workshops with key members of KCDC, the Cycling, Walking and Bridleway (CWB) Advisory Group, Waka Kotahi NZTA, Iwi representatives, Paraparaumu College Principal, and school council representatives.
- One Councillor workshop to inform the district's Councillors of the Pathways Network Plan.
- Ongoing engagement with various Iwi groups in the district.
- Community consultation through an online Have Your Say (HYS) survey hosted by KCDC.

KCDC developed an Engagement Summary Report to outline all the engagement activities and their outcomes (refer to **Appendix C**).

2. Context

This section sets out the context for this Pathways Network Plan, in terms of its strategic alignment with various policies, strategies and plans, as well as the existing transportation network that operates in the district. **Appendix B** provides details on the geographic, social, and economic context.

2.1 Strategic Alignment

Table 2-1 provides a summary of the key policies, strategies and plans, including how their priorities will align to this Pathways Network Plan over the 10 years.

Table 2-1: Key Policies, Strategies and Plans and their Alignment with this Network Plan

Document	Alignment
National	
Government Policy Statement on Land Transport 2024	The GPS sets out the Government's priorities for land transport investment over the next 10-year period. Waka Kotahi NZTA and local authorities need to ensure spend on transport reflects these priorities. The Plan's strategic initiative, and the district's context more broadly, aligns with the statement's commitment to walking and cycling investments that will clearly benefit economic growth, safety, and where pedestrian and cyclist volumes already exist.
Regional	
Wellington Regional Land Transport Plan (RLTP) 2021 – 2024 Mid Term Review	The Wellington RLTP sets out the direction for the Wellington Region's transport network for the next 10 to 30 years. The document outlines the long-term vision, regional priorities, and the investment projects over the next six years. Very Strong alignment with the 'Travel Choice' and 'Strategic Access' priorities. The Plan's outcomes will support the priorities by making walking and cycling a safe, resilient, and attractive option for more trips in and around the district, as well as improve access to key destinations e.g., employment, education, and health care centres. Strong alignment with the 'Safety' priority and the need to improve safety in the region, especially at high-risk intersections and on high-risk urban and rural roads. This Pathways Network Plan will complement and work in parallel with the KCDC Speed Management Plan.
Local	
Kāpiti Coast District Council Climate Change and Resilience Strategy 2023	This Strategy sets out an approach for tackling climate change and resilience in the district. Very Strong alignment with the 'Mitigation' focus area in terms of changing the way we move around. This will be achieved by increasing CWB use with more and safer walking, cycling and micro-mobility pathways, connecting to key destinations, and more cycle parking. Strong alignment with relevant initiatives identified for funding in the Strategy, including the installation of the Ōtaki cycle loop signage and the Ōtaki story.
Kāpiti Coast District Council Activity Management Plan 2023 (6.3 Footpath and Pathways – Walking and Cycling Facilities)	This section of the AMP covers footpaths, walkways, cycle lanes and shared paths in the district that the KCDC owns and maintains through the Access and Transport Team. Council has made a strategic decision to 'at least' maintain the current level of service for this activity. This means a combination of renewals as well as maintenance works to keep the network in a safe and appropriate condition. Very Strong alignment with the 2024-27 LTP focus areas for walking and cycling. This includes increasing maintenance of cycle path network and increasing walking and cycling improvements, new connections, and facilities e.g., wayfinding and cycle stands.
Kāpiti Coast District Council Sustainable Transport Strategy 2022	The Sustainable Transport Strategy is a framework to deliver good outcomes for communities and provide details of the key areas of focus for transport in Kāpiti for the next 20-years. Very Strong alignment with the 'Improved Connections and Mode Choice' focus area. In considering new development and investment priorities, Council will continue to develop the CWB network and ensure a high level of maintenance on the CWB network. Strong alignment with acknowledgement to the impacts of wider projects on the existing and future CWB network. This includes the Ōtaki to the north of Levin (Ō2NL) roading project

Document	Alignment
	which has the potential to enable better CWB networks, as well as the need to invest in the East-West connections.
Kāpiti Coast District Council Speed Management Plan 2023-33	The Speed Management Plan provides a three-year implementation programme with a focus on school zones, areas where there are high concentrations of active road users, such as town centres, marae and road corridors. Very Strong alignment as the SMP aims to create a safer and more accessible environment for pedestrians and cyclists. This includes installing appropriate speed limits (30 km/ hr variable and permanent) and safe infrastructure for active mode users.
Kāpiti Coast District Growth Strategy *Te tupu pai - Growing well* 2022	The Strategy sets out a vision and direction for how, where and when Kāpiti grows over the next 30 years. Very Strong alignment with the 'Good Design and Protection for our Green Spaces' objectives. Council will take advantage of the infrastructure already in place and continue to expand the district's cycleways, walkways and bridleway network. To maximise the benefits on intensification, Council also recognises that more services and facilities in the district's centres will encourage greater use of cycleways and walkways for active modes of transport within centres, east–west, and between centres, north–south. The CWB network will also be important for ensuring greenfield developments can make use of alternative transport options.
Kāpiti Coast District Council District Plan 2021	The District Plan outlines the development activities (including land use and sub-division) in the district and specifies the desired environment outcomes. The current approach is to maintain a consolidated urban form in existing urban areas and a limited number of growth areas which can be efficiently serviced and integrated with existing townships. Very Strong alignment with various transport policies which will reduce the need for private vehicle travel and increase the use of sustainable modes.

2.2 Transport Context

2.2.1 Walking & Cycling Network

There are a variety of footpaths, tracks and trails available for walking in the district as well as key routes for cycling including the Kāpiti Coast Cycle Route, Coast 35 and the dedicated Kāpiti Expressway Cycleway.

Walking and cycling improvements have been implemented across the district over the past 10 years. While there are still some gaps to address, the improvements have increased the extent of coverage of the walking and cycling network, meaning more people have better access to key destinations.

Importantly, many of the improvements have been implemented through the Stride n' Ride Programme[2], which provided investment for:

- Increasing the number and length of cycle routes, on-road cycle lanes, quiet routes (recommended by cyclists), and shared paths
- Creating linkages to the new expressway cycleway through the arterial routes of Poplar Avenue, Raumati Road, Kāpiti Road, Mazengarb Road, Otaihanga Road and Te Moana Road.

Figure 2-1 provides a map of the existing cycle routes, on-road cycle lanes, quiet routes (recommended by cyclists), and shared paths which have mainly been implemented through the Stride n' Ride Programme.

[2] Kāpiti Urban Cycleways Project | NZ Transport Agency Waka Kotahi

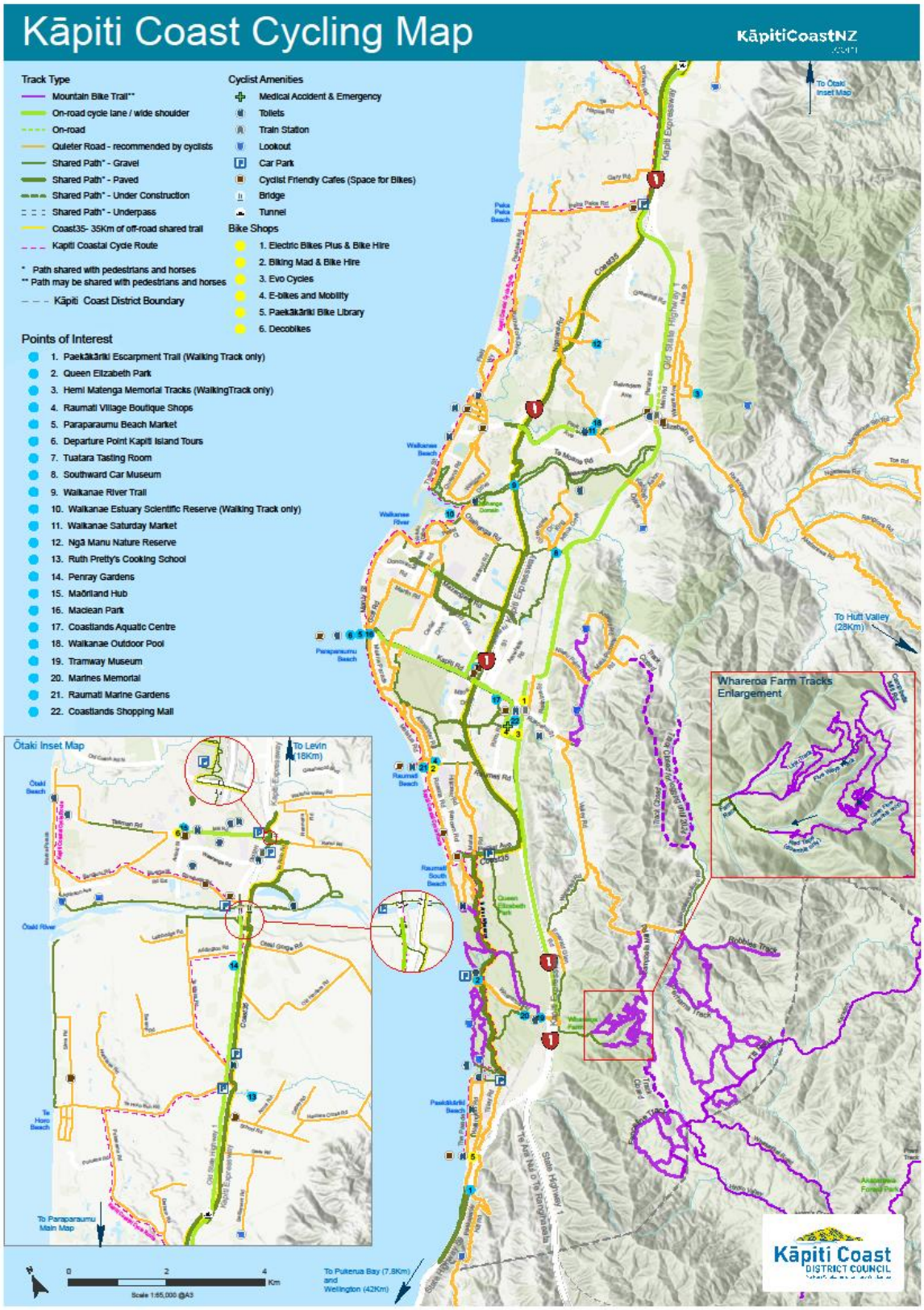

Figure 2-1: District Cycling Map[3]

[3] kapiti-coast-cycle-map-2023.pdf

2.2.2 Walking Demand

No data is available to understand walking demand in the district.

It is recommended that KCDC implements an annual actives modes monitoring programme (see recommendations on districtwide improvements in **Section 16**). This would involve the selection of specific count locations and consistently monitoring these locations in order obtain demand volumes over time.

2.2.3 Cycling Demand

Cycle volume monitoring has been undertaken at various cycle count locations in the district. This data has been captured in the RAMM database since 2015.

Figure 2-2 shows the cycle count locations that were selected to understand the change in total weekly cycle volumes over the past 10 years (2015 to 2024). The total weekly volumes for the selected locations are presented in Table 2-1 and the key trends are summarised below.

- Cycle volumes are more evenly distributed across the network in 2024 compared to 2015, which is shown through the reduction in cyclists on some roads and substantial increase on others.
- The Stride n' Ride Programme implemented the dedicated shared paths on Te Moana Road and Kāpiti Road. While no data is available for 2015, the 2024 data provides evidence that uptake is high on these shared paths, compared to other roads on the network.
- The Kāpiti Expressway shared path cycleway provides further explanation for the change in distribution as this provides a dedicated, safe, and more direct route for cyclists travelling in and around the district.
- The largest reduction in cycle volumes occurred on Park Avenue, Rutherford Drive and Makora Road – where dedicated cycle provision is limited. This indicates cyclists now use alternative routes which are safer, more direct and have better cycling provision.
- Makora Road has experienced the largest reduction in cycle volumes. Prior to the implementation of the Kāpiti Expressway cycleway, Makora Road was one of the only roads that could be used to cross the State Highway (now Old SH1) and access the main townships. In 2024, the Kāpiti Expressway cycleway now provides an alternative cycle route which is a reasonable explanation for this large reduction on Makora Road.
- Park Avenue and Rutherford Street also experienced reductions in cycle volumes over the 10-year period. These roads do not have dedicated cycling provision and have higher traffic speeds compared to other locations.

Overall, the evidence indicates the Stride n' Ride Programme has increased the choice of routes available for active modes users in the district. While volumes have increased in some areas, a key focus for this network plan is to further increase uptake and encourage mode shift to active modes over the next 10 years.

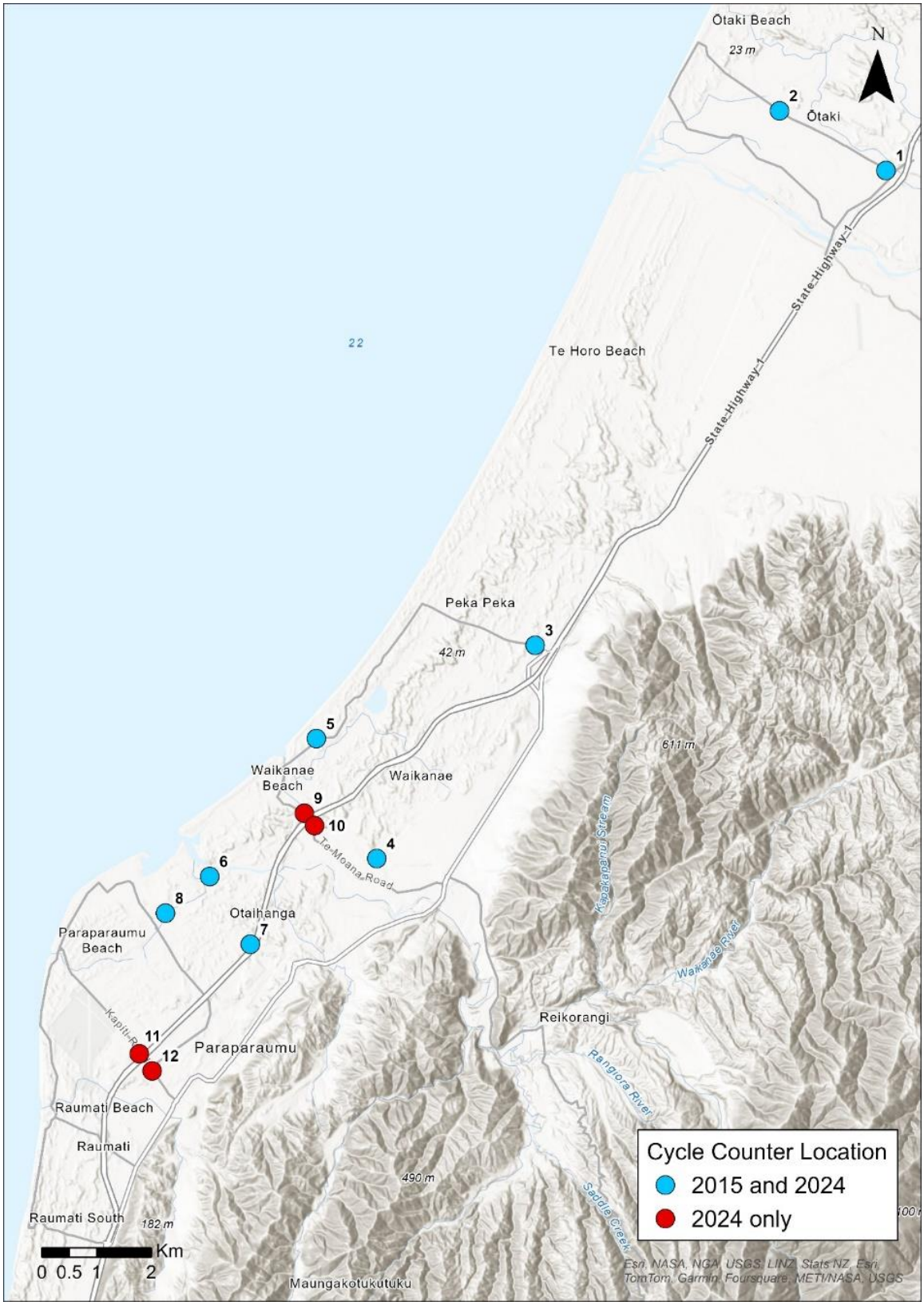

Figure 2-2: Cycle Count Locations[4]

[4] KCDC RAMM Database

Table 2-2: 10-year Change in Total Weekly Cycle Volumes (2015 – 2024)[5]

Ref.	Location	Direction	Total Weekly Cycle Volumes		
			2015	2024	10-year Change
1	Mill Road	EB towards Dustan Street	23	52	29
		WB towards Jean Hing Place	80	75	-5
		Combined	*103*	*127*	*24*
2	Tasman Road	EB towards Rangiuru Rd	15	151	136
		WB towards Robert McKeen St	21	217	196
		Combined	*36*	*368*	*332*
3	Peka Peka Road	EB towards SH1	49	126	77
		WB towards Kensington Drive	58	84	26
		Combined	*107*	*210*	*103*
4	Park Avenue	EB towards Ngarara Road	162	129	-33
		WB towards Walton Avenue	107	85	-22
		Combined	*269*	*214*	*-55*
5	Rutherford Drive	NB towards Goldie Place	183	65	-118
		SB towards William Street	251	123	-128
		Combined	*434*	*188*	*-246*
6	Makora Road	NB towards Ruru Road	704	192	-512
		SB towards Otaihanga Rd	712	112	-600
		Combined	*1416*	*304*	*-1112*
7	Otaihanga Road	EB towards SH1	42	87	45
		WB towards Ratanui Rd	29	75	46
		Combined	*71*	*162*	*91*
8	The Drive	NB towards Meredith Way	155	38	-117
		SB towards The Avenue	78	54	-24
		Combined	*233*	*92*	*-141*
9	Te Moana Road shared path (west of SH1)	EB towards SH1	-	413	413
		WB towards Ara Kawakahia	-	249	249
		Combined	*-*	*662*	*662*
10	Te Moana Road shared path (east of SH1)	EB towards Park Avenue	-	208	208
		WB towards SH1	-	201	201
		Combined	*-*	*409*	*409*
11	Kāpiti Road shared path (west of SH1)	EB towards SH1	-	129	129
		WB towards Milne Drive	-	127	127
		Combined	*-*	*256*	*256*
12	Kāpiti Road shared path (east of SH1)	EB towards Brett Ambler Way	-	171	171
		WB towards SH1	-	217	217
		Combined	-	388	388

[5] KCDC RAMM database

2.2.4 Public Transport Network

Figure 2-3 shows the existing public transport (PT) network that operates in the district, with the key characteristics of this network summarised below.

- The district has a well-established but limited bus network, with nine routes operating in the district. Bicycle racks are available to use on buses at no cost, although spaces are limited.
- The train link to and from Wellington City substantially lifts the proportion of people travelling by PT in the district. Trains on the Kāpiti Line run daily between Wellington City and Paekākāriki, Paraparaumu and Waikanae railway stations.
- The railway stations in the district are key destinations for walking and cycling trips, particularly where longer trips are required. Bicycles can be carried on trains free of charge, although spaces are limited during peak commuter periods.
- The Paraparaumu transport hub has been completed and includes upgrades to the bus interchange and taxi parking area, as well as making the area more pedestrian friendly[7].
- It is anticipated that the Lower North Island Integrated Mobility will deliver a suite of enhancements for Wairarapa and Manawatū rail lines[8] in 2028. This will improve long distance journeys, and therefore, increase connectivity and employment opportunities for those living in the Kāpiti Coast district.

A key focus for KCDC over the next 10 years will be to seek opportunities to integrate and improve walking and cycling connections to and from the PT network.

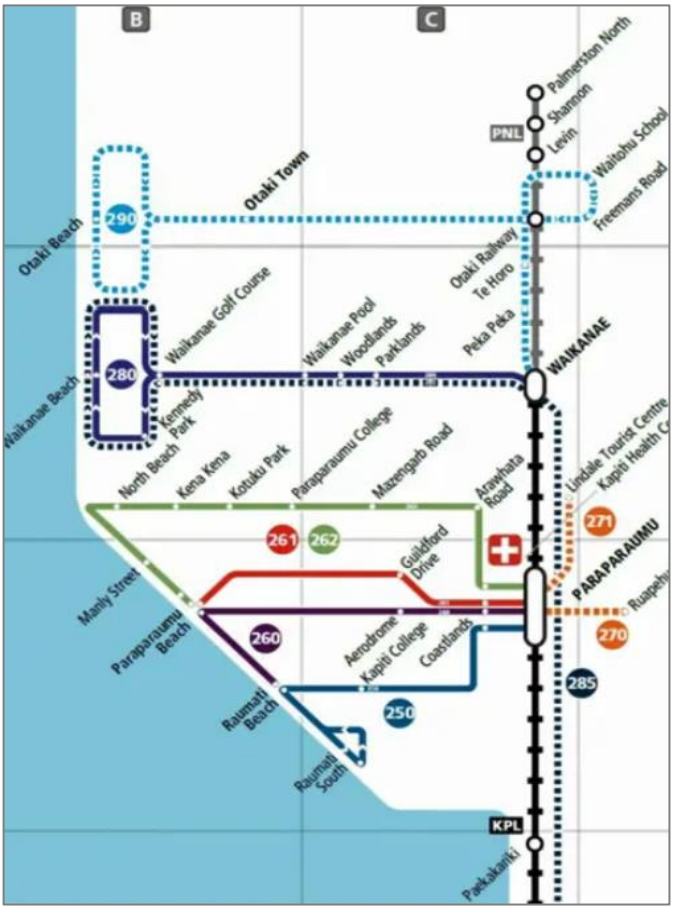

Figure 2-3: PT Network Operating in the District[6]

2.2.5 Road Network

The One Network Framework (ONF) is a tool to help establish transport network function, performance measures, operating gaps and potential interventions for each road and street type[9].

Figure 2-4 shows the ONF classifications for all roads in the district, and a summary of the network's key characteristics is provided below.

- More than 60% of the roads in the district are local streets which provide quiet and safe residential access for all ages and abilities and foster community spirit and local pride[10].
- Urban connectors form 10% of the network, some of which provide important connections for walking and cycling e.g., Kāpiti Road, Te Moana Road, and Poplar Avenue.
- SH1 and SH59 are classified as Interregional Connectors. SH1 (Kāpiti Expressway) provides a key connection between the Kāpiti Coast and Wellington City. SH59 runs through Paekākāriki up to the Mackays

[6] Source: KCDC website

[7] Paraparaumu transport hub upgrade - Kāpiti Coast District Council (kapiticoast.govt.nz)

[8] Transport Minister Simeon Brown announces $802.9m investment on lower North Island rail project - NZ Herald

[9] One Network Framework | NZ Transport Agency Waka Kotahi (nzta.govt.nz)

[10] Street categories | NZ Transport Agency NZTA (nzta.govt.nz)

Crossing interchange, where the northern end of the Transmission Gully Motorway meets the southern end of the Kāpiti Expressway.

- All other categories each comprise less than 10% of the network.

In order to maintain the overall mobility and inclusivity across the district, this Pathways Network Plan will aim to ensure the roads, and its surrounding infrastructure, are more accessible and safer for active mode users, and continue to provide for road users who rely on other modes for essential travel.

Figure 2-4: ONF Classification for Roads in the District[11]

[11] Source: NZTA MegaMaps

3. Investment Logic Map

An Investment Logic Map (ILM) is a tool used by Waka Kotahi NZTA to confirm that the rationale for the potential investment is adequately understood.

As part of this Pathways Network Plan, discussions were held with KCDC in order to define the problem statements, the benefits, investment objectives, and Key Performance Indicators (KPIs).

3.1 Problem Statements

The overarching problem statements and their relative weightings are:

- **Problem 1 (40%):** Gaps in the network are limiting connectivity and reducing access to key destinations in the district.
- **Problem 2 (40%):** Unsuitable traffic speeds and infrastructure are compromising safety for active mode users, which is deterring active travel uptake in the district.
- **Problem 3 (20%):** The current network is not future proofed to cater for population growth and land use change, which will result in reduced effectiveness over time.

While all problem statements can generally be applied across the entire network, each one was assigned a weighting based on the level of impact it has for active mode users, both at present and in the future if the problem is not adequately addressed. The weightings are also aligned with stakeholder priorities identified during Workshops 1 and 2.

3.2 Benefits & Investment Objectives

Four key benefits would be realised if the problem statements are adequately addressed through this Pathways Network Plan. These benefits, along with their associated investment objectives are presented in Table 3-1.

Table 3-1: Benefits & Investment Objectives

Benefit	Investment Objective
Improved access	• Improve the extent of coverage of the network to/ from key destinations e.g., town centres, schools, places of employment, railway stations, other commercial areas, and local streets. • Improve the safety for active modes users by implementing suitable traffic speeds and infrastructure across the district. • Consistent investment in the network to provide for its existing users and encourage active travel uptake in a way that responds to development over time.
Increased connectivity	
Improved safety	
Increased active mode share	

3.3 Key Performance Indicators

KPIs were developed to measure the realised benefits against the investment objectives. Each KPI in Table 3-2 has a baseline measure and a target to be achieved over the next 10 years of this Pathways Network plan.

Table 3-2: Baseline & Targets for Associated Investment Objectives & KPIs

Investment Objective	KPI	Baseline	2034 target
Improve access, connectivity, and integration of the walking and cycling network to/ from key destinations.	% of the district's trips made walking and cycling to workplaces (Source: Census data)	2018 Census Walking: 3% Cycling: 2%	Walking: 7% Cycling: 5%
	% of the district's trips made walking and cycling to education facilities (Source: Census data)	2018 Census Walking: 22% Cycling: 9%	Walking: 35% Cycling: 20%
Improve the safety for active modes users in the district.	Reduction in the annual number of deaths or serious injuries (DSI) equivalents involving pedestrians or cyclists[12]. (Source: Waka Kotahi NZTA Crash Analysis System)	Annual average over the last 10 years 0.5 pedestrian DSI equivalents annually 0.4 cyclist DSI equivalents annually	50% reduction in DSI equivalents compared to 2024 baseline
Consistent investment in the district's walking and cycling network over time to provide for its existing users and encourage active travel uptake.	Number of active mode users (Source: KCDC annual active modes count survey)	Selection of count location to be confirmed and baseline count data to be collected	40% increase in annual users compared to baseline year.

[12] DSI equivalents were calculated based the areas of the network that have been captured in the preferred programme.

3.4 Investment Logic Map

The linkages between the problem statements, benefits and investment objectives are shown in the ILM.

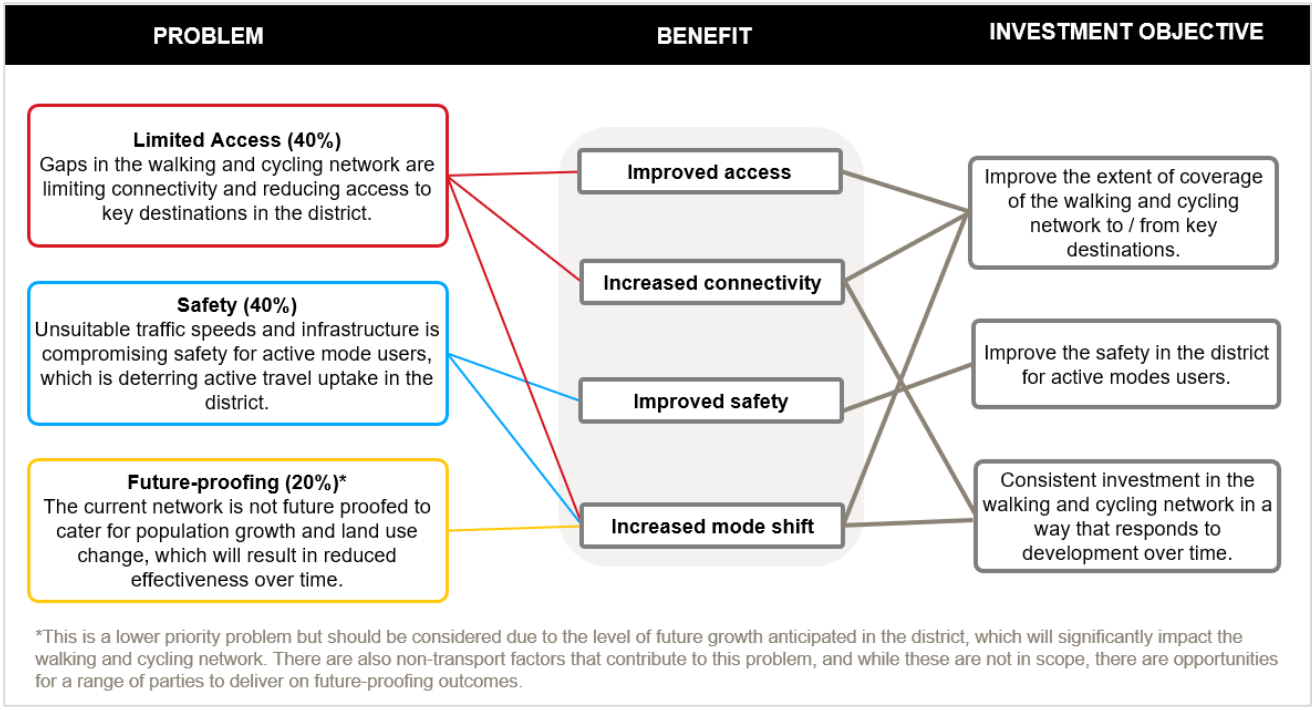

Figure 3-1: Investment Logic Map

4. Problem 1: Access

Problem Statement 1: Gaps in the walking and cycling network are limiting connectivity and reducing access to key destinations in the district.

4.1 Causes

4.1.1 Key Gaps Identified in the Walking & Cycling Network

As part of the development of this Pathways Network Plan, a districtwide assessment was undertaken to identify the key gaps in the walking and cycling network (refer to **Section 11.1.1** for details). Figure 4-2 to Figure 4-4 provide an overview of the gaps that were initially identified with KCDC. These gaps were used as a starting point and expanded upon during the Long List Development Process (refer to **Section 12.1**).

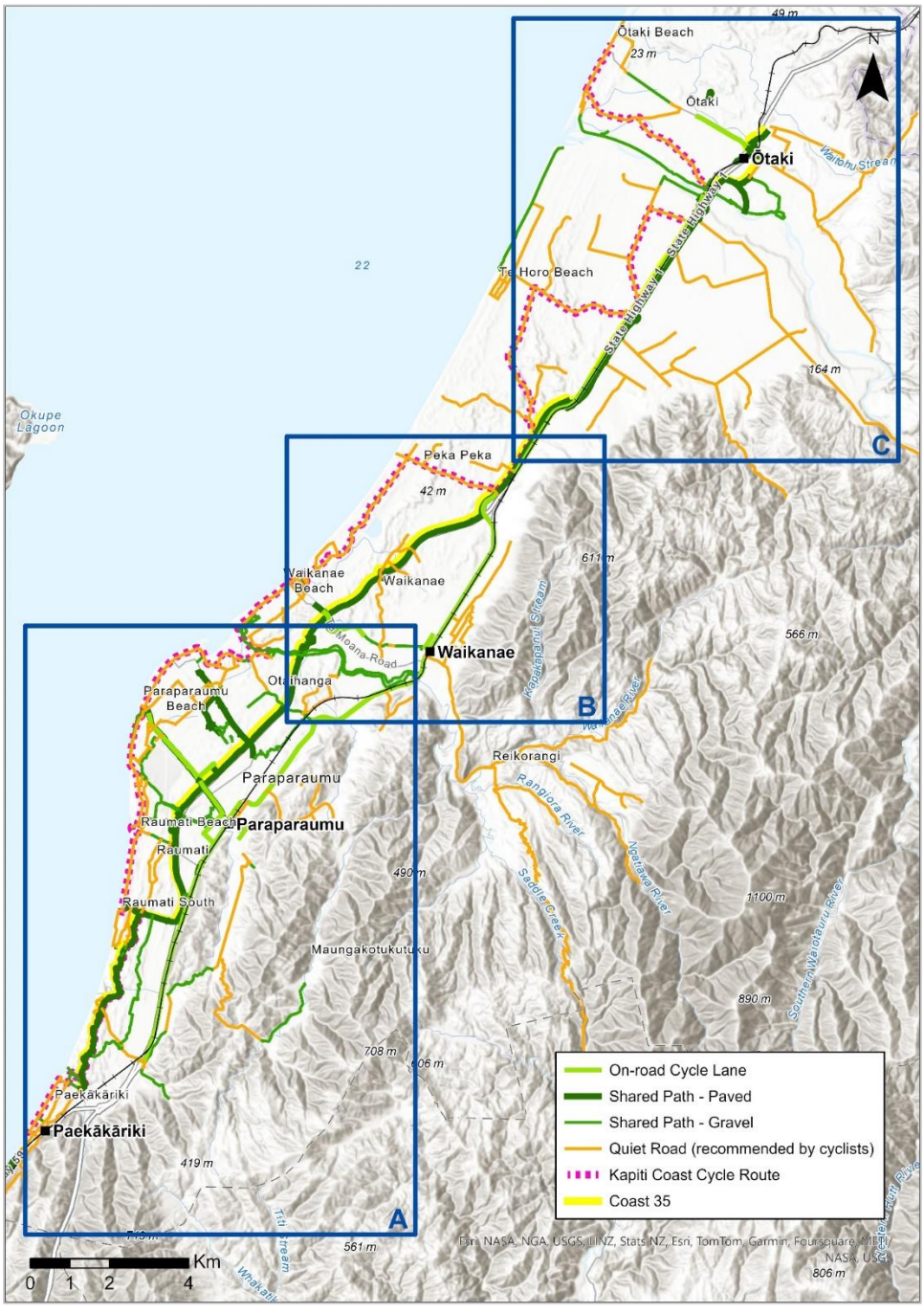

Figure 4-1: Key Gaps in the Walking & Cycling Network

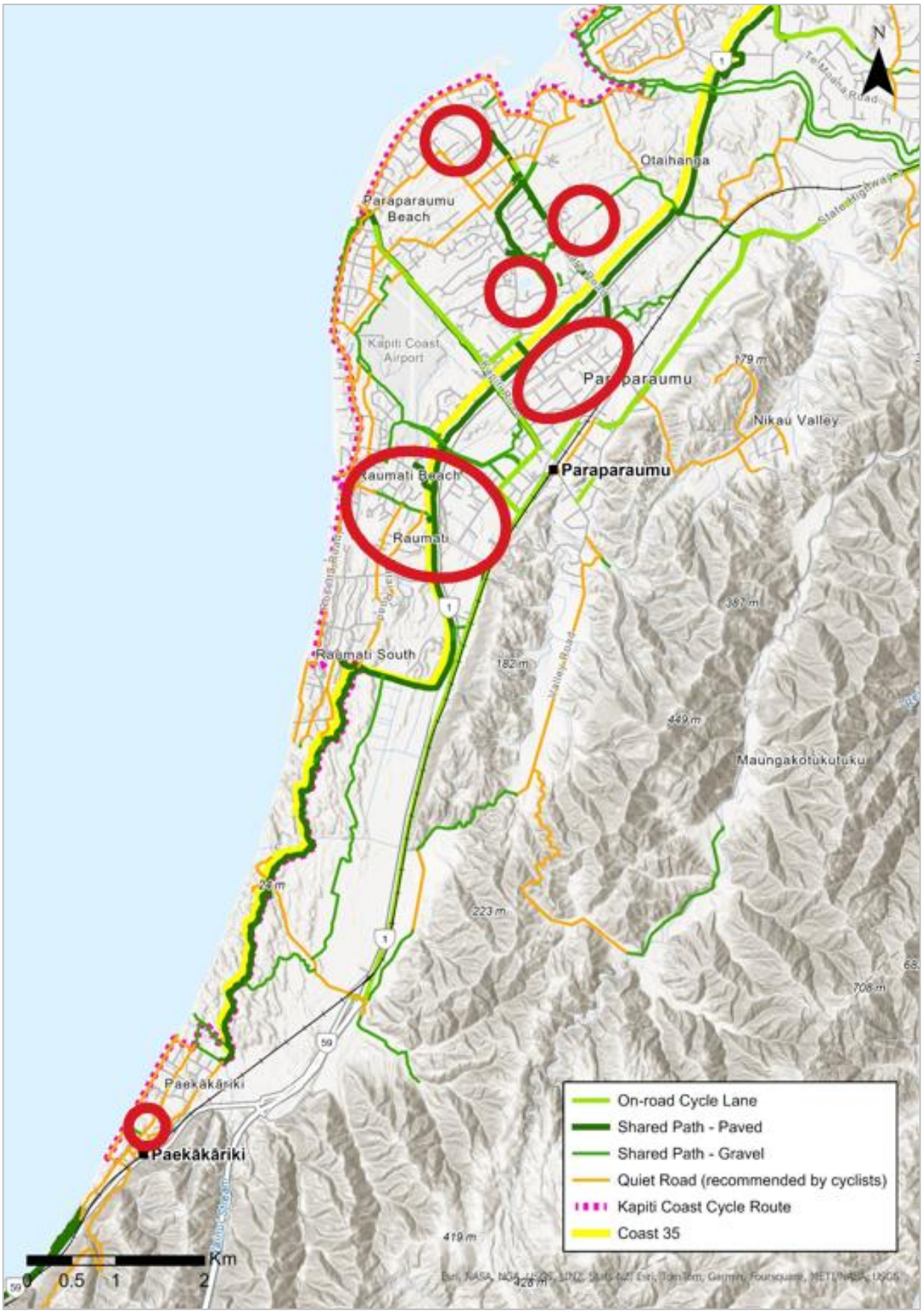

Figure 4-2: Key Gaps in the Walking & Cycling Network: Inset A

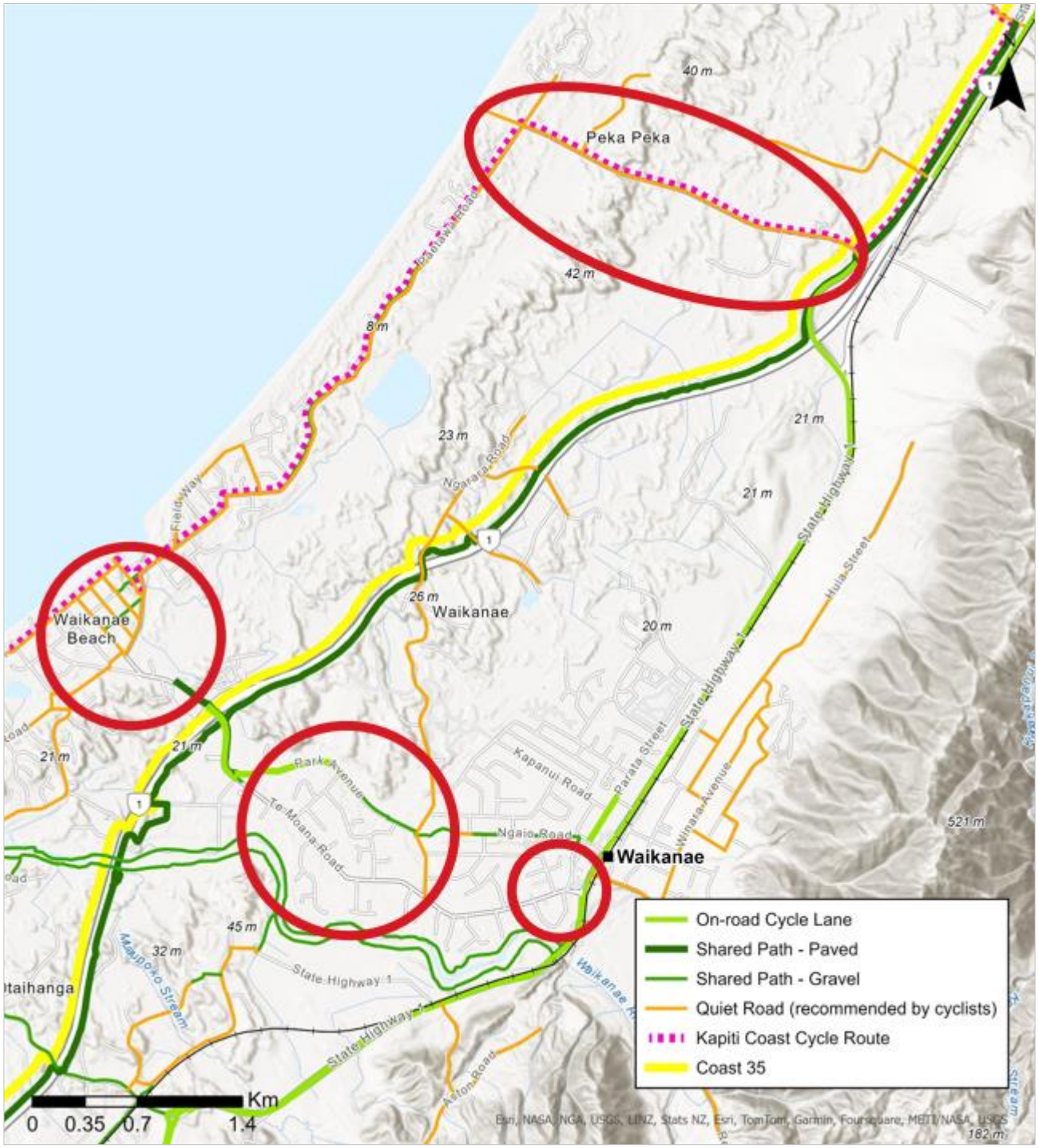

Figure 4-3: Key Gaps in the Walking & Cycling Network: Inset B

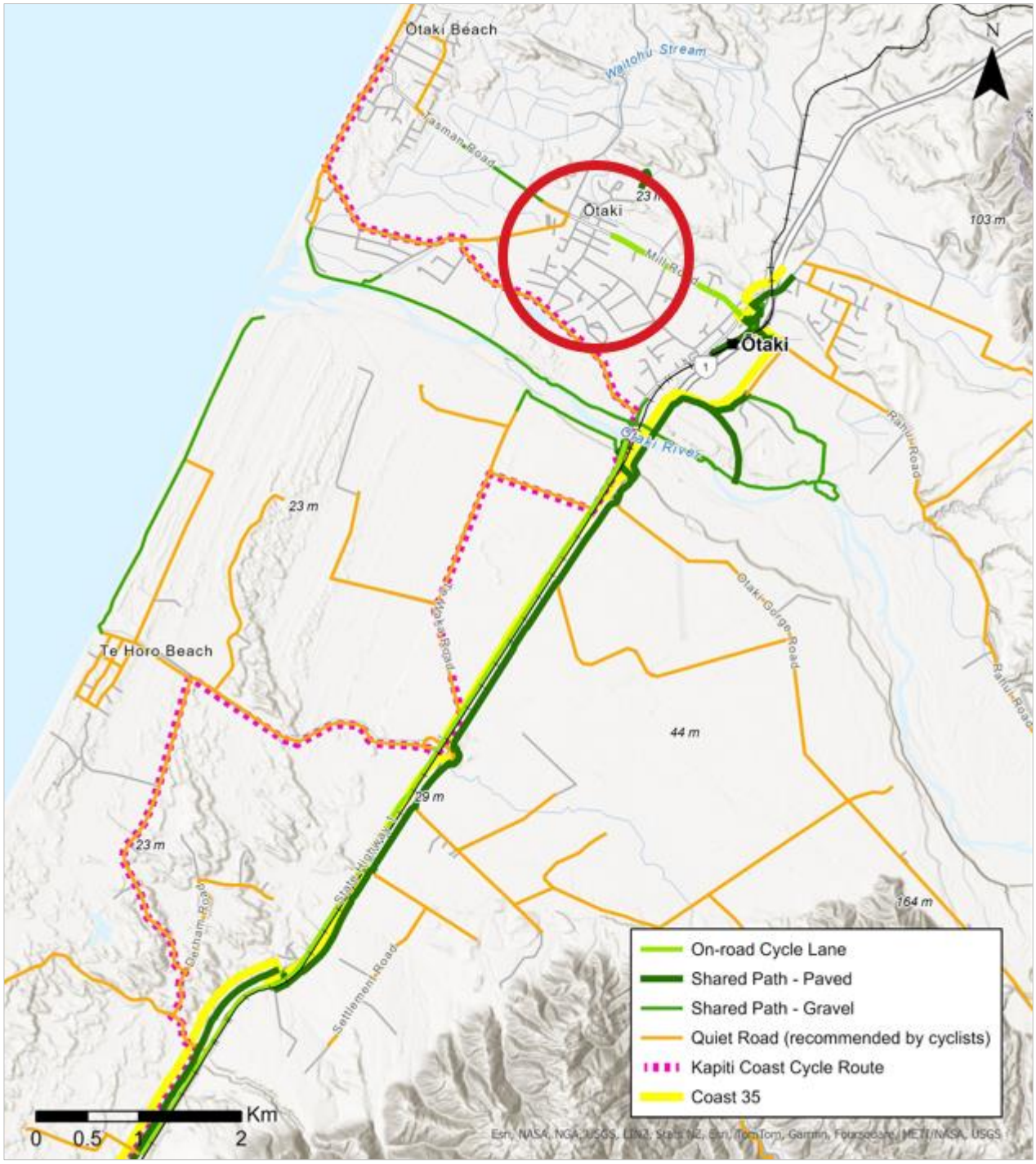

Figure 4-4: Key Gaps in the Walking & Cycling Network: Inset C

4.1.2 Incomplete Stride n' Ride Programme Projects

A review of the Stride n' Ride Programme was undertaken to understand the projects that have not been completed to date (Table 4-1 and Figure 4-1 shown in blue).These projects have been identified as gaps in the network which are limiting connectivity and reducing access to key destinations in the district.

Table 4-1: Incomplete Stride n' Ride Projects (2014 Proposed vs. 2024 Existing)[13]

Map ID.	Project	2014 Proposed	2024 Existing
1	Lavinia Grove to Tutere Street via Rauparaha Street	• Off road shared use facility on high volume section of Te Moana Road between recreational Rauparaha Street route to M2PP.	• Shared path exists from SH1 up to Te Ara Kawakahia but does not extend to Rauparaha Street. • This reduces walking and cycling connectivity between Te Moana Road and Waikanae Beach.
2	Ngarara Road to Waikanae River Route	• Off road shared use facility on Te Moana Road to provide a better connection between Ngarara Road and the Waikanae River Route.	• Footpath exists on Te Moana Road but there is no formal crossing point from Ngarara Road to access Maple Lane (the identified 'quiet route' used to access the Waikanae River Route).
3	Raumati Road Connection	• Off road shared path and dedicated on-road cycle lanes running parallel to Raumati Road between the Kāpiti Expressway shared path and Rosetta Road.	• While the new shared path exists, the on-road cycle lanes have not been implemented due to feasibility reasons. • No dedicated facility for cyclists reduces their connectivity and safety between the Kāpiti Expressway shared path and Rosetta Road (a key route used to access Raumati Beach). • This also increases potential conflicts between pedestrians and cyclists along the new shared path.
4	Waikanae Railway Station via Te Moana Road and Ngaio Road	• Off road shared path along Ngarara Road to provide a link for walking and cycling between Park Avenue and Te Moana Road.	• No shared path or dedicated crossing point on Ngarara Road, which reduces access and connectivity to Waikanae Train Station (via Ngaio Road) as well as the Waikanae River Trail (via Maple Lane).

[13] **Appendix E** – Stride n' Ride Programme Projects

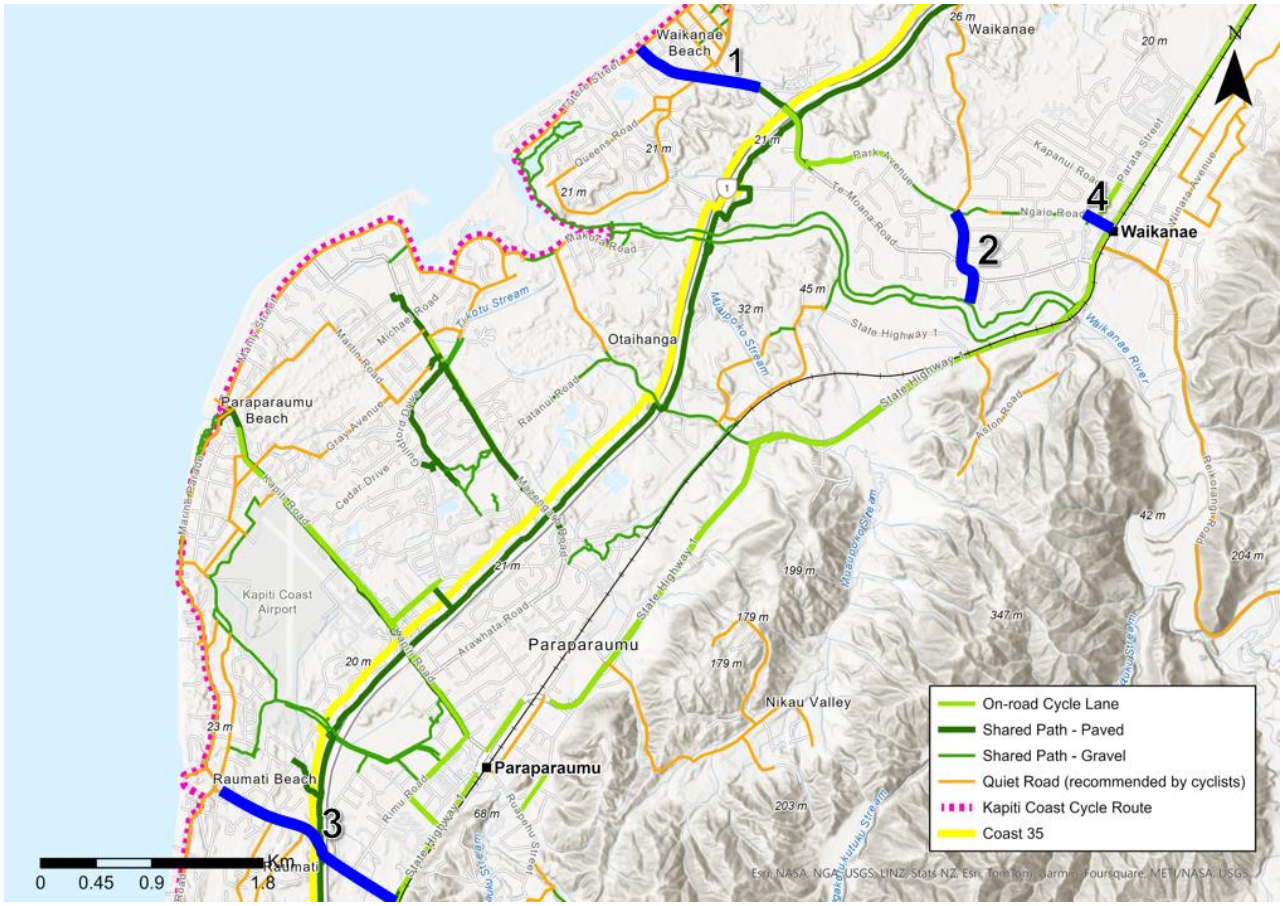

Figure 4-5: Incomplete Stride n' Ride Projects (shown in blue)

4.2 Effects

4.2.1 Limited Connectivity to/ from Key Destinations

Overview

To evidence the effect of Problem Statement 1 (gaps in the network), the Sustainability Transport Audit and Appraisal Toolkit (STAAT)[14] was used to assess the areas of limited walking and cycling connectivity to/ from the key destinations of education and employment that are in the district. STAAT was also used to understand how deprivation may impact walking and cycling connectivity in the district.

The findings from the assessment are summarised below (refer to **Appendix F** for connectivity maps).

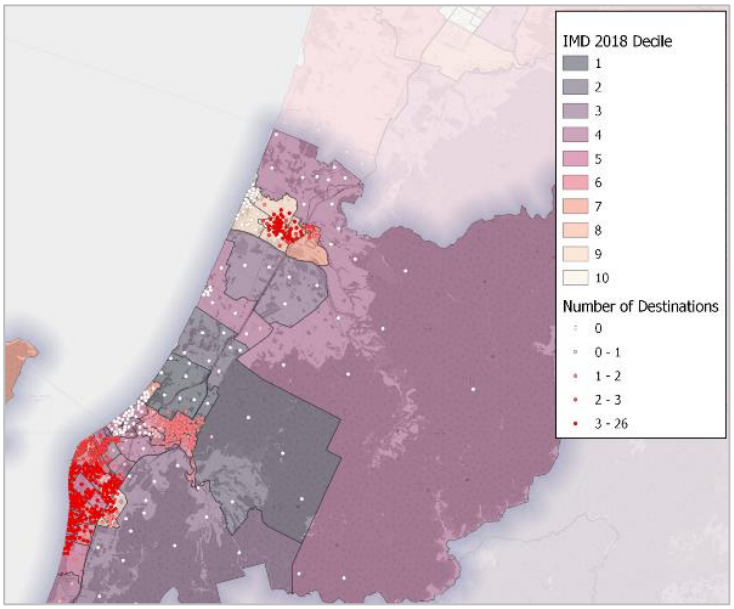

Figure 4-6: STAAT Assessment Map Example

Connectivity Analysis to/ from Key Education Centres

- Education centres within a 20-minute cycle are more accessible for those using a combination of the cycle and road network compared with those who use the cycle network only.
- The main gaps in the cycling network and infrastructure appear to be around Ōtaki Beach, Waikanae Beach, Waikanae, Otaihanga and Paekākāriki. These areas have less than three education destinations within a 20-minute cycle which could have a greater influence on connectivity rather than access to the cycling network.
- Paraparaumu and Raumati provide the most connectivity to education facilities, which could be explained by the linkages to/ from the Kāpiti Expressway cycleway and on-road cycle lanes.
- Connections to education centres within a 20-minute walk are more limited compared to cycling. While Ōtaki, Paraparaumu Beach East, and Raumati South show similar levels of connectivity between the two modes, all other areas in the district have a reduction in connectivity if walking is the chosen mode of travel.

Connectivity Analysis to/ from Key Employment Centres

- Employment centres within a 20-minute cycle are more accessible for those using a combination of both the cycle and road network compared with those who use the cycle network only.
- When cyclists choose to use elements of the road network to access their employment centres, the connectivity around Te Moana Road shows a significant improvement which indicates a gap in the cycling network and its infrastructure. Employment centres around Ōtaki are also more accessible to cyclists who use both the cycle and road network, further highlighting the gaps in the cycling network and its infrastructure.
- Paraparaumu and Raumati provide the best cycling connections to employment centres. This could be attributed to the east-west connections, such as the cycling infrastructure on Kāpiti and Mazengarb Roads. These roads provide clear access to the main north-south route of the Kāpiti Expressway cycleway for accessing job destinations in the district.
- Across the district, there are substantially fewer walking connections to employment centres within a 20-minute walk compared to cycling, with the greatest reduction in connectivity shown in Paraparaumu and

[14] STAAT uses travel time information to assess walking and cycling connections between specified origins and destinations. **Appendix F** details the STAAT methodology.

Raumati. The least connectivity for pedestrians is shown where both job opportunities and footpaths are limited, including areas around Ōtaki, Te Horo, Peka Peka, and Paekākāriki.

Impact of Deprivation on Connectivity

Deprivation statistics were overlayed with the STAAT to assess whether levels of deprivation impact walking and cycling connections to key destinations of education and employment.

While the level of deprivation varies across the district, this does not seem to be closely correlated to connectivity to key destinations of education and employment. The gaps in the walking and cycling network and infrastructure, along with the number of key destinations located in an area, is a greater factor in determining the level of connectivity for walking and cycling.

4.2.2 High Number of Short Trips made by Car to/ from Key Destinations

SATURN modelling was undertaken to forecast travel demands and trip patterns in the district, for the future year 2036 (refer to **Appendix G** for details).

This modelling has been utilised to estimate the distance of car trips being made to both Waikanae and Paraparaumu town centres, with key findings summarised below.

Short Trips to Waikanae Town Centre

- The average distance of car trips made to Waikanae town centre is 2.8km, with 77% of all trips being less than 5km.
- The most popular origins for these trips are the Waikanae town centre, followed by Waikanae Beach. Given the location of origin, this suggests most of these trips will use Te Moana Road or Park Avenue to access Waikanae town centre.

Short trips to Paraparaumu Town Centre

- The average distance of car trips made to Paraparaumu town centre is 2.4km, with 78% of all trips being less than 5km.
- Most of these trips originate out towards Paraparaumu beach, the northern part of the Paraparaumu township and Raumati Beach. This suggests that most of the trips will access the town centre via Kāpiti Road, Arawhata Road, Guildford Drive or Rimu Road.

Overall, the modelling results show that most car trips to both the Waikanae and Paraparaumu town centres are short trips of less than 5km. While this demonstrates the current network provides good access for short vehicular trips, increasing congestion at certain times/ areas[15] is a growing concern as it is unlikely that additional road capacity will be constructed in the district. While it should be acknowledged that the model is only able to provide a representation of short trips (and may underestimate the number based on zone size limitations), it does indicate that there are a large number of trips that could be made by an alternative mode.

As many of these trips could be made on foot or bike, this emphasises the importance of encouraging mode shift to active modes. This Pathways Network Plan aims to make these short trips both accessible and safe, while also providing appropriate infrastructure to support and facilitate greater uptake of active modes.

4.3 Consequences

4.3.1 Reduced Access for Walking & Cycling in the District

While the Stride n' Ride Programme has provided a range of improvements, there is evidence that the remaining gaps in the network are reducing access and uptake of walking and cycling in the district.

Wellington Region Mode Shift Plan 2020

The Wellington Region Mode Shift Plan 2020[16] states that trips by active modes are increasing but we need to continue making it easier and safer to travel using these modes.

[15] This includes weekends, school pickup/ drop offs, and during summer months.

[16] Wellington-regional-mode-shift-plans.pdf (nzta.govt.nz)

"The number of people cycling is steadily increasing but from a low base[17]. Although over half of existing Wellington region's cyclists report that the level of service for cycling is poor or very poor, in 2019, an increased number, 27% rate it as good. This would indicate some improvement of service that benefits some cyclists, consistent with recent progress on facilities such as the Kāpiti Expressway Cycleway, Wainuiomata Shared Path and the Oriental Bay cycleway.

However, there are gaps in the network that impact on the use of active modes, especially for commuting. For example, in Kāpiti, there is a growing network of trails along the expressways, riverbanks and through seaside parks, but connections from these paths to key town centre destinations needs to be improved."

Opinions from Residents in the District

HYS Survey respondents highlighted their concerns and suggestions regarding the gaps in the network which are reducing access to key destinations (Table 4-2).

Table 4-2: HYS Survey Responses

Evidence of reduced access to key destinations
• "Paraparaumu [and Waikanae have] some good cycleways along highways but lacks a cycling network that connects destinations such as shops, schools and services. I prefer cycleways that are protected and connected on main routes, rather than shared paths." • "Either transfer the Kāpiti Coast Cycle Route from Rosetta Road to Renown and Margaret Roads as the preferred coastal route for cyclists or add a new route. This could also be used by primary school children to access Raumati South School from Raumati Beach." • "Would the Council consider an over bridge (over the train tracks) connecting the new Lindale development to Awatea Ave to make it a safer journey for children getting to schools." • "We badly need a pedestrian crossing across Elizabeth Street to get to the dairy and the cafes." • "The footpath from the Old State Highway - Te Moana Road intersection should be extended down the south side of Te Moana Road to Karu Crescent. At the moment it stops halfway. This would provide a safer route for people in Karu Crescent area to get to the train station and shops and would make it safer and easier for people to get from the Waikanae Township to the Waikanae River via Karu Crescent."

The respondents also indicated that gaps in the walking and cycling network are reducing access for those with additional physical and cognitive needs, such as those who are older, children, mobility-impaired, sensory-impaired, and wheeled pedestrians (Table 4-3).

Table 4-3: HYS Survey Responses

Evidence of reduced access for those with additional physical and cognitive needs
• "The new shared path bridge add on is fabulous. Please improve the accessway at the north end that joins onto the Waikanae River north side path. It needs to be usable by wheelchairs, mobility scooters, trikes, pushchairs, ebikes, young & elderly walkers and everyone else." • "Great to have all these new footpath crossings on Te Moana Road. There is a design fault/danger for Trikes, Mobility Scooters, Wheelchairs. The concrete edging leading from the road to the path leads straight into a Metal barrier which makes this safe for only walkers. There is not enough room to manoeuvre safety onto the island." • "We have an increasing population (old and young), and we want to encourage everybody to walk and bike at every possible opportunity. We especially need to improve walking and biking access to our schools. We need wide shared pathways that can safely be shared with Mobility scooters, wheelchairs, trikes, bikes, ebikes and walkers. Please permanently change KCDC policy so that every time a footpath is replaces no matter where it is, it will be re-laid double the previous width wherever possible."

[17] The Wellington region was just ahead of the New Zealand average of 2%, at 2.5% for main mode of travel to work, yet for education, the region was behind the New Zealand average at 2.9% compared to 3.6% for all New Zealanders. This may be partly to do with the regions challenging topography and frequently windy weather.

4.3.2 Low Proportion of Walking & Cycling to Key Destinations

Figure 4-7 and Figure 4-8 respectively show the main means of travel to work and education for trips made within the district, according to the 2018 Census. Overall, the key trends demonstrate that:

- The main means of travel is private vehicle, with approximately 70% of people using this mode to travel to places of work and education within the district.
- The proportion of people walking or cycling to education is much higher than those using these modes to travel to work within the district. This may be due to the targeted improvements around schools, such as walking and cycling infrastructure, speed management, and safety improvements[18], which have encouraged more people to walk or cycle to education.
- Working from home in the district is the second highest proportion with approximately 32%. This may be due to the likelihood that many residents are employed in Wellington City and opt to commute occasionally for work.
- PT as a main mode of travel is low for trips made within the district, however, the proportion is higher for those made to education compared to workplaces. It is noted that this only accounts for trips made within the district, which could explain the lower proportion as many residents are employed in Wellington City and will commute to/ from the city using PT.

Appendix H provides a comparative analysis of the main means of travel to work and education for all trips made at the district, regional, and national level.

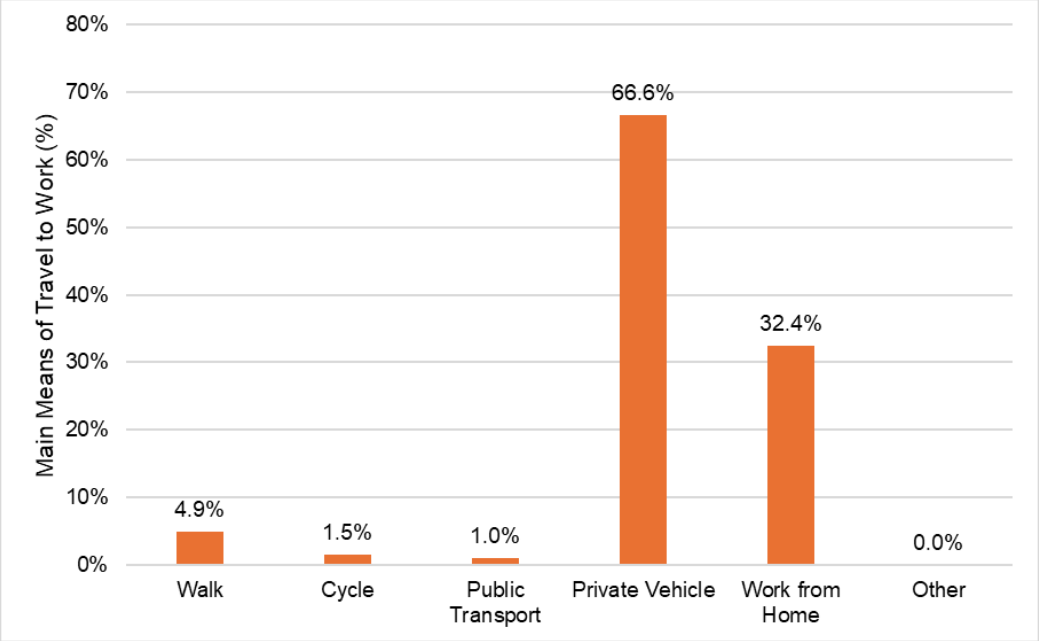

Figure 4-7: Main Means of Travel to Work for Trips made within the District

[18] Adolescents' perceptions of cycling versus walking to school: Understanding the New Zealand context - ScienceDirect

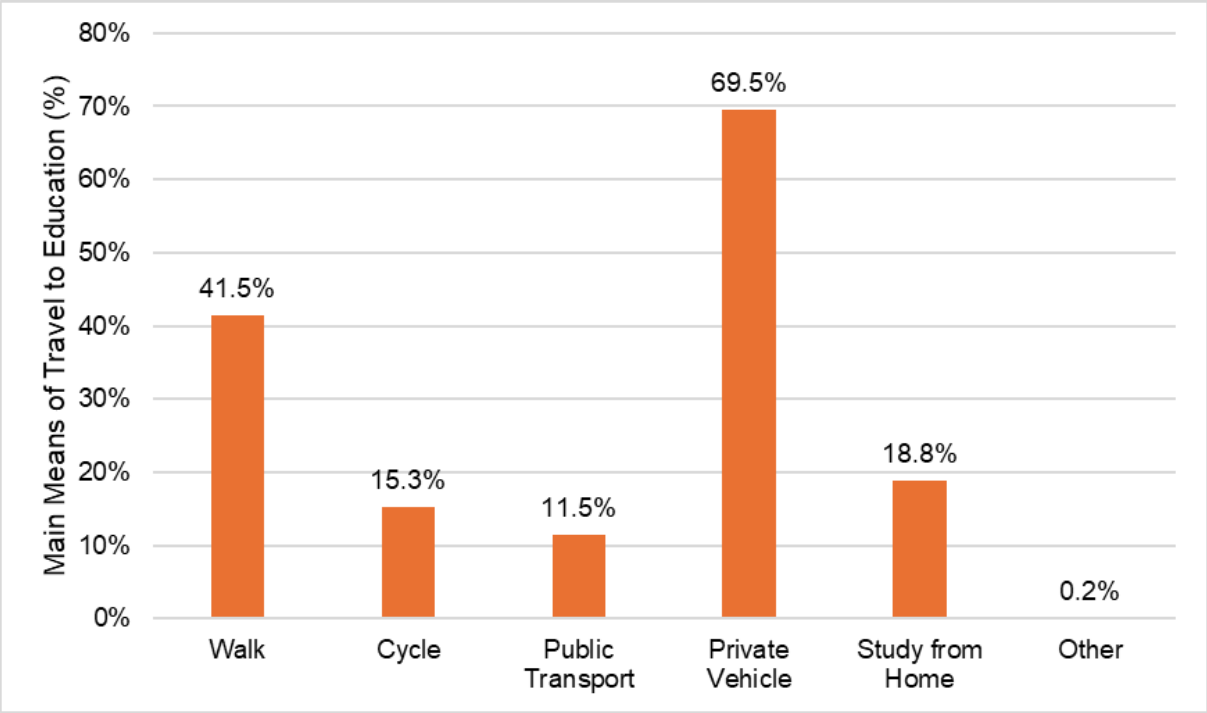

Figure 4-8: Main Means of Travel to Education for Trips made within the District

5. Problem 2: Safety

Problem Statement 2: Unsuitable traffic speeds and infrastructure are compromising safety for walking and cycling, which is deterring active travel uptake in the district.

5.1 Causes

5.1.1 Unsuitable Traffic Speeds

Higher traffic speeds increase the risk and consequences associated with crashes, which compromises safety for active mode users. As outlined below, there is evidence that this is a problem for people using these modes to travel in the district.

Speed Management Plan (SMP) 2023-33[19]

The Council has adopted their SMP 2023-33[20]. The Plan outlines an approach to better managing speeds through a range of methods such as improving infrastructure and implementing safer speed limits in the district. While indicating safety is currently compromised in the district (Table 5-1), the implementation of this Plan demonstrates that Council is committed to addressing problems associated with safety in the district, which aligns well with this Pathways Network Plan.

Table 5-1: SMP Community Consultation

Speed Management Plan Highlights Unsuitable Traffic Speeds in the District
• "All around New Zealand, many posted speed limits are higher than they should be, and in Kāpiti there have been community calls for changes to 'safe' speeds for many years. • The Council has heard from the community that safer roads are a priority. Many resident-developed outcome statements seek calmer and safer speeds, and our communities have been asking for measures to improve road safety, especially around schools. • Consultation during the Speed Limit Review in 2018/19 saw a majority of the 224 submitters support lower speeds across the district. • There was also a strong submission made to extend a 30 km/h limit to a 1 km radius of Paekākāriki School."

Opinions from Residents in the District

Several HYS Survey respondents raised concerns regarding traffic speeds in the district, with key examples shown in Table 5-2.

Table 5-2: HYS Survey Responses

HYS Survey Highlights Unsuitable Traffic Speeds in the District
• "50 km/ hr speed limits are too high for local streets where people on bikes have to share with private vehicles. Set these to 30 km/ hr in line with best practice." • "With the Expressway, we have seen an increase in speeding motorists especially heading west from the expressway. The central hill section of Peka Peka Road still has an 80 km / hr speed limit which is not safe or appropriate for a rural location used by cyclists, equestrians, and walkers." • "More needs to be done to slow traffic on Matatua and Rosetta Roads if we are to get more children biking safely to the two schools on Raumati Road."

[19] speed-management-plan-2023-33.pdf (kapiticoast.govt.nz)
[20] speed-management-plan-2023-33.pdf (kapiticoast.govt.nz)

5.1.2 Unsuitable Infrastructure for Walking & Cycling

Unsuitable infrastructure for walking and cycling increases the risk of crashes and injuries, particularly where these modes share the road with motorised vehicles. Infrastructure can also create accessibility issues and barriers to mobility where infrastructure does not cater to the needs of all users and/ or the infrastructure makes it difficult for active modes to navigate.

Districtwide Assessment

The Districtwide Assessment identified key areas of where unsuitable infrastructure comprises safety for active modes (refer to **Section 4.1.1**). This included areas where there is:

- A lack of dedicated cycling lanes, pedestrian walkways, and safe crossings. Pedestrians and cyclists are more likely to share road space with vehicles, which increases the risk of crashes between modes.
- Intersections perceived to be unsafe, inadequate lighting, and poorly designed crossings which further increases the danger for active mode users.

Opinions from Residents in the District

Respondents from recent surveys indicate their concerns regarding the unsuitable infrastructure for walking and cycling in the district. Their main concerns are summarised below, and their detailed responses are provided in **Appendix I**.

- Lack of dedicated facilities for walking and cycling which forces these modes to share road space with vehicles.
- Lack of street lighting in some areas which reduces people's perception of safety, particularly at night.
- Visibility issues in some areas, such as blind corners and at intersections where it is hard to see approaching traffic, which also reduces people's perception of safety.
- Limited signage, wayfinding and marking which makes it more difficult to navigate around the network for active modes.
- Lack of maintenance on roads and footpaths, such as potholes and uneven road surfaces, increasing the risk of collisions with vehicles. This can also lead to trips or falls hazards and ultimately discourage active mode movements.

5.2 Effects

5.2.1 Crashes involving Active Modes

The Crash Analysis System (CAS)[21] has been used to obtain the number and severity of crashes involving pedestrians (including wheelchair users, e-scooters, and skateboards) and cyclists in the district between 2014 and 2023[22]. The key trends are shown in Figure 5-1 and commentary is provided below (refer to **Appendix J** for maps showing crash locations).

- 227 crashes involving pedestrians or cyclists have been reported over the past 10 years. Of these, seven resulted in fatalities, 47 in serious injuries, and 126 in minor injuries.
- The lowest number of crashes occurred in 2014, with a total of nine recorded.
- As all crashes involved conflict with a vehicle, 50% of these involved pedestrians while 48% involved cyclists, and 2% involved both pedestrians and cyclists.
- Three crashes resulted in injuries for wheeled pedestrians such as wheelchairs and mobility scooters users. One fatality occurred on Waerenga Road in 2017, one minor injury occurred on Ngaio Road in 2015, and one minor injury occurred on Kaikomako Road in 2020.

[21] Crashes with vehicles that were attended by the police are recorded in the national CAS. It should be noted that crashes involving pedestrians and / or cyclists are often under reported, especially those between these modes. Crashes between pedestrians and cyclists generally occur on footpaths and shared paths, or a collision when a pedestrian crossed the road, and the cyclist is riding on the road.

[22] 2024 was discounted on the basis that it does not include crash statistics for the entire year.

It is important to consider crash cause in the design of facilities and best practice guidance as this aims to help reduce risks associated with these types of conflicts. The most common crash movements were:

- Pedestrian – other (36 crashes)
- Pedestrian crossing the road, from either the right or left side (35 crashes)
- Cyclists crossing at a right angle or from the right side (22 crashes)
- Cyclists merging and private vehicle turning left (16 crashes)

The roads experiencing the most crashes involving pedestrians and cyclists include Kāpiti Road, Te Moana Road, Rimu Road, SH1, Mazengarb Road and Raumati Road.

It is critical for this Pathways Network Plan to work alongside the SMP in order to improve traffic speeds and infrastructure around targeted areas in the district. This will reduce the risk of crashes and enable active mode users to feel safer while travelling in and around the district.

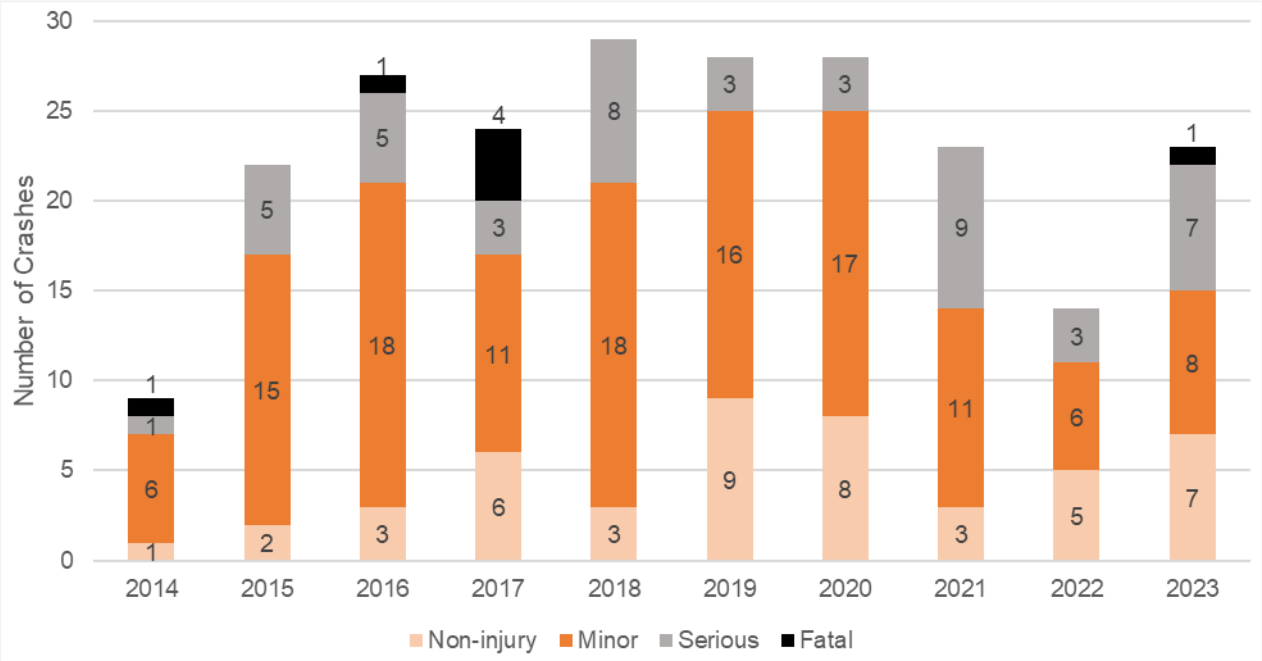

Figure 5-1: Crashes involving Pedestrians & Cyclists (2014 – 2023)[23]

5.3 Consequences

5.3.1 Compromised Safety around Key Destinations

Key locations where the safety for walking and cycling is compromised due to unsuitable traffic speeds and infrastructure include:

- **Areas around schools** including Poplar Avenue around Te Ra Waldorf School and Te Rāwhiti Kindergarten
- **Areas around key destinations** including Marine Parade and Raumati Village.
- **Highly utilised road corridors** including Te Moana Road, Kāpiti Road, Raumati Road
- **Busy intersections** including intersection of Percival Road/ Donovan Road near the Kena Kena Rest Home.

Refer to Appendix K for details.

It is critical these areas have appropriate traffic speeds and infrastructure given the high number of people using active modes in and around these areas.

[23] Crash Analysis System - Crash Analysis System (CAS) | NZTA

5.3.2 Deterred Uptake of Walking & Cycling in the District

Low Proportion of People Walking & Cycling

Refer to **Section 4.3.2** for evidence which shows low uptake of walking and cycling compared to private vehicle use. High private vehicle use can lead to unsafe conditions for walking and cycling if there is not suitable traffic speeds and infrastructure in place to support these alternative modes of transport.

Opinions from Residents in the District

Responses from the HYS Survey demonstrate that unsuitable traffic speeds and infrastructure are deterring the uptake of active modes in the district (Table 5-3).

Table 5-3: HYS Survey Response

HYS Survey Responses Highlighting Reduced Access which Deters Active Travel Uptake
• "Great to have all these new footpath crossings on Te Moana Road. There is a design fault/danger for trikes, mobility scooters, wheelchairs. The concrete edging leading from the road to the path leads straight into a Metal barrier which makes this safe for only walkers. There is not enough room to manoeuvre safety onto the island". • "The shared path on Mazengarb isn't safe. This is because the intersections are not raised. For a shared path to work for cyclists (and pedestrians with mobility impairments like my mum), there needs to be raised crossings to slow down cars and make it easier to cross the road."

6. Problem 3: Future-proofing

Problem Statement 3: The current walking and cycling network is not future proofed to cater for population growth and land use change resulting in reduced effectiveness over time.

6.1 Causes

6.1.1 Population Growth

Population growth in the Kāpiti Coast district is forecast to take place, and at a much higher rate than most of the Wellington region. Both the Wairarapa and Kāpiti Coast could each expect almost 20,000 more people by 2048 (Figure 6-1 and Figure 6-2). This will affect both the demand for transport and the way in which people travel in and around the district, particularly if the transport network prioritises private vehicle use over other more sustainable modes.

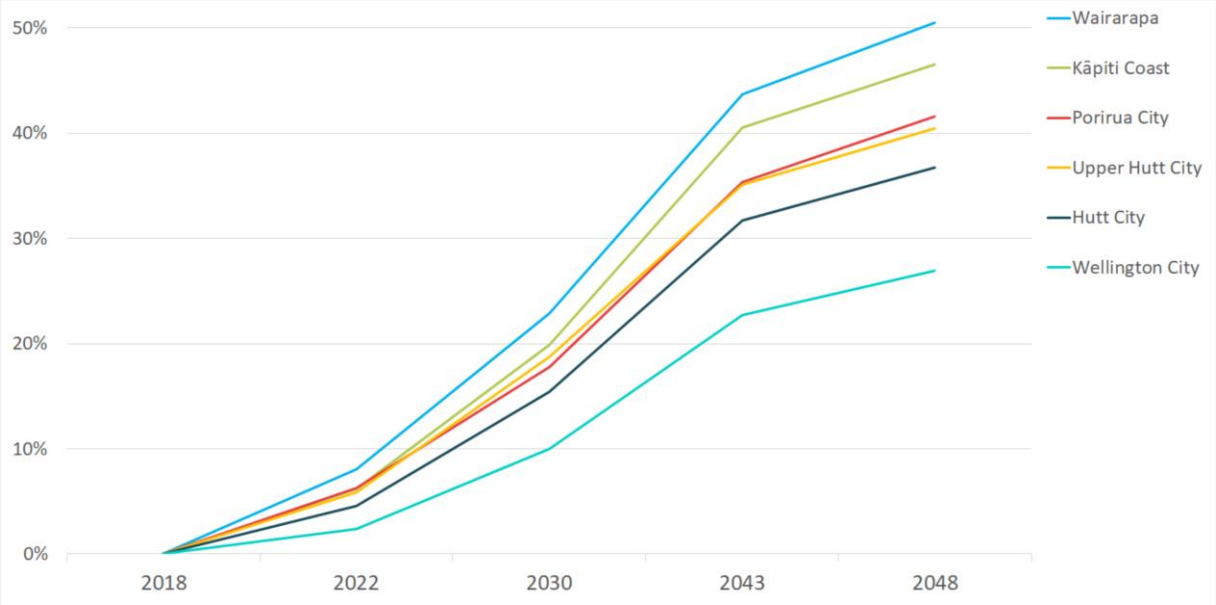

Figure 6-1: 2022-2048 Sense Partners Forecast Growth Rate (Relative to 2018 Base Year).[24]

[24] Sense Partners, 50th Percentile Our Network (arcgis.com)

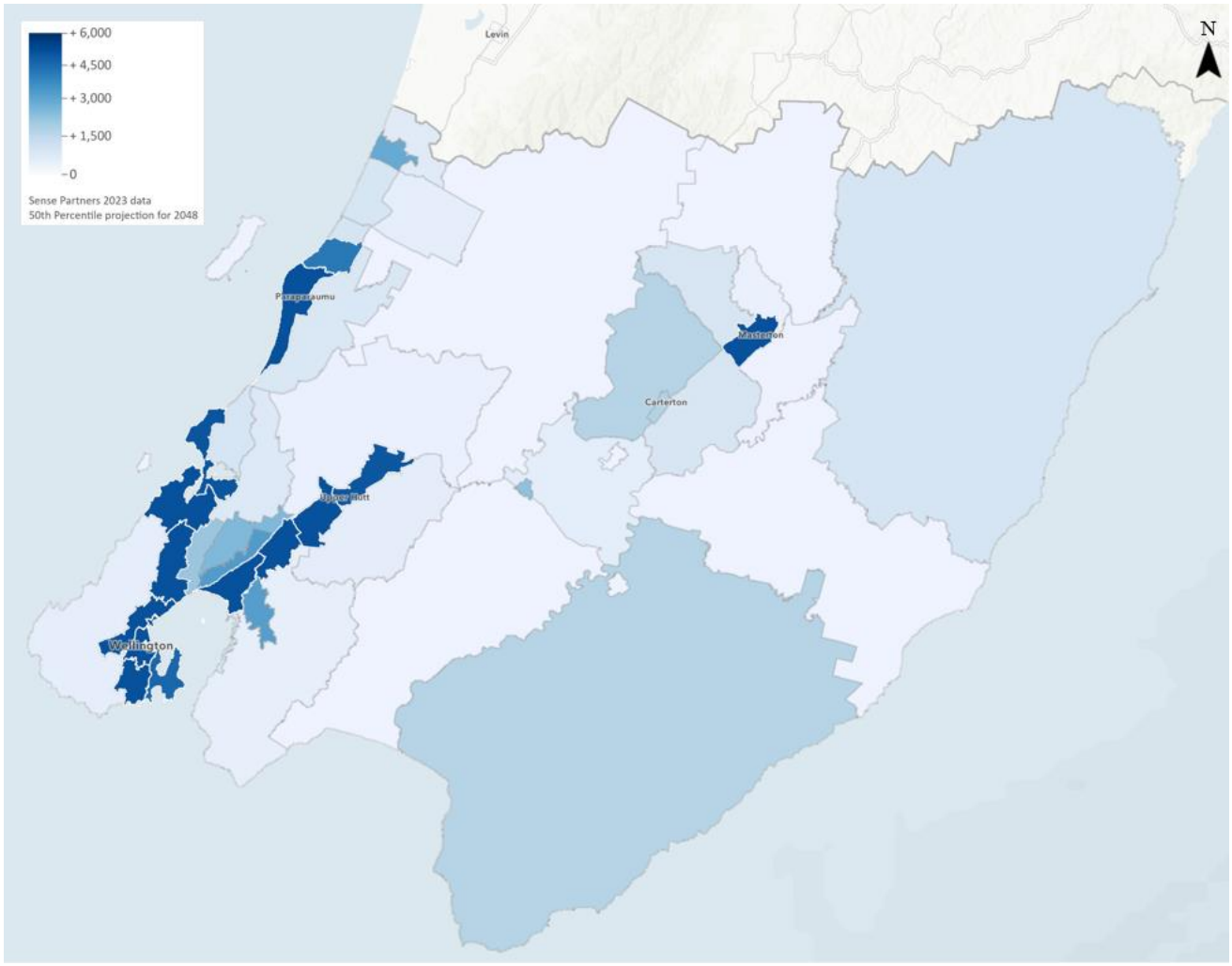

Figure 6-2: Projected Population Change in the Wellington Region 2023-2048[25]

6.1.2 Land Use Change

Future land use changes are anticipated in the district which will significantly impact the walking and cycling network. This includes:

- **Transport Infrastructure Changes –** This includes the construction of the Roads of National Significance through the district, as well as local roading projects to improve connectivity and accommodate future growth[26].
- **Business Development –** The Sustainable Transport Strategy 2022[27] states that population growth will be an influencer in the future demand for business development, and this development will require around 61,600 sqm of floor space over the next 25 years.
- **Intensification –** The Growth Strategy, known as Te Tupu Pai – Growing Well[28] has planned for sustainable growth over the next 30 years (Figure 6-3). In order to accommodate population growth particularly, there is emphasis on intensification in several key areas across the district. This includes central Paraparaumu; areas around railway stations; the town centres of Raumati Beach, Paraparaumu Beach, Waikanae, and Ōtaki; the local centres of Paekākāriki, Raumati South, Kena Kena, Meadows Precinct (southern end of Mazengarb Road between Realm Drive and the Expressway); Mazengarb Road (at the

[25] Sense Partners 50th Percentile Projection for 2048. Source: Our Network (arcgis.com)
[26] HBA3-CHAPTER-5-Kapiti.pdf (wrlc.org.nz)
[27] sustainable-transport-strategy.pdf (kapiticoast.govt.nz)
[28] growth-strategy-2022.pdf (kapiticoast.govt.nz)

Guildford Drive intersection); Waikanae Beach (Te Moana Road at Ono Street intersection); and potential future local centres.

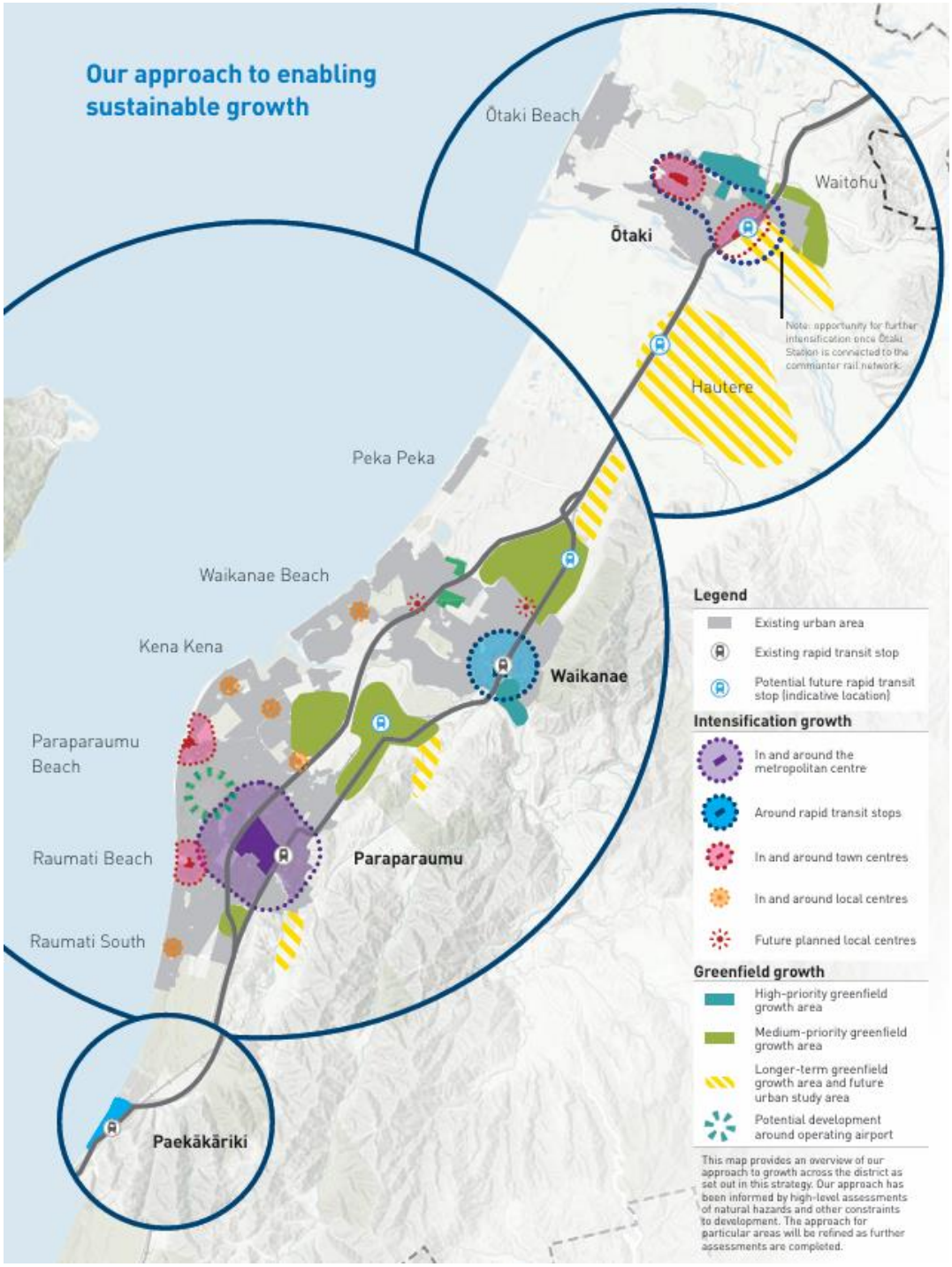

Figure 6-3: KCDC Approach to Enabling Sustainable Growth[29]

To promote mode shift to active modes, a key focus for this Pathways Network Plan will be to provide essential walking and cycling connections between new developments and key destinations across the district.

[29] growth-strategy-2022.pdf

6.2 Effects

6.2.1 Increased Traffic & Safety Concerns as the Population Grows

As the population grows in an area, the number of vehicles on the road increases. Without dedicated walking and cycling provision, pedestrians and cyclists are forced to share the road with more vehicles, leading to higher risks of crashes and injuries[30].

The potential East-West Connection in Paraparaumu, including the new 'Link Road' from Arawhata Road to Ihakara Street and the full Ihakara Street extension, is a key example where this could occur if the walking and cycling network is not future-proofed (Figure 6-4).

To provide evidence for this, traffic modelling has been carried out to determine the changes in traffic resulting from the proposed 'Link Road' development and the full Ihakara Street extension (refer to **Appendix L**). The results highlighted:

- Traffic increases on Kāpiti Road, Mazengarb Road, and Ihakara Street (south). While these roads have provision for walking and cycling, any additional traffic will increase the risk of crashes in the future.
- Traffic reduction on the Old SH1 and redistribution onto the new 'Link Road' and Ihakara Street. This indicates appropriate infrastructure will need to be incorporated into the new road's design so that active mode users are safe around traffic in these areas.
- A reduction in traffic on Rimu Road, Marine Parade and Rosetta Road. If appropriate infrastructure is provided, the reduction in traffic will improve the safety on these roads and provide opportunities for walking and cycling.

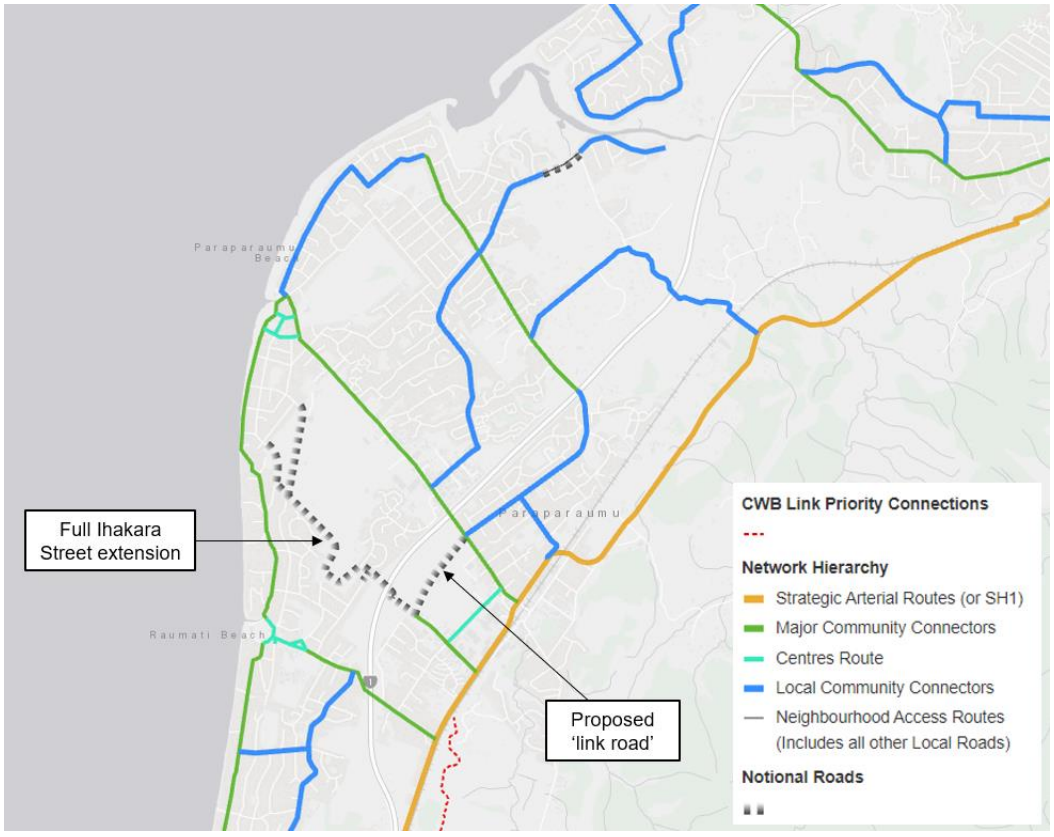

Figure 6-4: Location of the Proposed 'link road' and Full Ihakara Street Extension[31]

[30] Research highlights that areas with higher levels of walking and cycling infrastructure tend to have better safety outcomes for all road users (e.g., ALR_Review_ActiveTransport_January2016.pdf; Cycling lanes reduce fatalities for all road users, study shows | ScienceDaily)

[31] Map - Operative Kapiti Coast District Plan 2021

6.2.2 More Reliance on Motor Vehicles if New Developments do not Cater for Walking & Cycling

If new developments do not provide adequate provision and infrastructure for walking and cycling, more people will rely on cars[32]. This will lead to increased traffic congestion; reduce safety for active modes; and limit the ability to meet the various national, regional, and local level climate targets[33].

Table 6-1 provides an overview of the housing and land development projects that are included in the Fast-track Approvals Bill. These projects will significantly change the population and land use in the district, so it will be important to provide good connections to the transport network for all people and all modes.

The proposed location of the new developments shows there are existing gaps in the walking and cycling network near these locations (Figure 6-5 to Figure 6-7 below). It needs to be ensured that these developments are designed to cater for walking and cycling, so that the wider benefits of these projects are realised.

Table 6-1: Projects to be included in Schedule 2 of Fast-Track Approvals Bill[34]

Project Name	Project Description
New Central Park	To extend the Paraparaumu Town Centre to provide a master-planned mix of activities, including approximately 1,800 residential properties, commercial, large format retail, tourism (jobs/ identity), mixed use and aged care residential activities.
Waikanae North Developments	To establish a master-planned urban development comprising: over 1,000 residential dwellings of diverse typologies, a local centre and capacity for complementary activities such as a retirement village and a school.
Ōtaki Māori Racing Club Development	The Ōtaki Māori Racing Club Development project is to construct a mixed-use development (including 550 residential units) over a 20.3-hectare project area within a 59.8-hectare site near Ōtaki, Wellington.

[32] The Institute for Transportation and Development Policy highlights that minimizing space for motorised transportation and enhancing walking infrastructure can significantly improve walkability and reduce car dependency. Pedestrians First: A Tool for Walkable Cities - Institute for Transportation and Development Policy (itdp.org)

[33] sustainable-transport-strategy.pdf (kapiticoast.govt.nz)

[34] Attachment - Transport Fast Track.pdf

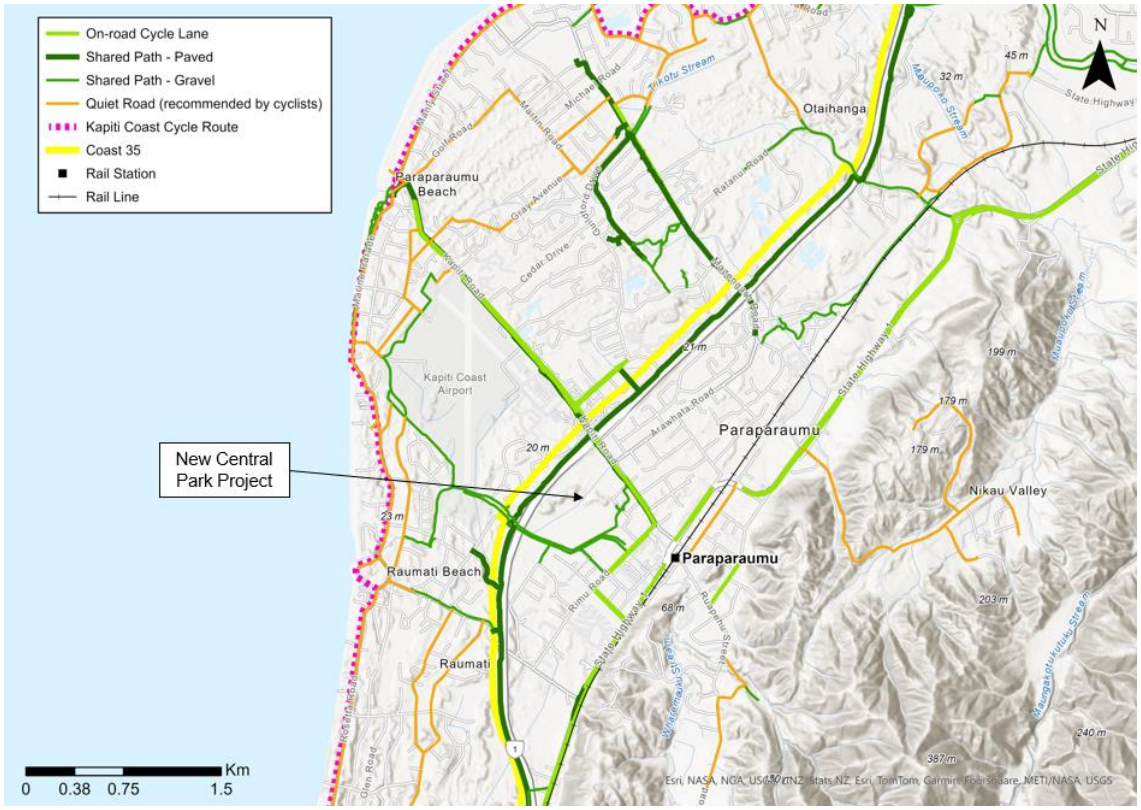

Figure 6-5: Location of Proposed New Central Park Project

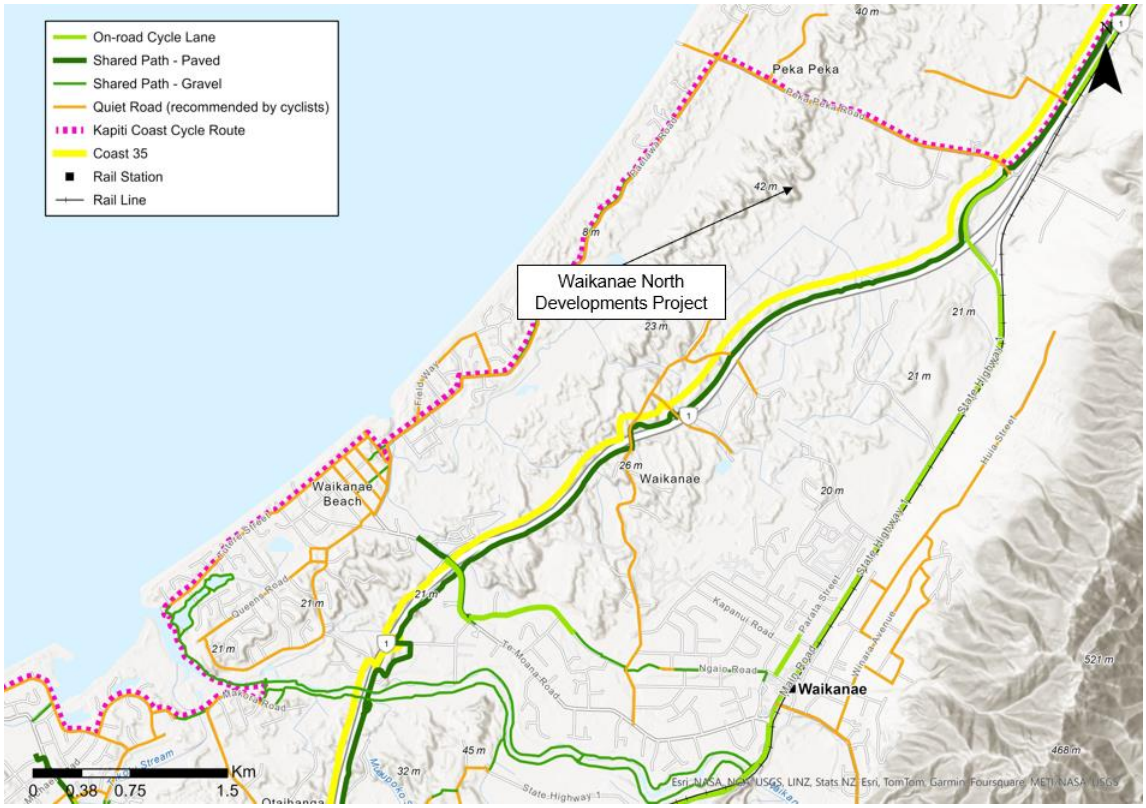

Figure 6-6: Location of Proposed Waikanae North Developments Project

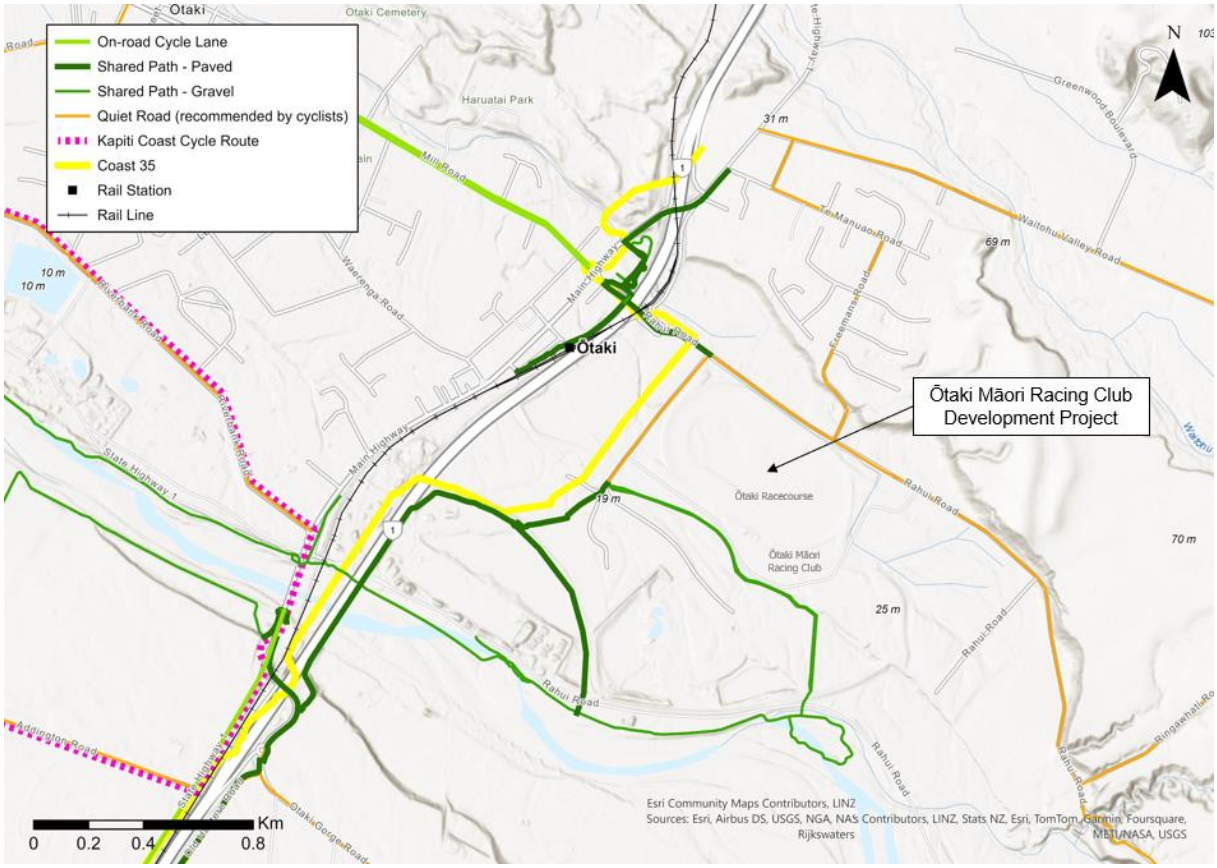

Figure 6-7: Location of Proposed Ōtaki Māori Racing Club Development Project

6.3 Consequences

6.3.1 Reduced Effectiveness of the Walking & Cycling Network

Without consistent investment, the effectiveness of the walking and cycling network will reduce over time. There will also be a range of consequences associated with future population growth and land use changes, as these factors could impact the way in which people travel. This includes:

- **Increased reliance on private vehicles** – As discussed in **Section 4.3.2**, private vehicles are the predominant mode of travel in the district. If this continues in line with population growth, there will be increased congestion and safety concerns for all modes.
- **Increased greenhouse gas emissions** – Road transport emissions have been historically high in the district compared to regionally.[35]. This will lead to a greater increase in emissions if people continue to rely on their cars or do not have the option to travel by more sustainable modes.
- **Reduced mode shift** – If land use changes do not provide opportunities for people to travel by all modes, there will be less mode choice available in the district and mode shift to active modes will not occur.
- **Missed opportunities** – There are several walkways, cycleways, tracks and trails.[36] which attract a high number of visitors year-on-year. These activities have created a range of opportunities for local businesses since visitors spend money on bike rentals, guided walking tours, cafes and restaurants, and other related services. Future opportunities to grow the walking and cycling tourism industry could be missed if the walking and cycling network does not cater for these activities in the future.

[35] Wellington Regional Mode Shift Plan : focusing our regional effort on mode shift. (natlib.govt.nz) – % gross emissions that is road transport was 42% in the district compared with 35% in the Wellington Region (2019). Between 2001 and 2019, the increase in road transport emissions between these years was 48% in the district and 8% in the Wellington region.

[36] Tracks and trails - Kāpiti Coast District Council (kapiticoast.govt.nz)

7. Case for Change

A review of the evidence has shown that there is a strong case for consistent investment in the district's walking and cycling network over the 10 years of this Pathways Network Plan.

The key reasons are:

- **Access:** The Stride n' Ride Programme has led to significant improvements in the district's walking and cycling network. However, the evidence highlights several connectivity gaps across the walking and cycling network which limit access to key destinations, particularly for those with additional physical and cognitive needs.
- **Safety:** There is strong evidence that safety remains a concern for active mode users, mainly attributed to high traffic speeds and unsuitable infrastructure for active mode users. Despite the investments over the last 10 years, the number of crashes involving pedestrians and cyclists have been relatively consistent, and there is no indication that collision risk is reducing.
- Community engagement demonstrates that people feel unsafe while walking and cycling in the district, which is deterring uptake. While there is an indication that more people are travelling by active modes, mode share remains low as most people are still reliant on private vehicles.
- **Future Growth:** The evidence shows that significant growth is expected to take place in the district. While land-use changes are planned to cater for this growth, these changes will put pressure on the existing transport network and services in the district. Unless these new developments are well connected to the active travel network, it will continue to perpetuate the reliance on private vehicles and associated consequences e.g., congestion, parking, and air pollution.

Consistent investment in the walking and cycling network is needed to encourage uptake of active modes and ensure the network remains effective over time.

8. Constraints, Assumptions & Dependencies

This Section provides a summary of the identified constraints, assumptions, and dependencies. The full analysis is contained in **Appendix M**.

The main constraints relate to the availability of funding, both nationally, and locally. The mitigation is reasonably consistent across all, including early engagement, seek the best alignment with the GPS, and seek best value for money. Effective community and stakeholder engagement is also noted as possible mitigation to opposition to the Preferred Programme of investment.

Key dependencies relate to the Speed Management Plan, and Council funding. Key assumptions relate to population growth and current areas of development.

Part B – Economic Case

9. Introduction

This Section provides an overview of the Economic Case for investment in the KCDC walking and cycling network. It sets out the process for identifying and evaluating potential projects and presents the Preferred Programme of highest priority projects.

It is acknowledged that funding streams are currently uncertain, and therefore, the Preferred Programme is intentionally flexible – elements can be included or removed as funding becomes more certain or Government priorities change.

10. Do Minimum

The Do Minimum is defined as the minimum level of expenditure required to provide a minimum level of service for active mode users in the district. This represents the baseline for which the Preferred Programme is assessed against.

It is assumed that the Do Minimum will include the implementation of the following improvement projects over the LTP 2024-27 period:

- Riverbank Road shared path between Miro Street and Main Highway.
- Peka Peka Road widening, including gravel off-road shared path and on-road cycle lane.
- Improved connectivity for active modes around Park Avenue, Ngarara Road and Te Moana Road.

KCDC put forward these projects for co-funding through the LTP 2024-27, however, this funding has not been granted. KCDC will explore alternative funding opportunities over LTP 2024-27 period, and if no funding becomes available, these projects will be included in the recommended Preferred Programme (see **Section 17** for details).

The Do Minimum recognises that there is no committed funding for implementing the Preferred Programme over the 10 years of this Pathways Network Plan. Therefore, the minimum level of service means that existing transport assets, in relation to the walking and cycling network and its infrastructure, are largely maintained based on their current condition (from the date this Pathways Network Plan is operative).

11. Project Identification

11.1 Project Identification Process

11.1.1 Districtwide Assessment

The project team undertook a district wide assessment to identify and develop a long list of projects that cover the walking and cycling network and its infrastructure. This assessment involved:

- 2-day districtwide site visit with KCDC to understand the existing walking and cycling network and its infrastructure.
- Review of the Stride 'n Ride Programme to identify projects that have not been completed.
- Desktop-based review of the walking and cycling network to identify gaps and potential areas of improvement. This utilised a range of sources, including Google Maps, Google Street View, LINZ Aerial Imagery, and GIS.

11.1.2 Engagement Activities

Stakeholder engagement and the HYS Survey also informed the project identification process. A summary of these engagement activities and their key outcomes are provided below (refer to **Appendix C** for details).

- Workshop 1 was held with KCDC and interested stakeholders[37] on 29th May 2024. The workshop aimed to identify the key problems and areas of improvement across the districts walking and cycling network. The findings from this workshop showed:
- The main challenges associated with the walking and cycling network relate to the limited access, lack of safety in some areas, and the need to future-proof the network.
- Areas which require improvement were highlighted around key destinations such as Paraparaumu train station, Waikanae train station, Raumati Village and schools.
- Key roads requiring improvement include Poplar Avenue, Te Moana Road, Marine Parade, Mazengarb Road, and Rimu Road.
- Community feedback from the HYS survey reinforced the findings from Workshop 1.

11.2 Walking & Cycling Hierarchies

Waka Kotahi NZTA have adopted a hierarchical approach to promote and implement the use of more sustainable modes of transport in preference to private vehicles. When identifying the projects, and their respective intervention types at each location, consideration was given to the following hierarchies to ensure each project aligns to Waka Kotahi NZTA's guiding principles:

- **Sustainable Transportation Hierarchy** – As shown in Figure 11-1, this hierarchy demonstrates active travel modes are at the top and should be prioritised accordingly to realise the most benefits across the transportation system.
- **Hierarchy of Provision for Cycling** – As shown in Figure 11-2, this hierarchy outlines an order of consideration for potential projects, rather the priority of implementation. For example, converting footpaths to shared use paths is commonly presented as a solution of providing for cycling, however, this should be the last option considered, as such facilities do not necessarily offer a suitable LOS for cyclists and can also compromise the LOS for pedestrians[38].

Following the guidance of these hierarchies has allowed for all levels of interventions to be considered when identifying the potential improvement projects over the 10 years of this Pathways Network Plan.

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[37] Interested stakeholders were key members of KCDC, CWB Advisory Group, Waka Kotahi NZTA, Paraparaumu College, relevant Iwi groups, and school representatives.

[38] Hierarchy of provision for cycling | NZ Transport Agency NZTA (nzta.govt.nz)

Figure 11-1: Sustainable Transportation Hierarchy.[39]

Consider first	1. Reduce traffic volumes
	2. Reduce traffic speeds
	3. Treat hazardous site, pinch points, or intersections
	4. Reallocate carriageway space to provide space for cycling (not necessarily marked e.g., wide lanes or shoulders)
	5. Specific cycle facilities (e.g., painted cycle lanes, separated cycleways, depending on the traffic speed and volume and target audience)
	6. Exclusive off-road facilities for cycling
Consider last	7. Shared paths

Figure 11-2: Hierarchy of Provision for Cycling.[40]

[39] National Walking Plan Update - Walking Summit - July 2023 FINAL.pdf (livingstreets.org.nz)
[40] Hierarchy of provision for cycling | NZ Transport Agency NZTA (nzta.govt.nz)

12. Long List

12.1 Long List Development Process

The long list of projects were developed by the project team based on the process outlined in **Section 0**.

Each project was defined in terms of their location/ extent, nature and their characteristics. While design has not been considered at this stage, the most appropriate type of intervention has been assigned for each project in the long list[41].

The broad types of walking and cycling interventions are outlined in Table 12-1 below.

Table 12-1: Intervention Types Assigned to Long List Projects

Intervention Type	Description
Speed management	Reduction or management of speed in areas with high volumes of walking and cycling, and / or provides high safety benefits for these modes.
Minor improvements	Implement or upgrade wayfinding, signage and markings on existing routes to better define and increase visibility for walking and cycling.
Infrastructure improvements	Improve or upgrade infrastructure for walking and cycling, such as intersections, crossing points, and traffic signals.
Improve/ upgrading existing network links	Upgrade existing links on the network to increase accessibility, connectivity and safety for walking and cycling.
New network links	New network links on the network to increase accessibility, connectivity and safety for walking and cycling.

12.2 Long List Projects

94 projects were identified across the district that will provide a range of benefits for walking and cycling, as well as integration with the wider network (Table 12-2).

KCDC highlighted that a minority of projects identified have been committed and/ or completed through other work programmes.

These projects are as follows:

- 45P10 - Improvements to Old SH1
- 47P10 - Improvements to Old SH1
- 73W13 - Improvements to Ferndale Drive
- 80O3 - Improvements to County Road
- 83O6 – Improvements to Mill Road/ Old SH1/ Rahui Road Roundabout
- 84O7 – Improvements to Old SH1
- 85O7 – Improvements to Old SH1
- 86O7 - Improvements to Old SH1
- 87O7 – Improvements Old SH1

The seven projects involving improvements to Old SH1 and Mill Road/ Old Road/ Rahui Road Roundabout have been completed through the revocation of M2PP. Regarding the Improvements to Ferndale Drive, KCDC indicated that the connection has been secured through Summerset to Expressway. Furthermore, there is an existing footpath on one side of Country Road which is acceptable, and renewal activity will resolve poor condition of existing asset.

While these projects were still considered in the assessment to understand the future benefits these would provide for walking and cycling, it was agreed that they would be discounted from the Preferred Programme if they performed well in the assessment Refer to **Section 13.8** and **Appendix O** for assessment outcomes.

[41] This was used as part of the economic evaluation to inform the cost estimates, as discussed in **Section 13.5**.

Table 12-2: Long List Projects

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
1PK1	Improvements to Beach Road	**Improvements to Ames Street / Beach Road / Wellington Road Intersection** - for pedestrians and cyclists			✓		
2PK1	Improvements to Beach Road	**Improvements on Beach Road from SH59 to Ames Street** - for cyclists through signage and marking - for pedestrians by providing a mid-block crossing refuge - for pedestrians and cyclists by upgrading the area around the level crossing	✓	✓	✓		
3PK1	Improvements to Beach Road	**Improvements on Beach Road from Ames Street to the Parade** - for pedestrians by increasing the footpath width where its narrower - for pedestrians improved access to the beach for pedestrians - for cyclists through signage and marking	✓	✓	✓		
4PK2	Improvements to Tilley Road	**Improvements to the Rail Path at End of Robertson Road to Beach Road** - for cyclist access to Tilley Road via signage and markings	✓	✓			
5PK3	Improvements to The Parade	**Improvements to The Parade** - for cyclists through signage and marking	✓	✓			
6PK4	Improvements to Wellington Road	**Improvements to Wellington Road** - for pedestrians at intersection crossing points - for cyclists through signage and marking	✓	✓	✓		
7PK5	Improvements to Ames Road	**Improvements to Ames Road as a key link to the Escarpment Track** - for pedestrians through signage and markings - for pedestrians at intersection crossing points	✓	✓	✓		
8R1	Margaret Road / Renown Road Improvements	**Improvements to Margaret / Renown Road** - for cyclists through signage and marking		✓			

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
9R2	Improvements to Poplar Avenue	**Improvements/ Reconfiguration to the intersection of Renown Road/ Poplar Avenue** - for pedestrians and cyclists poorly configured for walking and cycling			✓		
10R2	Improvements to Poplar Avenue	**Improvements to Poplar Avenue from Renown Road to The Esplanade** - for cyclists to improve visibility on the sweeping bends - for cyclists through increased markings and signage	✓	✓			
11R2	Improvements to Poplar Avenue	**Improvements to Area outside Te Ra Waldorf School & Te Rāwhiti Kindergarten** - for pedestrians and cyclists by upgrading the shared path between the school entrances and exits - for pedestrians by providing a formal crossing point on Poplar Ave - for pedestrians by better school threshold treatments to reinforce a lower speed area	✓		✓	✓	
12R2	Improvements to Poplar Avenue	**Intersection Improvements from Matai Road to Glenn Road** - for pedestrians to provide safer crossing points	✓		✓		
13R2	Improvements to Poplar Avenue	**Improvements from Matai Road to Te Ra Waldorf School & Te Rāwhiti Kindergarten** - for pedestrians and cyclists by upgrading the existing shared path				✓	
14R3	Improvements to Matai Road	**Improvements from Matai Road/ Poplar Avenue Intersection to Hillcrest Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points			✓	✓	
15R4	Improvements to Hillcrest Road	**Improvements from Matai Road Intersection to Raumati Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points			✓	✓	

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
16R5	Improvements to Menin Road	**Improvements from Hillcrest Road to Renown Road / Rosetta Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points - for cyclists through increased markings and signing		✓	✓	✓	
17R6	Improvements to Raumati Road / Raumati Beach Village	**Improvements to Raumati Road** - for all users extend the existing shared path to a new a new multi-use crossing point on the and upgrade the existing path on the opposite side to connect back into the expressway path - for pedestrians and cyclists extend existing shared path to Rata Road - for pedestrians and cyclists provide a shared path from SH1 to new multi-use crossing point			✓		✓
18R6	Improvements to Raumati Road / Raumati Beach Village	**Improvements from Hillcrest to Matatua Road** - for pedestrians and cyclists through upgrading the existing footpaths and providing new crossing points	✓		✓	✓	
19R6	Improvements to Raumati Road / Raumati Beach Village	**Improvements/ Reconfiguration to the intersection of Matatua Road/ Rossetta Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling	✓		✓		
20R6	Improvements to Raumati Road / Raumati Beach Village	**Improvements/ Reconfiguration to the intersection of Matatua Road/ Alexander Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling	✓		✓		
21R7	Improvements to Rata Road	**Improvements to Rata Road from Raumati Road to the Wharemauku Stream Path** - for pedestrians and cyclists through signing and marking	✓	✓			

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
22R8	Improvements to Garden Road	**Improvements to Garden Road** - for pedestrians by providing an extended footpath and safe designated walking route through the car park	✓			✓	
23P1	Improvements to Rimu Road	**Improvements from Raumati Road to Ihakara Street/ Rimu Road Roundabout** - for pedestrians and cyclists by installing a shared path				✓	
24P1	Improvements to Rimu Road	**Improvements at Ihakara Street/ Rimu Road Roundabout** - for pedestrians by upgrading existing crossing points	✓		✓		
25P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for cyclists by upgrading the existing on-road cycle lanes				✓	
26P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for pedestrians by upgrading the existing crossing points and providing new ones -for pedestrians by upgrading all side road accesses into the Coastlands / Pak N Save development			✓		
27P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Iver Trask Place** - for pedestrians by upgrading the existing footpath to a shared path				✓	
28P2	Improvements to Ihakara Street	**Improvements from Rimu Road to Link Road** - for pedestrians and cyclists through providing a shared path from the roundabout to Link Road				✓	
29P3	Improvements to Marine Parade	**Improvements between Tahi Road and Ocean Road** - for pedestrians by providing new crossing points to access the shared path and beach	✓		✓		
30P3	Improvements to Marine Parade	**Upgrade the Current Raised Crossings on Marine Parade to Dual Crossings** - for pedestrians and cyclists including restricting parking to current standards for increased visibility		✓	✓		

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
31P3	Improvements to Marine Parade	**Improvements to Marine Parade/ Maclean Street Intersection** - for pedestrians and cyclists including restricting parking to current standards for increased visibility - for cyclists to increase and upgrade bike parking		✓			
32P3	Improvements to Marine Parade	**Remove Kerb Buildouts on Marine Parade** - for pedestrians and cyclists to install a new raised crossing just before Howell Road for the new skate park and extend the existing shared path from the roundabout to it.	✓		✓	✓	
33P3	Improvements to Marine Parade	**Extend Existing Shared Path on Marine Parade to the Tahi Road Intersection** -for pedestrians and cyclists and provide a safe crossing			✓	✓	
34P4	Improvements to Tahi Road	**Improvements to Tahi Road from the Marine Parade Intersection** - for pedestrians and cyclists to the off-road gravel trail through improved signage and markings		✓			
35P5	Improvements to Guildford Drive	**Improvements to Guildford Drive** - for pedestrians and cyclists with a new crossing point close to the beginning of Te Roto Drive to a new shared path on the eastern side to Realm Drive - for pedestrians by providing a new crossing refuge just before Gandalf Crescent			✓		
36P5	Improvements to Guildford Drive	**Improvements to Guildford / Realm Drive Intersection** - for pedestrians by upgrading the existing crossing points			✓		
37P5	Improvements to Guildford Drive	**Improvements from Te Roto Drive to Mazengarb Road** - for cyclists by providing on-road cycle lanes accessing the College					✓

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
38P6	Improvements to Realm Drive	**Improvements to Realm Drive** - for pedestrians and cyclists through providing a shared path on the southern side of Realm Drive - for pedestrians by upgrading the current crossing point to a dual cycle / pedestrian crossing point - for pedestrians and cyclists with a new gravel trail to the expressway connection				✓	✓
39P7	Improvements to Ratanui Road	**Improvements to Ratanui Road** - for pedestrians and cyclists by upgrading the gravel path to a shared path from the Otaihanga Road intersection to the Little Farm Preschool - for pedestrians and cyclists by providing a crossing point close to the preschool - for pedestrians and cyclists by upgrading the footpath to a shared path from the preschool to Mazengarb Road			✓	✓	
40P8	Improvements to Mazengarb Road	**Improvements from Ratanui Road to Guildford Drive** - for pedestrians and cyclists by upgrade the existing shared path				✓	
41P8	Improvements to Mazengarb Road	**Improvements around Paraparaumu College** - for pedestrians and cyclists by upgrading the existing crossings to dual pedestrian / cycle crossings	✓		✓		
42P8	Improvements to Mazengarb Road	**Improvements on the stream bank between Mazengarb Road and Manly Street** - for pedestrians and cyclists by upgrade the current gravel path - for pedestrians and cyclists provide a short section of shared path on Manly Street from the stream to the Waikanae Reserve path entrance				✓	

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
43P8	Improvements to Mazengarb Road	**Improvements from Makarini Street to Awatea Avenue** - for pedestrians and cyclists by extending the shared path and providing a pedestrian cycle crossing to access the off-road trail				✓	
44P9	Improvements to Arawhata Road	**Improvements from Awatea Avenue to Kāpiti Road** - for pedestrians and cyclists by upgrading the footpath on the eastern side to shared paths - for pedestrians and cyclists by upgrading the crossing points on all intersections			✓	✓	
45P10	Improvements to Old SH1[42]	**Improvements from Raumati to Paraparaumu** - for cyclists by providing dedicated on-road cycle lanes from the Rongomau Lane Overbridge to Raumati Road Roundabout - for cyclists by providing dedicated on-road cycle lanes from Raumati Road Roundabout to Ihakara Street - for cyclists by providing dedicated on-road cycle lanes from Ihakara Street to Kāpiti Road - for cyclists by the reconfiguration of Kāpiti Road intersection to provide provisioning for cycling			✓	✓	✓
46P10	Improvements to Old SH1	**Improvements from Paraparaumu to Nikau Valley** - for cyclists by upgrading the existing on-road lanes from Hinemoa Street / Buckley Grove intersections to Nikau Valley - for cyclists by upgrading the Ruahine Street and Rimutaka Street intersections				✓	

[42] Completed through revocation of M2PP.

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
47P10	Improvements to Old SH1[43]	**Improvements from Nikau Valley to Waikanae** - for cyclists by upgrading the existing on-road cycle lanes from Nikau Valley to Otaihanga Road Roundabout - for cyclists by upgrading the existing on-road cycle lanes from Otaihanga Road Roundabout to Te Moana Road				✓	
48P11	Improvements to Hinemoa Street	**Improvements from Hinemoa Street to Buckley Grove under the Old SH1 bridge** - for cyclists by upgrading the off-road path under the old SH1 bridge				✓	
49P11	Improvements to Hinemoa Street	**Improvements from Rimutaka Street to Kāpiti Road** - for cyclists by providing dedicated on-road lanes for cyclists - for cyclists by reconfiguring the Tararua Street/ Hinemoa Street intersection - for cyclists by changing the existing parking to parallel		✓		✓	✓
50P12	Improvements to Ruapehu Street	**Improvements to Ruapehu Street** - for pedestrians and cyclists by upgrading the existing footpath to a shared path from Westridge Ct to Valley Road				✓	
51P13	Improvements to Connectivity around Paraparaumu Rail Station	**Connectivity and Accessibility Improvements around Rail and Coastlands** - for pedestrian and cyclists including Kāpiti Road/ Hinemoa/ Epiha/ Amohia intersections			✓		
52P14	Improvements to Percival Road	**Improvements from Percival Road to Donovan Road** - for pedestrians and cyclists by extending the existing shared path - for pedestrians by upgrading the existing	✓		✓	✓	

[43] Completed through revocation of M2PP.

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
		crossing points at the Donovan Road intersection					
53P15	Improvements to Kāpiti Road	**Improvements from Old SH1 to Rimu Road** - for cyclists by upgrading the existing on-road cycle lanes from the Old SH1 to Rimu Road				✓	
54P15	Improvements to Kāpiti Road	**Improvements from Rimu Road to Brett Ambler Way** - for cyclists by upgrading existing on-road cycle lanes from Rimu Road to Brett Ambler Way				✓	
55P16	Improvements to Donovan Road	**Improvements from Percival Road to Te Kupe Road** - for cyclists by upgrading the existing footpath to a shared path - for pedestrians by upgrading the existing crossing point			✓	✓	
56P17	Improvements to Ocean Road	**Improvements from Kāpiti Road to Bluegum Road** - for pedestrians by providing a new section footpath to connect the gap that exists on the existing footpath - for pedestrians by providing new crossing points through improvements to the intersections				✓	
57W1	Improvements to Connectivity around Waikanae Rail Station and shopping areas	**Connectivity and Accessibility Improvements around Railway Station and Shops** - for pedestrian and cyclists including Elizabeth St / Main Road or Ngaio / Main Road intersections - for pedestrians and cyclists by improving the provision of walking routes through the station park and rides including linkages for cyclists to the cycle parking		✓	✓		

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
58W2	Improvements to Elizabeth Street	**Improvements from Seddon Street to Anne Street** - for pedestrians by providing a crossing point to the shops	✓		✓		
59W3	Improvements to Te Moana Road	**Improvements from Te Ara Kawakahia to Rauparaha Street** - for pedestrians and cyclists by upgrading the existing shared path - for pedestrians and cyclists by upgrading the side street crossing facilities. - for cyclists by extending the current on-road cycle lanes on both sides			✓	✓	
60W3	Improvements to Te Moana Road	**Improvements from Park Avenue to Main Road** - for pedestrians and cyclists by upgrading the existing footpath to provide a shared path on one side - for pedestrians provide increased pedestrian crossing points - for cyclists provide on-road cycle lanes and mark shoulders as on-road cycle lanes OR			✓	✓	
61W3	Improvements to Te Moana Road	**Improvements from Park Avenue to Main Road** OR - for cyclists provide off-road cycle lanes in the berms with upgraded footpaths adjacent				✓	✓
62W3	Improvements to Te Moana Road	**Improvements from Main Road to Karu Crescent** - for pedestrians by extending the existing footpath				✓	
63W3	Improvements to Te Moana Road	**Improvements to Te Moana Road / Rauparaha Street Intersection** - for pedestrians to provide safe crossing points - for cyclists to facilitate the extension of the on-road cycle lanes			✓	✓	

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
64W4	Improvements to Rauparaha Street	**Improvements from Te Moana Road through to Tutere Street** - for pedestrians and cyclists by providing a shared path connection for increased connectivity and accessibility to Waikanae Beach				✓	
65W5	Improvements to Main Road	**Improvements from Te Moana Road to Martin Street** - for cyclists by providing on-road cycle facilities connecting to existing facilities to the north of Waikanae				✓	
66W6	Improvements to Tutere Street	**Improvements from Rangihiroa Street to Hemara Street** - for pedestrians through increased crossing points			✓		
67W7	Improvements to Huiawa Street	**Improvements from Rauparaha Street to Field Way** - for pedestrians and cyclists by providing a shared path - for pedestrians by providing additional crossing points - for pedestrians by upgrading the crossing points at Heperi Street intersection to increase connectivity and accessibility to Waikanae Beach			✓	✓	
68W8	Improvements to Park Avenue	**Improvements from Te Moana Road to Ngarara Road** - for cyclists by providing on-road cycle lanes through road reallocation and marking changes - for pedestrians by upgrading the existing footpath on the park side and connecting the missing gap - for pedestrians and cyclists by upgrading the connection from Albizia Grove and providing a safe crossing point - for pedestrians by providing additional pedestrian crossing points, including Ngarara Road			✓	✓	

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
69W9	Improvements to Ngarara Road	**Improvements from Park Avenue to Waikanae Pool and the Rugby Club** - for pedestrians and cyclists by upgrading the existing footpath to shared path				✓	
70W10	Improvements to Marae Lane	**Improvements to Marae Lane** - for pedestrians by upgrading pedestrian facilities along Marae Lane to increase accessibility and connectivity	✓		✓		
71W11	Improvements to Peka Peka Road	**Improvements from Old SH1 to Paetawa Road** - for cyclists by providing seal widening to the existing road - for pedestrians and cyclists by upgrading the crossing points at Paetawa Road intersection			✓	✓	
72W12	Improvements to Paetawa Road	**Improvements from Peka Peka Road to Marram Way** - for all users by providing an off-road gravel trail to connect to the existing - for all users by connecting the two sections of existing off road gravel trail on Rutherford Drive / Paetawa Road with a new section of off-road trail				✓	
73W13	Improvements to Ferndale Drive[44]	**Improvements from Ferndale Drive to Expressway Path** - for all users by providing a connection to the expressway shared path					✓
74W14	Improvements to Greendale Drive	**Improvements from Otaihanga Road** - for all users by providing a gravel shared path in berm					✓
75W15	Improvements to King Arthur Drive	**Improvements from Greendale Drive** - for all users by providing a gravel shared path in berm					✓
76W16	Improvements to Otaihanga Road	**Improvements from Ratanui Road to Makora Road**					✓

[44] Connection secured through Summerset to expressway- Ferndale connection no longer required.

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
		- for all users by providing a gravel shared path in berm					
77O1	Improvements to Rahui Road	**Improvements from Rahui Road to Te Roto Road** - for pedestrians and cyclists by extending the existing shared path in preparation for future development - for pedestrians by providing a crossing point at Te Roto Road intersection			✓	✓	
78O1	Improvements to Rahui Road	**Improvements from Te Roto Road to Freemans Road** - for pedestrians and cyclists by extending the existing shared path in preparation for future development				✓	
79O2	Improvements to Te Roto Road	I**mprovements from Rahui Road to Link in with the Off-road Trail** - for all users by providing a shared path or gravel trail to connect into the off-road network					✓
80O3	Improvements to County Road.[45]	**Improvements from Old SH1 to Rahui Road** - for pedestrians by completing the gap in the existing footpath providing connected access towards the riverbank trails				✓	
81O4	Improvements to Te Manuao Road	**Improvements to Waitohu School Access** - for pedestrians by increasing the footpath width OR providing a shared path				✓	
82O5	Improvements to Waitohu Valley Road	**Improvements from Old SH1 to No. 57** - for pedestrians and cyclists by providing a shared path					✓

[45] There is an existing footpath on one side of the road which is acceptable. Renewal activity will resolve poor condition of existing asset.

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
83O6	Improvements to Mill Road / Old SH1 /Rahui Road Roundabout[46]	**Improvements to BP Roundabout** - for pedestrians by providing new safe pedestrian crossing refuge islands on all 4 legs of the roundabout - for cyclists by providing safe approaches to the roundabout			✓		
84O7	Improvements to Old SH1[47]	**Improvements to Waerenga Road Intersection** - for pedestrians by upgrading the crossing points			✓		
85O7	Improvements to Old SH1[48]	**Improvements to Sue Avenue Intersection** - for pedestrians by upgrading the crossing points			✓		
86O7	Improvements to Old SH1[49]	**Improvements from Waerenga Road to Mill Road** - for pedestrians by upgrading existing pedestrian crossing points			✓		
87O7	Improvements to Old SH1[50]	**Improvements to Arthur Street Intersection** - for pedestrians by upgrading the crossing points to provide a clear walking route to the rail station and through the car park			✓		
88O8	Improvements to Mill Road	**Improvements from Old SH1 to Aotaki Street** - for cyclists by upgrading the signing and marking for the current on-road cycle lanes OR		✓			

[46] Completed through revocation of M2PP.
[47] Abid
[48] Abid
[49] Abid
[50] Abid

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
89O8	Improvements to Mill Road	**Improvements from Old SH1 to Aotaki Street** OR - for cyclists by implementing full separation for the existing on-road cycle lanes - for cyclists improve the approach to the Aotaki / Mill St roundabout			✓	✓	
90O9	Improvements to Te Ruaparaha Street	**Improvements from Tasman Road to St Peter Channel School** - for pedestrians and cyclists by widening the existing footpath for sharing - for pedestrians by providing a dedicated crossing for school children outside Te Kura Kaupapa Māori o Te Rito	✓		✓	✓	
91O10	Improvements on Aotaki Street	**Improvements from Riverbank Road to Mill Road** - for pedestrians and cyclists by providing a shared path OR					✓
92O10	Improvements on Aotaki Street	**Improvements from Riverbank Road to Mill Road** OR - for cyclists by providing on-road cycle lanes					✓
93O11	Improvements to Riverbank Road (extension)	**Improvements from Aotaki Street to Rangiuru Road** for all users by providing a new gravel trail on the berm area				✓	

ID.	Project Name	Project Description	Intervention Type				
			Speed Management	Minor Improvement	Infrastructure Improvement	Upgrade Existing Network Link	New Network Link
94O12	Improvements to Main Street	**Improvements from Aotaki Street to Te Rauparaha Street** - for cyclists by implementing sharrows from Aotaki Street through to the shopping area - for cyclists and pedestrians by extending the existing shared path from Te Kura a Iwi O Whakatupuranga Rua back to Rangiuru Road - for pedestrians by upgrading Rangiuru Road crossing point - for cyclists by providing an access to the shared path after Rangiuru Road			✓	✓	

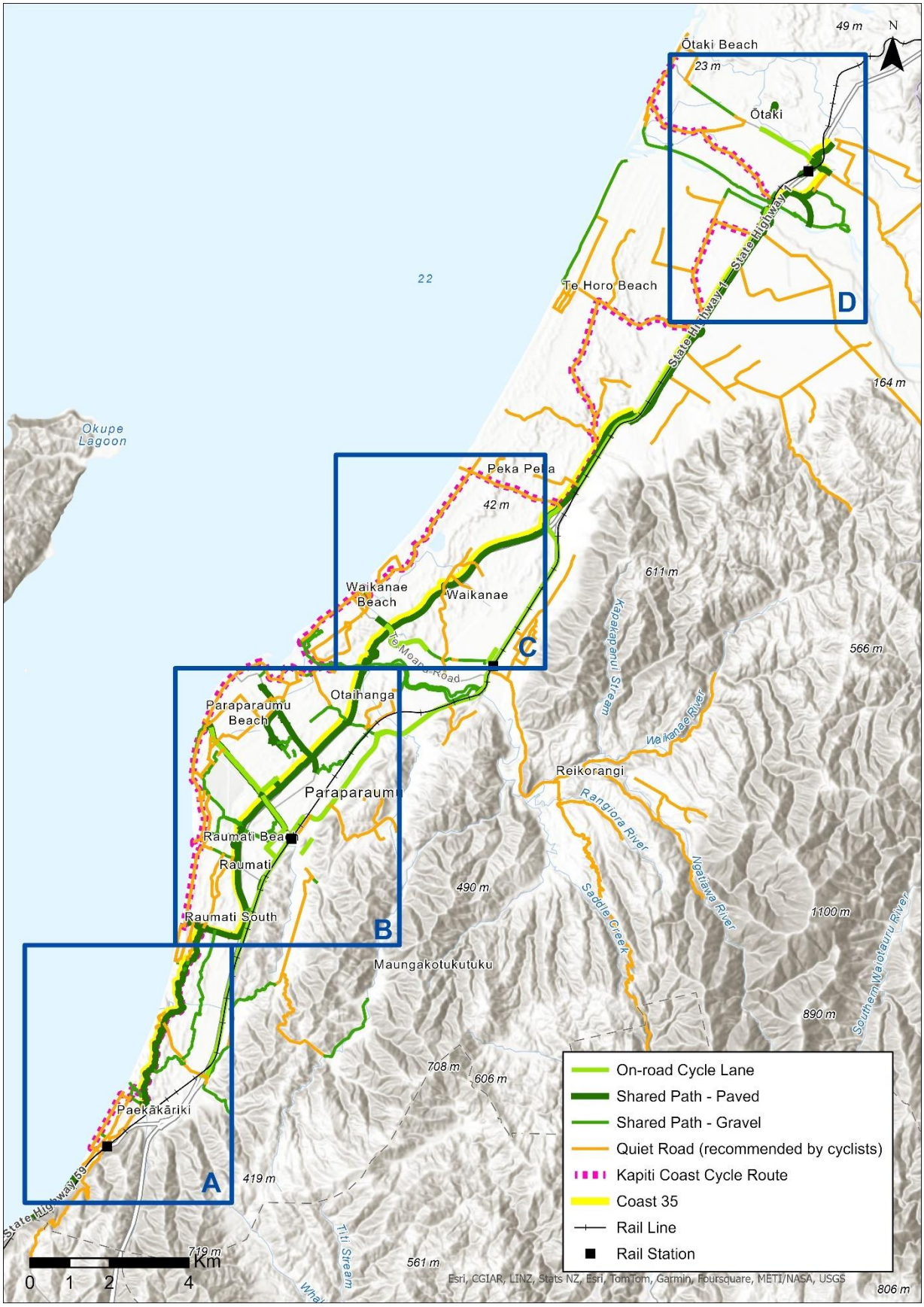


Figure 12-1: Long List Projects – Reference Map

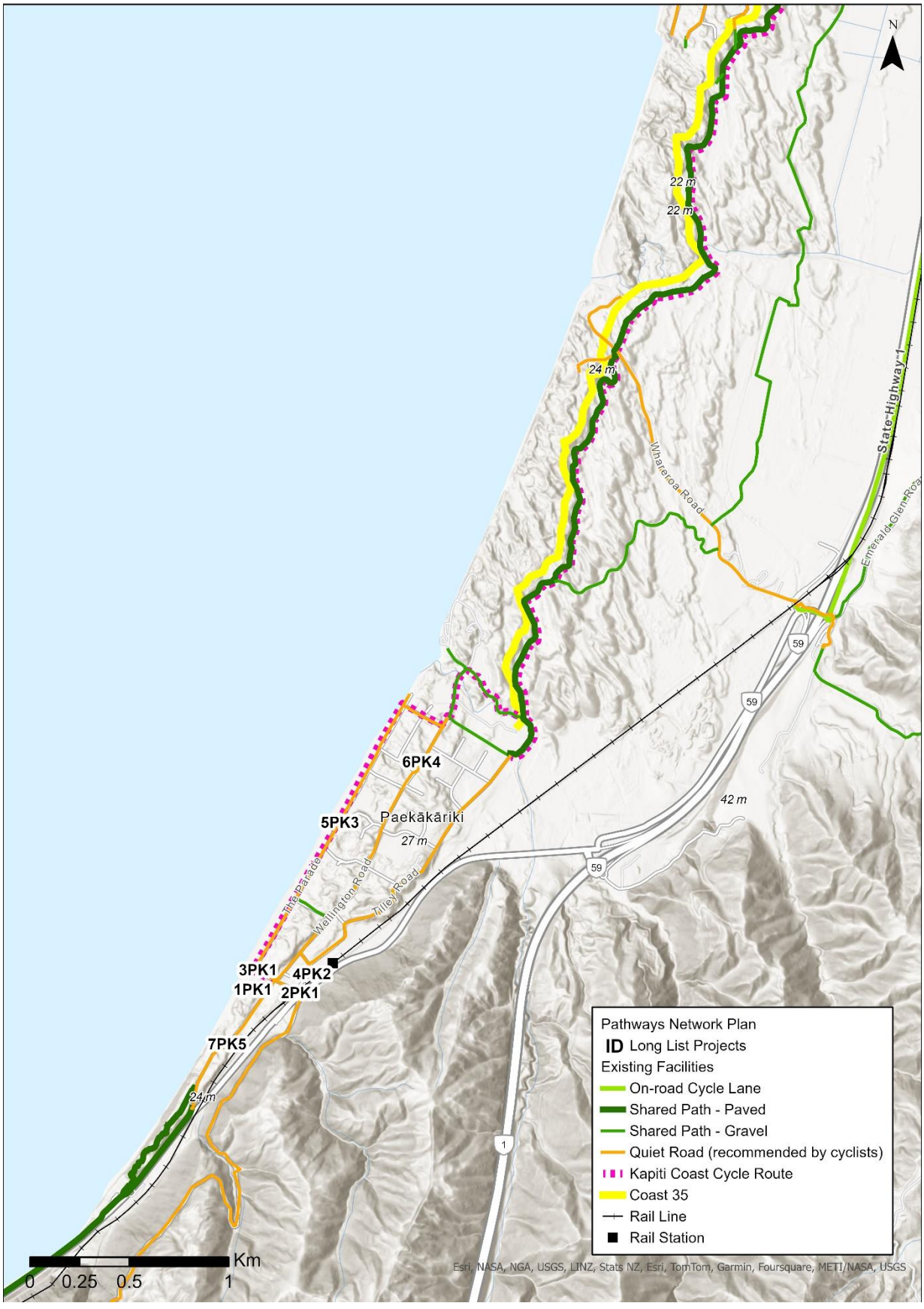


Figure 12-2: Long List Projects – Inset A

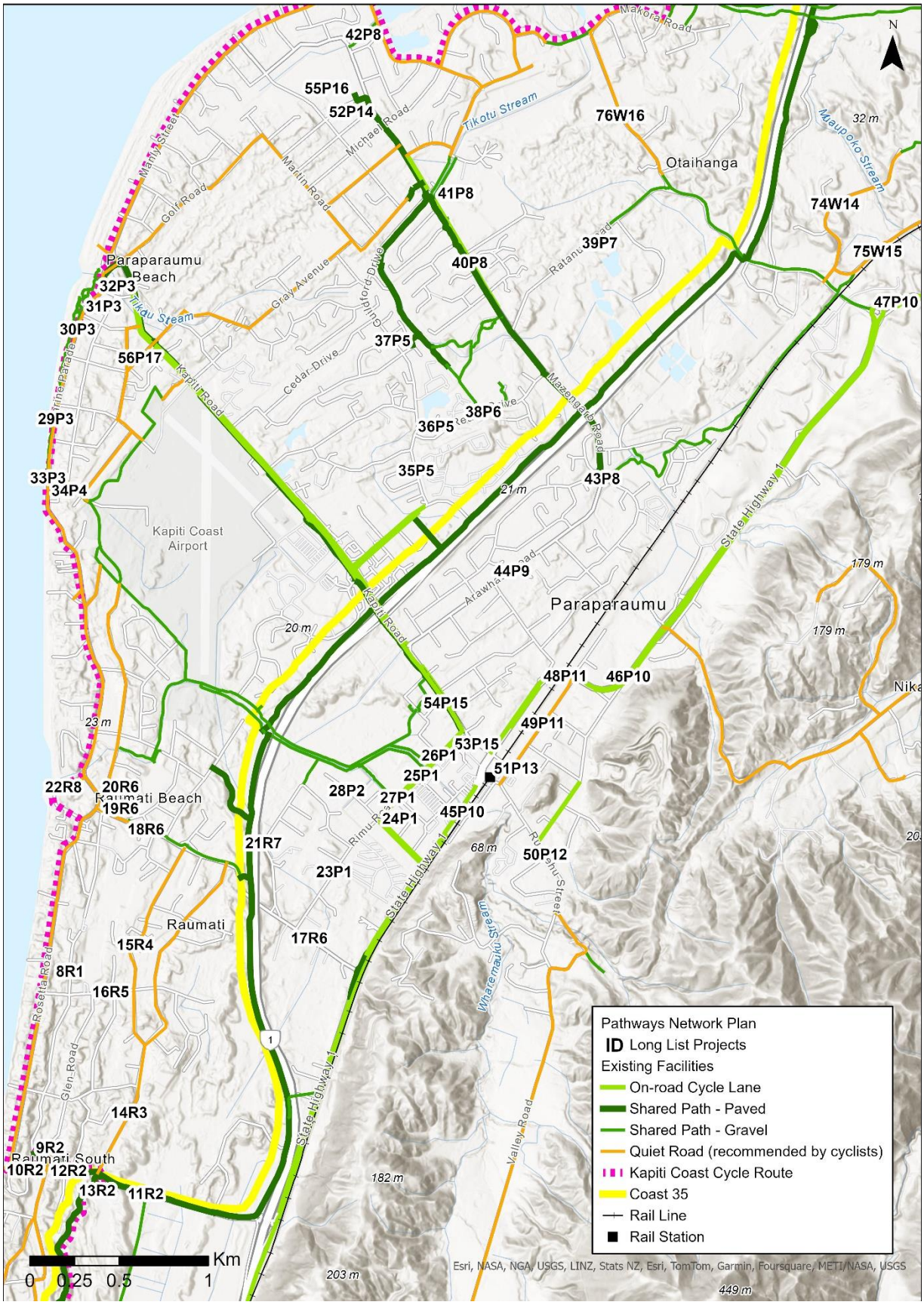


Figure 12-3: Long List Projects – Inset B

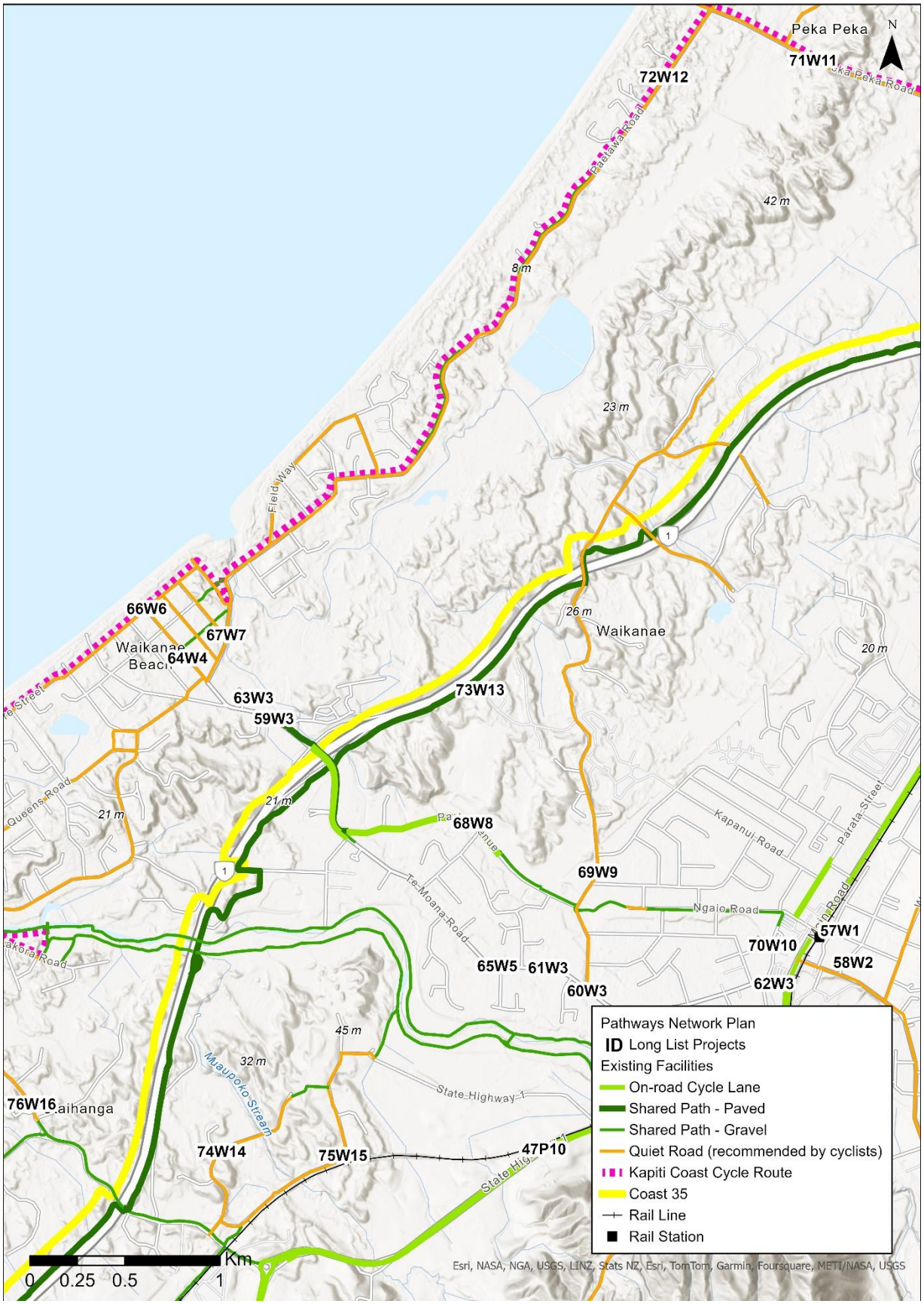


Figure 12-4: Long List Projects – Inset C

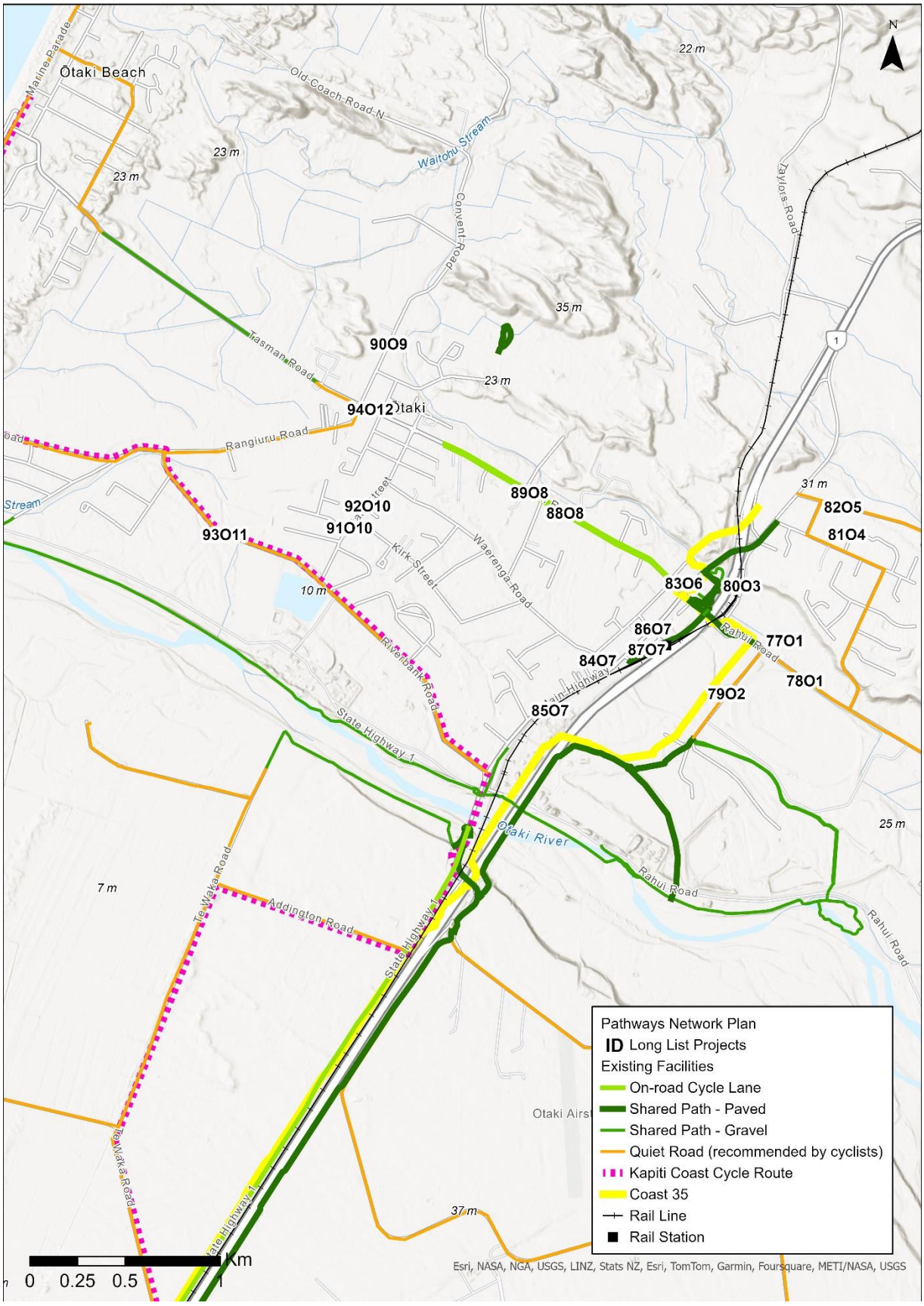


Figure 12-5: Long List Projects – Inset D

13. Project Assessment

13.1 Assessment Process

13.1.1 Initial Assessment

Following discussions held with KCDC (refer to **Section 12.2**), the long list of projects were shared with interested stakeholders[51] in Workshop 2 on 19th June 2024. This Workshop provided stakeholders the opportunity to discuss and make recommendations on the long list of projects. Overall, there was general consensus that each project could be implemented as stand-alone projects and would provide walking and cycling improvements in the district.

A Workshop Exercise was also undertaken which allowed the stakeholders to score (on a scale of 1 low to 3 high performing) each project against the three IOs of this Pathways Network Plan. The outcomes from this assessment were used as the Stakeholder Feedback criteria to inform the MCA Assessment outlined below (refer to **Appendix N** for stakeholder assessment outcomes).

13.1.2 Multi-Criteria Analysis Assessment

The longlist of projects were assessed using a Multi-Criteria Analysis (MCA) methodology[52] which was agreed with KCDC. The outcomes from the MCA assessment were used to determine the level of priority for each project i.e., high, medium and low, and then identify the Preferred Programme.

13.2 Assessment Criteria

The long list of projects were assessed against the criteria presented in Table 13-1. These criteria are representative of the IOs for this Pathways Network Plan as well as other criteria relevant to the decision-making process.

Table 13-1: Assessment Criteria

Criterion	Description
Investment Objectives	
IO1a – Access	A district that provides better access to walking and cycling opportunities for all people and abilities.
IO1b – Connectivity	A walking and cycling network that has improved connections to/ from key destinations for all people and abilities.
IO2 – Safety	A walking and cycling network that has improved safety for all walking and cycling users.
IO3 – Future-proofing	A walking and cycling network that caters for population growth land use change that is anticipated in the district.
Other Criteria relevant to Decision Making	
Social & Environmental Effect	Social and environmental effects associated with the construction of the project being assessed.
Cost & Affordability	Estimated cost of the project being assessed, including the affordability of the project being delivered within the estimated allocated budget of $10 million.
Economics	Estimated benefit to cost ratio (BCR) of the project being assessed.
Stakeholder Feedback	Project score awarded by the stakeholders during Workshop 2.

[51] Interested stakeholders were key members of KCDC, CWB Advisory Group, Waka Kotahi NZTA, relevant Iwi groups, and school representatives.

[52] Multi-criteria analysis | NZ Transport Agency Waka Kotahi (nzta.govt.nz)

13.3 Criteria Weightings

Criteria weighting is a key element of the MCA as it allows for the most important factors to be prioritised in the decision-making process, leading to more balanced and transparent outcomes.

Various weighting regimes were discussed in a workshop with key members at KCDC, and it was agreed that:

- IOs combined should hold a greater weighting as these criteria directly relate to walking and cycling improvements.
- IO1 and IO2 should hold a greater weighting than IO3 as access, connectivity, and safety are currently more significant problems/ opportunities in the district than future-proofing the network.
- While the other criteria were assigned similar weightings, BCRs and Stakeholder Feedback criteria should hold a slightly greater weighting as these capture the wider benefits/ outcomes associated with this Pathways Network Plan.

The criteria weightings ("Base" scenario) applied in the MCA Assessment are shown in Table 13-2.

Sensitivity analysis was also carried out to test how sensitive the outcomes were to changes in the relative criteria weightings. Overall, the analysis showed that all the highest performing projects were common across all scenarios that were tested (refer to **Section 15.4.1** for details).

Table 13-2: Base Scenario Weightings

Criterion	Base scenario weightings
Investment Objectives	**60%**
IO1a – Access	20%
IO1b – Connectivity	20%
IO2 – Safety	40%
IO3 – Future-proofing	20%
Other Criteria relevant to Decision Making	**40%**
Social & Environmental Effect	20%
Cost & Affordability	20%
Economics	30%
Stakeholder Feedback	30%

13.4 Criteria Scoring

Projects were scored using the scale shown in Table 13-3 below.

Scores were assigned for each project for a future year (assumed to be around 1-5 years after project implementation), which represents the change that the project facilitates when compared to the existing situation.

Table 13-3: Investment Objectives & Other Criteria Scoring Range

Score	Scoring description
3	Large positive, factoring in the scale of benefits, the degree of confidence of benefits being realised, and how permanent or long-term the benefits are likely to be.
2	Moderate positive, factoring in the scale of benefits, the degree of confidence of benefits being realised, and how permanent or long-term the benefits are likely to be.
1	Slight positive - factors in the scale of benefits, the degree of confidence of benefits being realised, and how permanent or long-term the benefits are likely to be.
0	No change in benefits, impacts or difficulties from current situation.
-1	Slight negative, factoring in implementation difficulties, costs, impacts on resources / values, and disbenefits.
-2	Moderate negative, factoring in implementation difficulties, costs, impacts on resources / values, and disbenefits.
-3	Large negative, factoring in implementation difficulties, costs, impacts on resources / values, and disbenefits.

13.5 Approach to Cost Estimates

Cost estimates were derived for the long list of projects using the Waka Kotahi NZTA SM014 cost estimate proforma. Refer to **Appendix P** for details.

As shown in Table 13-4, each project was assigned a score based on their cost estimate and this was used to inform the Cost & Affordability criteria that was considered in the MCA assessment.

Table 13-4: Cost Estimates Scoring Range

Score	Scoring description
3	$0 to 100k
2	$100k to 250k
1	$250k to $500k
0	$500k to $1 M
-1	$1 M to $2 M
-2	$2 M to $5 M
-3	Greater than $5 M

13.6 Approach to Economics

To inform the economic evaluation[53], BCR values were estimated for each long list project based primarily on calculating their safety and uptake benefits. This was conducted in accordance with best practice standards and utilised analytical tools appropriate for analysis at a PBC level. While BCRs were calculated at a high level, this allowed for each project to be compared against each other, in terms of their expected benefits relative to cost. Refer to **Appendix Q** for more details.

The BCR calculations were conducted at a high level based only on the safety considerations for walking and cycling and the health benefits of increased cycling. This ensures that the assessment was conservative. Both benefits were determined through the intervention type, and the expected impact on the identified benefit streams. Other benefit streams were not considered, as they were expected to be minor in relation to the safety and health benefits.

Consistent with the chart on SP11-7, with almost all projects under $2 million total cost and a moderate scale of change, sketch plans with informed expert input to calibration is an appropriate methodology to assess the scale of the benefits. The overall process was:

- Use existing count data (or nearby)
- Engineering judgement on uplift as a % of existing use by intervention type (e.g. raised crossing)
- Engineering judgement on adjacent/ nearby interventions (e.g. degree of double counting)
- Safety assessment based on the intervention type using the safety intervention toolkit and crash estimation compendium.

When there was an area with multiple interventions, both the health and the safety impacts were based on the most significant intervention. For example, where wayfinding and a raised platform at an intersection were delivered in conjunction, benefits for all individual projects were calculated individually, but only the most significant individual project benefits were considered in the calculation of the BCR.

All projects were anticipated to be delivered in a 12-month period, with 39 years of benefits accruals. A discount rate of 4% and an uplift range of 12.5% to 25% was anticipated by default, however, was scaled down based on professional judgement if it resulted in unrealistic numbers of users. Net user growth was assumed to be 0.5% per annum for the lower range of 1% for an upper range, unless it was considered to close a gap in the network at which point the growth was doubled. Like the uplift, professional judgement was used to reduce the growth if the numbers were felt to be too high.

Only cyclist health benefits were calculated, as it was judged that not enough data was available to accurately estimate the impact to pedestrian numbers. This means the only benefit streams considered were pedestrian safety, cyclist safety and cyclist health.

As shown in Table 13-5, each project was assigned a score based on their BCR value and this was used to inform the Economics criteria during the MCA assessment.

[53] Economic evaluation provides a high-level assessment of the costs and benefits associated with the Programme projects and aims to inform decision-makers about the economic viability and feasibility of the proposed interventions.

Table 13-5: BCR Scoring Range

Score	Scoring description
3	> 6
2	3 to 6
1	2 to 3
0	1 to 2
-1	0.5 to 1
-2	0 to 0.5
-3	< 0

13.7 Key Assumptions

To allow for consistency in the scoring of projects, the following assumptions were determined:

- Assess all the projects against the existing situation, and not against each other.
- Assess the future year, which was assumed to be around 1-5 years after project completion.
- Only committed local or regional projects will be in place.
- No changes to the existing PT network, other than those outlined in the projects.

13.8 MCA Assessment Outcomes

The project team documented their scores and reasoning behind each score in the standard MCA template outlined by Waka Kotahi NZTA. This was shared with KCDC to enable the opportunity to comment before a workshop was undertaken with KCDC to discuss the MCA assessment and shortlisting process.

The initial MCA assessment results were discussed during a meeting with KCDC on 25th July 2024. Based on the discussion, refinements were made to both the criteria and scoring.

Project scores were finalised on 16th August 2024 before the shortlisting process was undertaken. The key findings from the MCA assessment showed:

- Scores for all IOs were generally positive, with the most benefits being realised from a Safety perspective, followed by Access, Connectivity, and Future-proofing.
- Most projects received a negative scoring for the Social & Environmental Effect; however, this is due to the disruption expected to take place during the construction phases of project implementation.
- The projects were generally well received by the stakeholders, which was reflected in the Stakeholder Engagement Feedback criteria scoring.
- There was a large range in the project cost estimates, which was accordingly reflected in the scoring.
- Based on the BCR ranges, most of the projects (68%) received an MCA score of above zero, while only 32% scored negatively.

Appendix O provides an overview of the scores and rationale behind the scoring of each long list project.

14. Project Short List

14.1 Short List Development Process

The short list development process was discussed with KCDC, and it was agreed that a districtwide Prioritisation approach would be used. While it was acknowledged that the effects and outcomes may differ if multiple projects were packaged up and delivered together, the prioritisation approach ensured that projects were considered individually during the shortlisting/ preferred programme development. It also enables KCDC with the opportunity to implement projects on a 'needs' basis if/ when funding becomes available over the 10 years of this Pathways Network Plan.

In order to rank, and effectively prioritise each project, combined scores were calculated based on MCA assessment score awarded for each criterion and their relative weighting.

As shown in Table 14-1, the projects were prioritised using a high (> 1.7), medium (1.4 – 1.7) and low (< 1.4) scale, based on their combined scores received. These thresholds were agreed in the Council workshop and were deemed appropriate as they were calculated based on the range of scores across all Long List projects.

Table 14-1: Project Prioritisation Scoring Range

Combined score	Project priority
> 1.7	High
1.4 – 1.7	Medium
< 1.4	Low

14.2 Short List Projects

While the detailed results can be found in **Appendix O**, the project prioritisation highlighted that there were:

- 25 high priority projects
- 26 medium priority projects
- 43 low priority projects

It was agreed with KCDC that all the high priority projects would be taken forward as the Short List Projects. Table 14-2 provides an overview of these projects and their approximate locations are shown in Figure 12-1 to Figure 12-5 above.

Table 14-2: Short List Projects

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
51P13	Improvements to connectivity around Paraparaumu Rail Station	**Connectivity and Accessibility Improvements around Rail and Coastlands** - for pedestrian and cyclists including Kāpiti Road / Hinemoa / Epiha / Amohia intersections	2.20	1
58W2	Improvements to Elizabeth Street	**Improvements from Seddon Street to Anne Street** - for pedestrians by providing a crossing point to the shops	2.11	2
32P3	Improvements to Marine Parade	**Remove Kerb Buildouts on Marine Parade** - for pedestrians and cyclists to install a new raised crossing just before Howell Road for the new skate park and extend the existing shared path from the roundabout to it.	2.09	3
11R2	Improvements to Poplar Avenue	**Improvements to area outside Te Ra Waldorf School & Te Rawhiti Kindergarten** - for pedestrians and cyclists by upgrading the shared path between the school entrances and exits - for pedestrians by providing a formal crossing point on Poplar Ave - for pedestrians by better school threshold treatments to reinforce a lower speed area	2.08	4
25P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for cyclists by upgrading the existing on-road cycle lanes	2.08	4
29P3	Improvements to Marine Parade	**Improvements between Tahi Road and Ocean Road** - for pedestrians by providing new crossing points to access the shared path and beach	2.06	6
70W10	Improvements to Marae Lane	**Improvements to Marae Lane** - for pedestrians by upgrading pedestrian facilities along Marae Lane to increase accessibility and connectivity	2.00	7
59W3	Improvements to Te Moana Road	**Improvements from Te Ara Kawakahia to Rauparaha Street** - for pedestrians and cyclists by upgrading the existing shared path - for pedestrians and cyclists by upgrading the side street crossing facilities. - for cyclists by extending the current on-road cycle lanes on both sides	1.97	8
52P14	Improvements to Percival Road	**Improvements from Percival Road to Donovan Road** - for pedestrians and cyclists by extending the existing shared path - for pedestrians by upgrading the existing crossing points at the Donovan Road intersection	1.96	9

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
55P16	Improvements to Donovan Road	**Improvements from Percival Road to Te Kupe Road** - for cyclists by upgrading the existing footpath to a shared path - for pedestrians by upgrading the existing crossing point	1.96	9
63W3	Improvements to Te Moana Road	**Improvements to Te Moana Road / Rauparaha Street Intersection** - for pedestrians to provide safe crossing points - for cyclists to facilitate the extension of the on-road cycle lanes	1.96	9
12R2	Improvements to Poplar Avenue	**Intersection improvements from Matai Road to Glenn Road** - for pedestrians to provide safer crossing points	1.94	12
64W4	Improvements to Rauparaha Street	**Improvements from Te Moana Road through to Tutere Street** - for pedestrians and cyclists by providing a shared path connection for increased connectivity and accessibility to Waikanae Beach	1.94	12
2PK1	Improvements to Beach Road	**Improvements on Beach Road from SH59 to Ames Street** - for cyclists through signage and marking - for pedestrians by providing a mid-block crossing refuge - for pedestrians and cyclists by upgrading the area around the level crossing	1.92	14
24P1	Improvements to Rimu Road	**Improvements at Ihakara Street / Rimu Road Roundabout** - for pedestrians by upgrading existing crossing points	1.92	14
41P8	Improvements to Mazengarb Road	**Improvements around Paraparaumu College** - for pedestrians and cyclists by upgrading the existing crossings to dual pedestrian / cycle crossings	1.92	14
33P3	Improvements to Marine Parade	**Extend Existing Shared Path on Marine Parade to the Tahi Road Intersection** -for pedestrians and cyclists and provide a safe crossing	1.91	17
26P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for pedestrians by upgrading the existing crossing points and providing new ones -for pedestrians by upgrading all side road accesses into the Coastlands / Pak N Save development	1.88	18

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
83O6	Improvements to Mill Road / Old SH1 /Rahui Road Roundabout	**Improvements to BP Roundabout** - for pedestrians by providing new safe pedestrian crossing refuge islands on all 4 legs of the roundabout - for cyclists by providing safe approaches to the roundabout	1.88	18
62W3	Improvements to Te Moana Road	**Improvements from Main Road to Karu Crescent** - for pedestrians by extending the existing footpath	1.85	20
92O10	Improvements on Aotaki Street	**Improvements from Riverbank Road to Mill Road** - for pedestrians and cyclists by providing a shared path OR - for cyclists by providing on-road cycle lanes	1.81	21
94O12	Improvements to Main Street	Improvements from Aotaki Street to Te Rauparaha Street - for cyclists by implementing sharrows from Aotaki Street through to the shopping area - for cyclists and pedestrians by extending the existing shared path from Te Kura a Iwi O Whakatupuranga Rua back to Rangiuru Road - for pedestrians by upgrading Rangiuru Road crossing point - for cyclists by providing an access to the shared path after Rangiuru Road	1.80	22
57W1	Improvements to Connectivity around Waikanae Rail Station and shopping areas	**Connectivity and Accessibility Improvements around Railway Station and Shops** - for pedestrian and cyclists including Elizabeth St / Main Road or Ngaio / Main Road intersections - for pedestrians and cyclists by improving the provision of walking routes through the station park and rides including linkages for cyclists to the cycle parking	1.76	23
20R6	Improvements to Raumati Road / Raumati Beach Village	I**mprovements / Reconfiguration to the intersection of Matatua Road / Alexander Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling	1.72	24
28P2	Improvements to Ihakara Street	**Improvements from Rimu Road to Link Road** - for pedestrians and cyclists through providing a shared path from the roundabout to Link Road	1.72	24

15. Preferred Programme

15.1 Preferred Programme

When selecting the Preferred Programme, all 25 high priority projects were evaluated individually based on the following questions:

- Can all the projects combined be delivered around the indicative $10 million budget[54] allocated for this Pathways Network Plan?
- Can the projects be delivered alongside other future work programmes/ funding streams e.g., SMP, low cost/ low risk?
- Have the projects been committed through other work programmes?

As discussed in Section 12.2, it was agreed that one project (83O6 Improvements to Mill Road/ Old SH1/ Rahui Road Roundabout) would be removed from the Preferred Programme on the basis that this will be delivered by Waka Kotahi NZTA as part of the revocation of M2PP.

The remaining 24 high priority projects have been recommended as the Preferred Programme, as outlined in Table 15-1. The approximate locations of these projects are shown in Figure 15-2 to Figure 15-5.

Table 15-1: Recommended Preferred Programme

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
51P13	Improvements to connectivity around Paraparaumu Rail Station	**Connectivity and Accessibility Improvements around Rail and Coastlands** - for pedestrian and cyclists including Kāpiti Road / Hinemoa / Epiha / Amohia intersections	2.20	1
58W2	Improvements to Elizabeth Street	**Improvements from Seddon Street to Anne Street** - for pedestrians by providing a crossing point to the shops	2.11	2
32P3	Improvements to Marine Parade	**Remove Kerb Buildouts on Marine Parade** - for pedestrians and cyclists to install a new raised crossing just before Howell Road for the new skate park and extend the existing shared path from the roundabout to it.	2.09	3
11R2	Improvements to Poplar Avenue	**Improvements to area outside Te Ra Waldorf School & Te Rawhiti Kindergarten** - for pedestrians and cyclists by upgrading the shared path between the school entrances and exits - for pedestrians by providing a formal crossing point on Poplar Ave - for pedestrians by better school threshold treatments to reinforce a lower speed area	2.08	4
25P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for cyclists by upgrading the existing on-road cycle lanes	2.08	4
29P3	Improvements to Marine Parade	**Improvements between Tahi Road and Ocean Road** - for pedestrians by providing new crossing points to access the shared path and beach	2.06	6

[54] This has been estimated based on an extrapolation of the funding available for the Stride n Ride Programme.

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
70W10	Improvements to Marae Lane	**Improvements to Marae Lane** - for pedestrians by upgrading pedestrian facilities along Marae Lane to increase accessibility and connectivity	2.00	7
59W3	Improvements to Te Moana Road	**Improvements from Te Ara Kawakahia to Rauparaha Street** - for pedestrians and cyclists by upgrading the existing shared path - for pedestrians and cyclists by upgrading the side street crossing facilities. - for cyclists by extending the current on-road cycle lanes on both sides	1.97	8
52P14	Improvements to Percival Road	**Improvements from Percival Road to Donovan Road** - for pedestrians and cyclists by extending the existing shared path - for pedestrians by upgrading the existing crossing points at the Donovan Road intersection	1.96	9
55P16	Improvements to Donovan Road	**Improvements from Percival Road to Te Kupe Road** - for cyclists by upgrading the existing footpath to a shared path - for pedestrians by upgrading the existing crossing point	1.96	9
63W3	Improvements to Te Moana Road	**Improvements to Te Moana Road / Rauparaha Street Intersection** - for pedestrians to provide safe crossing points - for cyclists to facilitate the extension of the on-road cycle lanes	1.96	9
12R2	Improvements to Poplar Avenue	**Intersection improvements from Matai Road to Glenn Road** - for pedestrians to provide safer crossing points	1.94	12
64W4	Improvements to Rauparaha Street	**Improvements from Te Moana Road through to Tutere Street** - for pedestrians and cyclists by providing a shared path connection for increased connectivity and accessibility to Waikanae Beach	1.94	12
2PK1	Improvements to Beach Road	**Improvements on Beach Road from SH59 to Ames Street** - for cyclists through signage and marking - for pedestrians by providing a mid-block crossing refuge - for pedestrians and cyclists by upgrading the area around the level crossing	1.92	14
24P1	Improvements to Rimu Road	**Improvements at Ihakara Street / Rimu Road Roundabout** - for pedestrians by upgrading existing crossing points	1.92	14
41P8	Improvements to Mazengarb Road	**Improvements around Paraparaumu College** - for pedestrians and cyclists by upgrading the existing crossings to dual pedestrian / cycle crossings	1.92	14

ID.	Project Name	Project Description	Combined Score	Prioritisation Rank
33P3	Improvements to Marine Parade	**Extend Existing Shared Path on Marine Parade to the Tahi Road Intersection** -for pedestrians and cyclists and provide a safe crossing	1.91	17
26P1	Improvements to Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for pedestrians by upgrading the existing crossing points and providing new ones -for pedestrians by upgrading all side road accesses into the Coastlands / Pak N Save development	1.88	18
62W3	Improvements to Te Moana Road	**Improvements from Main Road to Karu Crescent** - for pedestrians by extending the existing footpath	1.85	19
92O10	Improvements on Aotaki Street	**Improvements from Riverbank Road to Mill Road** - for pedestrians and cyclists by providing a shared path OR - for cyclists by providing on-road cycle lanes	1.81	20
94O12	Improvements to Main Street	Improvements from Aotaki Street to Te Rauparaha Street - for cyclists by implementing sharrows from Aotaki Street through to the shopping area - for cyclists and pedestrians by extending the existing shared path from Te Kura a Iwi O Whakatupuranga Rua back to Rangiuru Road - for pedestrians by upgrading Rangiuru Road crossing point - for cyclists by providing an access to the shared path after Rangiuru Road	1.80	21
57W1	Improvements to Connectivity around Waikanae Rail Station and shopping areas	**Connectivity and Accessibility Improvements around Railway Station and Shops** - for pedestrian and cyclists including Elizabeth St / Main Road or Ngaio / Main Road intersections - for pedestrians and cyclists by improving the provision of walking routes through the station park and rides including linkages for cyclists to the cycle parking	1.76	22
20R6	Improvements to Raumati Road / Raumati Beach Village	I**mprovements / Reconfiguration to the intersection of Matatua Road / Alexander Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling	1.72	23
28P2	Improvements to Ihakara Street	**Improvements from Rimu Road to Link Road** - for pedestrians and cyclists through providing a shared path from the roundabout to Link Road	1.72	24

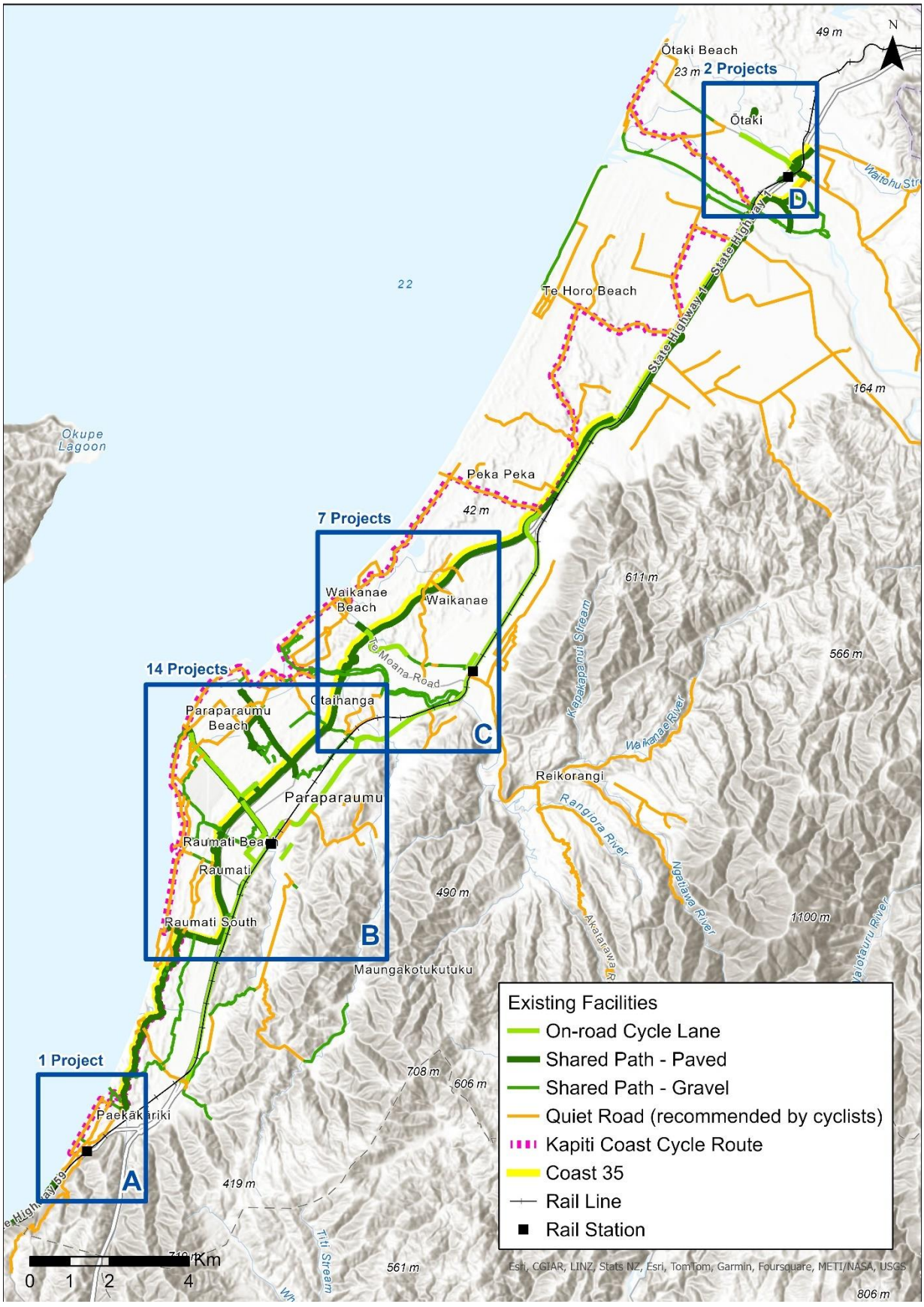


Figure 15-1: Recommended Preferred Programme

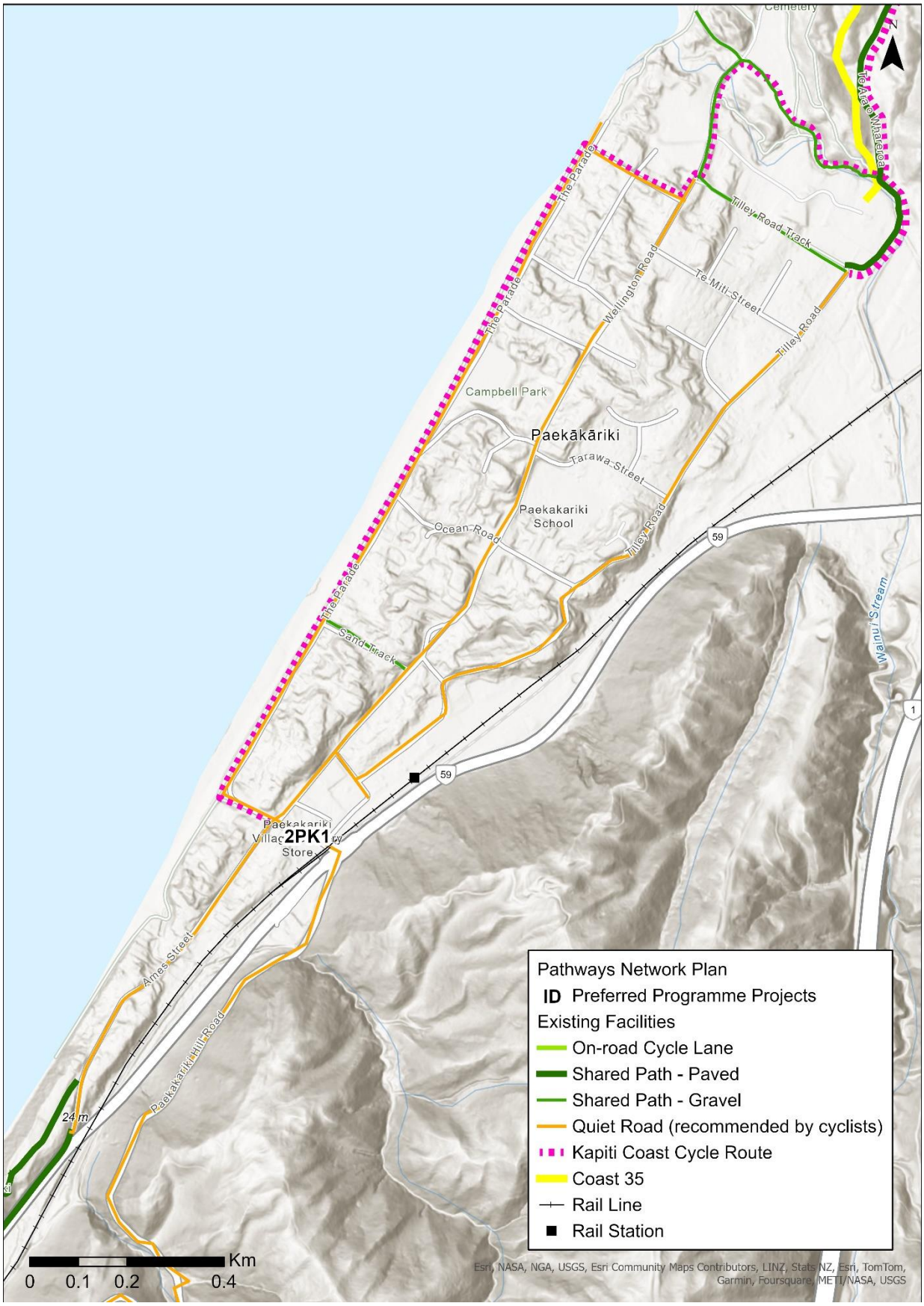


Figure 15-2: Recommended Preferred Programme – Inset A

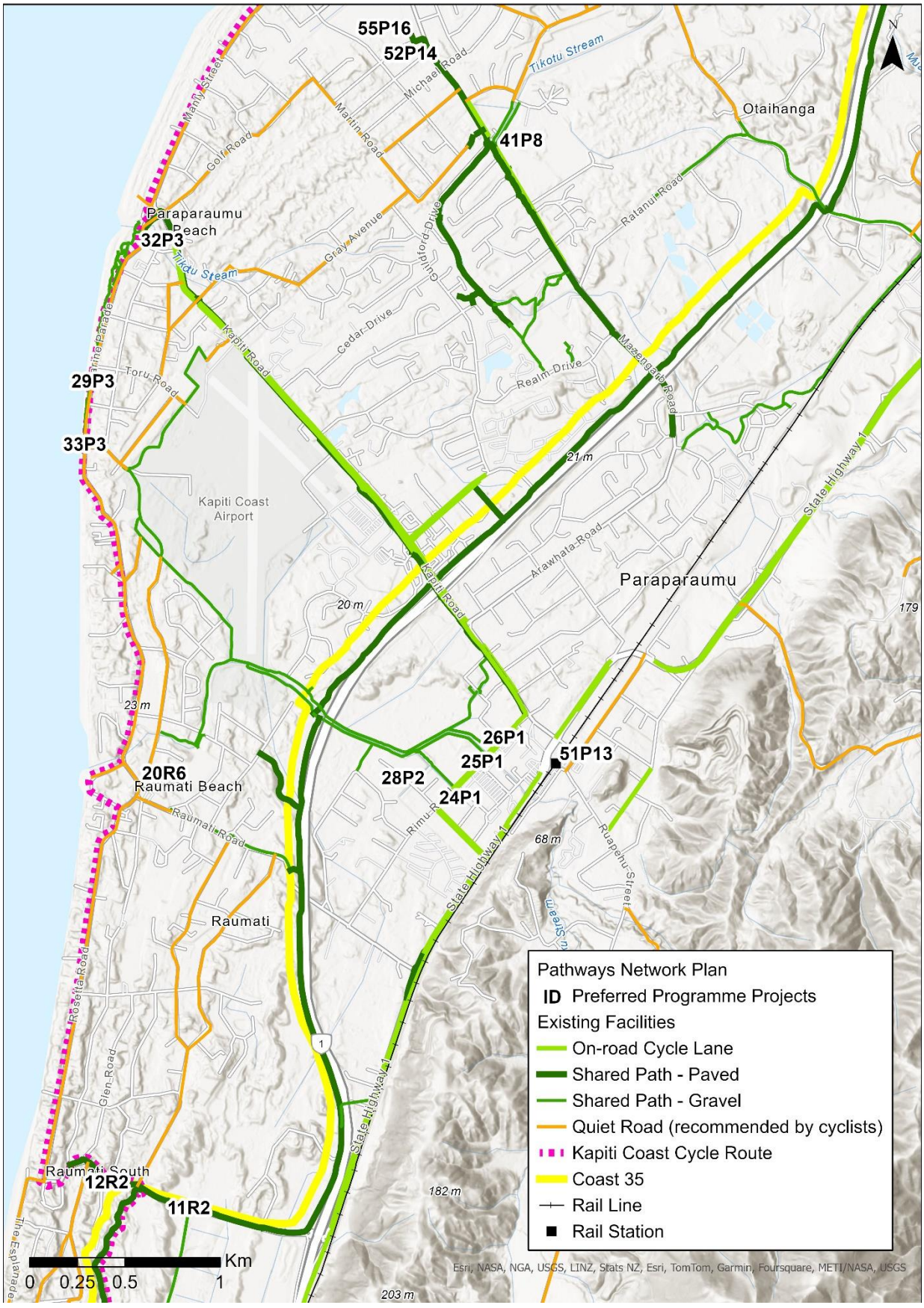


Figure 15-3: Recommended Preferred Programme – Inset B

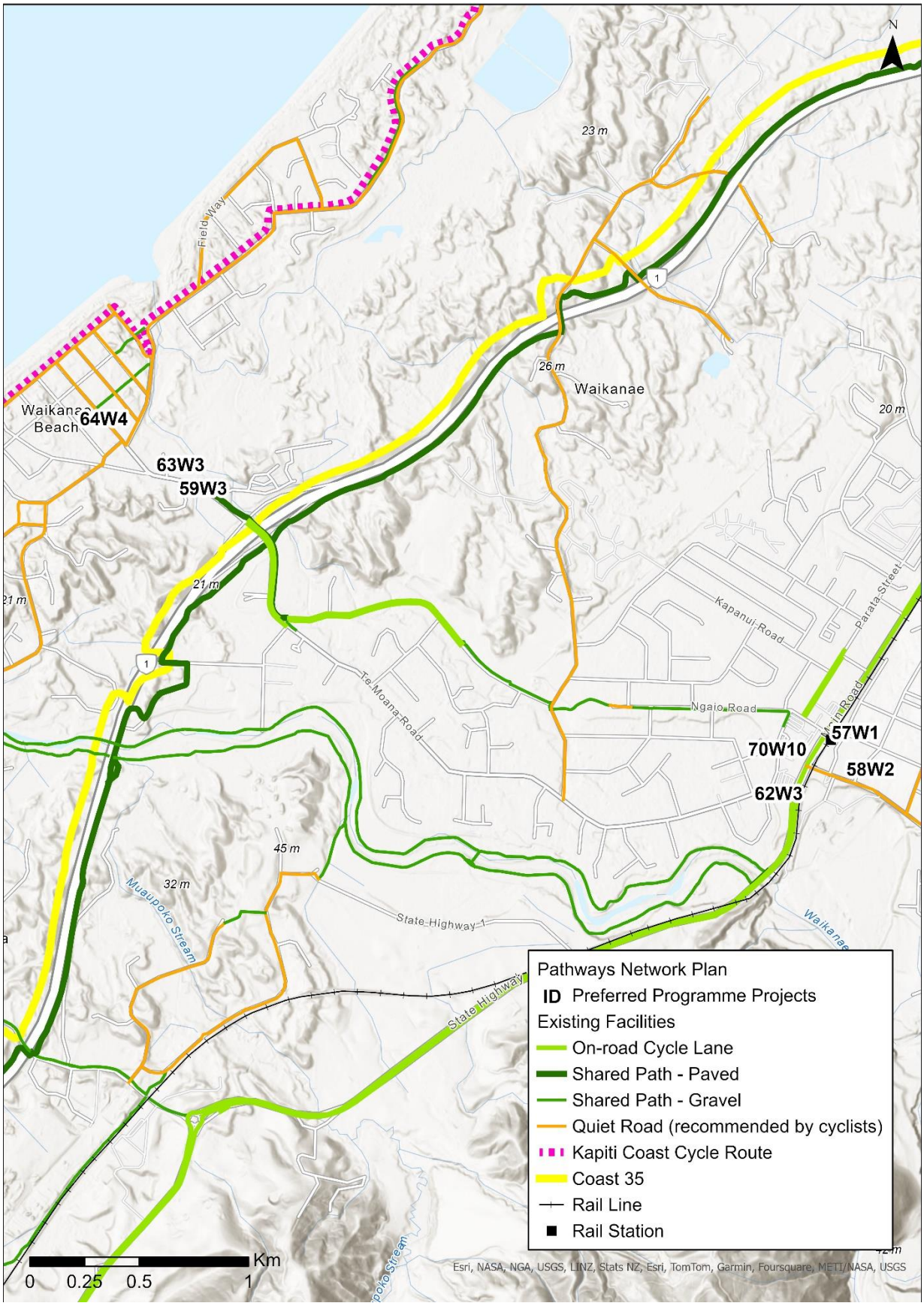


Figure 15-4: Recommended Preferred Programme – Inset C

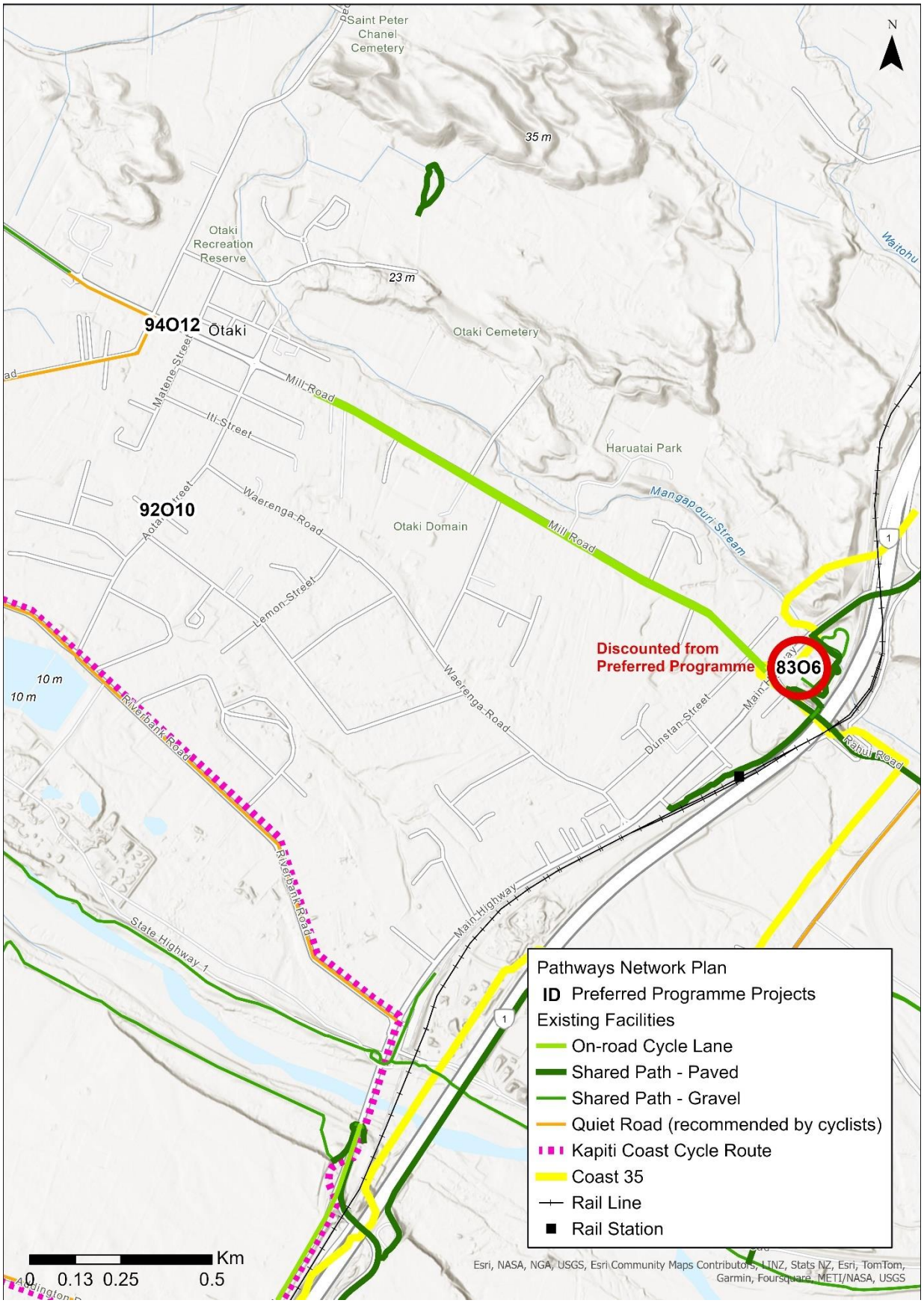


Figure 15-5: Recommended Preferred Programme – Inset D

15.2 Cost Estimates

The estimated total cost of delivering the recommended Preferred Programme over the 10 years of this Pathways Network Plan is approximately $10,581,000

Table 15-2 shows the breakdown of the cost estimates for each project included in the recommended Preferred Programme (refer to **Appendix P** for further details on Cost Estimates).

Table 15-2: Preferred Programme Cost Estimates

ID.	Project Name	Cost Estimates ($,000)
51P13	Improvements to Connectivity around Paraparaumu Rail Station	329
58W2	Improvements to Elizabeth Street	78
32P3	Improvements to Marine Parade	123
11R2	Improvements to Poplar Avenue	257
25P1	Improvements to Rimu Road	232
29P3	Improvements to Marine Parade	235
70W10	Improvements to Marae Lane	245
59W3	Improvements to Te Moana Road	1,231
52P14	Improvements to Percival Road	738
55P16	Improvements to Donovan Road	894
63W3	Improvements to Te Moana Road	444
12R2	Improvements to Poplar Avenue	156
64W4	Improvements to Rauparaha Street	1,210
2PK1	Improvements to Beach Road	143
24P1	Improvements to Rimu Road	164
41P8	Improvements to Mazengarb Road	324
33P3	Improvements to Marine Parade	97
26P1	Improvements to Rimu Road	650
62W3	Improvements to Te Moana Road	207
92O10	Improvements on Aotaki Street	641
94O12	Improvements to Main Street	716
57W1	Improvements to Connectivity around Waikanae Rail Station and Shopping Areas	663
20R6	Improvements to Raumati Road / Raumati Beach Village	444
28P2	Improvements to Ihakara Street	359

15.3 Benefit to Cost Ratios & Expected Benefits

The estimated BCR of delivering the recommended Preferred Programme over the 10 years of this Pathways Network Plan is within the range of 2.1 to 4.7. The expected benefits will equate to a net present value of approximately $40 million (rounded to the nearest 10 million) if delivered as per the identified programme. The timing for the interventions is proposed in Table 17-2 (refer to **Section 17.1**) and the benefits and BCRs presented below reflect the intervention timing.

Table 15-3 shows the breakdown of the BCR ranges and expected benefits for each project included in the recommended Preferred Programme (refer to **Appendix Q** for further details. Note that Appendix Q does not reflect the proposed implementation timings to enable a fair comparison between options).

Table 15-3: Preferred Programme BCRs & Expected Benefits

ID.	Project Name	BCR Range	Expected Benefits ($,000)
51P13	Improvements to Connectivity around Paraparaumu Rail Station	1.8 - 4.8	1,171
58W2	Improvements to Elizabeth Street	4.6 - 13.2	747
32P3	Improvements to Marine Parade	4.8 - 12.5	1,145
11R2	Improvements to Poplar Avenue	1.6 - 4.2	801
25P1	Improvements to Rimu Road	4.7 - 12.1	2,089
29P3	Improvements to Marine Parade	2.8 - 8.5	1,422
70W10	Improvements to Marae Lane	1 - 2.8	508
59W3	Improvements to Te Moana Road	2.1 - 3.5	3,902
52P14	Improvements to Percival Road	1.8 - 3	1,964
55P16	Improvements to Donovan Road	1.4 - 2.4	2,028
63W3	Improvements to Te Moana Road	3 - 7.4	2,576
12R2	Improvements to Poplar Avenue	2.7 - 6.9	801
64W4	Improvements to Rauparaha Street	2 - 3.3	3,624
2PK1	Improvements to Beach Road	0.9 - 2.4	277
24P1	Improvements to Rimu Road	7.4 - 14.5	1,973
41P8	Improvements to Mazengarb Road	3.2 - 8.3	1,986
33P3	Improvements to Marine Parade	5.2 - 13.9	1,075
26P1	Improvements to Rimu Road	2.3 - 8.2	3,625
62W3	Improvements to Te Moana Road	2.5 - 6.6	1,085
92O10	Improvements on Aotaki Street	2 - 3.3	2,022
94O12	Improvements to Main Street	1.9 - 3.1	2,021
57W1	Improvements to Connectivity around Waikanae Rail Station and Shopping Areas	0.3 - 0.9	471
20R6	Improvements to Raumati Road / Raumati Beach Village	1.4 - 3.5	1,153
28P2	Improvements to Ihakara Street	0.9 - 2.4	637

15.4 Sensitivity Analysis

15.4.1 MCA Assessment Weightings

Sensitivity analysis was carried out to test how sensitive the assessed criteria and costs were to changes in their relative weighting. The scenarios tested are shown in Table 15-4.

Table 15-4: Sensitivity Analysis Scenarios

Scenario	Description
Base	As discussed in **Section 0**.
IO Focused	Equal weighting applied to IO1, IO2 and IO3, with no weighting applied to other criteria relevant to decision making.
Equal Weighting	Equal weighting applied to all IOs and other criteria relevant to decision making.

The criteria weightings were adjusted for each scenario and the long list projects were ranked based on their MCA assessment scores. For each scenario, the top ranked projects that had a cumulative total cost of approximately $10 million were taken forward to be compared. Refer to **Appendix R** for details.

As presented in

Table 15-5, the findings from the sensitivity analysis revealed that:

- **IO Focused Scenario** – 11 projects fall around the indicative $10 million budget and would be prioritised for the Preferred Programme. As this scenario had less emphasis on the project cost/ economics, it allowed for some of the higher cost projects to be prioritised.
- **Equal Weighting Scenario** – 27 projects would be prioritised to the Preferred Programme. While more projects would be included in this scenario, it was agreed that this scenario did not place enough emphasis on certain criteria such as the stakeholder feedback and the IOs which places emphasis on projects enabling the most benefits for walking and cycling.
- **Base vs. Sensitivity** – All 25 high priority projects identified in the Base scenario were common across either the IO Focused or the Equal Weighting scenario.

Table 15-5: Sensitivity Analysis Summary

Scenario	No. prioritised projects around the $10m allocated budget	Cost Estimates ($) [55]	Common projects (Base vs. sensitivity scenario)
Base	25	10.7 million.[56]	-
IO Focused	11	10.4 million	73% (8/ 11)
Equal Weighting	27	10.3 million	85% (23/ 27)

15.4.2 Cost Estimates

As outlined in **Section 13.5** and detailed in **Appendix P**, cost estimates were prepared for each item using a SM014 compliant process. This resulted in a base, expected and P95 estimate for each line item.

In addition to this presented cost estimate range, further sensitivity testing was conducted for the BCR which involved an increase of costs by 25%, inclusive of the P95 cost estimate.

15.4.3 BCRs & Expected Benefits

To test the robustness of the preferred programme's BCR, a range of economic sensitivity tests were conducted.

This included the standard sensitivity tests of altering the discount rate to 3% and 6%, changes in the delivery cost as well as changes to the key benefit streams. Results from the sensitivity tests are presented below in Table 15-6.

Table 15-6: Sensitivity Testing of the BCRs for the preferred programme ($ million)

Programme Sensitivity tests	Benefits			Costs		BCR	
	Lower	Expected	Upper	Expected	Upper	Expected	Range
Expected Programme	**$25.8**	**$35.6**	**$45.3**	**$9.6**	**$12.3**	**3.7**	**2.1 - 4.7**
Discount Rate 3%	$28.8	$39.3	$49.7	$9.8	$12.6	4.0	2.3 - 5.1
Discount Rate 6%	$22.3	$31.2	$40.1	$9.2	$11.8	3.4	1.9 - 4.3
Costs +25%	$25.8	$35.6	$45.3	$12.0	$15.3	3.0	1.7 - 3.8
Costs - 25%	$25.8	$35.6	$45.3	$7.2	$9.2	4.9	2.8 - 6.3
Safety Benefits + 25%	$27.3	$37.9	$48.5	$9.6	$12.3	3.9	2.2 – 5.0
Safety Benefits -25%	$24.3	$33.2	$42.1	$9.6	$12.3	3.5	2.0 – 4.4
Health Benefits +25%	$30.8	$42.1	$53.5	$9.6	$12.3	4.4	2.5 - 5.6
Health Benefits -25%	$20.9	$29.0	$37.1	$9.6	$12.3	3.0	1.7 - 3.9
Costs + 25% Health -25%	$20.9	$29.0	$37.1	$12.0	$15.3	2.4	1.4 - 3.1

[55] The sensitivity analysis took into account all 94 Long List projects, including 83O6 Improvements to Mill Road/ Old SH1/ Rahui Road Roundabout that was later discounted from the recommended Preferred Programme.

[56] This cost figure includes the project (83O6) that was later discounted from the recommended Preferred Programme.

Importantly, there are no tests where even the lower estimate of the BCR drops below 1. When comparing the net present values from the benefits, even in the scenario with health benefits reduced and costs increase, BCR above 1 is still expected. This demonstrates good value for money.

15.5 Investment Prioritisation

15.5.1 Overview

The Waka Kotahi NZTA Investment Prioritisation Method (IPM) is used to support Waka Kotahi NZTA to give effect to the GPS by prioritising activities into activity classes in the NLTP 2024–27, and to confirm priority at the time a National Land Transport Fund (NLTF) investment decision is made[57].

Table 15-7 outlines the ratings for each investment factor and rationale behind these ratings for the recommended Preferred Programme.

Table 15-7: Preferred Programme Investment Priority Ratings

Factor	Rating	Rationale
GPS Alignment	Low	Low cost, low-risk improvement programme Proposed walking and cycling improvements will increase safety and economic growth. There is an existing demand for walking and cycling in the district, mainly due to Stride n' Ride Programme (refer to **Section 2.2.2**).
Efficiency	Medium	BCR range 2.1 to 4.7 (refer to **Section 15.3** for details)
Scheduling	Low	Low criticality and low interdependency
Priority Ranking	10 of 13	Low priority

While the overall priority ranking of the recommended Preferred Programme is considered to be low, there are a number of projects that rank higher due to their greater alignment with the GPS 2024. These are outlined in Table 15-7.

Table 15-8: Preferred Programme Projects with Strongest Alignment to the GPS 2024

Project type	Rationale
Access & Connectivity Improvements around Key Destinations such as Rail Stations, Schools, and Employment.	• GPS 2024-27 Priority: Economic Growth Improvements to rail stations will improve connectivity to key services and amenities. This can also increase access employment opportunities in Wellington City and wider region. Projects have been identified which will support and increase opportunities for land development and economic growth in the district.
Safety Improvements and Overlap with SMP 2023-33 (refer to Section **17.1.1** for details)	• GPS 2024-27 Priority: Safety A number of projects within the recommended Preferred Programme overlap with other workstreams, namely relating to safety and speed management. KCDC will work across workstreams to deliver a range of transport-related improvements in the district over the next 10 years.
Incomplete Projects included in the previous Stride n' Ride Programme	• "Activities that form part of continuous programmes are recognised and given priority in the GPS 2024 including those within maintenance and renewal of walking and cycling networks, as well as road safety promotion programme." A number of projects within the recommended Preferred Programme overlap with the incomplete projects included in the previous Stride n' Ride Programme.

[57] https://www.nzta.govt.nz/assets/P-and-I-Knowledge-Base/docs/2024-27-IPM.pdf

16. Districtwide improvements

There were several districtwide improvements that were discussed at the stakeholder workshops, Councillor briefing, and/or by the Council or the project team.

The cost of these have not been accounted for in the Preferred Programme, however, the districtwide improvements have been developed to provide alignment with other Council teams and funding streams.

To complement the Preferred Programme, the following districtwide improvements have been identified as opportunities to further enhance active mode journeys in the district (refer to **Appendix S** for more details):

- Wayfinding signage
- Behavioural marking[58]
- Eco/ active modes tourism
- Accessibility
- Complementary facilities
- Annual active modes monitoring programme.

[58] It should be noted that wayfinding signage and behavioural marking differ from improvements to signage in Preferred Programme. The former refers to key routes and destination used specifically by active users in the district, including Coast 35, the Kapiti Coast Cycle route, bike shops, as well as cycling and outdoors cafes. The latter refers to individual areas where specific signs can be upgraded/ implemented, such as stop signs and slow down warnings.

Part C – Delivering & Monitoring the Programme

17. Financial Case

The purpose of the Financial Case is to outline the programme costs and funding requirements for the programme streams identified in the management case. The financial case provides assurance that the 10-year Preferred Programme is affordable for KCDC, considering all potential funding sources.

17.1 Programme Cost

17.1.1 Overview

KCDC has allocated around $10 million to deliver the recommended Preferred Programme over the 10 years of this Pathways Network Plan. This allocation is in line with the expenditure of the Stride n' Ride Programme, which delivered a wide variety of walking and cycling improvements during the 10 years of the previous Network Plan.

The programme cost, fundings sources and implementation timeframe of the recommended Preferred Programme was discussed with KCDC. The outcomes from this discussion are summarised below.

- Each project in the Preferred Programme has been allocated to an implementation timeframe i.e., LTP period 2027-30, 2030-33, or 2033-26. It is assumed that KCDC will request funding for projects during each LTP period through the NLTP process.
- The Preferred Programme has been developed to provide synergies across workstreams. KCDC will work with other workstreams, such as Safety, Speed Management, and Development Planning to maximise funding opportunities available to implement the Preferred Programme.
- It is assumed that funding will be limited in the first three years (2027-30) of this Pathways Network Plan. Therefore, projects that can be delivered alongside other workstreams, namely the Speed Management Plan 2023-33, will be included in the funding for this period.
- Flexibility has been incorporated into the Preferred Programme, providing KCDC the ability to select projects on a 'needs' basis if/ when funding becomes available.

Table 17-1 provides an overview of the Preferred Programme Cost by implementation timeframe and funding source (per walking and cycling (W&C) or SMP activity class) and Table 17-2 provides a breakdown of this by individual projects included in the Preferred Programme.

Table 17-1: Preferred Programme Cost by Implementation Timeframe & Funding Source

Implementation Timeframe >>	2027-30		2030-33	2033-36	10-year Period
Funding Source by Activity Class >>	W&C	SMP	W&C	W&C	All
Total Cost ($,000)	1,569	2,765	3,527	2,720	10,581
No. projects implemented	4	10	4	6	24
% projects implemented	17%	42%	17%	25%	100%

Table 17-2: Preferred Programme Cost by Project, Funding Source (per Activity Class) & Implementation Timeframe

ID.	Preferred Programme Project Name	Cost ($,000)	2027-30		2030-33	2033-36
			W&C	SMP	W&C	W&C
51P13	Improvements to Connectivity around Paraparaumu Rail Station	329				✓
58W2	Improvements to Elizabeth Street	78		✓		
32P3	Improvements to Marine Parade	123		✓		
11R2	Improvements to Poplar Avenue	257		✓		
25P1	Improvements to Rimu Road	232		✓		
29P3	Improvements to Marine Parade	235	✓			
70W10	Improvements to Marae Lane	245	✓			
59W3	Improvements to Te Moana Road	1,231	✓			
52P14	Improvements to Percival Road	738		✓		
55P16	Improvements to Donovan Road	894		✓		
63W3	Improvements to Te Moana Road	444				✓
12R2	Improvements to Poplar Avenue	156		✓		
64W4	Improvements to Rauparaha Street	1,210	✓			
2PK1	Improvements to Beach Road	143		✓		
24P1	Improvements to Rimu Road	164				✓
41P8	Improvements to Mazengarb Road	324				✓
33P3	Improvements to Marine Parade	97		✓		
26P1	Improvements to Rimu Road	650			✓	
62W3	Improvements to Te Moana Road	207				✓
92O10	Improvements on Aotaki Street	641			✓	
94O12	Improvements to Main Street	716			✓	
57W1	Improvements to Connectivity around Waikanae Rail Station and Shopping Areas	663		✓		
20R6	Improvements to Raumati Road / Raumati Beach Village	444			✓	
28P2	Improvements to Ihakara Street	359				✓

17.1.2 Assumptions

The following assumptions were made to determine the Programme Costs:

- Estimates are based on the process within the Waka Kotahi NZTA SMO14 Cost Estimation Manual and are at a level sufficient for a Preliminary Business Case.
- Project costs are built up from first principles and using known local construction rates.
- A project base estimate, a project expected estimate and 95th percentile project estimate has initially been calculated for each project.
- The indicative programme costs in Table 17-2 are that of the expected estimate costs inclusive of a 20% contingency.

Refer to **Appendix P** for cost estimates for each project identified.

17.2 Funding Risks

The main fundings risks and uncertainties that could result in changes to costs are:

- The change in central Government in late 2023 and the new 2024 GPS have signalled a change in priority for the walking and cycling activity class which are likely to have some impact on funding mechanisms.
- Investing organisations (KCDC, Waka Kotahi NZTA and Central Government) have multiple commitments, and these Programmes will be competing against other priorities for investment.
- Cost increases are likely over the 10-year period, due to a range of factors including increased market rates, supply chain distribution, new regulations, changes in risk profile or increased knowledge of asset condition.
- During project construction, site specific investigations may identify cultural, archaeological, community, property and / or property constraints which could stop, delay, and / or lead to a change in scope associated with the physical works programme.

17.3 Funding Sources

17.3.1 Overview

The activities within the Preferred Programme are classed as walking and cycling improvements. As indicated in the GPS 2024, this activity class is for maintaining the existing walking and cycling network and investment in walking and cycling where there is a clear benefit for increasing economic growth or clear benefit for improving safety and where there is an existing or reliably forecast demand for walking and cycling.

While the Programme is focused on the GPS 2024, walking and cycling improvements remain a low investment priority for Waka Kotahi NZTA (refer to **Section 15.4**), and so, there is uncertainty around how the Preferred Programme will be funded.

17.3.2 Waka Kotahi NZTA Funding

Over the 10 years of this Pathways Network Plan, KCDC will continue to seek funding for walking and cycling projects through the LTP process. It is assumed that the relevant projects will be put forward by KCDC during each LTP period and will receive Waka Kotahi NZTA's normal funding assistance rates (FAR) from the NLTF.

17.3.3 Other Funding Opportunities

There will be opportunities where relevant teams within Council may contribute towards the delivery of Programme projects. This could take place where there are identified benefits for other workstreams, such as speed management, urban planning, as well as strategy and growth.

KCDC will also seek external funding opportunities over the 10 years of this Pathways Network Plan. This could be sought through:

- The SMP 2023-33, by adding proposed improvements from this Pathways Network Plan to the improvements already proposed in the SMP for a given location. This approach could help secure funding by highlighting the multiple advantages for safety and active modes.
- is overlap between implementing safety interventions and achieving additional benefits for walking and cycling. This approach could help secure funding by highlighting the multiple advantages of the proposed improvements.

- Buy-in from relevant stakeholders/ partners in the district such as local businesses, property developers, private sector developments, and tourism organisations.
- The Infrastructure Priorities Programme (IPP)[59]. While not a guarantee of funding, it is recommended that KCDC submit a project or proposal through the IPP application process to increase the likelihood of securing funding for projects identified in this Pathways Network Plan as additional funding sources become available.
- One-off transport funding opportunities from central government such as the former Transport Choices and shovel ready project funding.

Consistent investment from a range of funding sources will increase the likelihood that the walking and cycling network continues providing for its users, while also contributing to economic growth in the district.

17.4 Overall Affordability

The estimated cost of the recommended Preferred Programme is $10,581,000, and the BCR is within the range of 2.1 to 4.7 (refer to **Sections 15.2** and **15.3**). The funding immediately sought from the Pathways Network Plan would be allocated for the physical works required to implement each of the 24 improvement projects within the Preferred Programme.

Over the 10 years on this Pathways Network Plan, KCDC will include relevant budget lines for the projects that have been identified for each LTP implementation period. Funding streams will be confirmed when the Council adopts the final LTP for each period, following consultation, hearings and deliberations. The recommended Preferred Programme will also be included in the RLTP.

[59] Infrastructure Priorities Programme (IPP) | Te Waihanga IPP is administered by Te Waihanga, the New Zealand Infrastructure Commission. The IPP is designed to identify and prioritize key infrastructure projects that align with New Zealand's strategic objectives, offer good value for money, and are feasible to deliver.

18. Commercial Case

The purpose of this Commercial Case is to outline the proposed procurement arrangement for the Preferred Programme over the 10 years of this Pathways Network Plan.

18.1 Procurement Strategy

The approved procurement strategy that KCDC will use for this Network Plan is the Access and Transport Procurement Strategy 2023[60]. This has been informed by the Government Procurement Rules 2019[61](GPR) and the Waka Kotahi NZTA's Procurement Manual 2022[62].

The KCDC Procurement Framework 2023[63] is used to inform and implement the Access and Transport Strategy. It includes the Procurement Policy, Manual, Templates and Guidelines which are used by the Council to procure its infrastructure.

There are no proposed departures from the existing procurement strategy for this Pathways Network Plan. However, if one-off funding sources are sought then there is a risk that the procurement requirements of these different funding agencies will need to be met. While these procurement requirements will only be understood at the time and are not outlined in this Pathways Network Plan, KCDC's procurement principles and internal procurement expertise will ensure these issues are appropriately addressed.

18.2 Procurement Models

The procurement model that KCDC will use the procure and deliver the Pathways Network Plan Programme projects involves a combination of:

- Existing road maintenance contracts.
- Tendering for a 3-year Programme in line with LTP budgets[64]. These tenders may include other Council programmes for efficiencies, such as the SMP, as well as other safety improvement projects, low-cost low risk projects, and minor works.
- One-off funding opportunities. Selected programme projects identified in this business case will be fast tracked if / when funding becomes available over the 10-year period.

[60] kcdc-access-and-transport-procurement-strategy-2023.pdf (kapiticoast.govt.nz)

[61] Government Procurement Rules | New Zealand Government Procurement

[62] Procurement manual | NZ Transport Agency Waka Kotahi (nzta.govt.nz)

[63] Kāpiti coast district council access and transport procurement strategy (kapiticoast.govt.nz)

[64] For a Tendered Programme of Works, this will be procured in line with KCDC's Access and Transport Procurement Strategy and Procurement as well as Waka Kotahi NZTA's Procurement Policy.

19. Management Case

The purpose of the Management Case is to describe the arrangements that will be implemented for the successful delivery of the recommended Preferred Programme, ensuring successful delivery and management of Programme risks.

19.1 Access & Transport Network Management

KCDC provides asset management services for all the Council's access and transport activity class. This activity is owned and maintained through the Access and Transport Team and covers footpaths, walkways, cycle lanes and shared paths in the district. Recreational tracks and trails are managed by Parks and Open Spaces and are not included in this Pathways Network Plan[65].

KCDC's main personnel that will manage this Network Plan going forward are:

- **Fraser Miller:** Transport Lead – Walking and Cycling
- **Mark Martin:** Team Leader – Roading Asset Management
- **Ron Minnema:** Team Leader – Transport Safety
- **Sean Mallon:** Group Manager – Infrastructure and Asset Management

19.2 Outline Programme Plan

Table 19-1 shows the outline programme plan for this Pathways Network Plan. This includes the initial milestones to confirm funding, followed by the procurement and implementation of the projects included in the Programme.

The dates outlined below are relevant to the LTP 2027-30 only, however, the key milestones[66] are generally applicable for all LTP cycles over the next 10 years of this Pathways Network Plan.

Table 19-1: Outline Programme Plan – Key Milestones

Key milestone		Date	Owner
1	KCDC continue to liaise with Iwi	Ongoing	KCDC
2	KCDC continue to explore supplementary funding streams	Ongoing	KCDC
3	KCDC consider Pathways Network Plan and business case process[67]. KCDC approve Point of Entry	2024	KCDC
4	Waka Kotahi NZTA to endorse Pathways Network Plan and approve business case approach. Waka Kotahi NZTA approves Point of Entry	2025	Waka Kotahi NZTA
5	KCDC update Access and Transports activity Management Plan and consult with the community through LTP	2026	KCDC
6	KCDC include Programme projects in LTP for funding requirements in RLTP	2027	KCDC
7	KCDC include Programme projects in RLTP for funding requirements in NLTP. For projects not included in RLTP, KCDC make decision on funding projects 100%. Seek additional funding arrangements	2027	KCDC
8	Funding confirmed for Programme projects included in LTP, RLTP and NLTP	2027	KCDC and Waka Kotahi NZTA
9	Delivery of Programme projects committed to LTP.	2027 onwards	KCDC
10	Pre-implementation, procurement and construction of Programme projects	2027 onwards	KCDC

[65] Access & Transport Activity Management Plan 2024-33
[66] Excluding key milestones 3 and 4
[67] This includes MR Cagney peer review

19.3 Benefits Realisation Management

The benefits management framework for this Network Plan Programme is shown in Table 19-2 (refer to **Section 3.2** for more details).

Table 19-2: Benefits Management Framework

Benefit	Description	Baseline	Target (2034)	Responsibilities
Improved access, connectivity and integration for active mode users.	% of the district's trips made walking and cycling to workplaces.	2018 Census Walking: 3% Cycling: 2%	Walking: 7% Cycling: 5%	Data to be obtained from Statistics NZ Census
	% of the district's trips made walking and cycling to education facilities.	2018 Census Walking: 22% Cycling: 9%	Walking: 35% Cycling: 20%	Data to be obtained from Statistics NZ Census
Improved safety for active mode users	Calculated DSI equivalents involving pedestrians within the geographic area of the preferred programme	0.5 DSI equivalents annually	50% reduction in DSI Equivalents	Data to be obtained from CAS
	Calculated DSI equivalents involving cyclists within the geographic area of the preferred programme	0.4 DSI equivalents annually		
Increased active mode share	Implement annual monitoring survey	Selection of count locations to be confirmed and baseline count data to be collected.	40% increase in annual users compared to baseline year	KCDC

19.4 Risk Management

The risks associated with this Pathways Network Plan have been documented in Table 19-3. A rating score has been identified for each risk using Waka Kotahi NZTA's Z/44 Risk Management guidance[68]. Risk management will continue to be an important part of the planning and implementation of the Network Plan Programme. Over the 10-year period, KCDC will be the risk owner to allow for the identified risks to be regularly reviewed and updated throughout the course of the Programme.

[68] Minimum standard Z/44 - Risk management practice guide | NZ Transport Agency Waka Kotahi (nzta.govt.nz)

Table 19-3: Main Risks Identified

	Description	Cause	Consequence	Mitigation strategy	Level
Category: Stakeholders & funding					
1	Reduced funding available from Central Government	Reduction in the FAR from Central Government	Council may not be able to afford the entire programme and potentially deliver less affecting the programme outcomes and benefits	Engage with Waka Kotahi NZTA early and frequently throughout the 10 years of this Pathways Network Plan.	Medium
2	Reduced funding available from Central Government in the walking and cycling activity class	Changes in Central Government funding to align with the updated Government Policy Statement	Council may not be able to afford the entire programme and potentially deliver less affecting the programme outcomes and benefits	Engage with Waka Kotahi NZTA early and frequently throughout the 10 years of this Pathways Network Plan.	Critical
3	Projects will require prioritisation against other Council projects and funding	Preferred Programme may not be affordable or have a reduced priority compared to other Council priorities	Council may not be able to afford the entire programme and potentially deliver less affecting the programme outcomes and benefits	Ensure flexibility in the Pathways Network Plan to ensure KCDC is able to deliver future benefits and outcomes with investment available at the time.	High
4	Iwi interests not adequately included or addressed	Iwi have not been significantly engaged in the development of the Network Plan	Iwi may not support the Preferred Programme	On-going Iwi engagement will mitigate this risk.	Medium
5	Interests of key stakeholders e.g., CWB groups not adequately addressed.	Recommended Preferred Programme does not completely address the interests of key stakeholders.	Key stakeholders may not support the Preferred Programme or future works to the walking and cycling network.	On-going engagement with key stakeholders and interested groups will mitigate this risk.	Medium
Category: Public/ media					
6	Consultation with the public through the LTP process on the Preferred Programme	Significant rates increase for the district generating adverse publicity for the Council	Local communities / public not supporting the level of investment of the Preferred Programme	Ensure the Preferred Programme is consulted on with the public for each LTP period of this Pathways Network Plan.	Medium
Category: Legal/ Compliance					
7	Identification of any consenting requirements	Late involvement of the consents team	Delays to the implementation of the programme	Involve planners early in the delivery of projects in order to identify and minimise potential consenting issues.	Medium
Category: Delivery					

	Description	Cause	Consequence	Mitigation strategy	Level
8	Securing skilled local contractor resources to deliver the Preferred Programme	Lack of resources and capacity in the current market with many Tier 1 contractors committed to larger regional projects	Increased costs to deliver the Preferred Programme through a reliance on lower quality contractors leading to less delivered and poorer outcomes	Consider the timing of other local or regional major projects that may impact the district. Understand supplier availability by requesting expressions of interest.	High
10	Preferred Programme interdependencies with other programmes	Delays to the implementation of the Preferred Programme from other interlinked programmes	Some parts of the Preferred Programme are delayed or deferred	Encourage early engagement and closer collaboration with other Council teams	Medium
11	Unexpected events (weather / natural disaster / pandemic)	Delays to the implementation of the Preferred Programme	Cancellation or redirection of budgets	Ensuring all delayed projects are progressed to a suitable stage ready for implementation once budgets are re-established.	Medium
12	Future developments in the district	Council teams working in silos	Missed opportunities for additional funding / contributions or to influence the development outcome for the network	Encourage early engagement or close collaboration with developers/ interested parties.	High
Category: Cost					
13	Preferred Programme costs may increase given the implementation timeframe of 10 years	Construction cost escalation	Council may not be able to afford the entire programme and potentially deliver less affecting the programme outcomes and benefits	Review cost estimates of the Preferred Programme for each LTP period and make updates if/ when required.	Critical
14	Pre-implementation cost estimates to be developed for individual projects in the Preferred Programme through subsequent phases / business cases	Preferred Programme cost estimates have been developed for a PBC level at this stage	Council may not be able to afford the entire programme and potentially deliver less affecting the programme outcomes and benefits	Refine cost estimates of individual projects when they are being developed in future design and implementation stages.	High

20. Next Steps

The Pathways Network Plan has recommended a Preferred Programme of 24 improvement projects that will realise a variety of benefits for the district's active transport network. The total cost of this Preferred Programme is an estimated $10,581,000 (BCR range between 2.1 and 4.7) over the 10-year period.

In terms of the next steps, it is recommended that decision makers:

- Approve the recommended Preferred Programme outlined in this Pathways Network Plan and commit to the associated investment requirements and timeframes.
- Approve funding for the projects contained in the recommended Preferred Programme which are recommended for inclusion in the LTP 2027-30 and provide an indication on funding for subsequent LTP cycles over the 10-year period.

Appendices

Appendix A Prior Work

Relevant Prior Work

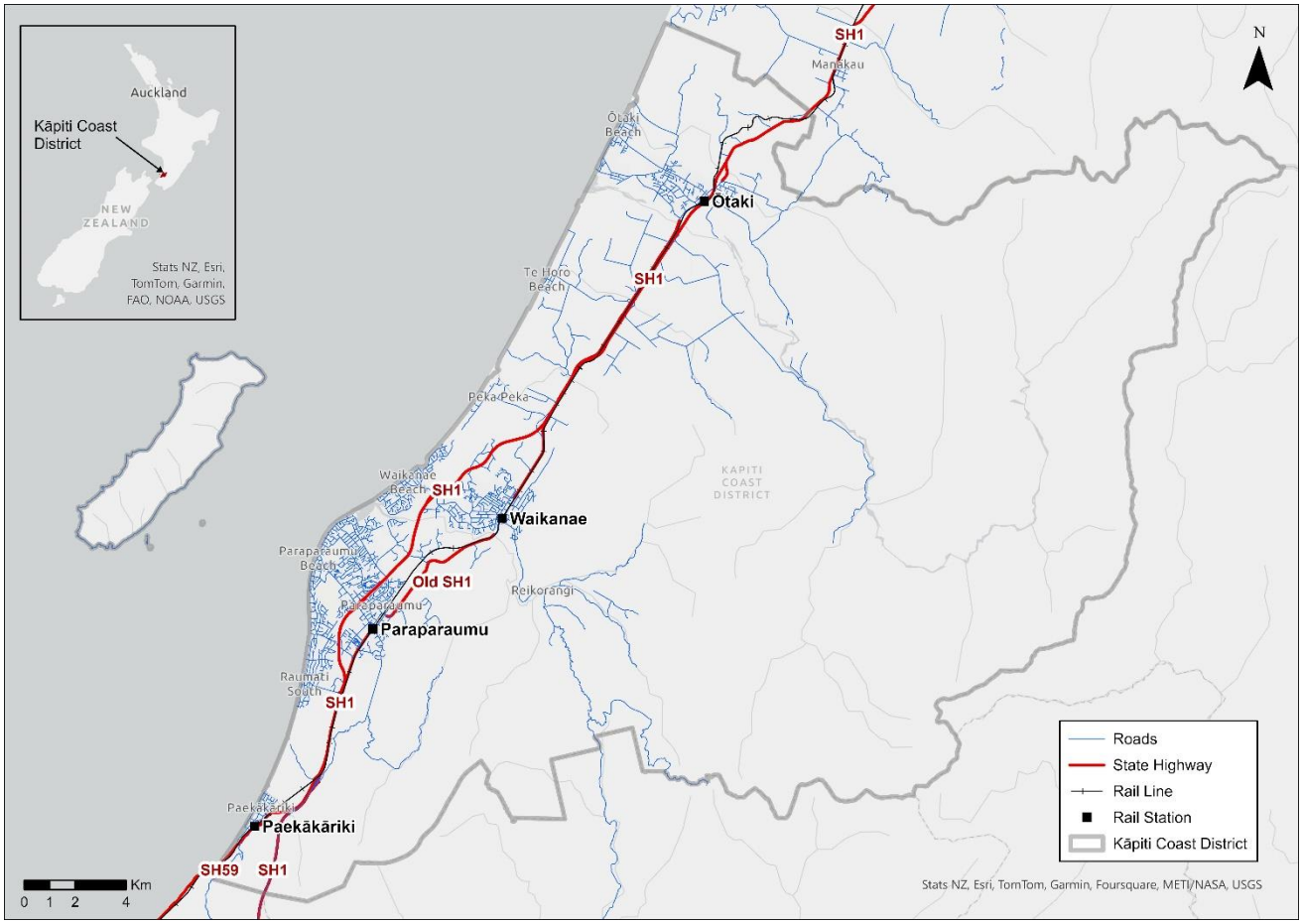
Document	Purpose	Relevant Findings
Kāpiti Coast District Cycleway, Walkway, and Bridleway (CWB) Network Planning 2014	To assess the district's CWB network, with the view of producing an overall strategy for the development of the network, including future network aspirations.	Around 60 separate schemes were identified for CWB infrastructure. The relative levels of scheme priority were determined, with the highest priority generally those eligible for partial Waka Kotahi NZTA category 2 funding associated with the revocation agreement.[69]
Kāpiti Coast District CWB Strategic Business Case (SBC) 2015	To inform whether developing a business case was justified to seek funding assistance for both walking and cycling infrastructure through the National Land Transport Fund (NLTF), more specifically the Urban Cycleways component of the Fund.	The SBC concluded there were barriers to cycling and walking in the district, and if left unresolved were highly likely to have adverse impacts on the safety of the network, people's connectedness across the district and the district's economy. To achieve optimal outcomes, a comprehensive programme of network improvements across the district was considered as the best potential solution.
Kāpiti Coast District CWB Programme Business Case (PBC) 2015	To determine the Preferred Programme to be progressed for the district's walking and cycling network.	The PBC concluded that the Preferred Programme was infrastructure focused and aimed to reduce travel times, increase the length of the walking and cycling network, reduce the number of crashes, increase pedestrian and cyclist volumes, increase mode share for school children, and improve connectivity and quality perceptions for the network. The PBC was endorsed by Waka Kotahi NZTA in April 2016.
Urban Cycleway Programme Kāpiti Coast Indicative Business Case (IBC) 2016	To identify the preferred option(s) for each route, including anticipated staging for implementation.	The IBC confirmed the case for investment after KCDC achieved funding support from Waka Kotahi NZTA to implement a programme of cycle network improvements through the Urban Cycleway Fund (UCF).
Stride n' Ride Physical Works Programme 2016	The 10-year physical works programme to improve the district's walking and cycling network.	The $5 million Stride n' Ride package focused on delivering off-road shared paths and on-road cycleways between Paekākāriki and Waikanae that connects the Expressway cycleway to busy rail stations, schools and town centres. All of these previous projects act as precursors to the network plan update.

[69] The agreement that governed the transfer of former SH1 to KCDC

Appendix B Geographic, Social & Economic Contexts

Geography & Environment

The Kāpiti Coast district is a local government district of the Wellington region in the lower North Island of New Zealand, 50 km north of Wellington City. The district is a predominantly rural and conservation area, with the population concentrated in coastal settlements along State Highway 1 (SH1). The main township is Paraparaumu, with smaller urban areas in the townships of Ōtaki, Paekākāriki, Raumati and Waikanae and several smaller settlements. Rural land is used largely for horticulture and market gardening. The Kāpiti Coast District encompasses a total land area of over 700 square kilometres, including coastline, beaches, wetlands, rivers, forests, and mountains[70].

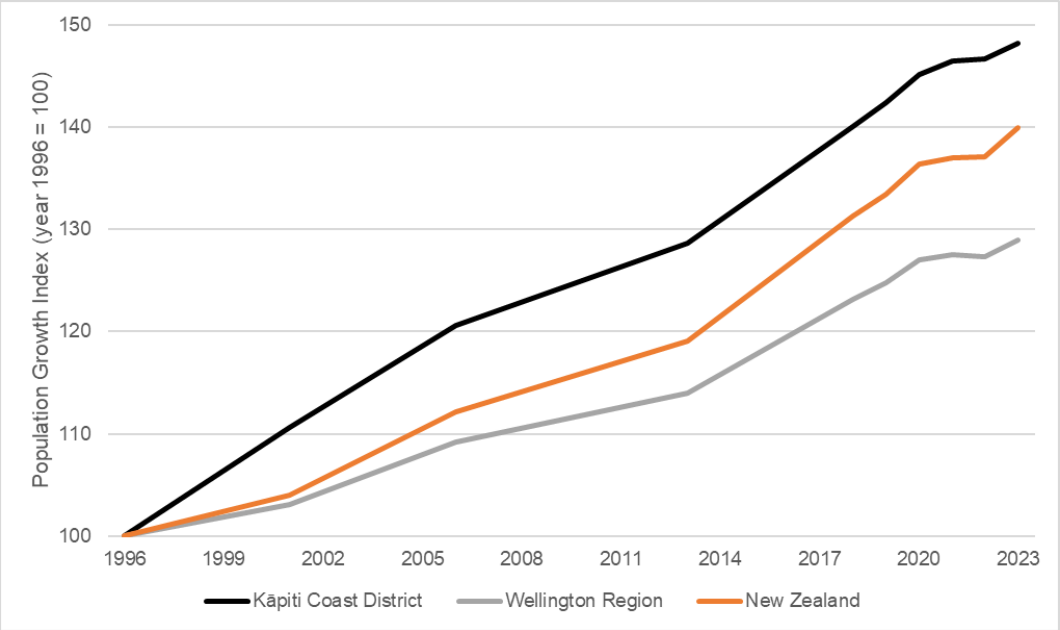


Kāpiti Coast District Study Area

Population Change

According to Statistics NZ, the usual resident population in the district has increased from an estimated 39,400 in 1996 to 58,400 in 2023. The growth rate between these years was an annual average of 4.5 % per annum. The district's population has increased more rapidly compared to the population of both the Wellington region and New Zealand. Overall, the district's population grew by 48% between 1996 and 2023, compared to 29% regionally and 40% nationally.

[70] https://web.archive.org/web/20190130074131/https://profile.idnz.co.nz/kapiti/about



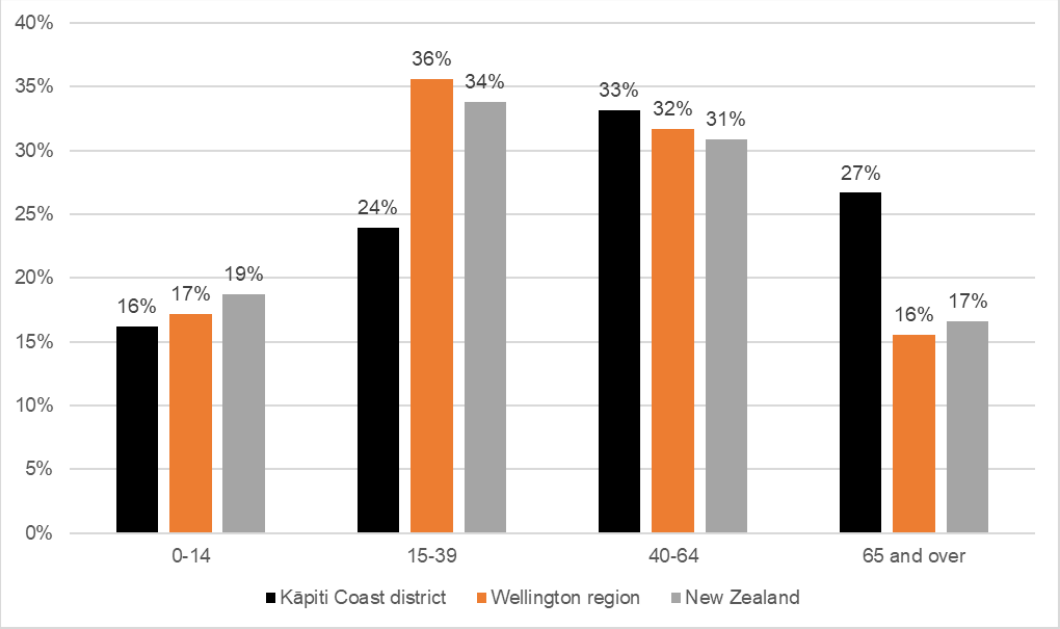
Statistics NZ Usual Resident Population between 1996 and 2023[71]

Population by Age Category

According to the 2023 Census, the number of people aged 14 and under is around 9,100 or 16% of its usual resident population. This is lower than the regional and national population, with 17% and 19% respectively.

The working age population is also the lowest at the district level, while the highest at the regional level.

Importantly, the Kāpiti Coast District has around 14,900 residents aged 65 and over, representing 27% of its population. While this is already significantly higher than regional and national figures (6% and 17% respectively), those aged 65 and over in the district is expected to grow to over 30% in the next 25 years[72].



Statistics NZ Usual Resident Population split by Age Category[73]

[71] Statistics NZ Census 1996-2023
[72] Kāpiti Coast adopts age-friendly plan - Inside Government NZ
[73] Statistics NZ Census, 2023

Education

There are 20 schools and colleges located within the Kāpiti Coast district. The total student population in 2023 was approximately 8,400, representing a 1.3% increase from the previous year[74].

All 20 schools have been identified by Waka Kotahi NZTA as high-benefit areas in the Speed Management Plan 2023-2033 (SMP). At the time of writing, this means the Council is required to use reasonable efforts to implement new speed limits for:

- at least 40% of all schools directly accessed from roads under its control by 30 June 2024.
- the remaining schools by 31 December 2027.

It is proposed that either variable or permanent 30 km / hour speed limits be installed on streets around schools and colleges, with criteria for each outlined further in the SMP.

For more information regarding education in the district, refer to Kapiti Coast District: Territorial Authority Summary | Education Counts

Improving access and safety for active modes around schools will be a key focus for this Pathways Network Plan over the next 10-years. The project team has ensured that this plan will complement the 10-year implementation programme outlined in the SMP.

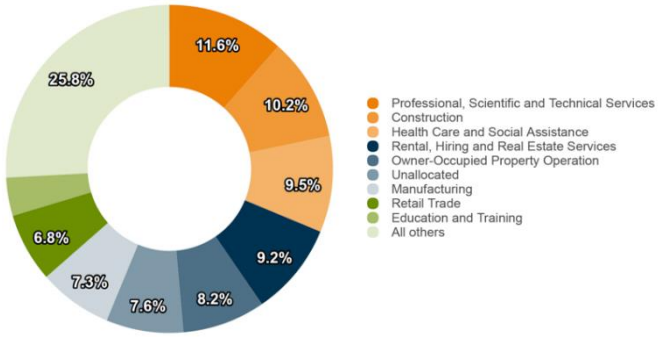
Economy

The Kāpiti Coast District Annual Economic Profile 2023[75] provides an overview of the district's economic performance over time. The table below provides a summary of the economic context relevant for this Pathways Network Plan.

[74] Kapiti Coast District: Trends | Education Counts

[75] All information regarding the Economic Context is sourced from the Kāpiti Coast District Annual Economic Profile (2023)

Economic Context Summary

Context	Description
Economic Growth	The economy has shown modest growth over the last 10 years, with economic growth averaging 3.4% p.a. in the district, compared with an average of 3.1% p.a. nationally. The main industries[76] contributing to the district's economy include Professional, Scientific and Technical Services with an 11.6% share of the total GDP, followed by Construction with 10.2%, and Health Care and Social Assistance with 9.4%. 
Employment	Total employment in the district averaged 19,986 in the year to March 2023, increasing 2.4% from the previous year. Employment in New Zealand increased by 2.4% over the same period. Employment growth in Kāpiti Coast District averaged 2.6% p.a. over the last 10 years compared with 2.3% p.a. nationally. Construction is the largest employment industry in the district with 17.2% (vs. 10.4% nationally), followed by Health Care and Social Assistance with 13.1% (vs. 10.3% nationally) and Retail Trade with 12.2% (vs. 8.8% nationally). The industry of Aged Care Residential Services accounted for 4.9% of total employment in the district, which is higher than the 1.4% in New Zealand.
Business Growth	Growth in the number of business units is an indicator of entrepreneurial activity. It indicates an environment in which entrepreneurs are prepared to take risks to start new ventures. In 2023, a total of 6,090 business units were recorded in the district, increasing 3.2% from the previous year earlier. This increase was higher than the national increase of 1.7%. Growth in the number of business units has been the same in the district and nationally over the last 10 years, with an average of 2.3%.
Tourism	Tourism has grown rapidly both at the district and national level over the last 10 years, despite the dip during the COVID-19 pandemic. Growth over the 10-year period has averaged 8.1% in the district, compared with 5.5% nationally. The tourism industry contributed to 3.9% of the district's economic output in 2023, up from 2.5% in the 10 years prior. In the past 10 years, economic output increased by 18.8% in 2023 in the district, compared with the 35.0% increase in New Zealand. To attract a range of social and economic benefits for the district, a key focus for this plan will be to explore opportunities to enhance the walking and cycling network for tourism purposes.

[76] Total GDP by ANZSIC 1-digit Industry

Appendix C Stakeholder Engagement Summary provided by KCDC

Appendix D Stride n' Ride Programme Projects

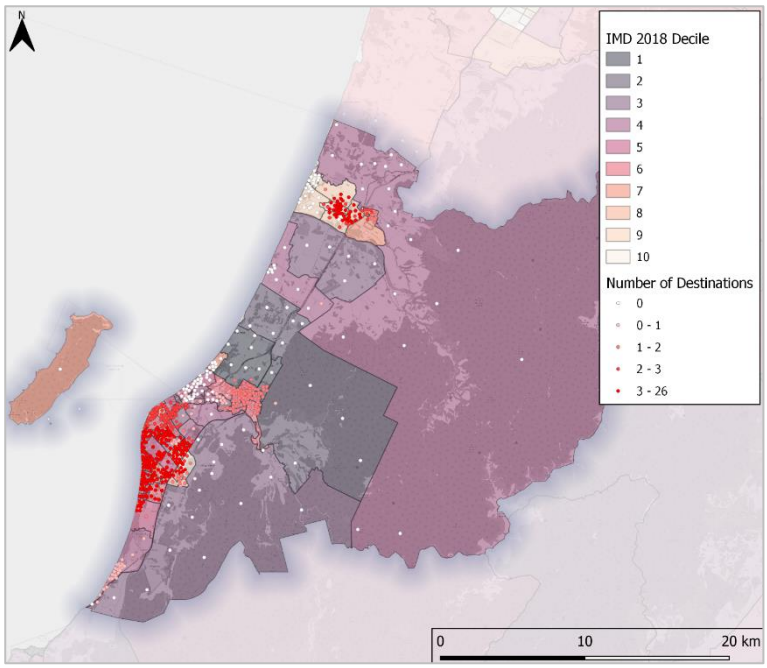
Appendix E STAAT Guide

Appendix F STAAT Assessment Results

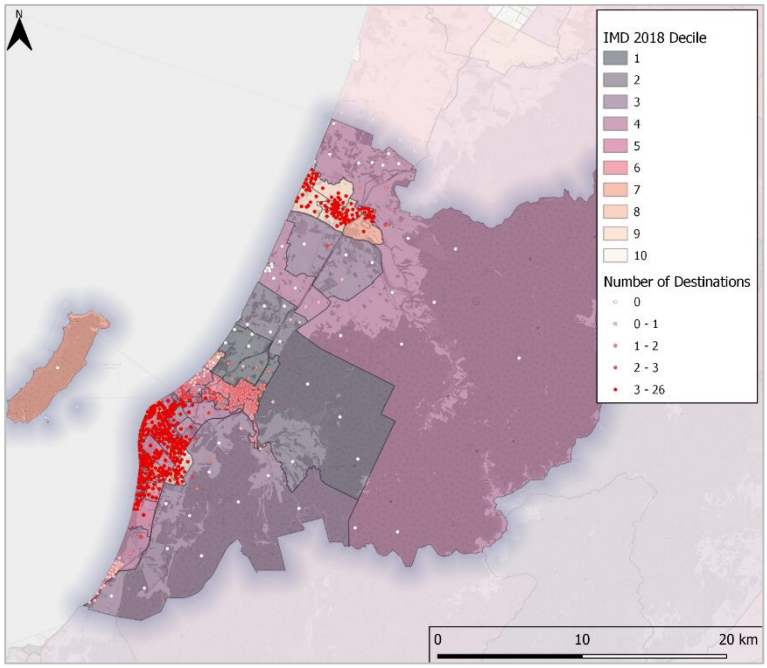
Two assessments were undertaken for cycling – one where cyclists could use the cycle network only, and one where cyclists could use both the cycle and road network to access their key destination. A further assessment was undertaken for walking, primarily using the walking network i.e., existing footpaths and shared paths.

The assessment results are presented in the figures below for education centres and employment centres. Areas providing a good level of connectivity are shown in red and areas providing a more restrictive level of connectivity are shown in white.

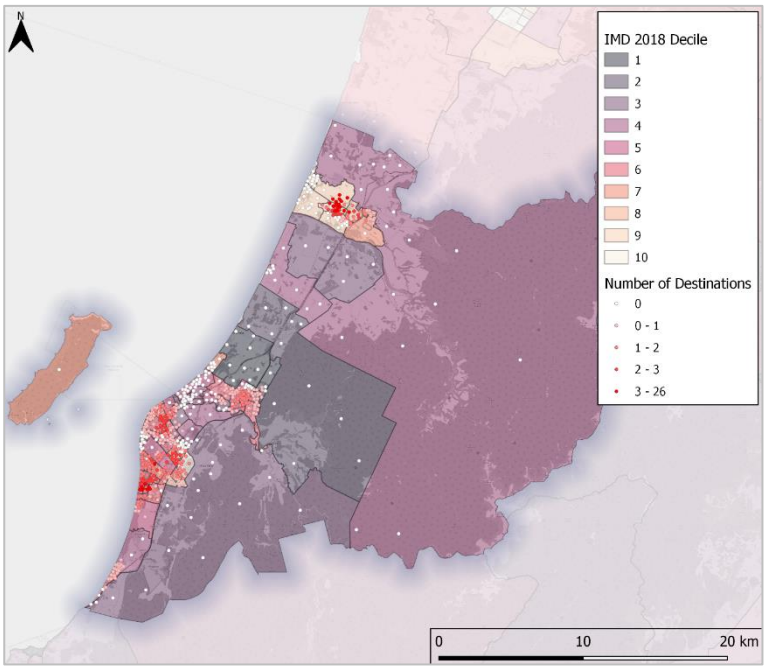
STAAT assessment results for education centres



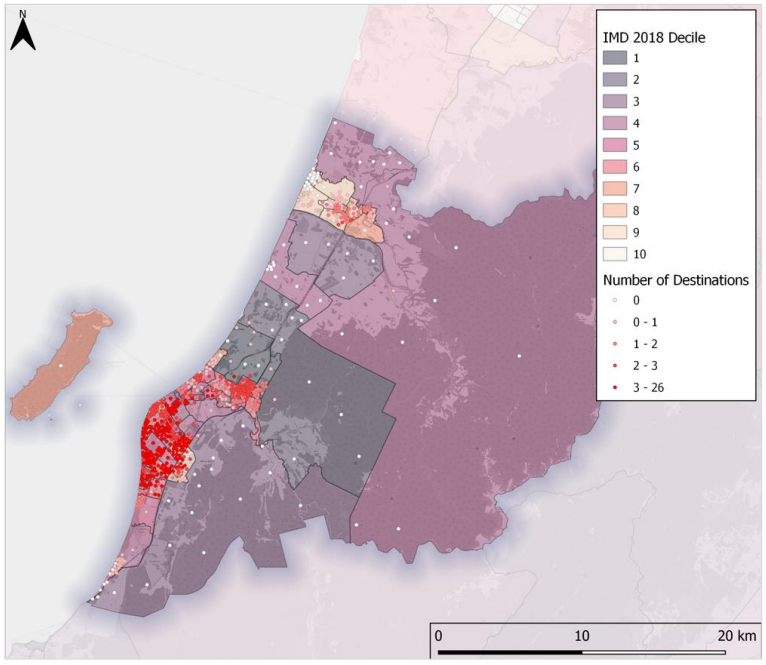
Cycling connections to education centres (20-minute travel time using the cycle network only)



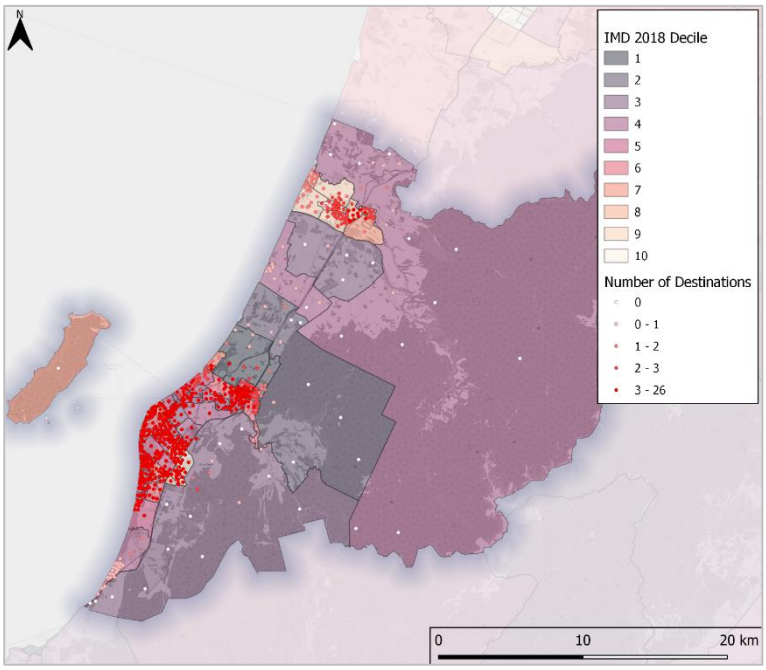
Cycling connections to education centres (20-minute travel time using the cycle and / or road networks)



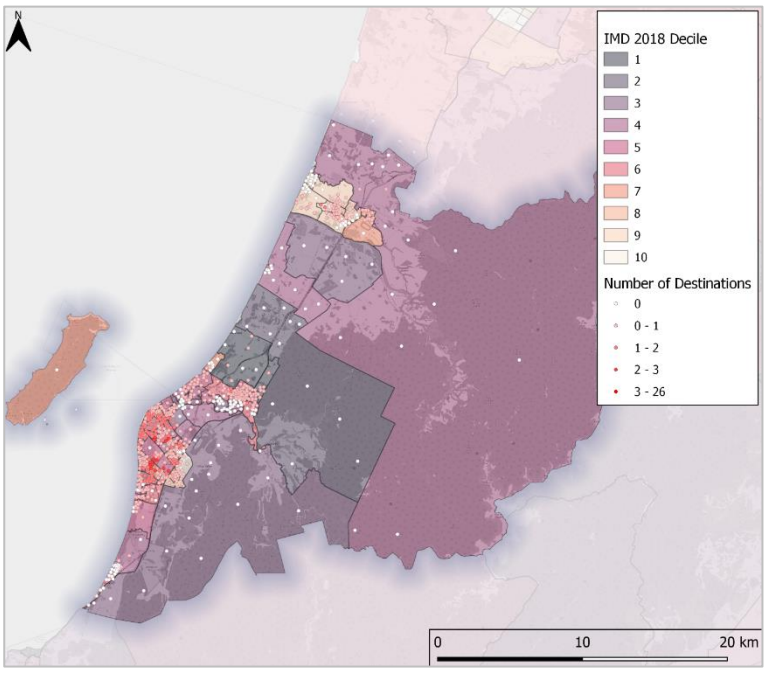
Walking connections to education centres (20-minute travel time using the walking network only)



Cycling connections to employment centres (20-minute travel time using the cycle network only)



Cycling connections to employment centres (20-minute travel time using the cycle and / or road networks)



Walking connections to employment centres (20-minute travel time using the walking network only)

Appendix G Short Trips Analysis (SATURN Modelling)

Appendix H Main Means of Travel to Work & Education

Low Mode Share for Walking & Cycling

The tables below respectively show the main means of travel to education and work for the Kāpiti Coast district, the Wellington region and across New Zealand as a whole. With key trends in travel summarised below, the evidence highlights the dominance of private vehicle use and low uptake of walking and cycling across all levels.

Main Means of Travel to Education

- New Zealand has a high reliance on private vehicles for travel to education (50%), and this is mirrored by the Kāpiti Coast district (47%) and the wider Wellington region (42%).
- PT usage is highest in the Wellington region (22%) and the lowest in the Kāpiti Coast District (13%) – this could be due to the greater number of educational institutions located in Wellington City.
- Cycling rates are relatively low across all areas, although is the highest in the Kāpiti Coast district (9%) – likely attributed to the greater provision of cycling infrastructure around schools delivered through the Stride n' Ride Programme.
- Walking to places of education is more popular than cycling across all areas – this is likely due to the perception that walking is a safer way of travel to school for young people and parents[77].
- To encourage uptake of active modes, a key focus for this Pathways Network Plan is to improve access and safety around school areas. This will complement the implementation programme outlined in the Speed Management Plan.

Main Means of Travel to Work

- New Zealand has a high reliance on private vehicle use for travel to work (73%), and this is mirrored by the Kāpiti Coast district (68%) and lesser so in the wider Wellington region (58%). This however highlights the dominant use of private vehicles to access places of employment.
- PT usage is higher in both the Wellington region (18%) and the Kāpiti Coast district (14%), compared to New Zealand as a whole (6%).
- The proportion of the population travelling to work by active modes is the lowest in the district, with only 2% cycling and 3% walking – this could be due to the limited number of employment opportunities within walking or cycling distances for those living in the district.
- Walking is popular across the Wellington region (10%) but less so in the Kāpiti Coast district – this could be due to the greater number of employment places located in Wellington City and its compact connected nature, which makes walking a more accessible mode choice for those living in the city[78].
- While a key focus is to improve connectivity to workplaces within the district, this plan will also seek to improve the walking and cycling network's integration to key PT links to enable longer journeys to be made (with the predominant use of active modes in the district).

[77] Adolescents' perceptions of cycling versus walking to school: Understanding the New Zealand context - ScienceDirect

[78] Census 2018 - Work and labour force status of people residing in New Zealand

Main Means of Travel to Education[79]

Census 2018: Main Means of Travel to Education	Kāpiti Coast District	Wellington Region	New Zealand
Private Vehicles[80]	47%	42%	50%
Public Transport[81]	13%	22%	19%
Cycle	9%	3%	4%
Walk	22%	26%	20%
Study from Home	8%	6%	5%
Other	1%	2%	1%

Main Means of Travel to Work[82]

Census 2018: Main Means of Travel to Work	Kāpiti Coast District	Wellington Region	New Zealand
Private Vehicle	68%	58%	73%
Public Transport	14%	18%	6%
Cycle	2%	2%	2%
Walk	3%	10%	5%
Work from Home	13%	9%	12%
Other	1%	2%	1%

[79] Census 2018 – Travel to Work and Travel to Education
[80] Private vehicles include driver / passenger in a car, van or truck
[81] Public transport includes public bus, train, and ferry
[82] Census 2018 – Travel to Work and Travel to Education

Appendix I Unsuitable Infrastructure Supporting Evidence

Lack of dedicated facilities for walking & cycling

HYS survey respondents highlighted the lack of dedicated facilities was comprising safety for walking and cycling.

HYS survey anecdotal evidence

Key Examples of Responses
• "There is no safe cycle facility on Park Avenue Waikanae. This is an important cycle link as council has done work on Ngaio Road, Russel Reserve, and at the Te Moana Road junction. The gap in this route needs to be filled. It would allow primary school children living at the Beach to bike to Kapakapanui School." • "Paraparaumu and Waikanae have some good cycleways along highways but lack a cycling network that connects destinations such as shops, schools, and services. I prefer cycleways that are protected and connected on main routes, rather than shared paths." • "A walking and cycle track could be created between Peka Peka township and Harrisons on Peka Peka Road. There have been several accidents with cyclists along this road. The potholes are a real hazard and the traffic travels at high speeds." • "Peka Peka Rd has a much more urgent safety need for a cycle path because of speeding traffic, rough bitumen edges, and lack of a berm to ride on." • "There needs to be a footpath on the south side of Hira Street between Seddon Street and Pehi Kupa Street. This is a popular route for school children and commuters to get from Waikanae East to the railways station and the Waikanae Shops, however the existing footpath is on the wrong side of the street for most pedestrians (especially those coming from the school or down from the other side of Hira Street). What ends up happening is that most pedestrians (including school children, parents with prams, elderly) end up either walking on the grass or on the road on the south side of the street which is dangerous."

Lack of street lighting in some areas

Street lighting tends to make people feel safer when walking and cycling at night. This perception can lead to an increase in the number of minutes people spend walking each week and reduce social isolation.

The Resident's Opinion Survey 2022/23 shows that satisfaction with street lighting has remained consistent with previous years, at 83%. This is just below the target of 85% and there is evidence that street lighting could be improved in some areas. Key reasons for dissatisfaction with street lighting was that "there is a lack of it in the district".

> "Street lighting could be a bit better in some places."
>
> (Source: Resident's Opinion Survey 2022-2023)

HYS survey respondents also highlighted the lack of street lighting in some areas is compromising safety for walking and cycling.

HYS survey anecdotal evidence

Key Examples of Responses
• "This pathway between Rimu Road and the Expressway shared path is heavily used. Can consideration be given to introducing street lighting along this path as it does feel unsafe at times." • "This is a crucial to link from Rimu Road through to Raumati and Raumati South. Can the surface of the track be kept at A Grade standard. Can we have lighting for evening and nighttime safety." • "Lighting - Not all in our community drive. The same barriers that effect our rangatahi can affect our elderly. Many would like to walk or bike these trails for commuting or enjoyment purposes but feel unsafe after dark."

Visibility issues in some areas

HYS survey respondents highlighted there are visibility issues in some areas which increases the risk of collisions and comprises safety for active modes.

HYS survey anecdotal evidence

Key Examples of Responses

- “We use this shared path to bike to school / daycare, but this intersection is blind in both directions - really tricky to see cars approaching until you’re already on the road. This could be fixed by extending the footpath on both sides and narrowing the roadway exit for Clunie Ave. or by installing a raised pedestrian crossing to reduce vehicle speeds and increase visibility of school kids travelling to and from school.”
- We travel this way for school, daycare, and leisure. This crossing point is currently dangerous with a blind corner where vehicles can’t be seen coming out of Glen Road until you’re already on the road. I’ve seen kids running to cross frequently as they can’t see, and countless near misses. This should be a raised pedestrian crossing to reduce the speed of approaching vehicles and increase the visibility of pedestrians.”
- “A "line of sight" safety issue opposite the end of Ocean Road. A spot where users are unable to see each other due to the flax plant obscuring the view. It has caused a safety issue regarding speeding ebikes.”

Limited signage, wayfinding & markings

HYS Survey respondents also highlighted there are some areas which have limited signage, wayfinding, and markings. This makes it more difficult to navigate around the network and comprises safety for active modes.

HYS survey anecdotal evidence

Key Examples of Responses

- “There is a new shared pathway on the west side of Kāpiti Road at the airport. Near Cedar Drive cyclists are supposed to cross over to the existing footpath that passes beside the cemetery and on to cross Ocean Road. This crossing is unmarked and visiting cyclists do not make the crossing.”
- “Better road signage is required as unfortunately some cyclists use the Expressway instead of the designated cycleways which I think it is very dangerous.”
- “Signage for the Coastal 35 track needs to be improved.”
- “It would be good to make some form of marking on Kāpiti Road to signify a cycling lane, similar to what has been done on the Old State Highway 1 going north from the Raumati Road roundabout.”
- “Cycle lane marking for safety from here (outskirts of Waikanae) to Peka Peka Road then continuing on Peka Peka Road to intersection with Old State Highway 1.

Lack of maintenance on roads & footpaths

Responses from the Residents’ Opinion Survey 2022/23[83] shows that some residents are dissatisfied with the condition of the roads and footpaths in the district.

The key reasons for residents’ dissatisfaction in the condition of roads were that roads are poorly maintained (26 percent).

> “The condition of the roads. They are always in a poor state. When we are out and about, the surface of the roads appears to be deteriorating.”

> “The roads and the footpaths are not maintained to a decent standard.”

[83] kapiti-coast-residents-opinion-survey-annual-report-2022-23-august-2023.pdf (kapiticoast.govt.nz)

Residents' key reasons for dissatisfaction with the condition of footpaths include that

- footpaths are not suitable – i.e., design and accessibility issues (11 percent); and

> "I am on a mobility scooter and the footpaths do not have enough room or viability to see cars exiting the driveway, Temoana Road footpath is too close to the fences.."

- footpaths are poorly maintained (11 percent).

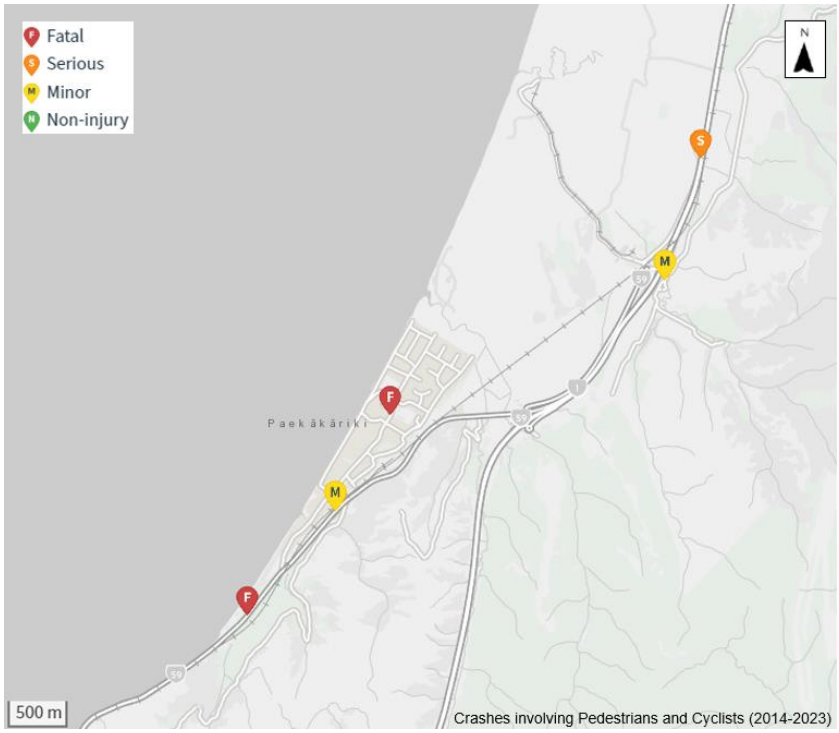
> "Footpaths - too many cracks in it, for people pushing their walkers and things like that it's difficult for them."

Resident's Opinion Survey 2022 / 23 anecdotal evidence [84]

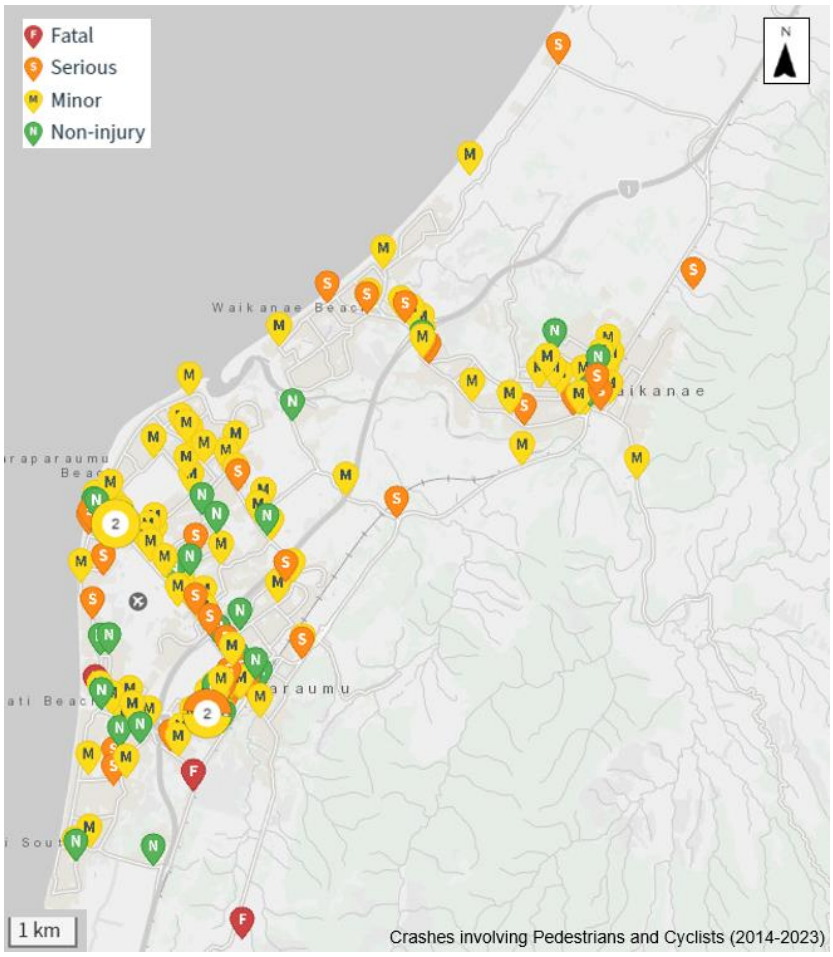
Potholes and uneven road surfaces increase the risk of collisions with private vehicles. Without timely and adequate maintenance, facilities that initially encouraged walking and cycling can become trips or falls hazards and create further safety issues. This ultimately discourages movements made through active modes.

[84] Source: KCDC Residents' Opinion Survey, 2022/23)

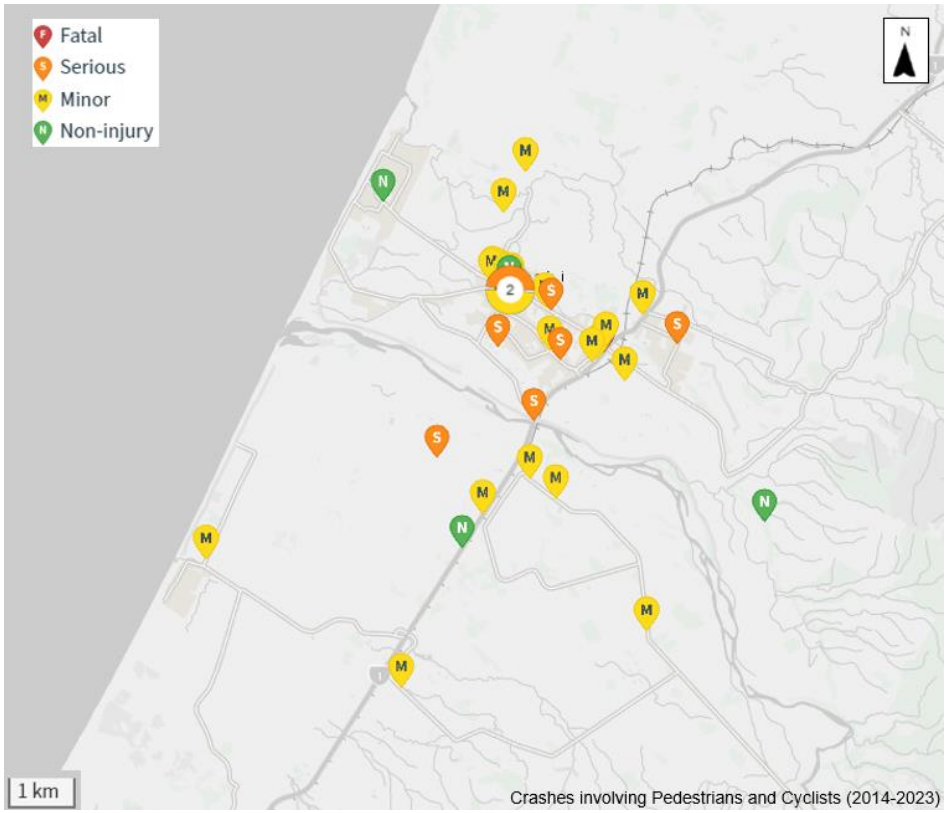
Appendix J 10-year Crashes involving Pedestrians & Cyclists (2014 - 2023)



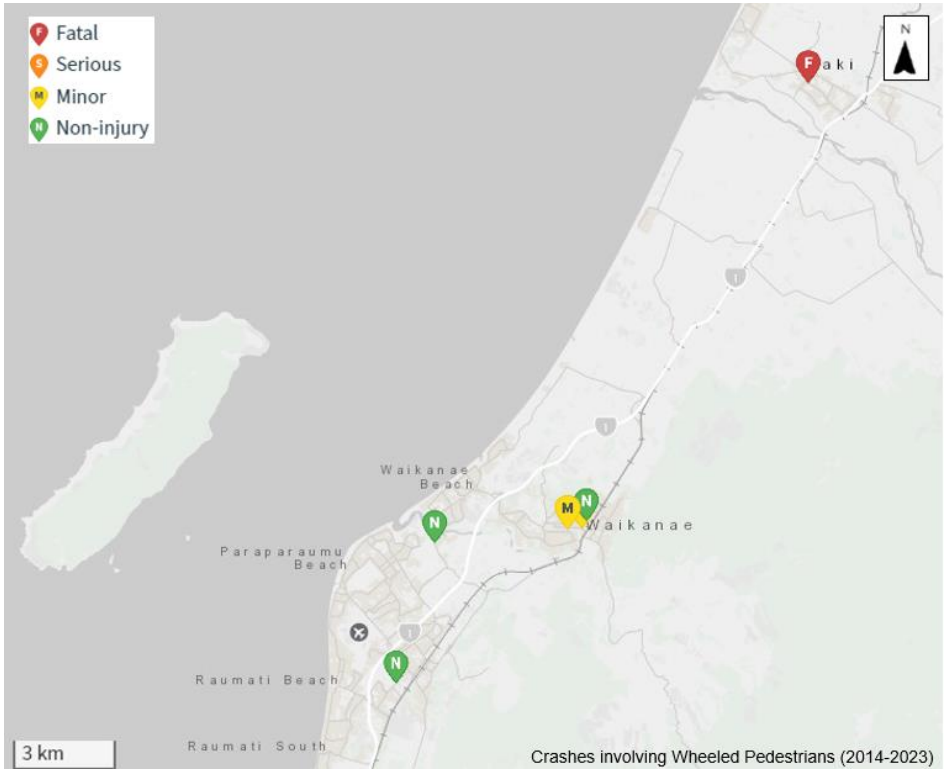
Crashes involving pedestrians & cyclists (2014 – 2023)



Crashes involving pedestrians & cyclists (2014 – 2023)



Crashes involving pedestrians & cyclists (2014 – 2023)



Crashes involving wheeled pedestrians (2014 – 2023)

Appendix K Compromised Safety around Key Destinations Examples

1. Poplar Avenue

Poplar Avenue is in Raumati South and is a popular traffic route in the district, with an average of around 4,200 vehicles travelling along this road per day in 2024[85].

Unsuitable infrastructure identified:

- No formal crossing point or signage at or near Te Ra Waldorf School and Te Rāwhiti Kindergarten

Unsuitable infrastructure on Poplar Avenue (Raumati South, Paraparaumu)

[85] Traffic counts from the RAMM database.

2. Marine Parade

Marine Parade is the road that runs along the coastline between Tahi Road and Kāpiti Road. It is a key destination for locals and visitors, attracting a high number of pedestrians and cyclists particularly in the summer months.

Unsuitable infrastructure identified:

- Sweeping kerb curvature design of corners at the Howell Road / Marine Parade junction – this reduces visibility of oncoming traffic when pedestrians cross the road.
- High number of parked cars - creates visibility issues and reduces space for cyclists travelling along the corridor.

Unsuitable infrastructure on Marine Parade (Paraparaumu Beach, Paraparaumu)

3. Raumati Village

Raumati Village is a key destination for many people, owing to the variety of local shops, cafes, and restaurants located in the area. The Kāpiti Coast Cycle Route also runs through the village on Rosetta Road.

Unsuitable infrastructure identified

- No dedicated cycle lane around the area
- Lack of wayfinding signages around the area to indicate the Kāpiti Coast Cycle Route
- Zebra crossing on Rosetta Road is in the middle of the right turn bay – creates priority and safety issues for pedestrians crossing and road users turning right.
- Design / configuration of the intersection at Alexander Road – no crossing point for pedestrians.

Unsuitable infrastructure around Raumati Village (Raumati Beach, Paraparaumu)

4. Te Moana Road

Te Moana Road is a highly used road corridor, with an average of 10,800[86] daily road users recorded in 2024. There are a number of amenities and services around Te Moana Road and is a well-used route for school children travelling to / from Waikanae Beach

Unsuitable infrastructure identified:

- No formalised crossing point at the Te Moana Road / Rauparaha Street intersection.
- No dedicated cycle lane at the intersection.
- Shared path forming part of the Kāpiti Expressway cycleway ends when it joins Te Moana Road.

Unsuitable infrastructure on Te Moana Road (Waikanae)

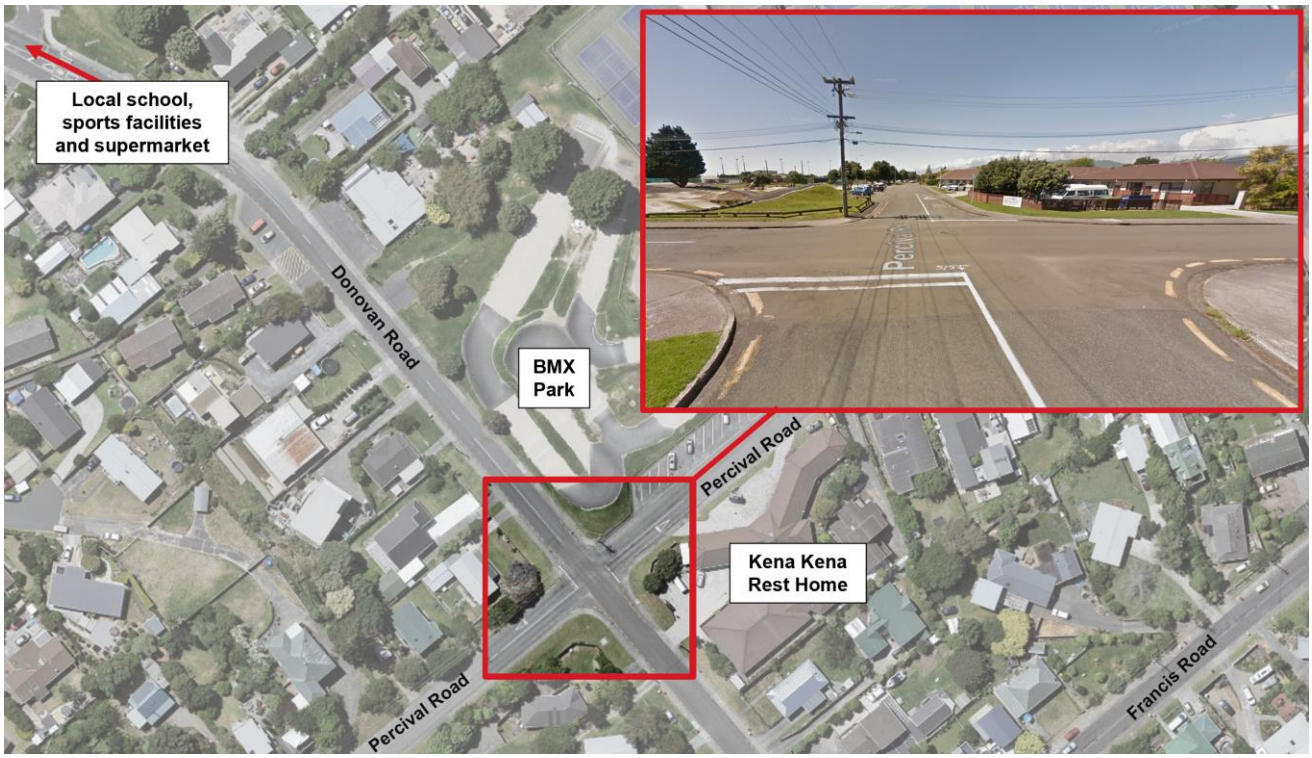
[86] Traffic volumes from RAMM database.

5. Percival Road / Donovan Road Intersection

Several local amenities are within proximity of the Percival Road / Donovan Road intersection, including schools, sports facilities, and shops. Importantly, the Kena Kena Rest Home is close to the intersection, meaning a high number of more vulnerable people are likely to be located around this area.

Unsuitable infrastructure identified:

- No formalised crossing points around the intersection – this increases the risk of crashes when crossing the road
- Narrow footpaths
- Sweeping kerb curvature design of corners around the intersection –reduces visibility of oncoming traffic when pedestrians cross the road.



Unsuitable infrastructure at Percival Road / Donovan Road Intersection (Paraparaumu Beach, Paraparaumu)

Appendix L Link Road Development SATURN Modelling

Appendix M Constraints, Assumptions & Dependencies

Constraints

Constraint	Explanation	Mitigation
GPS 2024	GPS 2024 is built around four strategic priorities – Economic Growth and Productivity, Increased Maintenance and Resilience, Safety, and Value for Money will have a bearing on funding opportunities through the National Land Transport Fund (NLTF) for walking and cycling projects.	Early engagement with Waka Kotahi NZTA around a suitable approach to maximise funding opportunities as they arise.
Fiscal constraint on NLTF budgets	NLTF budgets are constrained and there will be a limit on funding for implementation of the Preferred Programme.	Early engagement with Waka Kotahi NZTA around a suitable approach to maximise funding opportunities as they arise. Ensure programmes align as best as possible with the strategic priorities of the GPS.
LTP & Annual Plan budgets	Council funding is constrained and there is a potential that walking and cycling projects may need to be fully rates funded with no subsidy from Waka Kotahi NZTA	Ensure potential programmes provide value for money and maximise benefits for investment.
LTP & Annual Plan budgets	Council have allocated approximately $1 million per year for 10 years in the current 2024 – 34 LTP for walking and cycling network improvement and development	Ensure potential programmes provide value for money and maximise benefits for investment. Be ready to respond, should other funding sources become available.
Stakeholder and community agreement	It is possible that key stakeholders and the community will not agree with the Preferred Programme of investment.	Communicate with stakeholders and the community effectively ensuring that they understand the rationale for the Preferred Programme.
Corridor width	Variable corridor width may mean that design compromises have to be made	Limited mitigation warranted - seek to maximise corridor space where available

Dependencies

Dependency	Explanation	Mitigation
Speed Management Plan implementation	The implementation of the current speed management plan by KCDC is reassessed due to change in government policy	Ensure potential programmes align as best as possible with the strategic priorities of the GPS to account for any changes in the Councils approach for funding.
Council Funding	The current funding allocation in the 2024 – 34 LTP remains	Ensure potential programmes provide value for money and maximise benefits for investment while providing the flexibility for adjustment should funding allocations be changed within the finalised LTP.
Land development	Private sector land development projects have an impact on transport network development	Seek to engage with developers where appropriate to ensure developments integrate with the walking and cycling network.

Assumptions

Assumption	Explanation	Mitigation
Current population growth forecasts and expected traffic demand	Growth assumptions influence the current demand on the transport network	Ensure the latest assumptions are included with the development of this updated plan.
Current areas of development	Current areas of development influence the likely future demand on the transport network	Ensure any areas of future development are known and that the programmes developed will provided suitable linkages to facilitate active mode use.
Public transport and road network	Assumed to remain largely “as is” with additional road links planned around Paraparaumu town centre	The Pathways Network Plan should be flexible enough to adapt to changes to the road and public transport network (including new bus and rail services.

Appendix N Stakeholder Engagement Assessment

Appendix O Long List MCA Assessment, Shortlisting and Preferred Programme Identification

Appendix P Cost Estimates

Cost estimates methodology

The preliminary business estimate is based on the Waka Kotahi NZTA SM014 cost estimate proforma.

Each intervention has been priced at a level sufficient for a preliminary business case.

The project base estimate, project expected estimate and the 95th percentile project estimate has been calculated for each intervention.

The following assumptions were made while undertaking the cost estimates:

- Intervention type cost derived from first principles using local construction rate.
- Intervention type cost derived per meter or each and applied to various intervention locations.
- Environmental compliance 3% of base estimate
- Temporary Traffic management 8% of base estimate
- Preliminary and General 20% of base estimate
- Project investigation 3.5% of construction cost
- Design 6% of construction cost
- MSQA 8% of construction cost
- Project base estimate has no contingency or funding risk
- Project Expected estimate has 20% contingency
- Project 95th project estimate has 20% contingency and 33% funding risk

The cost estimates for each individual intervention (i.e., 94 improvement projects) is provided in the Table below.

Appendix Q Economic Analysis (BCRs)

Economics methodology

Monetised benefits were obtained for each of the 94 improvement projects, and this was used to inform the MCA assessment and economic analysis of the preferred programme.

The BCR calculations were conducted at a high level based only on the safety considerations for walking and cycling and the health benefits of increased cycling. Both benefits were determined through the intervention type, and the expected impact on the identified benefit streams. Other benefit streams were not considered, as they were expected to be minor in relation to the safety and health benefits.

Consistent with the chart on SP11-7, with almost all projects under $2m total cost and a moderate scale of change, sketch plans with informed expert input to calibration is an appropriate methodology to assess the scale of the benefits. The overall process was:

- Use existing count data (or nearby)
- Engineering judgement on uplift as a % of existing use by intervention type (e.g. raised crossing)
- Engineering judgement on adjacent / nearby interventions (e.g. degree of double counting)
- Safety assessment based on the intervention type using the safety intervention toolkit and Crash Estimation Compendium (CEC).

To understand the safety benefits, two CAS searches were conducted, with a 50 m radius around the interventions and a 200m radius around the interventions. This enabled the direct safety benefits of the intervention to be noted through the 50 m radius search, while also understanding the benefits of the intervention to the wider route choice, i.e. to account for safety benefits through trips avoiding an unsafe area due to the new facilities.

By default, crashes which have occurred within 200m of the project area was scaled down to 1% of the crash value, and excluded entirely based on professional judgement if it was judged that the interventions would not result in users transferring from the wider network to the planned intervention.

Crash rate adjustment factors were taken from the Crash Estimation Compendium, and where two rates were provided, these indicated an upper and lower range of the benefits. Where only one crash modifying factor was presented, this was assumed to be an upper limit with half the provided value being used for the lower range of benefits.

Health benefits were calculated from a predicted uptake model which was assessed based on methodology similar to the previous simplified procedures. This resulted in calculating a step change for the interventions based on intervention significance, and an adjusted growth rate, also based on the significance of the interventions. These were sense checked and adjusted on a per intervention basis where the predictions resulted in significant changes in the number of cyclists, i.e. where cycling was already popular would not see the same extent of changes as improvements. These values were halved to provide a lower range.

To discount the benefits and costs streams, it was assumed for interventions that implementation would take 1 year and benefits would accrue for the next years and were discounted accordingly. At this level, no maintenance costs were considered, or impacts to the wider transport network, i.e. only active mode safety and health benefits were considered. At this level of analysis, no individual disbenefits were accounted for during construction.

As the projects consisted of ‘groups of interventions’, to calculate the project CBR’s, the cost for the individual interventions were summed, but only the most significant intervention in terms of uptake or safety was considered for calculating the BCR. This means that potential double counting of benefits in adjacent areas was unlikely to occur. For example, where wayfinding and a raised platform at an intersection were delivered in conjunction, benefits for all individual projects were calculated individually, but only the most significant individual project benefits were considered in the calculation of the BCR.

The key assumptions for the economic analysis is outlined below:

Input	Values Used
Analysis Period	40 Years from construction start
Construction Period	1 Year
Benefits Period	39 years
Base Year	2024 dollars
Discount Rate	4% (excluding sensitivity testing)
Step change in users	25% based on existing count data Professional judgement used to reduce this if it resulted in an unrealistic number of new users Low growth rate = half of the above
Net User Growth Rate per annum	1% Base growth 2% - Where the intervention removes a gap in the network Professional judgement used to reduce this if it resulted in an unrealistic number of new users Low growth rate = half of the above
Benefits uses	Average of Pedestrian and Cyclists crash costs values

The BCRs for each individual intervention (i.e., 94 improvement projects) is provided in the Table below.

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
1PK1	Beach Road	**Improvements to Ames Street / Beach Road / Wellington Road Intersection** - for pedestrians and cyclists		0: Beach Rd 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Wellington Rd Date: 2015 Cycle ADT: 13	0.6	0.5 - 0.8
2PK1	Beach Road	**Improvements on Beach Road from SH59 to Ames Street** - for cyclists through signage and marking - for pedestrians by providing a mid-block crossing refuge - for pedestrians and cyclists by upgrading the area around the level crossing		0: Beach Rd 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Wellington Rd Date: 2015 Cycle ADT: 13	1.9	1.5 - 2.6
3PK1	Beach Road	**Improvements on Beach Road from Ames Street to the Parade** - for pedestrians by increasing the footpath width where its narrower - for pedestrians improved access to the beach for pedestrians - for cyclists through signage and marking		0: Beach Rd 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Wellington Rd Date: 2015 Cycle ADT: 13	1.8	1.4 - 2.5
4PK2	Tilley Road	**Improvements to the Rail Path at End of Robertson Road to Beach Road** - for cyclist access to Tilley Road via signage and markings		0: Tilley Rd 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Tilley Rd Date: 2024 Cycle ADT: 44	2.0	1.5 - 2.6
5PK3	The Parade	**Improvements to The Parade** - for cyclists through signage and marking		0: The Parade 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Tilley Rd Date: 2024 Cycle ADT: 44	2.0	1.6 - 2.7
6PK4	Wellington Road	**Improvements to Wellington Road** - for pedestrians at intersection crossing points - for cyclists through signage and marking		1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Wellington Rd Date: 2015 Cycle ADT: 13	0.2	0.1 - 0.2
7PK5	Ames Road	**Improvements to Ames Road as a key link to the Escarpment Track** - for pedestrians through signage and markings - for pedestrians at intersection crossing points		0: Ames Rd 1 fatal: Wellington Rd 1 fatal: SH59 (Fisherman's Table) 1 minor: SH59	Road: Ames St Date: 2015 Cycle ADT: 10	1.0	0.7 - 1.3
8R1	Margaret Road / Renown Road Improvements	**Improvements to Margaret / Renown Road** - for cyclists through signage and marking		0: Margaret Rd 1 minor: Renown Rd	Road: Rosetta Rd Date: 2021 Cycle ADT: 29	1.1	0.9 - 1.5
9R2	Poplar Avenue	**Improvements / Reconfiguration to the intersection of Renown Road / Poplar Avenue** - for pedestrians and cyclists poorly configured for walking and cycling		1 non-injury: Poplar Ave 1 minor: Renown Rd	Road: Poplar Ave Date: 2024 Cycle ADT: 81	3.9	3 - 5.3

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
10R2	Poplar Avenue	**Improvements to Poplar Avenue from Renown Road to The Esplanade** - for cyclists to improve visibility on the sweeping bends - for cyclists through increased markings and signage		1 non-injury: Poplar Ave 1 minor: Renown Rd	Road: Poplar Ave Date: 2024 Cycle ADT: 81	17.0	13.3 - 22.7
11R2	Poplar Avenue	**Improvements to area outside Te Ra Waldorf School & Te Rāwhiti Kindergarten** - for pedestrians and cyclists by upgrading the shared path between the school entrances and exits - for pedestrians by providing a formal crossing point on Poplar Ave - for pedestrians by better school threshold treatments to reinforce a lower speed area		1 non-injury: Poplar Ave	Road: Poplar Ave Date: 2024 Cycle ADT: 81	3.1	2.4 - 4.2
12R2	Poplar Avenue	**Intersection improvements from Matai Road to Glenn Road** - for pedestrians to provide safer crossing points		1 non-injury: Poplar Ave 1 non-injury: Matai Rd 0 Glen Rd	Road: Poplar Ave Date: 2024 Cycle ADT: 81	5.1	4 - 6.9
13R2	Poplar Avenue	**Improvements from Matai Road to Te Ra Waldorf School & Te Rāwhiti Kindergarten** - for pedestrians and cyclists by upgrading the existing shared path		1 non-injury: Poplar Ave	Road: Poplar Ave Date: 2024 Cycle ADT: 81	3.2	2.5 - 4.3
14R3	Matai Road	**Improvements from Matai Road / Poplar Avenue Intersection to Hillcrest Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points		1 non-injury: Matai Rd 0 Glen Rd 2 serious, 2 minor, 1 non-injury: Hillcrest Road	Road: Poplar Ave Date: 2024 Cycle ADT: 81	1.6	1.3 - 2.2
15R4	Hillcrest Road	**Improvements from Matai Road Intersection to Raumati Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points		1 non-injury: Matai Rd 2 serious, 2 minor, 1 non-injury: Hillcrest Road 2 serious, 3 minor, 2 non-injury: Raumati Rd	Road: Matai Road Date: 2010 Cycle ADT: 47	0.4	0.3 - 0.6
16R5	Menin Road	**Improvements from Hillcrest Road to Renown Road / Rosetta Road** - for pedestrians through upgrading the existing footpaths and providing new crossing points - for cyclists through increased markings and signing		0: Menin Rd 2 serious, 2 minor, 1 non-injury: Hillcrest Road 1 minor: Renown Rd 0 Rosetta Rd	Road: Matai Road Date: 2010 Cycle ADT: 47	1.4	1.1 - 1.9

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
17R6	Raumati Road / Raumati Beach Village	**Improvements to Raumati Road** - for all users extend the existing shared path to a new a new multi-use crossing point on the and upgrade the existing path on the opposite side to connect back into the expressway path - for pedestrians and cyclists extend existing shared path to Rata Road - for pedestrians and cyclists provide a shared path from SH1 to new multi-use crossing point	Yes No shared path or on road cycle lanes between old SH1 and Expressway	2 serious, 3 minor, 2 non-injury: Raumati Rd	Road: Raumati Rd Date: 2023 Cycle ADT: 35	0.7	0.6 - 0.9
18R6	Raumati Road / Raumati Beach Village	**Improvements from Hillcrest to Matatua Road** - for pedestrians and cyclists through upgrading the existing footpaths and providing new crossing points		2 serious, 3 minor, 2 non-injury: Raumati Rd 2 serious, 2 minor, 1 non-injury: Hillcrest Road 1 minor, 1 non-injury: Matatua Rd	Road: Matatua Rd Date: 2010 Cycle ADT: 47	2.0	1.5 - 2.6
19R6	Raumati Road / Raumati Beach Village	**Improvements / Reconfiguration to the intersection of Matatua Road / Rosetta Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling		2 serious, 3 minor, 2 non-injury: Raumati Rd 1 minor, 1 non-injury: Matatua Rd 0 Rosetta Rd	Road: Matatua Rd Date: 2010 Cycle ADT: 47	1.7	1.3 - 2.2
20R6	Raumati Road / Raumati Beach Village	**Improvements / Reconfiguration to the intersection of Matatua Road / Alexander Road** - for pedestrians and cyclists as current intersection poorly configured for walking and cycling		2 serious, 3 minor, 2 non-injury: Raumati Rd 1 minor, 1 non-injury: Matatua Rd 1 non-injury: Alexander Rd	Road: Matatua Rd Date: 2010 Cycle ADT: 47	2.6	2 - 3.5
21R7	Rata Road	**Improvements to Rata Road from Raumati Road to the Wharemauku Stream Path** - for pedestrians and cyclists through signing and marking		0: Rata Rd 2 serious, 3 minor, 2 non-injury: Raumati Rd	Road: Raumati Rd Date: 2023 Cycle ADT: 35	3.3	2.6 - 4.4
22R8	Garden Road	**Improvements to Garden Road** - for pedestrians by providing an extended footpath and safe designated walking route through the car park		1 fatal: Garden Rd	Road: Matatua Rd Date: 2010 Cycle ADT: 47	1.7	1.4 - 2.3

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
23P1	Rimu Road	**Improvements from Raumati Road to Ihakara Street / Rimu Road Roundabout** - for pedestrians and cyclists by installing a shared path	Yes No shared path or on road cycle lanes between Raumati Road and Ihakara Street	3 serious, 5 minor, 4 non-injury: Rimu Rd 2 serious, 3 minor, 2 non-injury: Raumati Rd 1 serious, 1 minor, 1 non-injury: Ihakara St	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	1.3	1 - 1.6
24P1	Rimu Road	**Improvements at Ihakara Street / Rimu Road Roundabout** - for pedestrians by upgrading existing crossing points		3 serious, 5 minor, 4 non-injury: Rimu Rd 1 serious, 1 minor, 1 non-injury: Ihakara St	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	12.0	9.4 - 14.5
25P1	Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for cyclists by upgrading the existing on-road cycle lanes		3 serious, 5 minor, 4 non-injury: Rimu Rd 1 serious, 1 minor, 1 non-injury: Ihakara St 5 serious, 14 minor, 10 non-injury: Kāpiti Rd	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	9.0	7.1 - 12.1
26P1	Rimu Road	**Improvements from Ihakara Street to Kāpiti Road** - for pedestrians by upgrading the existing crossing points and providing new ones -for pedestrians by upgrading all side road accesses into the Coastlands / Pak N Save development		3 serious, 5 minor, 4 non-injury: Rimu Rd 1 serious, 1 minor, 1 non-injury: Ihakara St 5 serious, 14 minor, 10 non-injury: Kāpiti Rd 1 minor: Coastlands Parade car park	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	5.6	4.4 - 8.2
27P1	Rimu Road	**Improvements from Ihakara Street to Iver Trask Place** - for pedestrians by upgrading the existing footpath to a shared path		3 serious, 5 minor, 4 non-injury: Rimu Rd 1 serious, 1 minor, 1 non-injury: Ihakara St 5 serious, 14 minor, 10 non-injury: Kāpiti Rd	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	1.6	1.2 - 2.1
28P2	Ihakara Street	**Improvements from Rimu Road to Link Road** - for pedestrians and cyclists through providing a shared path from roundabout to Link Road		1 serious, 1 minor, 1 non-injury: Ihakara St 1 minor: Old SH1 3 serious, 5 minor, 4 non-injury: Rimu Rd	Road: W - Wharemaku Stream Shared Path Date: 2023 Cycle ADT: 26	1.8	1.4 - 2.4
29P3	Marine Parade	**Improvements between Tahi Road and Ocean Road** - for pedestrians by providing new crossing points to access the shared path and beach		2 serious, 1 minor: Marine Pde 1 minor: Tahi Rd 1 non-injury: Ocean Rd	Road: W - Marine Parade Shared Path Date: 2023 Cycle ADT: 44	6.1	4.8 - 8.5

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
30P3	Marine Parade	**Upgrade the current raised crossings on Marine Parade to dual crossings** - for pedestrians and cyclists including restricting parking to current standards for increased visibility		2 serious, 1 minor: Marine Pde	Road: W - Marine Parade Shared Path Date: 2023 Cycle ADT: 44	5.2	4.1 - 7
31P3	Marine Parade	**Improvements to Marine Parade / Maclean Street Intersection** - for pedestrians and cyclists including restricting parking to current standards for increased visibility - for cyclists to increase and upgrade bike parking		2 serious, 1 minor: Marine Pde 1 minor, 2 non-injury: Maclean St	Road: W - Marine Parade Shared Path Date: 2023 Cycle ADT: 44	4.5	3.6 - 5.9
32P3	Marine Parade	**Remove kerb buildouts on Marine Parade** - for pedestrians and cyclists to install a new raised crossing just before Howell Road for the new skate park and extend the existing shared path from the roundabout to it.		2 serious, 1 minor: Marine Pde 1 serious: Howell Rd	Road: W - Marine Parade Shared Path Date: 2023 Cycle ADT: 44	9.3	7.3 - 12.5
33P3	Marine Parade	**Extend existing shared path on Marine Parade to the Tahi Road intersection** -for pedestrians and cyclists and provide a safe crossing		2 serious, 1 minor: Marine Pde 1 minor: Tahi Rd	Road: Tahi Rd Date: 2024 Cycle ADT: 72	11.0	8.7 - 14.9
34P4	Tahi Road	**Improvements to Tahi Road from the Marine Parade Intersection** - for pedestrians and cyclists to the off-road gravel trail through improved signage and markings		1 minor: Tahi Rd 2 serious, 1 minor: Marine Pde	Road: Tahi Rd Date: 2024 Cycle ADT: 72	5.6	4.4 - 7.6
35P5	Guildford Drive	**Improvements to Guildford Drive** - for pedestrians and cyclists with a new crossing point close to the beginning of Te Roto Drive to a new shared path on the eastern side to Realm Drive - for pedestrians by providing a new crossing refuge just before Gandalf Crescent		1 minor, 2 non-injury: Guildford Dr 1 minor: Te Roto Dr 0 Realm Dr 0: Gandalf Cres	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	1.1	0.9 - 1.5
36P5	Guildford Drive	**Improvements to Guildford / Realm Drive Intersection** - for pedestrians by upgrading the existing crossing points		1 minor, 2 non-injury: Guildford Dr 0 Realm Dr	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	5.5	4.3 - 7.4
37P5	Guildford Drive	**Improvements from Te Roto Drive to Mazengarb Road** - for cyclists by providing on-road cycle lanes accessing the College	Yes No on-road cycle lanes providing a connection from Te Roto Drive to Mazengarb Road	1 minor, 2 non-injury: Guildford Dr 1 minor: Te Roto Dr 1 serious, 5 minor, 2 non-injury: Mazengarb Rd	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	2.1	1.7 - 2.4

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
38P6	Realm Drive	**Improvements to Realm Drive** - for pedestrians and cyclists through providing a shared path on the southern side of Realm Drive - for pedestrians by upgrading the current crossing point to a dual cycle / pedestrian crossing point - for pedestrians and cyclists with a new gravel trail to the expressway connection	Yes New shared path	0 Realm Dr	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	1.1	0.8 - 1.2
39P7	Ratanui Road	**Improvements to Ratanui Road** - for pedestrians and cyclists by upgrading the gravel path to shared path from the Otaihanga Road intersection to the Little Farm Preschool - for pedestrians and cyclists by providing a crossing point close to the preschool - for pedestrians and cyclists by upgrading the footpath to a shared path from the preschool to Mazengarb Road	Yes New shared path from existing end to Mazengarb Road	1 minor: Ratanui Rd 1 minor, 1 non-injury: Otaihanga Rd 1 serious, 5 minor, 2 non-injury: Mazengarb Rd	Road: Ratanui Rd Date: 2024 Cycle ADT: 22	0.4	0.3 - 0.4
40P8	Mazengarb Road	**Improvements from Ratanui Road to Guildford Drive** - for pedestrians and cyclists by upgrade the existing shared path		1 serious, 5 minor, 2 non-injury: Mazengarb Rd 1 minor: Ratanui Rd 1 minor, 2 non-injury: Guildford Dr	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	0.8	0.6 - 1.1
41P8	Mazengarb Road	**Improvements around Paraparaumu College** - for pedestrians and cyclists by upgrading the existing crossings to dual pedestrian / cycle crossings		1 serious, 5 minor, 2 non-injury: Mazengarb Rd	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	6.1	4.8 - 8.3
42P8	Mazengarb Road	**Improvements on the stream bank between Mazengarb Road and Manly Street** - for pedestrians and cyclists by upgrade the current gravel path - for pedestrians and cyclists provide a short section of shared path on Manly Street from the stream to the Waikanae Reserve path entrance.		1 serious, 5 minor, 2 non-injury: Mazengarb Rd 1 minor: Manly St	Road: Mazengarb Rd Date: 2024 Cycle ADT: 50	3.0	2.4 - 4
43P8	Mazengarb Road	**Improvements from Makarini Street to Awatea Avenue** - for pedestrians and cyclists by extending the shared path and providing a pedestrian cycle crossing to access the off-road trail		1 serious, 5 minor, 2 non-injury: Mazengarb Rd 1 serious: Makarini St 0 Awatea Ave	Road: Arawhata Rd Date: 2023 Cycle ADT: 2023	2.2	1.7 - 2.7
44P9	Arawhata Road	**Improvements from Awatea Avenue to Kāpiti Road** - for pedestrians and cyclists by upgrading the footpath on the eastern side to shared paths - for pedestrians and cyclists by upgrading the crossing points on all intersections	Yes No shared path from Mazengarb Road to Kāpiti Road	1 minor, 1 non-injury: Arawhata Rd 0 Awatea Ave 5 serious, 14 minor, 10 non-injury: Kāpiti Rd	Road: Arawhata Rd Date: 2023 Cycle ADT: 2023	0.2	0.2 - 0.3

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
45P10	Old SH1	**Improvements from Raumati to Paraparaumu** - for cyclists by providing dedicated on-road cycle lanes from the Rongomau Lane overbridge to Raumati Road Roundabout - for cyclists by providing dedicated on-road cycle lanes from Raumati Road Roundabout to Ihakara Street - for cyclists by providing dedicated on-road cycle lanes from Ihakara Street to Kāpiti Road - for cyclists by the reconfiguration of Kāpiti Road intersection to provide provisioning for cycling		1 minor: Old SH1 2 serious, 3 minor, 2 non-injury: Raumati Rd 1 serious, 2 minor, 1 non-injury: Ihakara St 5 serious, 14 minor, 10 non-injury: Kāpiti Rd	Road: Kāpiti Road Date: 2024 Cycle ADT: 55	1.6	1.3 - 2.2
46P10	Old SH1	**Improvements from Paraparaumu to Nikau Valley** - for cyclists by upgrading the existing on-road lanes from Hinemoa Street / Buckley Grove intersections to Nikau Valley - for cyclists by upgrading the Ruahine Street and Rimutaka Street intersections		1 minor: Old SH1 1 non-injury: Hinemoa St	Road: Kāpiti Road Date: 2024 Cycle ADT: 55	6.0	4.7 - 8.1
47P10	Old SH1	**Improvements from Nikau Valley to Waikanae** - for cyclists by upgrading the existing on-road cycle lanes from Nikau Valley to Otaihanga Road Roundabout - for cyclists by upgrading the existing on-road cycle lanes from Otaihanga Road roundabout to Te Moana Road		1 minor: Old SH1 1 minor, 1 non-injury: Otaihanga Rd 5 serious, 10 minor, 1 non-injury: Te Moana Rd	Road: Otaihanga Road Date: 2024 Cycle ADT: 23	0.4	0.3 - 0.5
48P11	Hinemoa Street	**Improvements from Hinemoa Street to Buckley Grove under the Old SH1 bridge** - for cyclists by upgrading the off-road path under the old SH1 bridge		1 non-injury: Hinemoa St 0 Buckley Grove 1 minor: Old SH1	Road: Kāpiti Road Date: 2024 Cycle ADT: 55	5.0	4 - 6.8
49P11	Hinemoa Street	**Improvements from Rimutaka Street to Kāpiti Road** - for cyclists by providing dedicated on-road lanes for cyclists - for cyclists by reconfiguring the Tararua Street / Hinemoa Street intersection - for cyclists by changing the existing parking to parallel		1 non-injury: Hinemoa St 0 Rimutaka St 5 serious, 14 minor, 10 non-injury: Kāpiti Rd	Road: Kāpiti Rd Date: 2024 Cycle ADT: 55	0.7	0.5 - 0.9
50P12	Ruapehu Street	**Improvements to Ruapehu Street** - for pedestrians and cyclists by upgrading the existing footpath to a shared path from Westridge Ct to Valley Road		0 Ruapehu St 0 Westridge Ct 0 Valley Rd	Road: Valley Rd Date: 2015 Cycle ADT: 14	0.2	0.2 - 0.3
51P13	Improvements to Connectivity around Paraparaumu Rail Station	**Connectivity and Accessibility Improvements around Rail and Coastlands** - for pedestrian and cyclists including Kāpiti Road / Hinemoa / Epiha / Amohia intersections		5 serious, 14 minor, 10 non-injury: Kāpiti Rd 1 non-injury: Hinemoa St 0 Epiha 1 non-injury: Amohia St	Road: Kāpiti Rd Date: 2024 Cycle ADT: 55	3.6	2.8 - 4.8

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
52P14	Percival Road	**Improvements from Percival Road to Donovan Road** - for pedestrians and cyclists by extending the existing shared path - for pedestrians by upgrading the existing crossing points at the Donovan Road intersection	Yes No shared path from end of existing on Percival Road to Donovan Road	0 Percival Rd 4 minor: Donovan Rd	Road: Martin Rd Date: 2015 Cycle ADT: 51	2.7	2.1 - 3
53P15	Kāpiti Road	**Improvements from old SH1 to Rimu Road** - for cyclists by upgrading the existing on-road cycle lanes from the old SH1 to Rimu Road		5 serious, 14 minor, 10 non-injury: Kāpiti Rd 1 minor: Old SH1 3 serious, 5 minor, 4 non-injury: Rimu Rd	Road: Kāpiti Rd Date: 2024 Cycle ADT: 55	11.0	8.6 - 14.8
54P15	Kāpiti Road	**Improvements from Rimu Road to Brett Ambler Way** - for cyclists by upgrading existing on-road cycle lanes from Rimu Road to Brett Ambler Way		5 serious, 14 minor, 10 non-injury: Kāpiti Rd 3 serious, 5 minor, 4 non-injury: Rimu Rd 1 non-injury: Brett Ambler Way	Road: Kāpiti Rd Date: 2024 Cycle ADT: 55	5.5	4.3 - 7.4
55P16	Donovan Road	**Improvements from Percival Road to Te Kupe Road** - for cyclists by upgrading the existing footpath to a shared path - for pedestrians by upgrading the existing crossing point	Yes No shared path from end of Percival Road to Te Kupe Road	4 minor: Donovan Rd 0 Percival Rd 0 Te Kupe Rd	Road: Martin Rd Date: 2015 Cycle ADT: 51	2.3	1.8 - 2.6
56P17	Ocean Road	**Improvements from Kāpiti Road to Bluegum Road** - for pedestrians by providing a new footpath connecting the gap between the existing - for pedestrians by providing new crossing points through improvements to the intersections			Road: Kāpiti Rd Date: 2024 Cycle ADT: 55	1.7	1.3 - 2.3
57W1	connectivity around Waikanae Rail Station and shopping areas	**Connectivity and Accessibility Improvements around Railway Station and Shops** - for pedestrian and cyclists including Elizabeth St / Main Road or Ngaio / Main Road intersections - for pedestrians and cyclists by improving the provision of walking routes through the station park and rides including linkages for cyclists to the cycle parking		1 serious: Elizabeth St 2 serious, 1 non-injury: Main Rd 3 minor: Ngaio Rd	Road: Ngaio Rd Date: 2022 Cycle ADT: 22	0.7	0.6 - 1
58W2	Elizabeth Street	**Improvements from Seddon Street to Anne Street** - for pedestrians by providing a crossing point to the shops		1 serious: Elizabeth St 1 minor: Seddon St 0: Anne St	Road: Elizabeth St (labelled Wharemauku Rd) Date: 2015 Cycle ADT: 54	9.6	7.5 - 13.2

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
59W3	Te Moana Road	**Improvements from Te Ara Kawakahia to Rauparaha Street** - for pedestrians and cyclists by upgrading the existing shared path - for pedestrians and cyclists by upgrading the side street crossing facilities. - for cyclists by extending the current on-road cycle lanes on both sides	Yes No on-road cycle lanes from end of existing just past the expressway to just beyond Rauparaha Street intersection	5 serious, 10 minor, 1 non-injury: Te Moana Rd 0: Rauparaha St	Road: Te Moana Rd Date: 2024 Cycle ADT: 95	3.2	2.5 - 3.6
60W3	Te Moana Road	**Improvements from Park Avenue to Main Road** - for pedestrians and cyclists by upgrading the existing footpath to provide a shared path on one side - for pedestrians provide increased pedestrian crossing points - for cyclists provide on-road cycle lanes and mark shoulders as on-road cycle lanes	Yes No on-road cycle lanes from end of existing just past the expressway to just beyond Rauparaha Street intersection	5 serious, 10 minor, 1 non-injury: Te Moana Rd 0 Park Avenue 2 serious, 1 non-injury: Main Rd	Road: Te Moana Rd (2) Date: 2024 Cycle ADT: 58	0.3	0.2 - 0.3
61W3	Te Moana Road	OR - for cyclists provide off-road cycle lanes in the berms with upgraded footpaths adjacent		5 serious, 10 minor, 1 non-injury: Te Moana Rd 0 Park Avenue 2 serious, 1 non-injury: Main Rd	Road: Te Moana Rd (2) Date: 2024 Cycle ADT: 58	0.1	0.1 - 0.2
62W3	Te Moana Road	**Improvements from Main Road to Karu Crescent** - for pedestrians by extending the existing footpath		5 serious, 10 minor, 1 non-injury: Te Moana Rd 1 minor: Old SH1 0: Karu Cres	Road: Te Moana Rd (3) Date: 2015 Cycle ADT: 44	5.3	4.1 - 7.1
63W3	Te Moana Road	**Improvements to Te Moana Road / Rauparaha Street Intersection** - for pedestrians to provide safe crossing points - for cyclists to facilitate the extension of the on-road cycle lanes		5 serious, 10 minor, 1 non-injury: Te Moana Rd 0: Ruaparaha St	Road: Te Moana Rd Date: 2024 Cycle ADT: 95	5.8	4.6 - 7.6

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
64W4	Rauparaha Street	**Improvements from Te Moana Road through to Tutere Street** - for pedestrians and cyclists by providing a shared path connection for increased connectivity and accessibility to Waikanae Beach	Yes No shared path from Ruaparaha Street to Tutere Street	0: Ruaparaha St 5 serious, 10 minor, 1 non-injury: Te Moana Rd 1 serious, 1 minor: Tutere St	Road: Te Moana Rd Date: 2024 Cycle ADT: 95	3.0	2.3 - 3.4
65W5	the old SH1	**Improvements from Te Moana Road to Martin Street** - for cyclists by providing on-road cycle facilities connecting to existing facilities to the north of Waikanae		1 minor: Old SH1 5 serious, 10 minor, 1 non-injury: Te Moana Rd 1 minor: Martin St	Road: Te Moana Rd (2) Date: 2024 Cycle ADT: 58	5.1	4 - 6.9
66W6	Tutere Street	**Improvements from Rangihiroa Street to Hemara Street** - for pedestrians through increased crossing points		1 serious, 1 minor: Tutere St 0: Rangihiroa St 0: Hemara St	Road: Tutere St Date: 2015 Cycle ADT: 44	1.8	1.4 - 2.4
67W7	Huiawa Street	**Improvements from Rauparaha Street to Field Way** - for pedestrians and cyclists by providing a shared path - for pedestrians by providing additional crossing points - for pedestrians by upgrading the crossing points at Heperi Street intersection to increase connectivity and accessibility to Waikanae Beach		0: Huiawa St 0: Ruaparaha St 1 minor: Field Way	Road: Te Moana Rd Date: 2024 Cycle ADT: 95	1.3	1.1 - 1.8
68W8	Park Avenue	**Improvements from Te Moana Road to Ngarara Road** - for cyclists by providing on-road cycle lanes through road reallocation and marking changes - for pedestrians by upgrading the existing footpath on the park side and connecting the missing gap - for pedestrians and cyclists by upgrading the connection from Albizia Grove and providing a safe crossing point - for pedestrians by providing additional pedestrian crossing points, including Ngarara Road	Yes No on-road cycle lanes and existing footpath is discontinuous, considered a primary route into Waikanae for KCDC	0: Park Ave 5 serious, 10 minor, 1 non-injury: Te Moana Rd 0: Ngarara Rd	Road: Park Ave Date: 2024 Cycle ADT: 31	0.6	0.5 - 0.7
69W9	Ngarara Road	**Improvements from Park Avenue to Waikanae Pool and the Rugby Club** - for pedestrians and cyclists by upgrading the existing footpath to shared path		0: Ngarara Rd 0: Park Ave	Road: Park Ave Date: 2024 Cycle ADT: 31	0.9	0.7 - 1.2

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
70W10	Marae Lane	**Improvements to Marae Lane** - for pedestrians by upgrading pedestrian facilities along Marae Lane to increase accessibility and connectivity		0: Marae Lane	Road: Ngaio Rd Date: 2022 Cycle ADT: 22	2.1	1.6 - 2.8
71W11	Peka Peka Road	**Improvements from the Old SH1 to Paetawa Road** - for cyclists by providing seal widening to the existing road - for pedestrians and cyclists by upgrading the crossing points at Paetawa Road intersection	Yes No current off-road facilities for either pedestrian or cyclists, also used by equestrians	0: Peka Peka Rd 1 minor: Old SH1 1 serious: Paetawa Rd	Road: Peka Peka Rd Date: 2024 Cycle ADT: 30	0.6	0.4 - 0.6
72W12	Paetawa Road	**Improvements from Peka Peka Road to Marram Way** - for all users by providing an off-road gravel trail to connect to the existing - for all users by connecting the two sections of existing off road gravel trail on Rutherford Drive / Paetawa Road with a new section of off-road trail		1 serious: Paetawa Rd 0: Peka Peka Rd 0: Marram Way 0: Rutherford Dr	Road: Paetawa Rd (South) Date: 2015 Cycle ADT: 42	0.6	0.5 - 0.8
73W13	Ferndale Drive	**Improvements from Ferndale Drive to Expressway Path** - for all users by providing a connection to the expressway shared path		0: Ferndale Dr	Road: Te Moana Rd (2) Date: 2024 Cycle ADT: 58	7.0	5.5 - 9.5
74W14	Greendale Drive	**Improvements from Otaihanga Road** - for all users by providing a gravel shared path in berm		0: Greendale Dr	Road: Otaihanga Road Date: 2024 Cycle ADT: 23	0.4	0.3 - 0.6
75W15	King Arthur Drive	**Improvements from Greendale Drive** - for all users by providing a gravel shared path in berm		0: King Arthur Dr	Road: Otaihanga Road Date: 2024 Cycle ADT: 23	0.3	0.2 - 0.4
76W16	Otaihanga Road	**Improvements from Ratanui Road to Makora Road** - for all users by providing a gravel shared path in berm		1 minor, 1 non-injury: Otaihanga Rd 1 minor: Ratanui Rd 0: Makora Rd	Road: Makora Rd Date: 2024 Cycle ADT: 43	0.8	0.7 - 1.1
77O1	Rahui Road	**Improvements from Rahui Road to Te Roto Road** - for pedestrians and cyclists by extending the existing shared path in preparation for future development - for pedestrians by providing a crossing point at Te Roto Road intersection		1 non-injury: Rahui Rd 1 minor: Te Roto Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	1.4	1.1 - 1.9
78O1	Rahui Road	**Improvements from Te Roto Road to Freemans Road** - for pedestrians and cyclists by extending the existing shared path in preparation for future development		1 non-injury: Rahui Rd 1 serious: Freemans Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.4	0.3 - 0.5

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
79O2	Te Roto Road	**Improvements from Rahui Road to link in with the off-road trail** - for all users by providing a shared path or gravel trail to connect into the off-road network		1 minor: Te Roto Rd 1 non-injury: Rahui Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.4	0.3 - 0.5
80O3	County Road	**Improvements from Old SH1 to Rahui Road** - for pedestrians by completing gap in the existing footpath providing connected access towards the riverbank trails		0: Country Rd 1 minor: Old SH1 1 non-injury: Rahui Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	1.0	0.8 - 1.4
81O4	Te Manuao Road	**Improvements to Waitohu School access** - for pedestrians by upgrading the existing pedestrian crossing		0: Te Manuao Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.7	0.5 - 0.9
82O5	Waitohu Valley Road	**Improvements from Old SH1 to No. 57** - for pedestrians and cyclists by providing a shared path		0: Waitohu Valley Rd 1 minor: Old SH1	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.2	0.2 - 0.3
83O6	Mill Road / Old SH1 /Rahui Road roundabout	**Improvements to BP Roundabout** - for pedestrians by providing new safe pedestrian crossing refuge islands on all 4 legs of the roundabout - for cyclists by providing safe approaches to the roundabout		1 serious, 3 minor: Mill Rd 1 minor: Old SH1 1 non-injury: Rahui Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	2.3	1.8 - 3.2
84O7	Old SH1	**Improvements to Waerenga Road Intersection** - for pedestrians by upgrading the crossing points		1 minor: Old SH1 1 fatal, 1 serious, 1 minor: Waerenga Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	2.4	1.9 - 3.3
85O7	Old SH1	**Improvements to Sue Avenue Intersection** - for pedestrians by upgrading the crossing points		1 minor: Old SH1 0: Sue Ave	Road: Mill Rd Date: 2024 Cycle ADT: 18	2.4	1.9 - 3.3
86O7	Old SH1	**Improvements from Waerenga Road to Mill Road** - for pedestrians by upgrading existing pedestrian crossing points		1 minor: Old SH1 1 fatal, 1 serious, 1 minor: Waerenga Rd 1 serious, 3 minor: Mill Rd	Road: Mill Rd Date: 2024 Cycle ADT: 18	1.8	1.4 - 2.5
87O7	Old SH1	**Improvements to Arthur Street Intersection** - for pedestrians by upgrading the crossing points to provide a clear walking route to the rail station and through the car park		1 minor: Old SH1 0: Arthur St	Road: Mill Rd Date: 2024 Cycle ADT: 18	2.4	1.9 - 3.3
88O8	Mill Road	**Improvements from old SH1 to Aotaki Street** - for cyclists by upgrading the signing and marking for the current on-road cycle lanes		1 serious, 3 minor: Mill Rd 1 minor: Old SH1 1 serious, 1 minor: Aotaki St	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.9	0.7 - 1.3
89O8	Mill Road	OR - for cyclists by implementing full separation for the existing on-road cycle lanes - for cyclists improve the approach to the Aotaki / Mill St roundabout		1 serious, 3 minor: Mill Rd 1 minor: Old SH1 1 serious, 1 minor: Aotaki St	Road: Mill Rd Date: 2024 Cycle ADT: 18	0.2	0.1 - 0.2

ID	Route	Description	Network gap	10-year crashes involving pedestrians and cyclists (CAS)	Cycle count (RAMM nearest counter/ latest date available)	BCR	BCR range
90O9	Te Ruaparaha Street	**Improvements from Tasman Road to St Peter Channel School** - for pedestrians and cyclists by widening the existing footpath for sharing - for pedestrians by providing a dedicated crossing for school children outside Te Kura Kaupapa Māori o Te Rito		0: Te Ruaparaha St 1 non-injury: Tasman St	Road: Tasman Rd Date: 2024 Cycle ADT: 53	1.2	0.9 - 1.6
91O10	Improvements on Aotaki Street	**Improvements from Riverbank Road and Mill Road** - for pedestrians and cyclists by providing a shared path		1 serious, 1 minor: Aotaki St 0: Riverbank Rd 1 serious, 3 minor: Mill Rd	Road: Tasman Rd Date: 2024 Cycle ADT: 53	0.7	0.5 - 0.9
92O10	Improvements on Aotaki Street	OR - for cyclists by providing on-road cycle lanes	Yes No shared path or on-road cycle lanes	1 serious, 1 minor: Aotaki St 0: Riverbank Rd 1 serious, 3 minor: Mill Rd	Road: Tasman Rd Date: 2024 Cycle ADT: 53	3.2	2.5 - 3.6
93O11	Riverbank Road	**Improvements from Aotaki Street to Rangiuru Road** for all users by providing a new gravel trail on the berm area		1 serious, 1 minor: Aotaki St 1 minor: Rangiuru Rd	Road: Tasman Rd Date: 2024 Cycle ADT: 53	0.9	0.7 - 1.2
94O12	Main Street	**Improvements from Aotaki Street to Te Rauparaha Street** - for cyclists by implementing sharrows from Aotaki Street to the shopping area - for cyclists and pedestrians by extending the existing shared path from Te Kura a Iwi O Whakatupuranga Rua back to Rangiuru Road - for pedestrians by upgrading Rangiuru Road crossing point - for cyclists by providing an access to the shared path after Rangiuru Road	Yes Missing shared path connection	1 serious, 3 minor: Mill Rd 1 serious, 1 minor: Aotaki St 0: Te Ruaparaha St	Road: Tasman Rd Date: 2024 Cycle ADT: 53	2.8	2.2 - 3.2

Programme Analysis & Sensitivity Testing

Following the identification of the preferred programme, this was separately assessed. As the delivery of the preferred programme was staged over 3 NLTP periods, this assessment included accounting for the preferred start period. For simplicity, it was assumed that construction would start in the first year of the identified NLTP period. The benefits stream was consequently shortened for the projects delivered in later NLTP.

The outcome of this is presented in the table below.

Sensitivity Testing of the BCRs for the preferred programme ($ million)

Programme Sensitivity tests	Benefits			Costs		BCR	
	Lower	Expected	Upper	Expected	Upper	Expected	Range
Expected Programme	**$25.8**	**$35.6**	**$45.3**	**$9.6**	**$12.3**	**3.7**	**2.1 - 4.7**
Discount Rate 3%	$28.8	$39.3	$49.7	$9.8	$12.6	4.0	2.3 - 5.1
Discount Rate 6%	$22.3	$31.2	$40.1	$9.2	$11.8	3.4	1.9 - 4.3
Costs +25%	$25.8	$35.6	$45.3	$12.0	$15.3	3.0	1.7 - 3.8
Costs - 25%	$25.8	$35.6	$45.3	$7.2	$9.2	4.9	2.8 - 6.3
Safety Benefits + 25%	$27.3	$37.9	$48.5	$9.6	$12.3	3.9	2.2 – 5.0
Safety Benefits -25%	$24.3	$33.2	$42.1	$9.6	$12.3	3.5	2 - 4.4
Health Benefits +25%	$30.8	$42.1	$53.5	$9.6	$12.3	4.4	2.5 - 5.6
Health Benefits -25%	$20.9	$29.0	$37.1	$9.6	$12.3	3.0	1.7 - 3.9
Costs + 25% Health -25%	$20.9	$29.0	$37.1	$12.0	$15.3	2.4	1.4 - 3.1

Importantly, there are no tests where even the lower estimate of the BCR drops below 1. When comparing the net present values from the benefits, even in the scenario with health benefits reduced and costs increase, BCR above 1 is still expected. This demonstrates good value for money.

Appendix R Sensitivity Analysis

Appendix S Districtwide Improvements

Districtwide improvement project	Justification	Recommendation	Benefit
Wayfinding Signage	Wayfinding signage is inconsistent, particularly on routes implemented through the Stride n' Ride Programme.	Conduct a districtwide network review of the wayfinding signage, ensuring all signage is up to date with current guidance.	Wayfinding signage is an integral component for ensuring good access and connectivity to key destinations for users on the wider network. Signage can also be used as a tool for 'storytelling' information across the network.
Behavioural Markings	There is a lack of behavioural markings on key routes used by active modes.	Conduct a districtwide network review of the behavioural marking, to ensure the network is safe for all users. Implement behavioural markings and design infrastructure to reduce conflicts between modes. Key strategies include differentiated pathways, warning markings, shared space signs, speed control measures, as well as education and awareness campaigns.	Research demonstrates behavioural markings are useful tools for managing user conflicts on the network[87]. Conflicts involving active modes will potentially increase as demand increases over time –particularly with the uptake of e-bikes due to the differential speeds involved.
Eco / Active Modes Tourism	The district is considered a tourist destination, and with the current expressway linkages, longer distance active travel trips on dedicated safe facilities are more feasible than ever for a wider range of ages and abilities.	Promotion and specific branding of routes such as the Kāpiti Coastal Route and Coast 35 will encourage visitors and economic growth into the district.	Coupling this with suitable wayfinding, the promotion of eco / active modes tourism will encourage uptake and enjoyment for all users.
Accessibility	Accessibility is likely to become a key issue for the district due to the ageing demographic and people relocating for retirement, many of them to the retirement villages located in the district.	Explore opportunities to implement a wider programme of improvements for accessibility through other Programme of Works. While the Programmes recommended through this Network Plan provide improvements around key locations and routes, a wider programme of improvements for accessibility should be considered to prevent barriers for access.	By preventing barriers for accessibility, this will encourage uptake of active modes and improve equitable access to / from key destinations.

[87] path-behaviour-markings-guidance-note.pdf (nzta.govt.nz)

Districtwide improvement project	Justification	Recommendation	Benefit
Complementary Facilities	Complementary facilities will improve user experience and enhances safety across the network.	Identify appropriate areas and implement complimentary facilities, such as seating and secure cycle parking ‘Locky Docks’.	Complementary facilities are key components for active mode users. For example, seating in appropriate areas improves equitable access to active travel and encourages recreational activities to take place across the network. Safe locations for people to securely park and leave their bikes is essential in providing that first mile / last mile component of people’s journeys.
Active Modes Monitoring Programme	No pedestrian volume monitoring has been undertaken. Cycle volume monitoring has been inconsistent since 2015.	Development of an annual monitoring programme through the placement of automated count technologies.	It is fundamental to collect usage data and provide validation for your investment.

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