Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

DRAFT FOR DISCUSSION

FAR NORTH INTEGRATED TRANSPORT STRATEGY

PROGRAMME BUSINESS CASE

September 2020

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Far North District Council Programme Business Case

VERSION

Abbreviation	Date	Full name
1.0	08 May 2020	Issued to FNDC and Waka Kotahi IQA for review.
2.0	July 2020	Final
3.0	September 2020	Final issue 2

Prepared by Commute Transportation Ltd

Contents

GLOSSARY OF TERMS

Abbreviation	Full name
APA	Action Plan Area
BCR	Benefit Cost Ratio
DBC	Detailed Business Case
DSI	Death or Serious Injuries
FAR	Funding Assistance Rates
FNDC	Far North District Council
GPS	Government Policy Statement
HCV	Heavy Commercial Vehicle
IAF	Investment Assessment Framework
IAM	FNDC Infrastructure and Asset Management Department
ILM	Investment Logic Map
ITS	Integrated Transport Strategy
ITP	Integrated Transport Plan
KiwiRAP	Kiwi Road Assessment Programme
KPI	Key Performance Indicator
LCLR	Low Cost Low Risk
LoS	Level of Service
LSF	Living Standards Framework
MoT	Ministry of Transport
MOR	Maintenance, Operations and Renewals
NAL	North Auckland Line
NEAP	Northland Economic Action Plan
NLTF	National Land Transport Fund
NLTP	National Land Transport Programme
NRC	Northland Regional Council
NTA	Northland Transport Alliance
Waka Kotahi (or The Agency)	The New Zealand Transport Agency
ONRC	One Network Road Classification
PBC	Programme Business Case
RAMP	Regional Activity Management Plan
REG	Road Efficiency Group
RLTP	Regional Land Transport Plan
RLTS	Regional Land Transport Strategy
RMA	Resource Management Act
TDM	Travel Demand Management

EXECUTIVE SUMMARY

The Far North District Council has developed a Programme Business Case in conjunction with key stakeholders to support the Integrated Transport Strategy (ITS) and considers the case for investment to support communities and business in the Far North by providing a safer, more resilient and reliable transport system. This PBC is intended to be a transport investment map to provide details on the type of options that will holistically provide the greatest benefits to the District.

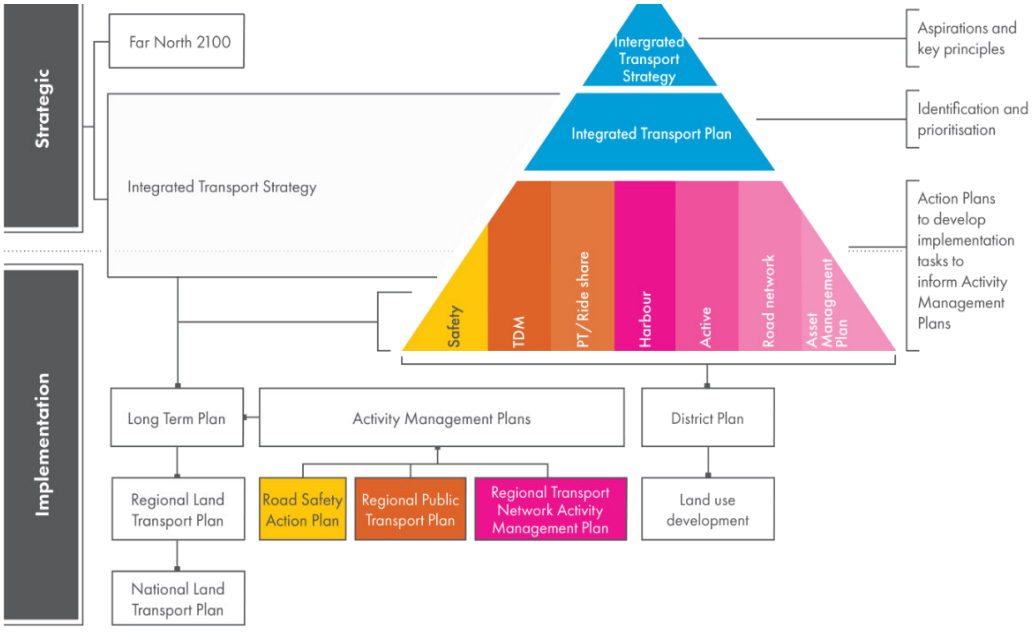
Far North District Council (FNDC) has developed an Integrated Transport Strategy (ITS) to address the key transport problems faced by the District. It is a holistic strategy that focuses on improving the "now" as well as providing direction to allow the District to respond in a consistent manner to address future challenges faced by growth, changing land use and new technology.

The ITS will comprise of the following documents:

- **Strategy**
  - Public facing strategy which documents the problems, benefits and strategic responses for investment in the Far North. It also includes high level prioritisation for each strategic response.
  - Analysis to inform the development of the strategy in a traditional Part A business case format
- **Integrated Transport Plan (ITP)**
  - Public facing executive summary
  - Integrated Transport Plan split into action plans, describing the prioritised projects to be delivered
  - Analysis to inform the plan in traditional Part B and Part C business case formats

Together, these documents will form the **Far North District Council Integrated Transport Strategy** and will provide a transport investment map for the District. The structure of the ITS is shown in Figure A.

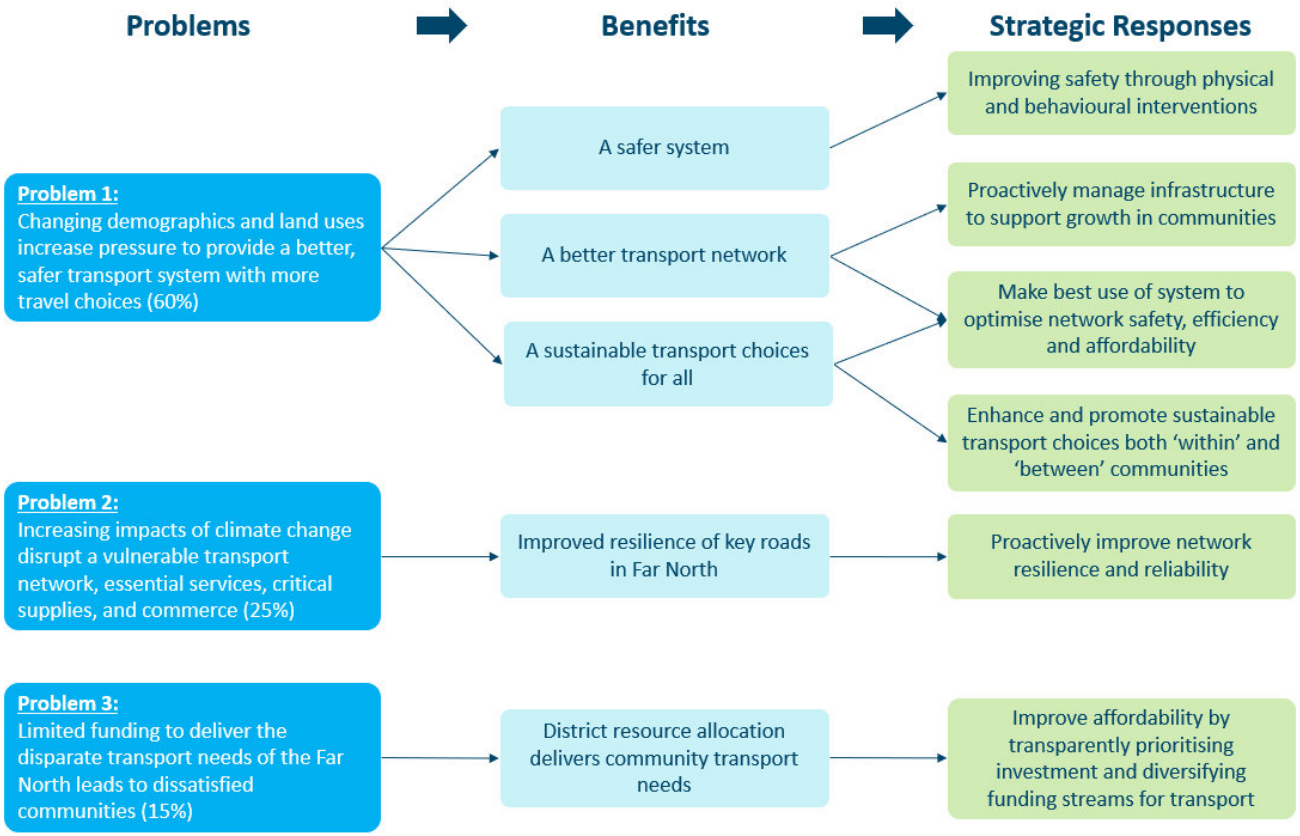
Figure A: Structure of the Integrated Transport Strategy



The Far North District Council Integrated Transport Strategy will focus on addressing three key problems through six strategic responses as shown in Figure B. By doing these things, the Far North will benefit from:

- A better, safer transport system with more transport choice.
- Improved resilience of key roads in Far North
- Community transport needs will be met.

Figure B: Problems, benefits and strategic responses



As such, the Far North District transport vision to deliver this transport strategy is shown in Figure C.

Figure C: Far North Strategic Response

The Integrated Transport Plan (ITP) recommended programme is a comprehensive and holistic programme of initiatives that supports the Far North District transport vision and the delivery of the Integrated Transport Strategy (ITS).

The programme has been developed based on the seven action plan areas in Figure D.

Figure D: Integrated Transport Plan Action Plan Areas

Collectively, they all have an integral role in delivering programme-wide benefits. The Maintenance, Operations and Renewals action plan is being delivered as part of a parallel Activity Management Plan process.

The Far North ITP Recommended Programme is shown in Figure E below and includes 62 activities which represents an investment value (non-maintenance) of **$211M-$226M** over a proposed 10 year implementation plan. Many activities are considered 'business as usual' for transport and focus on general maintenance, operation and renewal activities as well as physical improvements to the network such as safety, road upgrades, improved resilience and enhanced connectivity / condition of walking and cycling networks.

The programme includes packaged transport activities (as identified above), which in some cases, are broad and overarching and are therefore supported by a list of potential individual projects to be further prioritised within this activity. This list contains specific projects / locations identified to date and its purpose is to provide a starting point for the prioritisation of activities. It should be noted that other projects / locations can be considered within each transport activity during this process. This will retain flexibility for FNDC to respond to changes in the future.

The transport benefits for the recommended programme are projected to be in the order of $**204M NPV**[1]**.** Wider economic benefits were not considered for this PBC. The programme also contributes to the four capitals of the Treasury Living Standards. The BCR for the programme when compared to the do minimum is calculated to be **1.4**.

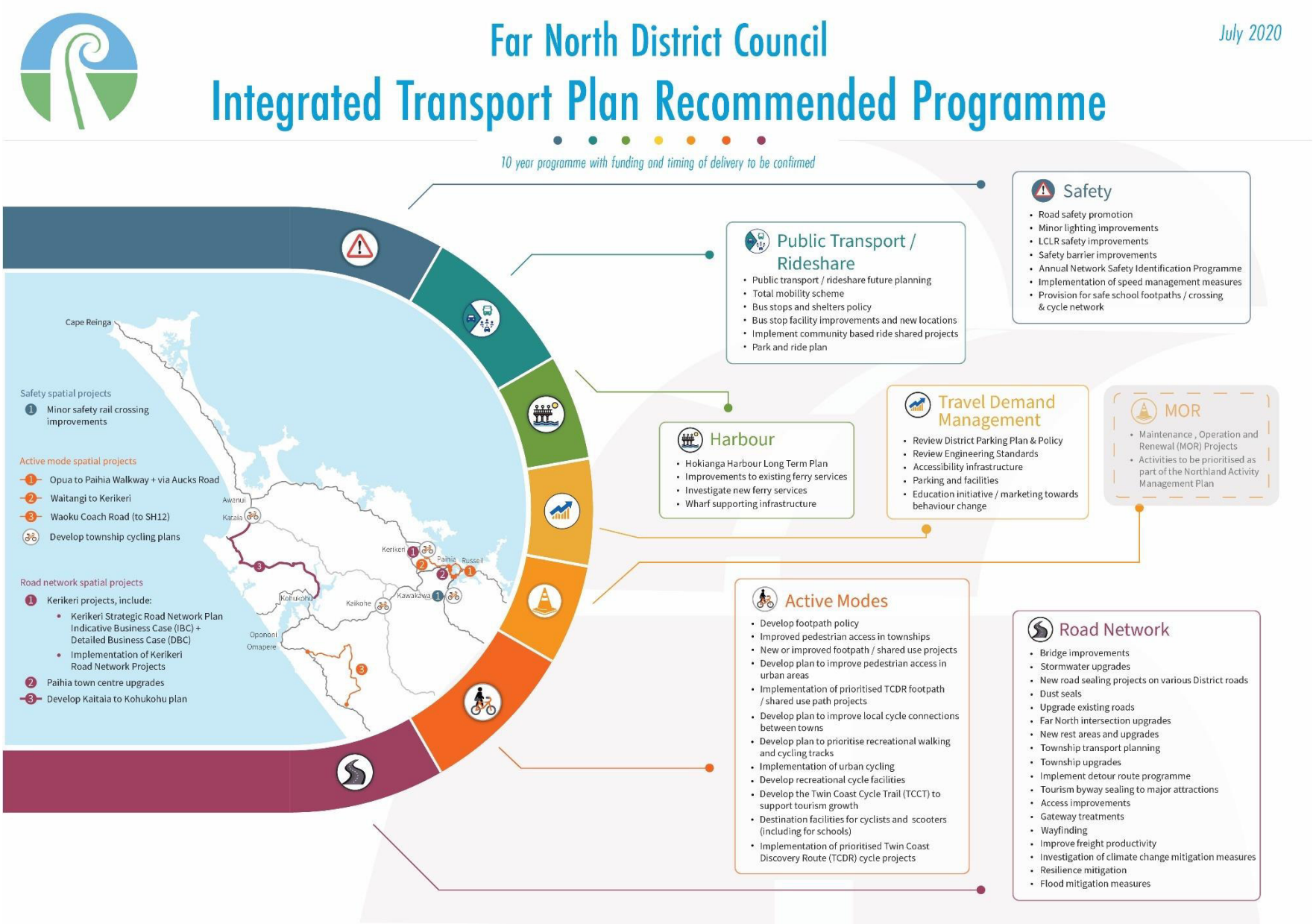
Whilst not all projects are potentially eligible for NLTF, the full programme has been assessed for IAF alignment and is a high alignment with a low BCR, which results in an investment priority of **5**.

The holistic and multifaceted nature of the programme results in positive improvements for a range of outcomes with respect to the investment objectives (transport vision). These outcomes are detailed in Figure F.

Overall, this recommended programme will deliver balanced and targeted transport investment to the Far North. The programme has a clear prioritisation process which will result in benefits for both the district as a whole as well as individual communities.

[1] NPV benefit value used for BCR calculation (excludes do-minimum NPV benefits)

Figure F: Recommended Programme



Recommended Programme Outcomes

	KPI Measures	Project Contribution	Transport Outcomes
IO 1 Improving safety	Number of death and serious injuries on local roads (#23)	25% of the options in the recommended programme contribute to the transport outcome of 49 DSI savings over 5 years. 69% of the programme holistically contributes to improving the safety of the transport network.	49 DSI's over 5 years. Approximately 26% DSI reduction.
	Average annual fatal and serious injury crashes per 100 million vehicle-KM (#24)	28% of options contribute to improving personal risk. This is likely to increase the proportion of low-medium personal risk from 95% to 96%.	
IO 2 Managing for growth	Percentage travel on road network classified as smooth as per defined level of service (#41)	49% of options within the recommended programme contribute to this measure at a total of $164m investment	
	Customer satisfaction with operation of network	95% of the options increase customer satisfaction of the overall network	
	Number of dwellings affected by roading dust	4 options contribute to reduced roading dust (predominantly road sealing projects)	
	Incr in wellbeing assessed including social connections (#42)	87% of the options contribute to increased wellbeing	
	Perception of safety and ease of walking and cycling (#28)	28 options increase perception of safety and ease of walking and cycling facilities	
	Physical health benefits from active modes (#20)	Investment in walking and cycling infrastructure is likely to increase the number of users therefore increasing associated monetary benefits.	
IO 3 Making best use of our existing network	Project uses/enhances existing network	Recommended programme heavily focuses on the existing network, with 92% of the options using / enhancing the existing network.	
	Percentage within travel threshold to key social and economic activities by different modes	This KPI essentially measures the level of travel undertaken. 93% of options contribute to improved quality of travel and accessibility to key social & economic activities in some form.	
IO 4 Improving transport choices	Percentage of low floor and wheelchair accessible services (#39)	8 options contribute to improve accessibility for mobility impaired. This would generally include any improvements to public transport / ferry services or infrastructure and total mobility scheme.	
	Number of transport users by mode, expressed as percentages (#46)	59% of the options promote modal shift in some form. This equates to approximately $90m investment.	
	Number of pedestrians and cyclists (#45)	59% of the options encourage walking and cycling by providing new / improved facilities increased convenience, better connectivity and safer facilities. This equates to $111m of investment	
	Percentage completion of the planned walking and cycling network (#32)	10% of the options in the recommended programme achieve the transport outcome 163km of new or improved footpaths / cycle paths. .	• 77km of new or improved footpath / shared paths • 86km of new or improved cycle paths
IO 5 Securing our transport system	Number and duration of resolved road closures: urban >=2 hrs; rural >=12hrs (#52)	13 options can potentially reduce the effects of potential local road closures or support State Highway closures.	
	Reduction in school days lost	Programme contributes to reducing school days lost through increased reliability of roads: • Resilience mitigation • Provision of detour routes or viable alternative methods of travel • MO&R programme – preventative maintenance	
	Percentage of high-risk, high-impact routes with a viable alternative (#49)	15 options focus on or may result in increased number of routes with viable alternatives	
IO 6 Prioritising funding	Percentage of PBC projects delivered	Programme aims to increase the number of projects funded and delivered: • Providing strategic content to support funding applications	
	Efficiency of network spend/km	Programme seeks to ensure efficiency of network spend through: • Increased investment on MO&R activities to maintain or improve level of service • Prioritisation within packaged options to ensure funding is spent efficiently to achieve desired outcomes	
	$ projects funded outside NLTF subsidy	32% of options can be potentially fully or partially funded by alternative funding sources such as developer contributions, private funding, PGF and TIF	

***Note:** The remaining transport outcomes (left blank above) are to be developed following the targeted data collection and benefit management work. In addition, the transport outcomes identified above may be subject to change following the prioritisation work to be undertaken in later stages of the programme.*

Part A: The Strategic Case for the Integrated Transport Strategy

1. INTRODUCTION

1.1 Scope and purpose

Far North District Council (FNDC) is developing an Integrated Transport Strategy (ITS) to address the key transport problems faced by the District. These include safety and network resilience, to address level of service and climate change risks, planning for growth, community connectivity, and a shift to a multimodal transport response in urban areas.

The ITS will include clear strategic responses and a prioritisation framework to ensure the strategy responds to:

- Immediate needs such as the transport work pipeline and as an input to the 2021-2024 Regional Land Transport Plan (RLTP) process.
- Longer term needs such as planning for growth, improvement in the wellbeing of the District's people and supporting increased economic growth for the District.

It is important to develop a business case now so that transport strategy is interlinked with the FNDC Spatial Plan (FNDC 2100) that is currently being developed and so that the strategy and its associated Implementation Plan can provide robust evidence and prioritisation guidance to support the RLTP 2021-2024 process.

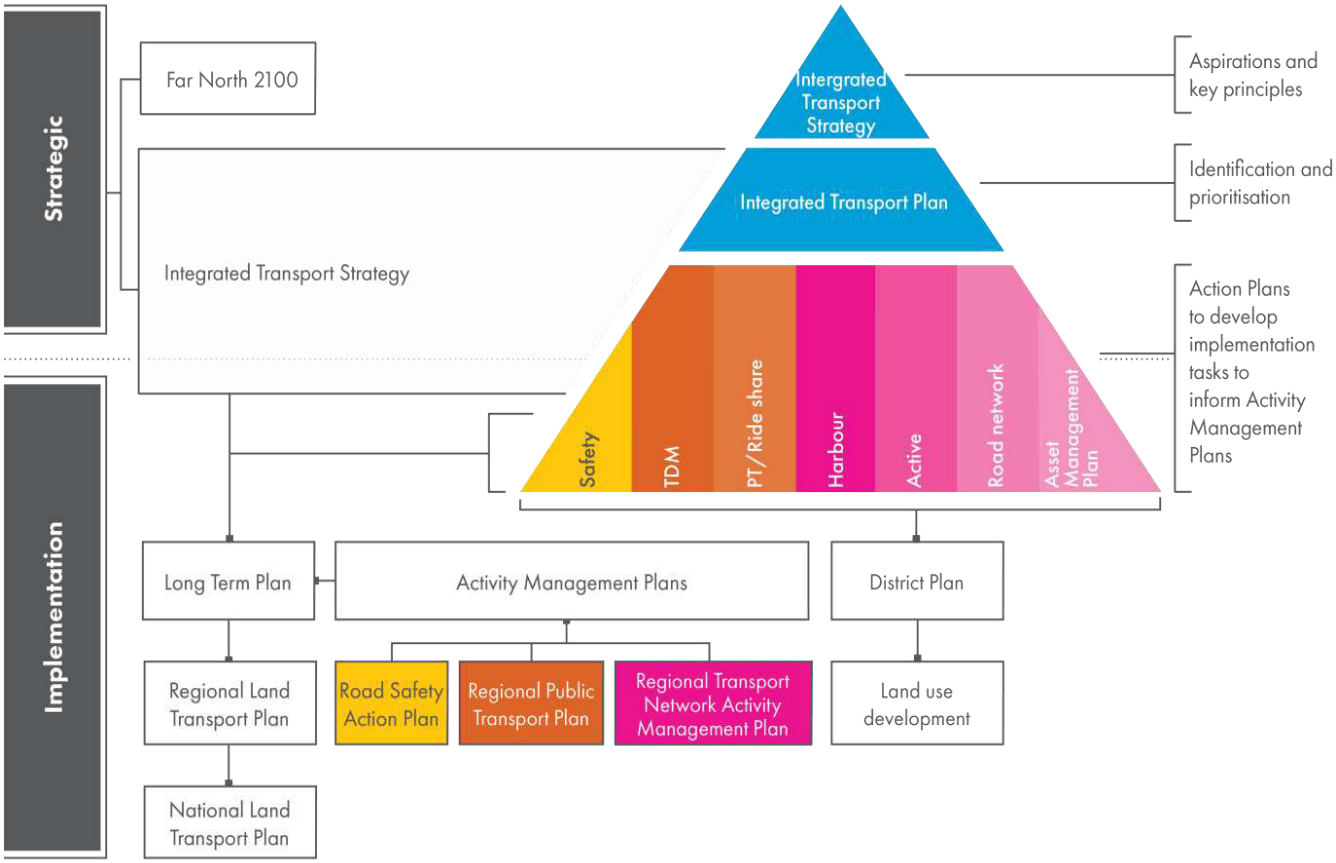
FNDC is developing the ITS according to Waka Kotahi NZ Transport Agency (Waka Kotahi) Programme Business Case (PBC) guidelines in consultation with district and regional councils as well as key customers and communities.

The ITS will comprise of the following documents:

- **Strategy**
  - Public facing strategy which documents the problems, benefits and strategic responses for investment in the Far North. It also includes high level prioritisation for each strategic response.
  - Analysis to inform the development of the strategy in a traditional Part A business case format
- **Integrated Transport Plan (ITP)**
  - Public facing executive summary
  - Integrated Transport Plan split into action plans, describing the prioritised projects to be delivered
  - Analysis to inform the plan in traditional Part B and Part C business case formats

Together, these documents will form the **Far North District Council Integrated Transport Strategy** and will provide a regionally prioritised transport investment map for the District. The structure of the ITS is shown in Figure 1.

Figure 1 Structure of the FNDC Integrated Transport Strategy



As the communities in the Far North rely heavily on the State Highway network for access, the ITS covers all roads within the Far North District. However, the ITP will focus on options that require funding from FNDC or interface the State Highway network. There are other Waka Kotahi projects such as the Twin Coast Discovery Route Detailed Business Cases and Safe Network Programme that are also developing improvement programmes for the State Highway network.

This document is the PBC to support the ITS and considers the case for investment to support communities and business in the Far North by providing a safer, more resilient and reliable transport system.

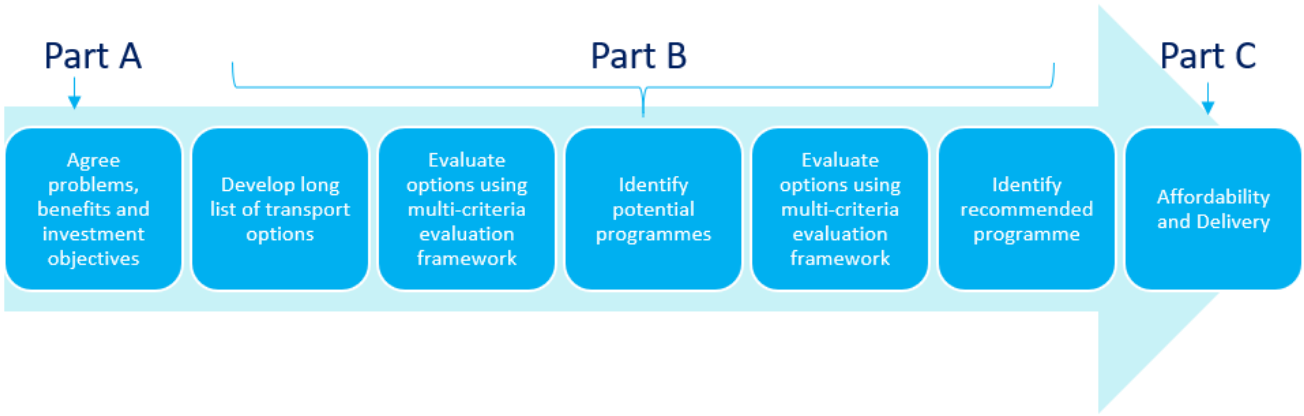
1.2 Project objectives

The Far North District economy has historically been one of New Zealand's poorest performers and experiences high deprivation levels. The region is also ripe with opportunities with a strong primary industry advantage, rich cultural history and strong community pride.

This PBC is an integrated transport approach that recognises the importance of improving intra-regional and inter-regional transport access for the Far North against constraints such as geographically spread communities, low density population and a low rates base. The journeys within the District utilise many State Highways and district roads.

This PBC has been developed with stakeholders and investors to ensure a coordinated approach for investment. The PBC process is shown in Figure 2.

Figure 2: PBC process



Overall, the PBC:

- Confirms the strategic case problems and benefits
- Develops investment objectives
- Is informed by customer insights
- Investigates options and alternatives
- Identifies the key projects that will support the programme outcomes
- Seeks the early approval of decision-makers

1.3 Work to date

There are a number of workstreams that have informed or are being developed parallel to the development of this ITS as shown in Table 1.

Table 1: Complementary work undertaken in the Far North and Northland

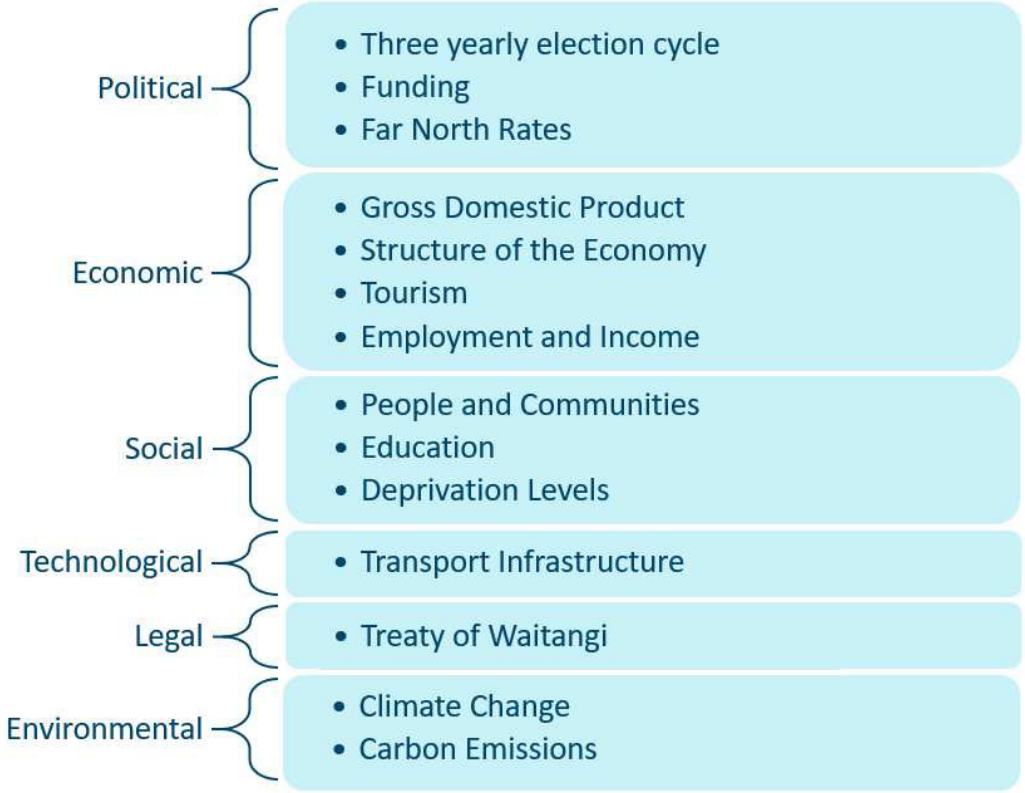
Workstream	Description	Impact for ITS
Northland Regional Land Transport Plan (RLTP) 2015-2021	Details regional priorities for the Northland transport system. Note this was developed prior to the current 2018 GPS. A new RLTP is currently under development, to be adopted for the 2021-27 term, which will reflect the 2018 and draft 2021 GPS. The key priorities are: • Enhances economic growth • Encourages tourism • Safety for all road users • Well-connected to Auckland/ NZ • Roading network fit for purpose and resilient • Transport choices to access jobs, recreation, community facilities • Enhance environmental and cultural values • Effective ports	The ITS needs to align with the broad priorities of the region as well as provide for the prioritisation of District specific issues. The ITS and ITP will provide input into the RLTP. The ITS team will need to be in regular contact with the RLTP team. Representatives from the RLTP team will be included in the PBC workshops.
Northland Regional Public Transport Plan (RPTP) 2015 -2025	Strategic blueprint for the region's public transport system. This includes public transport and Total mobility scheme and discussion how to maintain the affordability and quality of services.	The plans in the RPTP details how the Total Mobility scheme might be extended, considerations for alternative public transport options for small rural communities. The ITS needs to support the aims of the existing plan as well as provide support to seek transformational change in the future.
Far North District Strategy and Spatial Plan (Far North 2100)	District strategy that develops the role of the Far North and identifies transformational opportunities and collaboration and partnerships for delivery. Running parallel to the ITS and due for completion 2020/21	Transport is one of the methods identified to help deliver this vision "He whenua rangatira – A District of sustainable prosperity and wellbeing". The ITS will need to support the overall framework. Representatives from the Far North 2100 team will be included in the PBC workshops
Far North District Council Long Term Plan and Annual Plans	The new FNDC Long Term Plan is currently under development and includes a new 30 year Infrastructure Strategy.	Transport related projects identified in the Long Term Plan will form inputs into the long list for the ITP.
Northland Economic Action Plan (NEAP)	Transport has been identified as an enabler with the action plan and advocates a safe, resilient and efficient multi modal transport system.	A key goal for the ITS is to improve the economic outcomes for the Far North which is in direct alignment with the NEAP. Therefore, the NEAP has been used in the development of the ITS.
Twin Coast Discovery Route (TCDR) Programme	Development of a comprehensive investment programme to improve the TCDR. Detailed business cases for SH11, SH12, wayfinding, passing lanes and rest areas, cycling and townships are being finalised.	The improvements identified for the FNDC District will form key inputs into the long list for the ITP.

2. PROGRAMME CONTEXT

The programme context outlines the relevant contextual information for the strategic case. It is not intended to describe or analyse the key problems or opportunities but rather provides relevant context to the area where investment is being sought.

A PESTLE analysis framework has been undertaken to assess relevant factors against the following six themes as shown in Figure 3.

Figure 3: PESTLE analysis



In summary, the PESTLE analysis indicates that the Far North District has a rich cultural history with significant economic advantages from the tourism and primary industry sectors. It is however underperforming economically and experiences significant deprivation within its communities. The District is exposed to environmental factors such as climate change, particularly as many of its settlements are in low-lying flood prone or coastal areas. Long term infrastructure investment is a challenge due to funding constraints and political cycles. The transport network is the lifeline for the region and is currently dominated by private vehicle use. The State Highway network is an important part of the Far North District's road network serving most road traffic. It is noted that this PBC will focus on Far North District roads that provide access to the State Highway network and support road users within local townships.

Appendix A provides detailed assessment against the above themes, outlining the important contextual information for the strategic case.

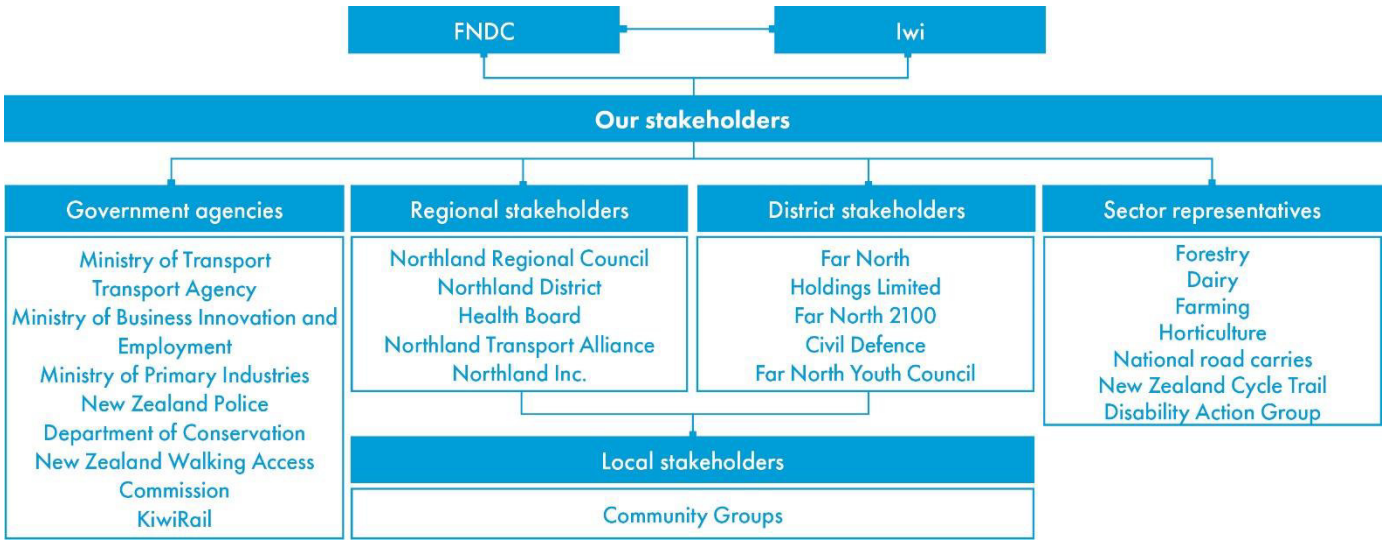
3. WHO ARE OUR PARTNERS AND STAKEHOLDERS?

3.1 Key stakeholders

Our aim was to work closely with partners and stakeholders to develop a robust Integrated Transport Strategy. The level of engagement for this PBC has been scaled to match the size of the geographical area and PBC timelines to ensure meaningful engagement with as many stakeholder groups as possible. It is expected that this is a first step and further detailed engagement will occur as individual projects are progressed following the completion of the PBC.

There were five key groups of stakeholders for this project as shown in Figure 4.

Figure 4: Stakeholder Collaboration



The ITS has been developed in collaboration with key Iwi representatives, government agencies, regional and district stakeholders, and sector representatives. Based on engagement with these stakeholders, a number of key focus areas have been identified. Generally, there is strong alignment between stakeholders regarding the focus areas for the District road network. A summary of the focus areas important to each stakeholder group is included in Table 2.

Table 2: Key ITS stakeholders

Stakeholders	Focus areas
Iwi representatives	Improved connectivity and reduced safety risks along the District road network Transport provision for growing horticulture industry Improved ability to cater for vulnerable road users
Government agencies	Road safety for all users Efficient and reliable access to economic and social opportunities
Regional stakeholders	Provision of a fit for purpose district road network that aligns with Regional transport goals A safe and resilient transport network, with good connectivity between communities
District stakeholders	Improved connectivity within and between communities Improved resilience on high risk roads Sustainable modes of travel
Sector representatives	Safe and efficient freight routes and improved level of service on local roads Improved access to key facilities

3.1.1 Workshop collaboration

The Integrated Transport Strategy and Integrated Transport Plan has been developed through a collaborative process with active involvement from a key stakeholder group. A total of five workshops were held as follows:

- Workshop 1: Problem Definition Workshop (ITS)
- Workshop 2: Investment Logic Mapping Workshop (ITS)
- Workshop 3: Benefit Mapping processes Workshop (ITS)
- Workshop 4: Option Longlist Development Workshop (ITP)
- Workshop 5: Programme Development Workshop (ITP)

Appendix B includes the list of participants and minutes for Workshops 1, 4 and 5. List of participants for Workshops 2 and 3 are summarised in **Appendix B**.

Some stakeholders were unable to attend workshops however where possible, they were individually interviewed to provide insight and feedback for the key problems and evidence. All participants received workshop briefings and minutes of the meeting regardless of attendance.

Post workshop feedback was also received via the project email and incorporated into the ITS and ITP process where appropriate.

Following Workshop 4, an online survey was also organised to gather further feedback on possible transport options. This online 'Have Your Say' survey was made available via the FNDC website to the Council's Elected Members and a wider stakeholder group, including those who were not present at the Option Longlist Development Workshop, as well as to workshop participants for post workshop feedback. A total of nine responses were received from the stakeholders. These responses have been incorporated into the option long list where appropriate.

The stakeholder involvement in each workshop is detailed in the following table.

Table 3: Workshop collaboration

Workshop	Workshop purpose	Stakeholder groups invited						
		FNDC	NTA	Iwi	Waka Kotahi	NRC	Community & Business associations	Industry
Workshop 1: Problem Definition Workshop (ITS)	The purpose of this workshop was to better understand what an Integrated Transport Strategy is and the importance of it for everyone who lives, works and visits the Far North and to understand the problems faced by all users of the transport network.	✓	✓	✓	✓	✓	✓	✓
Workshop 2: Investment Logic Mapping Workshop (ITS)	The purpose of this workshop was to undertake the Investment Logic Mapping (ILM) process with approximately six selected stakeholders that represented a range of district roles. These key stakeholders worked towards identifying the benefits of resolving the problems recognised in workshop 1, and to explore the strategic responses to remedy those problems. They were also invited to comment on the wording of the problem, benefit and strategic response statements. The outcome of this workshop was the ILM map, which will be further discussed in sections below.	✓			✓			
Workshop 3: Benefit Mapping processes Workshop (ITS)	The purpose of this workshop was to undertake the Benefit Mapping (BM) process and produce a BM map which will be discussed in detail later in the strategic response. KPIs and measures were identified against each of the benefits that were finalised in the previous session.	✓			✓	✓		
Workshop 4: Option Longlist Development Workshop (ITP)	The option long list for this PBC was developed through a collaborative process with active involvement from key stakeholder groups that also attended Workshop 1. The workshop's primary focus was to develop a long list of transport project options to address the key strategic responses under each of the seven Action Plan areas and to explain the process going forward. As part of this process, two facilitated group activities were undertaken with workshop attendees to gather possible transport solutions for each strategic response. Stakeholders were then given an opportunity to individually prioritise the transport solutions gathered.	✓	✓	✓	✓	✓	✓	✓
Workshop 5: Programme Development Workshop (ITP)	Stakeholders who were invited to Workshop 4 were also involved in the programme development process. The workshop's primary focus was to further understand stakeholder's views on prioritising transport projects to best address the identified FNDC transport problems and strategic responses. As part of this process, a group activity was facilitated where stakeholder groups (Workshop Groups 1-4) were given the opportunity to prioritise the longlist of transport options and therefore produce a total of four workshop draft programmes.	✓	✓	✓	✓	✓	✓	✓

3.2 Whakatūtaki Māori / Māori engagement

Maori engagement has taken place throughout the development of the PBC and is summarised below.

- Iwi invited to problem definition workshop and offered separate opportunity to meet outside of workshop.
- All invitees were issued meeting minutes from problem definition workshop
- Secondary opportunity offered for individual discussions about the workshop outputs or to discuss problems.
- Separate meeting with staff of the Te Hiku Development Trust that manage the infrastructure development needs of five northern Iwi.
- Invitation to participate in the development of the ITP including workshop 2 and 3. All invitees were issued meeting minutes irrespective of attendance.

It is noted that there are opportunities for more widespread engagement and these future engagement steps are outlined in the Part C Management Case.

4. ALIGNMENT TO EXISTING STRATEGIES

This section describes how the proposed assessment outcomes align to relevant national, regional, sector and organisational strategies. The strategies with the most direct impact on this PBC are shown below in Figure 5.

Figure 5: Existing strategies with most direct impact on the ITS

Appendix C provides a detailed description on the key focus areas and outcomes of each strategy identified above.

5. ISSUES AND CONSTRAINTS

Issues and constraints which may impact the programme of works are summarised in the uncertainty log in **Appendix D.**

The role of the uncertainty log is to identify areas of uncertainty that exist in the context of the PBC and that may be within the sphere of influence of the project. The uncertainty log includes assumptions that might influence understanding of the problem statements and which may affect the effectiveness and feasibility of the alternatives and options developed.

The uncertainty log was progressively developed through the project. Issues have been added from stakeholder meetings, evidence gathered and analysis that has been undertaken by the project team.

The key uncertainties for the programme include:

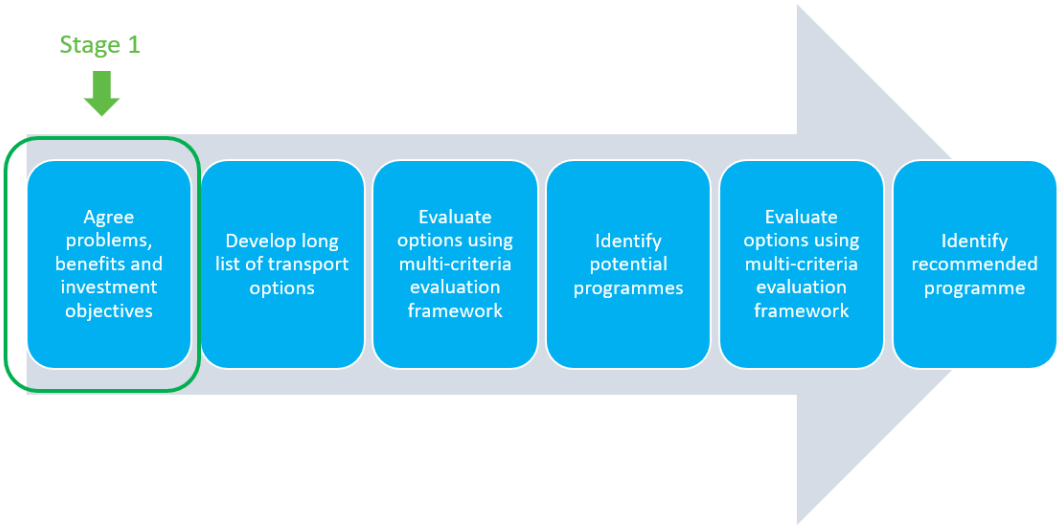
- Factors affecting transport and network demand
    - Land use changes for both existing and new agriculture and horticulture industries
    - Change in forestry harvesting patterns and increase in small scale logging productivity
    - Residential population forecast increases
    - Future land-use changes
    - Fluctuating market value for primary industry products
- Factors affecting supply and cost of transport:
    - Uptake of High Productivity Motor Vehicles
    - Climate change and associated environmental effects
    - Seasonal variations and weather patterns
    - Low population base outside of urban areas limiting the feasibility and provision of public transport options
    - Potential re-establishment of the North Auckland rail line
    - Fluctuations in fuel prices
    - Fluctuations in the market value of products

All uncertainties were considered by the project team during the development and assessment of options and programmes.

6. DEFINING THE PROBLEM, BENEFITS AND STRATEGIC RESPONSES

This first stage in the PBC process is shown in Figure 6. Understanding the underlying problems in the Northland region was critical to setting the PBC up for success.

Figure 6 PBC Process – Stage 1



A facilitated workshop was held on 29th July 2019 with a wide range of stakeholders to understand the key issues for the region. Five themes were identified:

- Issue 1: Road Condition
- Issue 2: Resilience
- Issue 3: Growth
- Issue 4: Transport Choices
- Issue 5: Safety

Additional workshop discussions with key stakeholders were carried out to confirm the problems to better address the challenges faced over the entirety of the network.

The two additional workshop sessions were:

- 29th July 2019 – Investment Logic Mapping workshop focusing on redefining and condensing the problems and identifying the benefits and strategic responses.
- 31st July 2019 – Benefit Mapping workshop focusing on identifying the KPIs, measures and baseline.

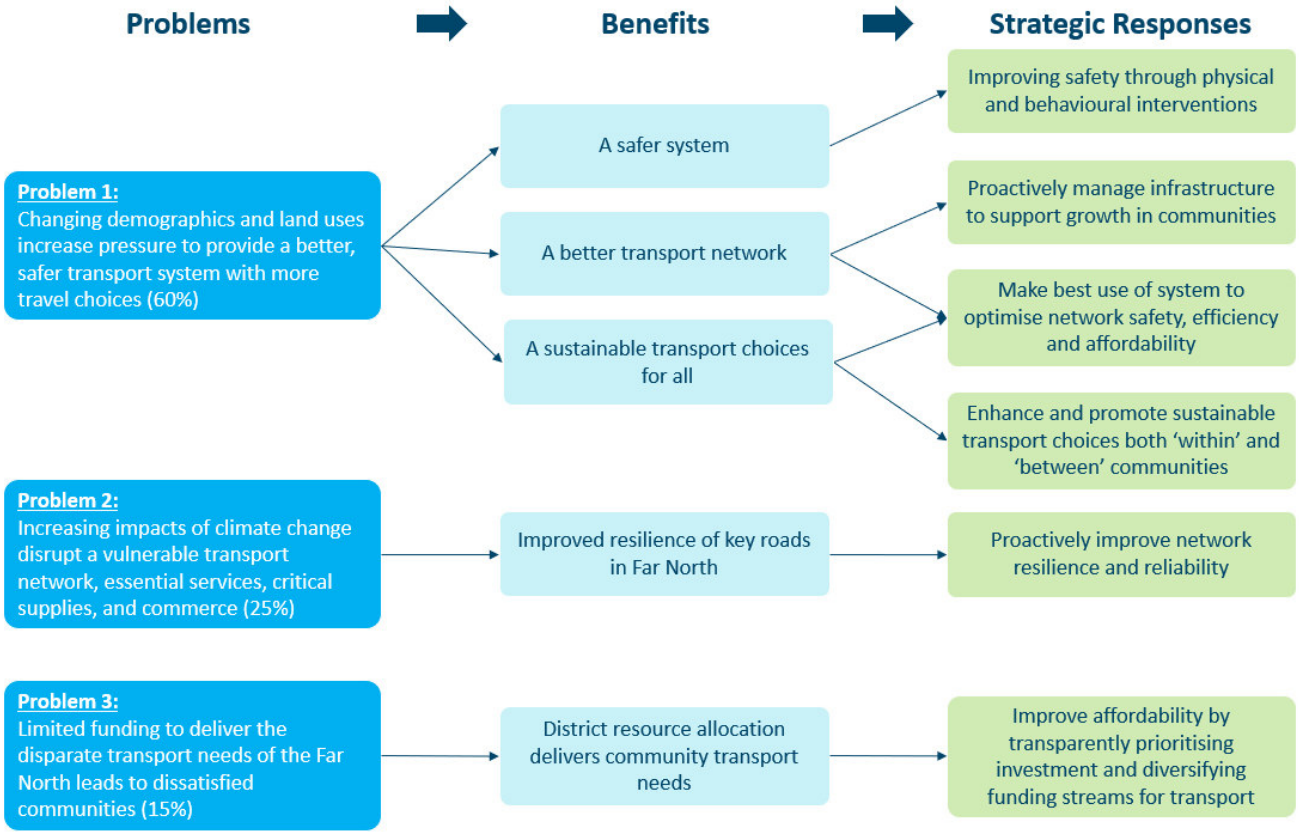
An analysis of existing problems within strategic documentation such as the Regional Land Transport Plans (RLTP) and the Northland Economic Action Plan (NEAP) as well as a review of the Government Policy Statement on Land Transport was provided to the workshop participants as a starting point for problem identification.

Three problem statements were developed by the team based on the themes identified by the wider stakeholders and key issues within strategic documentation. In summary:

- **Problem 1** addresses road condition, growth, transport choices and safety
- **Problem 2** focuses on resilience
- **Problem 3** explores a key challenge area involving limited funding issues faced by the District.

As noted, the benefits of successfully investing to address these problems were identified as part of the ILM process. The ILM is provided in Figure 7 mapping the problems described above to benefits of investment and ultimately the strategic responses identified.

Figure 7: FNDC transport strategy problems, benefits, and strategic responses



The following three sections will separately discuss each problem, its associated benefits and the strategic responses required to address this issue. Each problem section is ordered as follows:

- **Problem description** – description of the intent of the problem
- **The Evidence** – detailed evidence of the cause and effect of the problem
- **The Response** – discussion about the strategic response (which forms the basis of the six focus areas of the Integrated Transport Strategy)
- **The Investment Objective and Measurement** – detailed discussion on investment objectives, KPIs and measures for the problem.

7. PROBLEM 1

Problem 1: Changing demographics & land uses increase pressure to provide a better, safer transport system with more travel choices (60%)

Problem 1 is a wide-reaching problem and integrates various areas of the transport system. Figure 8 below summarises the key parts to Problem 1.

Figure 8: Problem 1 key parts

The Far North has a limited transport system and the key areas experiencing ongoing issues were identified to be safety, the road network and travel choices. These areas are particularly vulnerable to the changing demands and environment in the Far North.

The essence of Problem 1 lies in the triggers that exacerbate these existing transport problems in the Far North. The changing population demographic and land uses in the Far North District were identified as key triggers during the stakeholder workshop. The Far North is experiencing a small but steady increase in overall population, with a significant rise in the aging population. In addition, future projections indicate an increase in Maori population residing in the Far North. Overall, the resulting growth in residential activity along with commercial and industrial activity is prompting increasing changes in land use within the District. Growth in the primary industry sector including forestry, agricultural and horticultural activities are encouraging land use changes in rural areas. For example, the avocado industry is expanding in Kaitaia, dairy farming is anecdotally reported as changing to beef or other land uses and previously marginal forestry land is being harvested.

Changing demographics and land uses changes the needs and demands of communities and as a result significantly impacts the overall transport system and therefore exacerbates the existing problem areas. This change in transport demand puts pressure on the transport system to provide safer roads and facilities, improved road conditions, and sustainable and affordable travel choices.

The different causes of changing demographics and land uses in the Far North and the general effects and consequences are summarised in Table 4.

Table 4: Problem 1– Causes and general effect and consequences of changing demographics and land uses

Causes	Effect and Consequence
• The demographic outlook shows the gradual increase in resident population, however a reduction in the working age population is expected with a significant increase in the number of older persons. The Far North is an attractive place for the retired to reside in.	• The older demographic of the District requires the transport network to cater for more equitable access provisions which include alternative travel choices and improved facilities. Furthermore, the population migrating from urbanised areas to the Far North for retirement will potentially have higher expectations on the level of service of the transport network, which will influence overall customer satisfaction.
• A large population returning to Iwi and Hapu.	• The steady increase in visitors will generate a higher demand on the existing roading network during the peak travel periods, putting pressure on the network level of service and overall compromises driver road safety. There is a significant concern on the existing transport network regarding the balance and prioritisation between peak and off-peak seasons. In addition, there is opportunity for the growth of international visitors, therefore the road network needs to be able to cater for the different expectations and needs of international visitors
• The visitor economy in the Far North is stable and indicates a gradual increase in visitors. Furthermore, tourist visits are concentrated in peak travel periods.	• The increasing population of Iwi and Hapu in the Far North may contribute to changes in land use as a result of Treaty Settlements.
• The Far North is experiencing a change in land uses across the District, particularly focused around primary industries, and residential / commercial growth in key townships.	• Changing land uses and growth within the District results in the current level of service of the transport network being a major concern for the community. In addition to the implications on the network condition, higher heavy vehicle volumes on the existing road network will result in a problem with dust-prone roads.
• The relative isolation of communities' results in people commonly required to travel long distances to access social and economic opportunities. The residents are reliant on the road network.	• A lack of structure planning is creating ad-hoc responses to new developments / land uses, which is leading to poor transport outcomes.
• The geographical nature and dispersion of the District limits the possibility and viability of alternative travel choices other than by private vehicles.	• The geographical isolation of communities and type of terrain cannot be physically changed and there is a limit to the type of affordable engineering improvements that can be made to address safety

Far North's changing demographics and land use will have a direct impact the overall transport network and will require the District to respond accordingly to the resulting transport issues. These impacts can be summarised into three key areas of the Far North's transport system: a safer system, a better transport network and sustainable transport choices for all. The following table further describes the impacts of changing demographics and land uses on the three focus areas of the existing transport system.

Table 5: Impacts of changing demographics and land uses on the Far North District transport system

Key transport focus areas	Description
A safer system	• Increasing number of residents in the Far North generate higher volumes of traffic on the existing roading network. In addition, growing tourist visits concentrated during peak seasons further increases traffic volumes. Higher traffic volumes combined with the high-speed environment increases accident risks. • New road users (including older persons) that have migrated to the Far North or tourists may not be familiar with the road conditions and standards within the District. Unfamiliarity and high expectations on the transport network can lead to a higher crash risk. Fatigue caused by long distance travel may also be a contributing factor to higher crash risk especially for tourists who are more likely to misjudge travel distances and are unfamiliar with the narrow winding nature of the district's roads. • Low income families are more likely to be driving vehicles with low star ratings or unwarranted vehicles, which can therefore lead to poor safety outcomes. • Changing land use supporting the growth of primary industries lead to an increase in heavy vehicles on the road network. With the District road network generally narrow and windy, the increased heavy vehicle traffic poses a safety risk for both regular and heavy vehicle road users in terms of reduced visibility, passing and damaged road surfaces.
A better transport network	• Higher traffic demand and loads put pressure on the existing transport infrastructure. Sections of the existing road network are not fit for high traffic volumes and loads (including high productivity motor vehicles and 50MAX vehicles), as they do not provide an adequate level of service. This requires more effective road maintenance and improved provision of infrastructure. • A large section of the District road network is unsealed. Increased number of heavy vehicles on these unsealed roads induces health impacts on the local community as a result of dust discharge. • The increasing population numbers and changing age structure triggers a need for more equitable access to social and economic opportunities. In addition, access provisions for the mobility impaired (i.e. footpaths, road design and signage) is another significant area of improvement given the increasing older population within the District. • The Far North District is currently heavily reliant on the road network however the existing road network is prone to failures and closures[2]. It is important to provide a consistent and reliable transport network for social and economic access.
Travel choices	• The increasing population and higher number of older residents triggers the need for alternative modes of travel. This need is further exacerbated with potential increased employment from growth in forestry, agriculture and horticulture sectors which are dispersed around the District. • With the higher expectations of users in the urban areas, the Far North District is pressured to optimise their existing transport network to be able to provide viable travel choices such as walking, cycling, public transport and shuttle buses. • Sustainable travel choices include both sustainable modes but also sustainable in terms of affordability of maintaining the services. The Far North will remain geographically spread with low population communities which could make traditional travel choices such as regular bus services uneconomical.

[2] Evidence provided on road closures in Section 8.

The following sections examine in more detail the evidence for the existing safety situation, road conditions and provision of alternative modes in the Far North as well as the changing demographics and land uses.

7.1 The evidence

7.1.1 Existing Safety

Road safety is a key theme which emerged from the stakeholder workshop and various transport strategies within the region. The safety issue included the unforgiving nature of the route with windy sections and narrow roads, personal safety and perceived safety sharing the roads with a high number of heavy vehicles.

Analysis has looked at crash data from the Crash Analysis System (CAS) for the District road network within the strategic case District. At a network level, crash statistics have been reported in the Kiwi Road Assessment Programme (KiwiRAP) risk ratings for both personal and collective risk.

The risk mapping highlights roads that are of higher risk than others and the road, vehicle, speed and driver/rider contribution to the risk.

Collective risk is a measure of the total number of fatal and serious injury crashes per kilometre over a section of road. Because collective risk is measured in terms of the number of crashes per kilometre, in general roads with higher traffic volumes have a higher collective risk.

Personal risk is a measure of the risk to an individual using a section of road. Unlike collective risk, personal risk takes traffic volumes into account.

The associated risk rating thresholds are detailed in Figure 9. A medium personal and collective risk rating is generally considered acceptable for the State Highway network.

Figure 9: Collective and personal risk thresholds

RISK RATING	COLLECTIVE RISK Average annual fatal and serious injury crashes per km	PERSONAL RISK Average annual fatal and serious injury crashes per 100 million vehicle-km	COLOUR
Low	≤0.039	<4	
Low-medium	0.04≤0.069	4≤4.9	
Medium	0.07≤0.10	5≤6.9	
Medium-high	0.11≤0.189	7≤8.9	
High	0.19+	9+	

Figure 9 and Figure 10 set out collective and personal risk ratings for the district roads based on the past five years of crash history and latest traffic volumes.

The district roads perform satisfactorily from a personal and collective risk perspective with most of the network operating at low risk levels. This is likely because of the low traffic volumes on district roads compared with State Highways within the region.

Several areas within the District operate with medium-high and high personal and collective risk. These areas include generally well-populated or growth areas with higher traffic volumes such as Kerikeri, Waipapa, Kaitaia and Kaikohe. It is noted that the data indicates that the personal risk experienced by road users is generally higher than the collective risk, with more district roads having a high personal risk rating.

Figure 10 Collective Risk map

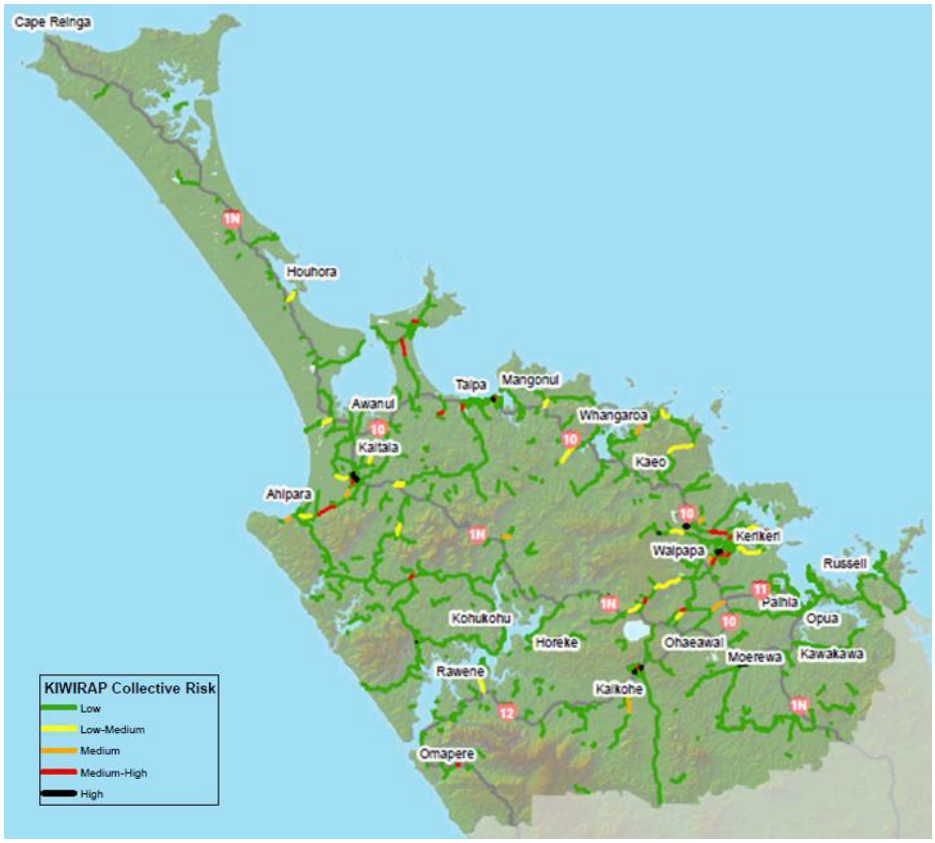


Figure 11: Personal Risk map

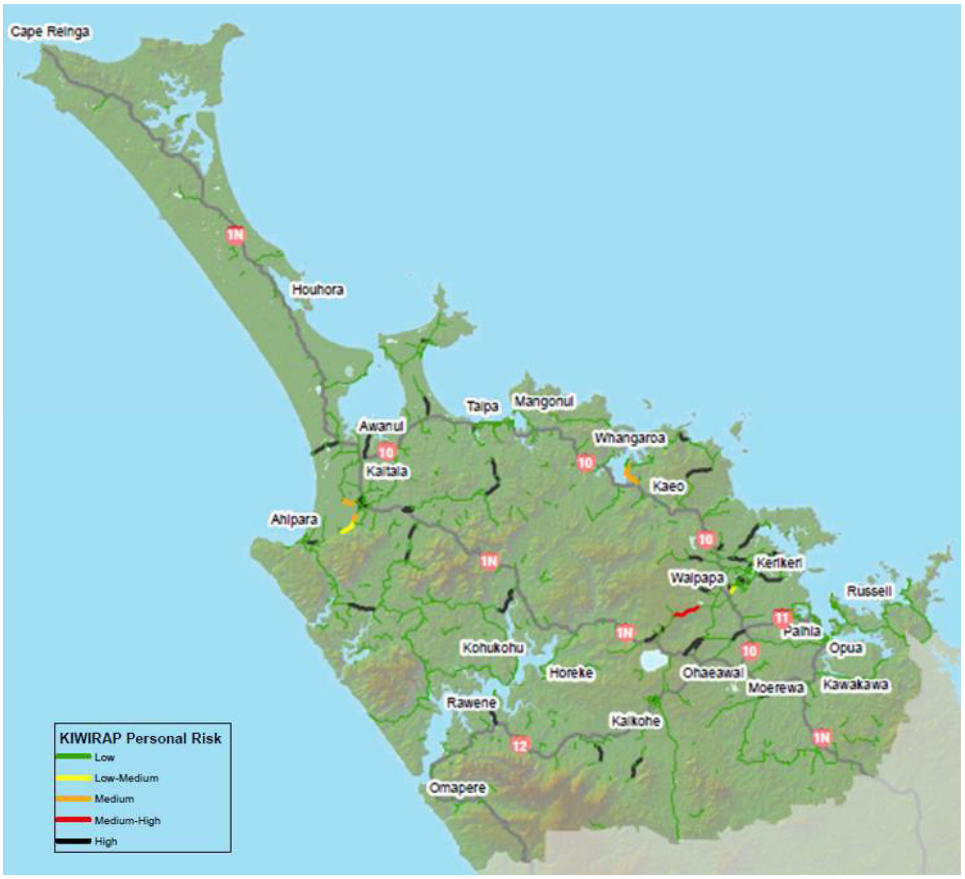


Figure 12 sets out the location of deaths and serious injury crashes in the District based on the movement type in each crash.

Figure 12: DSI crashes by movement type and severity

The crash history for the District over the last five years has been analysed to determine common themes and trends between crashes. The crash history on Far North local roads and State Highways is shown in the table below.

Table 6: Far North DSI crash history

	Local Roads only	State Highways only	TOTAL
# DSI crashes	**160 crashes**	197 crashes	357 crashes
# Fatal crashes	27 crashes	38 crashes	65 crashes
# DSI's	**189 injuries**	263 injuries	452 injuries
# Fatal injuries	28 injuries	44 injuries	72 injuries

As shown, a total of 160 fatal and serious injury crashes (or 189 DSI's) occurred on local roads within the District. Analysis suggests the following trends and patterns on local roads:

- Approximately 70% of high severity crashes involved lost control and head on crashes.
- While heavy vehicles are perceived as a high safety risk for drivers, less than 5% of crashes involve heavy vehicles, which is below national averages.
- 45% of DSI has alcohol or drugs as a factor which is overrepresented compared with national averages.

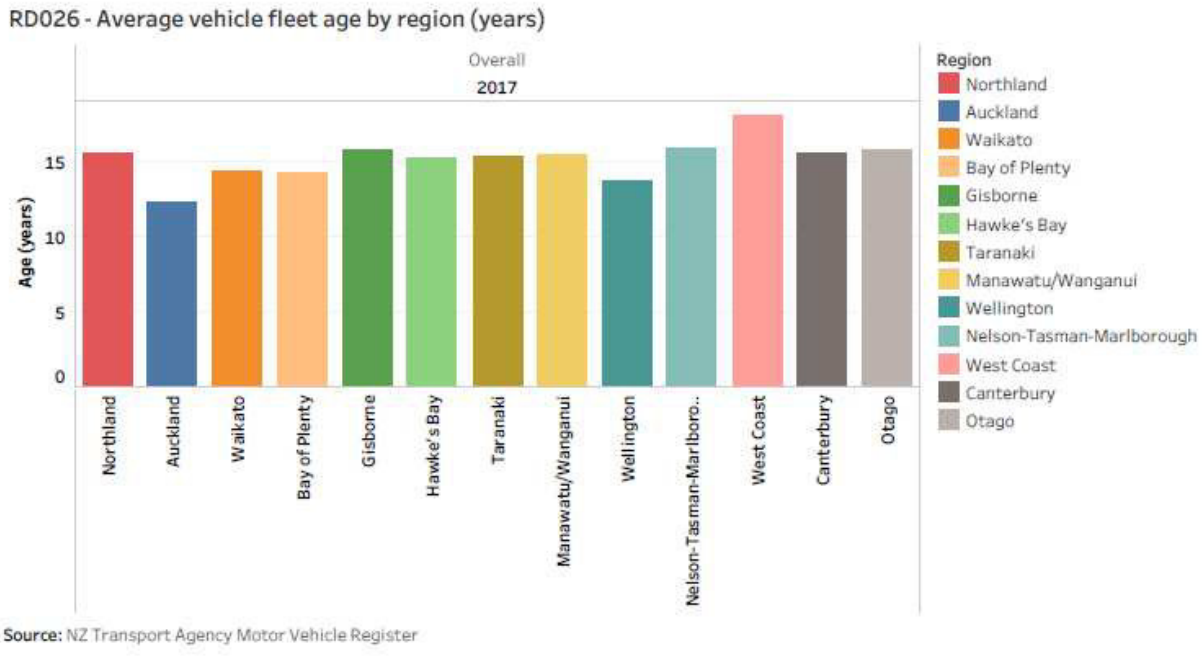
In addition to the Waka Kotahi Crash Analysis System (CAS) database, evidence has been analysed from customers using the network on a day to day basis. Anecdotal evidence suggests the following:

- Road Crashes are generally underreported due to the remoteness of the District and limited cell phone reception.
- Driver behaviour and attitude regarding speeding and lack of seatbelts are major factor in high severity crashes.
- High speed limits (+80 km/hr) encourage drivers to speed on narrow and windy roads, which is a likely factor for loss of control crashes.
- The vehicle fleet is generally older contributing to the road safety issues. Police anecdotally report a high level on non-compliance with Warrant of Fitness certification.
- Police report there are many unlicensed drivers in the District.
- Customers perceive reduced personal safety due to the challenging and narrow road terrain combined with a high proportion of larger vehicles sharing the network.
- Wandering stock is considered a contributor to crashes.

Regional vehicle fleet information has been investigated using the Waka Kotahi vehicle registration database (2017) as shown in Figure 13.

Key regions within the north island have been compared to Northland to determine the differences in average vehicle fleet age. The data suggests that Northland generally has an old vehicle fleet compared to other regions and compared to the national average, which is 14.4 years in 2017.

Figure 13: Vehicle fleet age by region



Source: NZ Transport Agency Motor Vehicle Register

Crash data indicates that the highest safety risk areas in the Far North are between Kaitaia and Ahipara, Waipapa and Kaikohe and the Kerikeri road network. A key opportunity to improve the safety of road users lies in targeting these high-risk areas first, combined with effective driver behaviour education and enforcement.

7.1.2 Existing road network

The Far North encompasses a large road network which serves as the main transportation method for industry, tourists and people residing in dispersed communities located around the region. This is due to the geographic and topographic nature of Far North, which limits the development of other alternative transport methods. It is noted that 65% of the road network is currently unsealed and a number of investigations have been undertaken on this issue.

The ONRC is a classification system that identifies the level of service, function and use of road networks and State Highways. Figure 14 shows the classifications for the District road network.

Figure 15 and Figure 16 indicates the total and heavy vehicle traffic volumes along the district roads within the Far North District.

Figure 14: Far North District road network classification

Figure 15: Average daily traffic count (vpd)

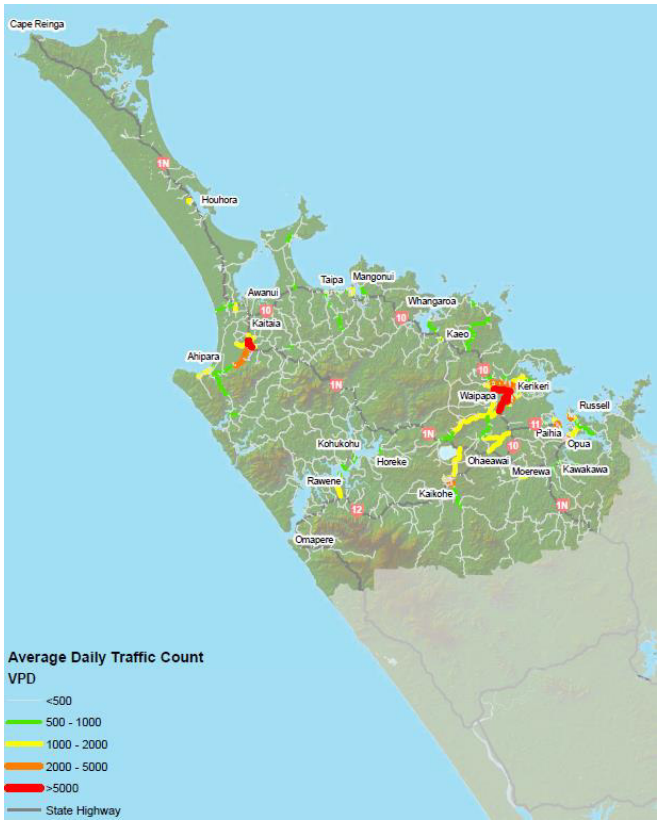
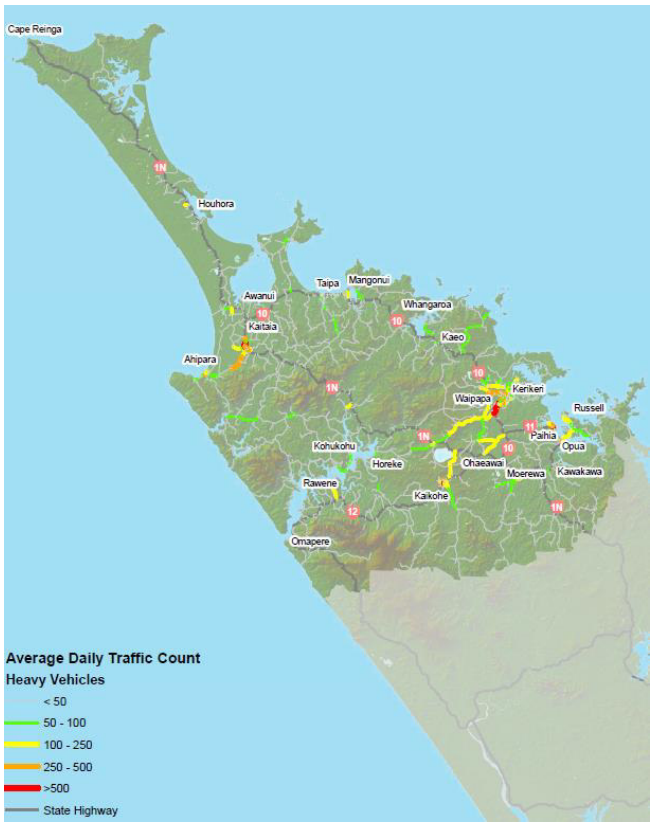


Figure 16: Average daily heavy vehicle traffic count (vpd)



As shown, key urban areas such as Kerikeri and Kaitaia currently carry the highest volumes. Kerikeri and Kaitaia are key growth townships, with Kaitaia experiencing a boom in the horticulture industry and Kerikeri accommodating increasing residential and commercial activity. This will result in increasing traffic volumes and heavier loads which is expected to put pressure on the existing transport infrastructure in these areas. It is therefore important to proactively manage and prioritise infrastructure to support the growth in communities.

General Road Conditions

Poor road surface conditions have a significant impact on the safety of roads users as a result of increased wear and tear on vehicles and obstruction on the roads. Damaged roads restrict connectivity between communities through lower freight speeds and in some cases full route closures and reduces the efficiency of doing business within the District.

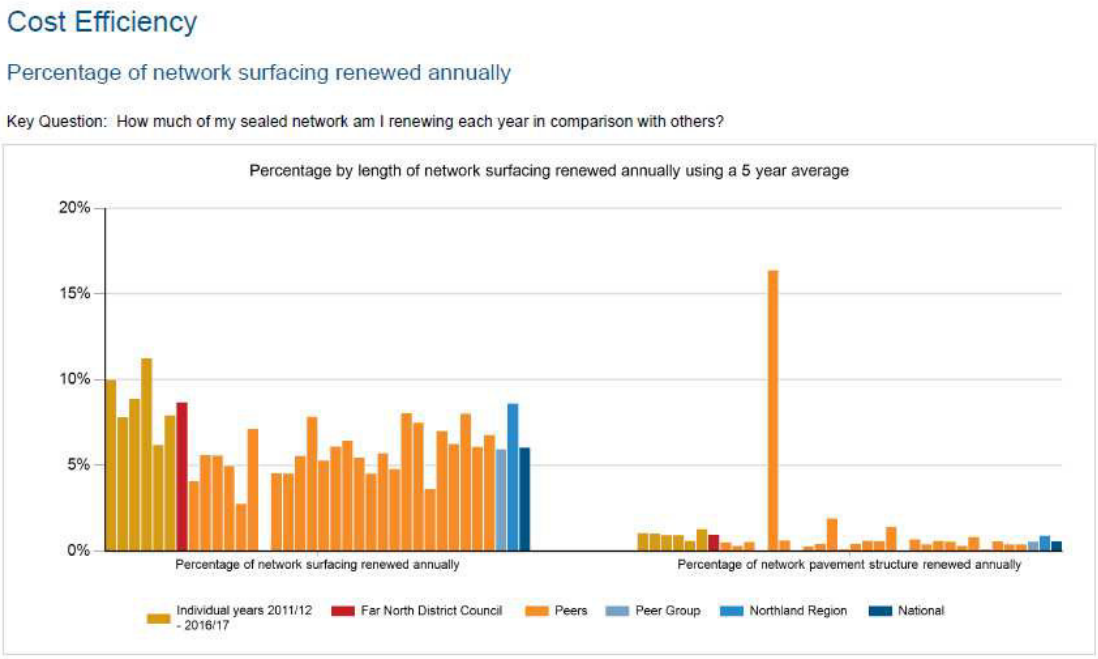
When normal maintenance practices are undertaken, sealed roads usually have a design life of 30 years, while unsealed roads have a design life of 25 years. Lack of planned maintenance is the leading cause of failures and damage to the both sealed and unsealed roads. Damaged road conditions are evident on the District roads as maintenance works undertaken are usually reactionary following local complaints. The need of 'emergency works' to repair damaged roads places the District under significant pressure as this adds considerable unexpected costs. It is noted that the Far North District council has spent an average of $7.1m per year over the past 10 years on emergency works[3].

The Far North District road network has a short surface life compared to its peers, with an average of 11 years compared to a 14-year average life for its peer groups. This combined with its extensive roading asset base results in the cost of pavement maintenance in the Far north being one of the

[3] FNDC AMP 2018-21

highest for its peer groups. The graph below shows the percentage of pavement surfacing renewed in the Far North each year in relation to its peers.

Figure 17: Percentage of road network surfacing and pavement renewal annually



Source: Waka Kotahi TIO annual achievement figures

Poor maintenance programmes and high maintenance costs leaves road surfaces in inadequate condition, generally beyond repair or in need of emergency works to recover its level of service desired for asset type.

Currently, High Productivity Motor Vehicles (HPMV) and 50Max vehicles do not have full access to the district's road network. The poor condition of bridges and roads in the network restrict the access of HPMV and 50Max vehicles, which therefore limits the efficiency of transport, especially for the freight industry. With reference to the Activity Management Plan (2018-21), the latest review of bridges was undertaken in 2016 which identified a total of 715 bridges to maintain within the network. Out of the 715 bridges, 111 bridges were identified as requiring remedial action to remedy scour, while 15 bridges were in the state of collapse. The bridges in critical condition can be directly associated with HPMV and HCV's damage and the age of the bridges.[4]

Maintaining and extending the HPMV and 50Max network optimises efficiency of the District's transport system. Currently, the Council allocates approximately $1m per year for bridge maintenance, which is insufficient to maintain the HPMV and 50Max network. It is noted that the bridge inspection process is anticipated to be conducted on the three-yearly basis (more often for critical bridges), therefore results should be closely monitored, and appropriate improvement / maintenance programmes should be developed and reviewed (if necessary). This data is captured in the Activity Management Plan.

[4] FNDC AMP 2018-2021

Unsealed road network

There are over 1,600 km of unsealed roads in the Far North District. Unsealed roads are an ongoing issue on the District road network. Sealing or dust mitigation on all unsealed roads is not a viable option for the Far North given that associated costs are one of the highest compared to peer groups.

Heavy vehicles serving primary industries are one of the key causes of dust generated from unsealed roads as freight in the Far North must use unsealed District roads to access State Highways. With new and changing land uses, the location and scale of heavy vehicle demand on the transport network is changing. Anecdotal evidence suggests there is a significant problem around new farms and industries being established in locations where the surrounding District road network is unfit to service heavy vehicles. As an example, the National Exotic Forest Description 2016[5] indicates that approximately 10,000-15,000 ha of forest will be due for harvesting every 5-year period for the next 15 years, therefore leading to an increase in the number of forestry and logging trucks on the unsealed road network.

To address the problem with dust exposure, FNDC has undertaken an investigation to assess the highest risk roads for dust using the Dust Risk Matrix from Waka Kotahi's General Circular 16/04. Results from 2017 indicate that there a 374km of unsealed roads with a dust risk score of 12 or more from which there are 711 houses exposed to a potential dust risk[6].

The Far North District is proposing in its Long-Term Plan to spend $6.08 million each year over the next 10 years to repair and maintain the rural unsealed roading network. The expenditure on maintenance is high, therefore the importance of targeted maintenance and programming of renewals is emphasized to get better value for money across the assets. It is noted that the Far North District is currently implementing a seal extension programme (2018/19) funded entirely by ratepayers.

The level of service on the road network can be improved when effective preventative maintenance schemes and prioritisation programmes for road seal extensions and dust mitigation are implemented district wide.

7.1.3 Existing travel choices

The Far North is supported by local bus services operating within key communities including Kerikeri, Kaitaia and Mangonui. However due to the widespread nature of communities, local bus services are limited to connections between and within more urbanised communities. The current inter-city bus services operating in Far North are shown in Figure 18. These services connect Auckland to Paihia, Kerikeri, Kaikohe and Kaitaia. In addition, there are a number of tourist buses and other privately-operated services throughout Far North. Anecdotally, stakeholders have raised that the cost of these services can be prohibitive for low income families and that the frequency and range of destinations is limited for access to jobs and social services.

The Far North District is progressively recognising active modes such as walking and cycling as an alternative form of transportation to commuters. Cycling is also an emerging visitor activity in Northland and has the potential to general economic benefits. Currently, there are approximately

[5] https://www.nzfoa.org.nz/images/stories/pdfs/2016-NEFD-report_web.pdf

[6] RLTP 2015-2021

87km of cycle trail, 212km of footpaths, 8km cycle lanes and 5km of shared use paths in the District. Figure 19 shows that there are four cycle trails already existing with six new cycle trails proposed.

Cycling has potential growth opportunities within key communities such as Kerikeri, with cycle lanes being established on main connection routes and attractions such as Waitangi Mountain Bike Park prompting locals to use cycling as a viable mode of transport. It is noted that the Councils annual residents survey (2018) indicates that 38% of pedestrians were satisfied with the level of service of local footpaths, which is an increase of 4% from 2017[7]. Ferry services within the Far North currently link Paihia and Russell, Opua and Okiato and Rawene and Kohukohu (which serves as a critical connection for the Twin Coast Discovery Route). Current ferry operations are critical to the connectivity of the transport network, particularly in the Hokianga, but stakeholders have reported that there is opportunity to improve frequencies to support a wider range of trip purposes.

Air travel is an important way for people to access Far North. In this regard, this District is served by the Bay of Islands Airport, at Kerikeri, and an airport in Kaitaia, with both airports providing domestic flight services to and from Auckland. It is however noted that Air New Zealand does not provide services to Kaitaia leaving only Great Barrier Air, which is an expensive flight service that does not support total mobility. Following the increase in demand, the Bay of Islands airport has undergone an expansion programme overall improving airport facilities. There is currently no provision for direct international flights, and it is unlikely for the airport to accommodate this in the future.

There is currently no active rail connection operating in the Far North and as a result, primary industries are currently solely reliant on the road network. The future for freight rail in Northland is currently uncertain. KiwiRail has recently received funding to upgrade the condition of the North Auckland Line (NAL) which operates from Swanson to Otiria. This upgrade includes tracks, drainage, tunnel upgrades and remove speed restrictions. This funding does not provide for works to increase the capacity of the line such as double tracking. It should also be noted that the Upper North Island Freight Strategy has been released and recommends relocating some/all of Auckland Ports to Northport with associated rail infrastructure improvements to accommodate significantly greater rail freight demand. If this occurs this could significantly alter the freight choices in Northland.

[7] https://www.fndc.govt.nz/your-council/resident-opinion-survey/Far-North-District-Council-2018-Annual-Residents-Survey-Final-030920....pdf

Figure 18: Far North multimodal transport system

Figure 19: Far North walking and cycling routes

As can be seen above, townships along the north-eastern cost and west coast have limited provision of public transport and ferry services and walking and cycling facilities. Isolated communities such as Taipa, Mangonui, Whangaroa and Panguru are heavily reliant on private vehicles to access essential social and economic services such as hospitals, shops, schools and jobs. However, the low and dispersed population base of these communities means that traditional public transport and ride share models are unsustainable for operators and unaffordable for customers. There are very few options for accessible transport and demand for these options will be further exacerbated as the population ages.

The Northland District Health Board (NDHB) provide a free wheelchair friendly daily shuttle service from Kaitaia Hospital to Whangarei Hospital (return) for patients travelling to NDHB appointments or who are eligible for assistance through the National Travel Assistance scheme. It is accessible to the general public provided there are enough seats available, at a cost of $20pp each way. The shuttle has several designated stops en-route to Whangarei Hospital. The service is undergoing a review shortly.

Connectivity is critical for small isolated communities and consideration should be given to the likely benefit any improvements in the range or frequencies of rideshare will provide, particularly with respect to those with mobility impairments and those that are less able.

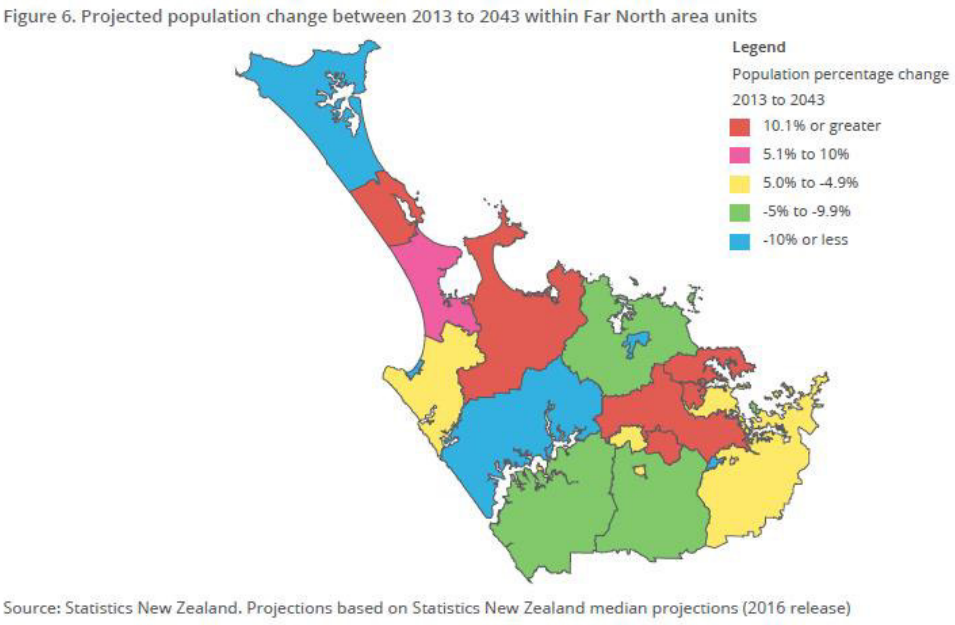
Development of active mode facilities and the Hokianga Ferry connection provides opportunity to improve travel choices for communities in the Far North. A focus on the provision of accessible modes of travel will better support our vulnerable people.

7.1.4 Changing demographics

Population and age

The Far North District is experiencing population growth. As of June 2018, the estimated resident population was 64,000 representing a population density of around 9 people / km[8]. This is a population growth of 1.9% from 2017 and indicates an average growth of 1.2% over the past five years.[9] The majority of population increase has been focused in urban areas located throughout the District, with 85% of growth occurring in and around Kerikeri. Along with Kerikeri, larger urban areas such as Paihia, Kaitaia and Kaikohe cater for around half of the population within the Far North. Most growth is expected to be focused in and around Kerikeri, followed by Mangonui, Coopers Beach and Cable Bay areas, offsetting the ongoing population decline to the north end and west of the District. The following figure shows the projected population change between 2013 and 2043 for different areas in the Far North District.

Figure 20: Projected population change between 2013 to 2043 within Far North area units



Source: FNDC Long Term Plan, Infrastructure Strategy 2018-48

The location and numbers the forecast population growth from 2020 to 2043 is shown in the figure and table below.

[8] Statistics New Zealand, Subnational Population Estimates: At 30 June 2018 (Provisional)

[9] Infometrics, Far North District: Annual Economic Profile, 2018

Figure 21: Location of previous and forecast population growth

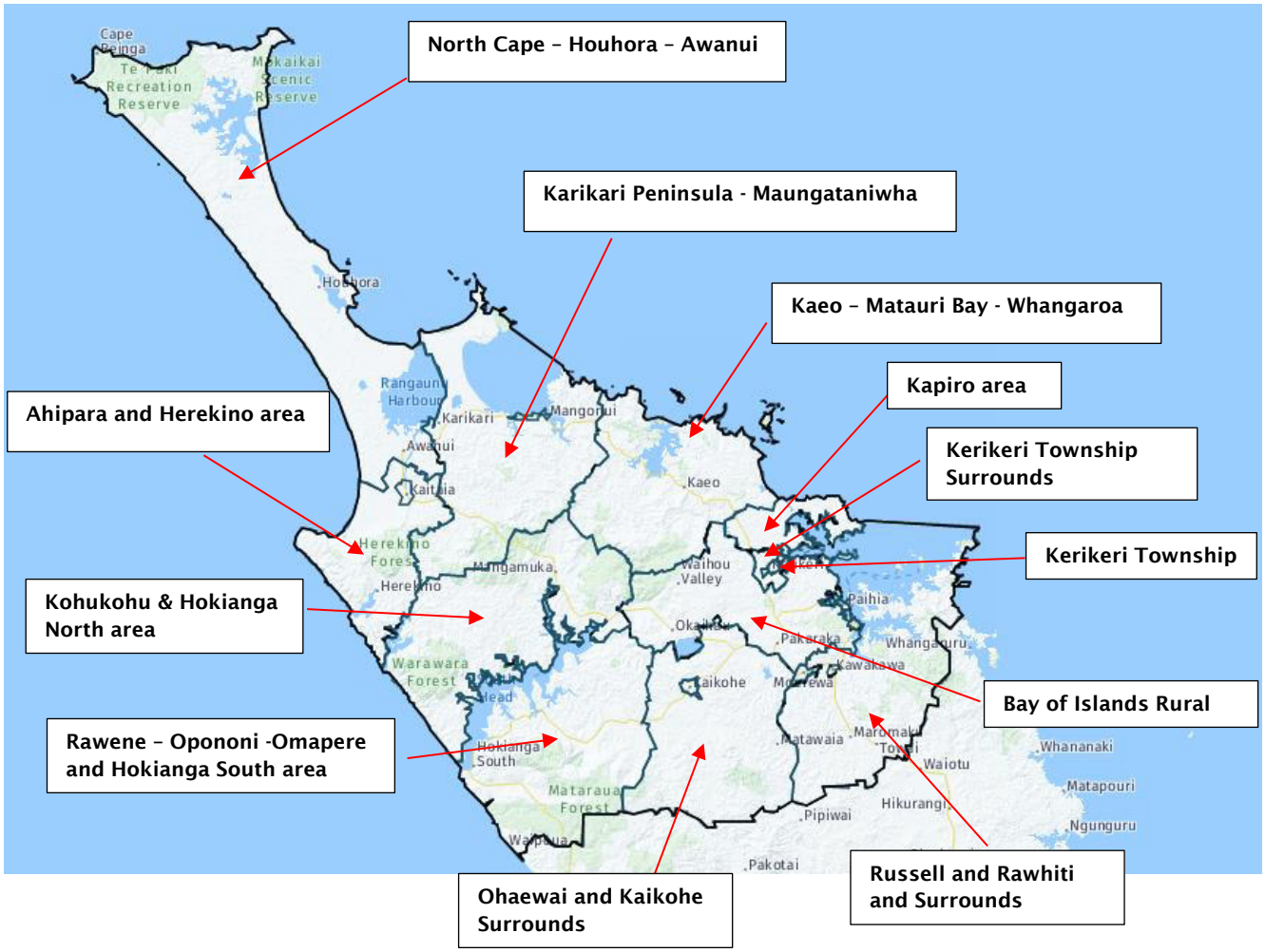


Table 7: Numbers of forecast population growth [10]

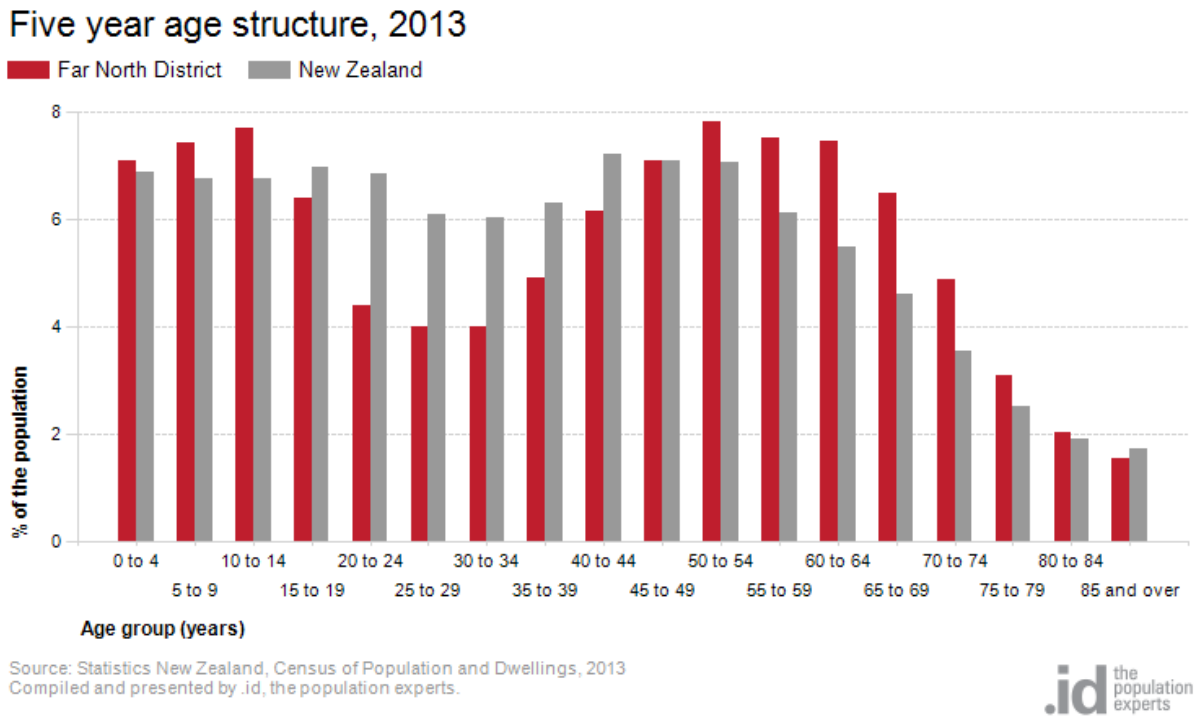
Location	Forecast Population (2020 to 2043)
North Cape – Houhora – Awanui	3,629 to 3,579 (-1.38%)
Ahipara and Herekino area	3,433 to 3,849 (+12.13%)
Kohukohu & Hokianga North area	2,046 to 1,922 (-6.04%)
Rawene – Opononi -Omapere and Hokianga South area	3,870 to 3,738 (-3.41%)
Ohaewai and Kaikohe Surrounds	3,328 to 3,403 (+2.25%)
Russell and Rawhiti and Surrounds	3,385 to 3,179 (-6.08%)
Bay of Islands Rural	5,264 to 5,934 (+12.73%)
Kerikeri Township	4,393 to 6,584 (+49.88%)
Kerikeri Township Surrounds	4,477 to 6,726 (+50.25%)
Kapiro area	3,103 to 3,612 (+16.39%)
Kaeo – Matauri Bay - Whangaroa	3,821 to 4,526 (+18.47%)
Karikari Peninsula - Maungataniwha	4,990 to 5,778 (+15.78%)

As shown above, the highest population growth by far is forecasted to occur in and around Kerikeri.

[10] https://forecast.idnz.co.nz/far-north

The Far North District has a high dependency ratio (proportion of people aged under 17 and over 65 years to the working age population) of any New Zealand region indicating a low proportion of working age people as shown in Figure 22.

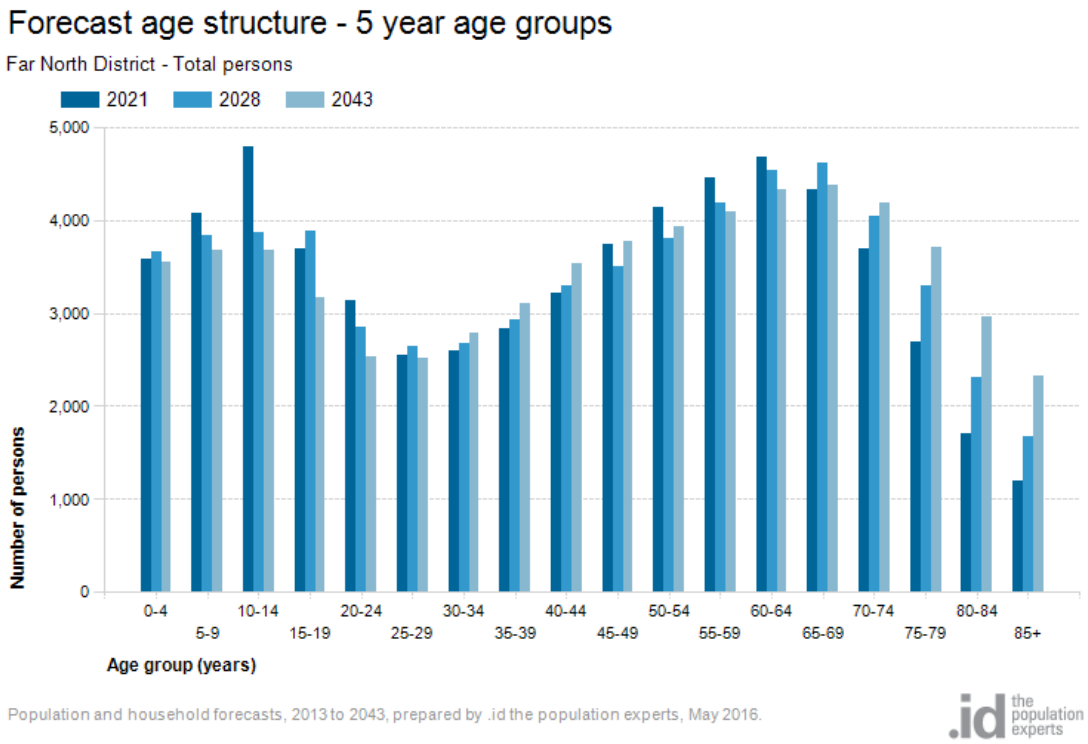
Figure 22: Far North age structure as of 2013 Census data



Source: .id the population experts

Looking to the future, this trend is anticipated to be further emphasised, with the proportion of residents aged 65 years or older forecasted to have the highest population growth between 2028 and 2043. This information is shown in Figure 23.

Figure 23: Forecast age structure



Source: .id the population experts

Future demographic projections indicate that "between 2021 and 2028, the age structure forecasts for Far North District indicate an 8.6% decrease in population under working age, a 16.9% increase in population of retirement age, and a 2.1% decrease in population of working age."[11]

Furthermore, evidence indicates that the largest population increase (in terms of age group) between 2021 and 2028 will be ages 75-79, which is anticipated to grow by 600 persons and account for 5.3% of the total Far North population. By 2028, the largest 5-year age group is expected to be 65-69 years, with a total of 4,611 persons. This will result in different demands on the transport network such as alternative transport options for those that cannot drive or demand for basic infrastructure to accommodate modes such as mobility scooters.

Ethnicity

According to the Census 2013, the District's population comprised the following predominant ethnic groups[12]:

- European 66%
- Maori 45%
- Pacific peoples 3.8%
- Asian 2.2%

Anecdotal evidence suggested by Far North elected members indicated that there is an increasing population returning to the Iwi and Hapu residing in the Far North. This is confirmed by Table 8 below which shows the projected Maori population in the Far North by 2038.

[11] https://forecast.idnz.co.nz/far-north/population-age-structure?AgeTypeKey=2&WebID=10&Year1=2021

[12] Note some people have identified with two ethnic groups.

Table 8: Maori population projections in the Far North (using 2013 census data as the base)

	Ethnicity	Maori
	Projection	Medium
	Age	Total people, all ages
	Sex	Total people
Area	**Year at 30 June**	
Far North district	2013	27100
	2018	28700
	2023	30300
	2028	31800
	2033	33300
	2038	34900

Source: NZ Statistics

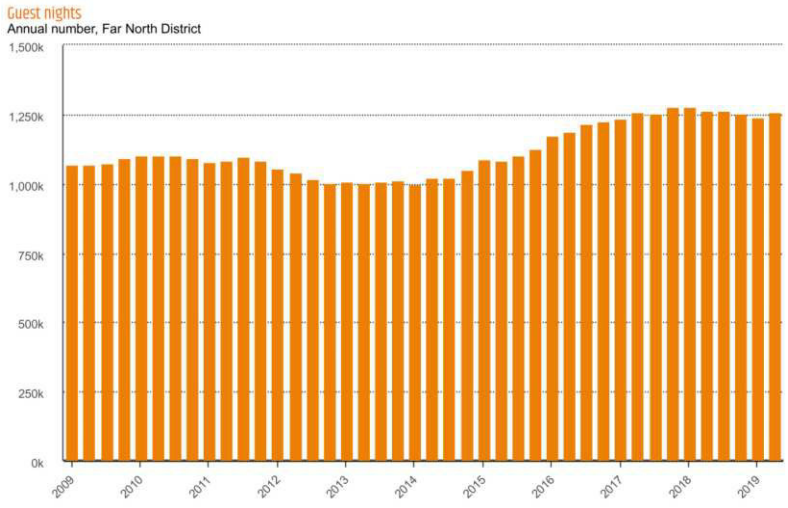
According to the table above, the total Maori population in the Far North is expected to grow by approximately 1.2% between the years 2018 and 2038.

Visitor Economy

The Far North District has a strong base visitor economy with significant opportunity for additional economic growth. The visitor economy contributed $278 million to the total Far North District's GDP in 2018 (with a 10-year average growth rate of 2.3%) and is the highest employment industry (18% of the total share of employment) providing over 4,350 jobs in 2018.

The District has been experiencing gradual growth in the tourism sector, with annual data from 2010 to 2019 indicating a general rise in the annual number of guest nights and tourism expenditure.

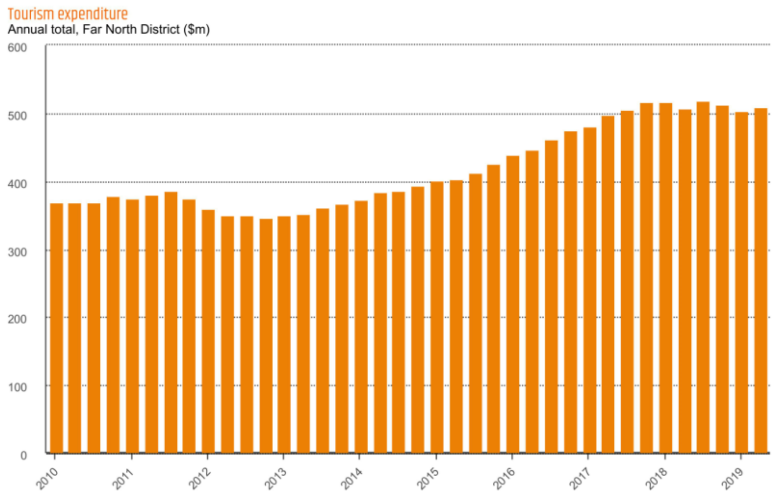
Figure 24: Far North annual guest nights



Source: Infometrics[13]

[13] https://ecoprofile.infometrics.co.nz/far%20north%20District/QuarterlyEconomicMonitor/GuestNights

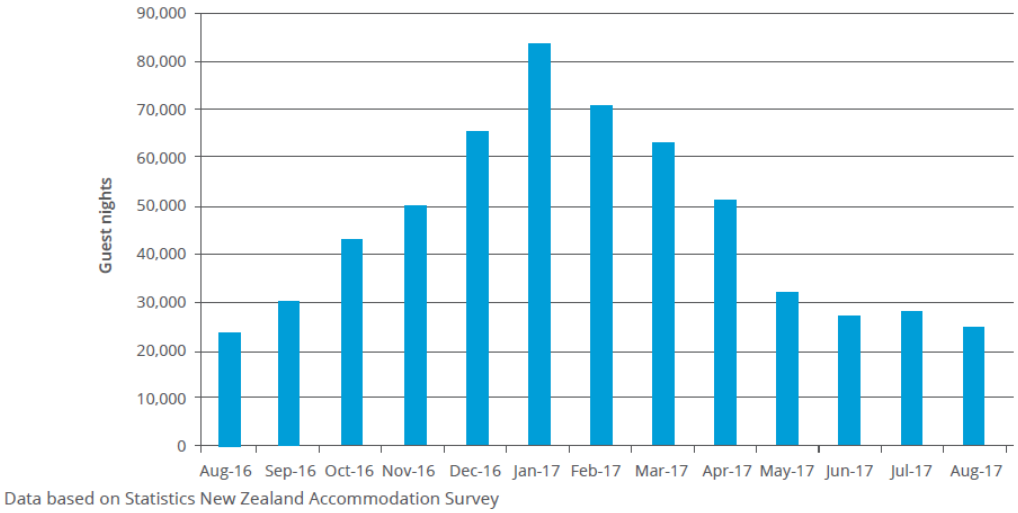
Figure 25: Far North annual tourism expenditure



Source: Infometrics[14]

The Far North is largely seen as a summer holiday destination by both domestic and international visitors. Accordingly, Northland's visitor industry is highly seasonal, with a peak over the summer months, especially January. This corresponds with the holiday period for most New Zealanders and hence domestic visitors make up the majority of this peak. International visitors also peak in summer but tend to be more spread out between January and March. Figure 26 shows the extreme peaks of the Far North guest nights.

Figure 26: Monthly guest nights in the Far North District between August 2016 and August 2017



Source: FNDC Long Term Plan, Infrastructure Strategy 2018-48

This seasonality effect results in the sudden increase in traffic volumes which places additional pressure on the sections of the District's road network that do not provide a sufficient level of service to support high and heavy volumes of traffic. It is important for the District to balance provision for off-peak and peak times, while ensuring key tourist routes are fit for purpose and provide adequate road conditions.

Infometrics is forecasting a moderate increase in international tourism. However, given the District's focus to improve the tourism industry in the Far North via developments such as the Twin Coast

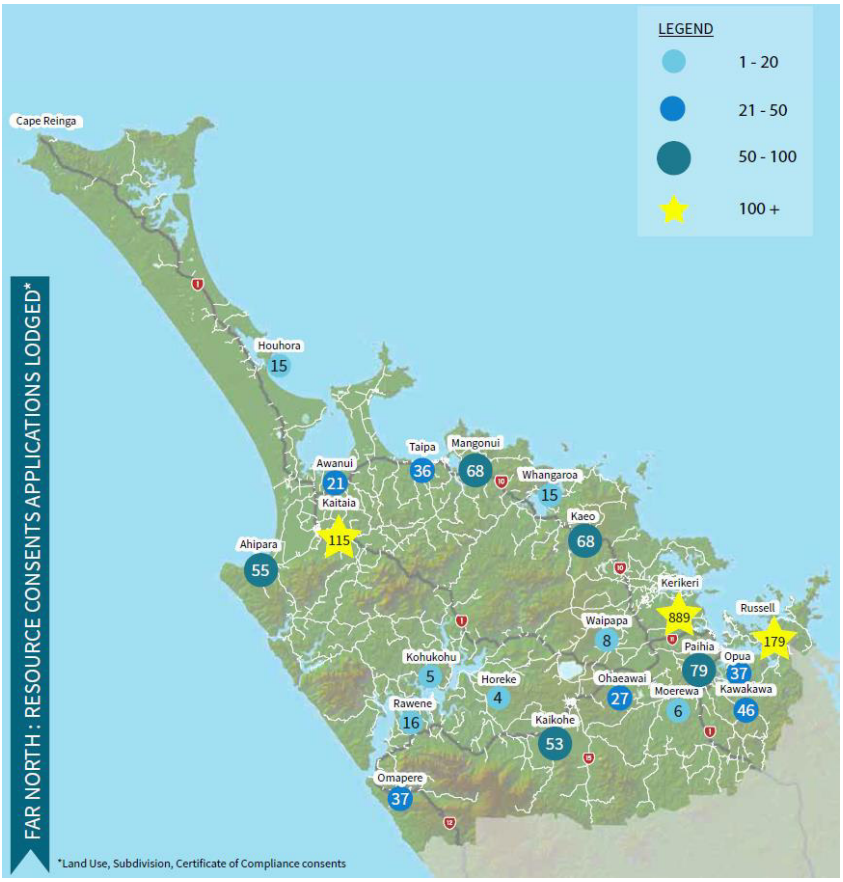
[14] https://ecoprofile.infometrics.co.nz/far%20north%20District/QuarterlyEconomicMonitor/TourismSpend

Discovery Route, there is opportunity for growth in visitors in the next 30 years. International visitors generally have limited experience driving on the typical unsealed and windy roads in the district and there are safety and access implications for these road users. The transport network needs to be able to cater for these different customer expectations as well as manage peak demands from the visitor industry in order to enhance the reputation of the Far North as a travel destination.

7.1.5 Changing land use

The Far North is experiencing changes in land use across the District, with growth areas undergoing increasing residential and commercial development. To capture the changing District, Figure 27 maps the number of resource consents lodged over the recent 5-year period for key townships. The map below accounts for land use, subdivision and certificate of compliance consents only.

Figure 27: Resource consent applications lodged in the Far North

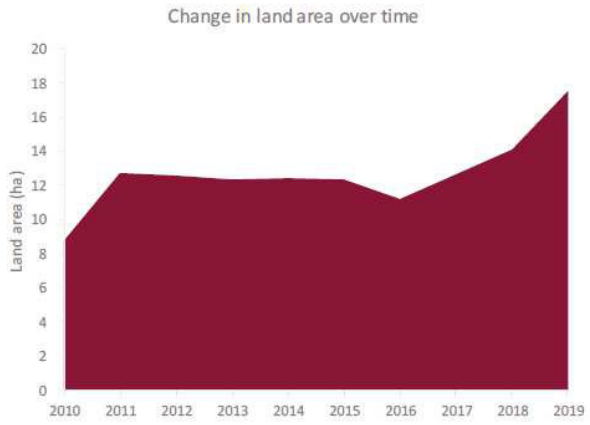


As shown above, Kerikeri has had a significant number of resource consents lodged compared to the rest of the District, followed by Russell and Kaitaia. Kerikeri accounts for 50% of all lodged resource consents within the District and comprises of approximately 63% land use change and 23% subdivision consents. Increasing residential and commercial activity in key townships is a significant contribution to changing land use and growth.

Overall, evidence suggests changing land uses and growing subdivision activity within the District. In particular, there has been a significant increase in industrial and commercial land use in the District (between 2010 to 2019) as shown in the Figures[15] below.

[15] FNDC Industrial and Commercial Land Instruction Guide 2020

Figure 28: Overall change in commercial and industrial land use activity in Far North District between 2010 to 2019



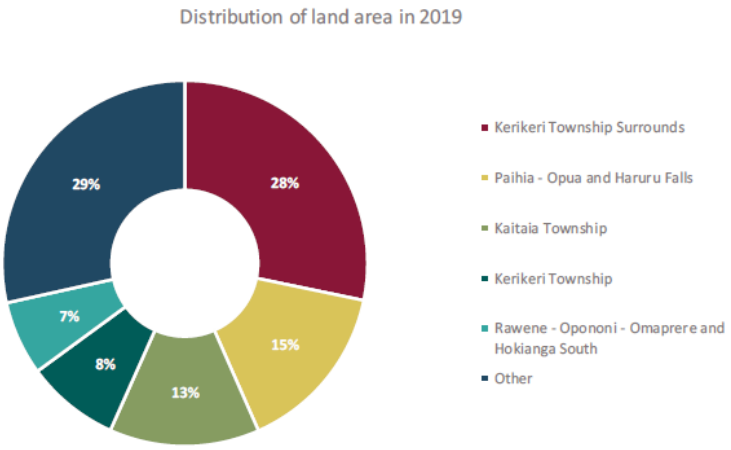
Source: FNDC Industrial and Commercial Land Instruction Guide 2020

Figure 29: Commercial and industrial land use per population area between 2010 to 2019

Population area	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Kerikeri Township	0.4	1.2	1.2	1.2	1.1	1.1	0.9	1.1	1.3	1.5
Kerikeri Township Surrounds	1.8	4.6	4.6	4.6	4.6	4.6	3.7	4.1	4.5	5.0
Kapiro Area										
Bay of Islands Rural	0.2	0.2	0.2							
Kaikohe Township		0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4
Ohaeawai and Kaikohe Surrounds										
Kaitaia Township	1.8	1.8	1.7	1.7	1.8	1.8	1.8	2.0	2.2	2.3
Ahipara and Herekino Area	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7
North Cape - Houhora - Awanui	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	1.0
Kaeo - Matauri Bay - Whangaroa	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Karikari Peninsula - Maungataniwha										
Kawakawa - Moerewa	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Kohukohu and Hokianga North Area	0.1									
Mangonui - Coopers Beach - Cable Bay	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7
Paihia - Opua and Haruru Falls	0.6	0.8	0.7	0.7	0.7	0.6	0.6	1.0	1.5	2.7
Rawene - Opononi - Omaprere and Hokianga South	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Russell and Rawhiti and Surrounds										1.1
Total commercial and industrial	**8.7**	**12.7**	**12.5**	**12.3**	**12.4**	**12.3**	**11.2**	**12.7**	**14.1**	**17.5**

Source: FNDC Industrial and Commercial Land Instruction Guide 2020

Figure 30: Distribution of industrial and commercial land use activity in 2019



Source: FNDC Industrial and Commercial Land Instruction Guide 2020

As shown above, there is a clear increasing trend in industrial and commercial land use in the District and as of 2019, this growth is focused in and around Kerikeri.

The industrial growth can be partly attributed to the growth in primary industries of the forestry, agriculture and horticulture fields due to ideal subtropical climate and soils. Between 2018 and 2019, 'Forestry & Logging' achieved 19.7% annual growth, 'Horticulture & Fruit Growing' achieved 17.1% annual growth and 'Dairy Cattle Farming' achieved 10.8% annual growth. These three growth sectors were within the top 9 industries contributing to growth out of approximately 56 industries in the Far North District (2018-19).

Figure 31: Industries in the Far North District by contribution to growth (2018-2019)

GDP 54 industries by contribution to growth, 2018-2019

Year: 2019 Base year: 2018 Update

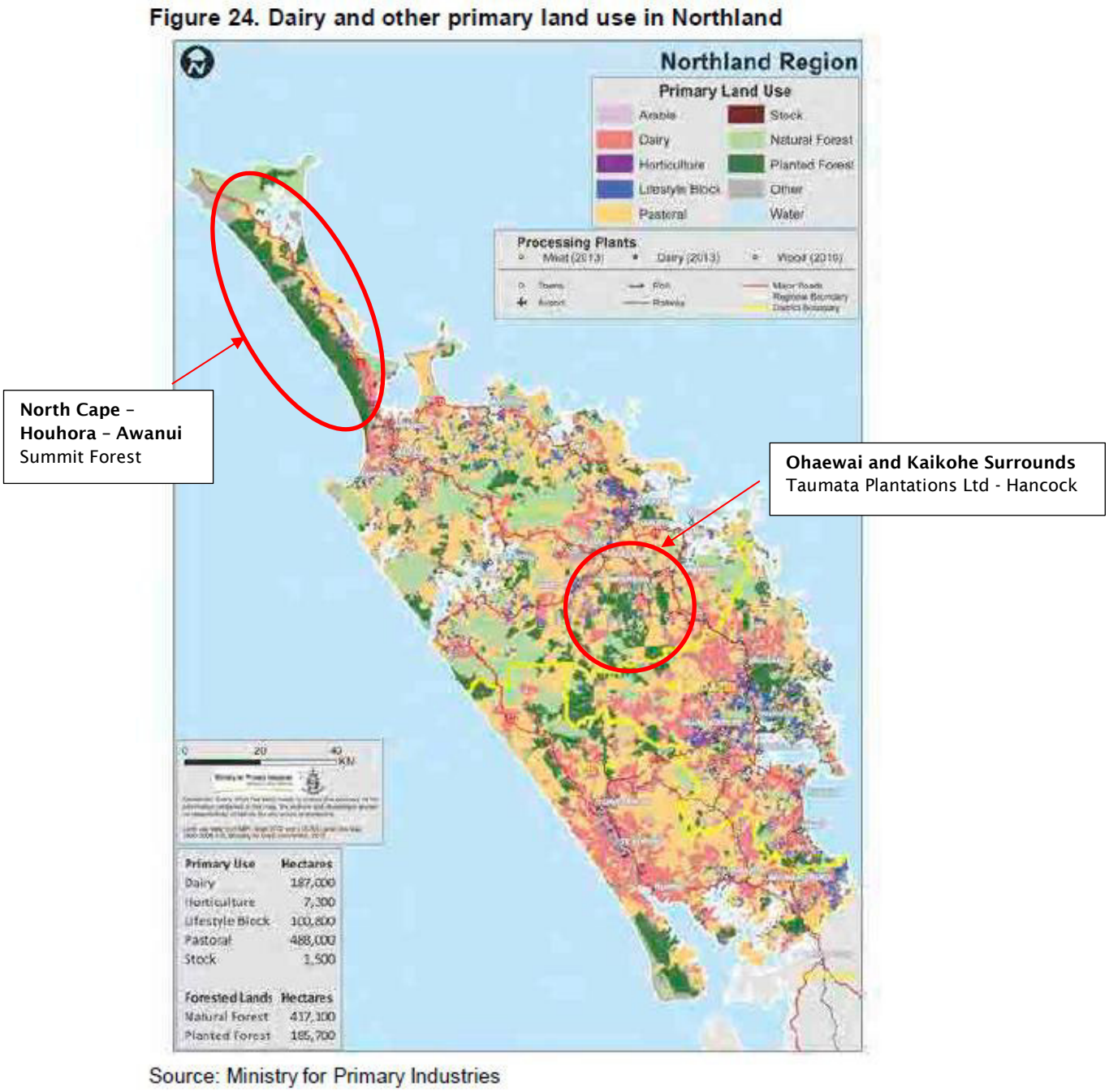
Industry	GDP 2018	GDP 2019	% point contribution to growth	Annual Growth
Primary Metal & Metal Product Manu	$0m	$1m	0.01%	65.0%
Poultry, Deer & Other Livestock Farming	$11m	$15m	0.17%	37.5%
Beverage & Tobacco Product Manu	$10m	$12m	0.09%	22.3%
Forestry & Logging	$49m	$59m	0.41%	19.7%
Horticulture & Fruit Growing	$36m	$42m	0.26%	17.1%
Telecomms, Internet & Library Services	$4m	$5m	0.03%	15.4%
Sheep, Beef Cattle & Grain Farming	$76m	$87m	0.45%	14.0%
Transport Equipment Manufacturing	$16m	$18m	0.08%	12.2%
Dairy Cattle Farming	$88m	$97m	0.40%	10.8%
Dairy Product Manufacturing	$1m	$1m	0.00%	9.5%

Source: Infometrics - Growth Industries in Far North District[16]

There is no recent data on the areas in Far North District where primary industrial growth is occurring, however the Tai Tokerau Northland Growth Study (February 2015) shows the indicative locations of primary land use in the Northland region. This is shown below.

[16] https://ecoprofile.infometrics.co.nz/Far%2bNorth%2bDistrict/Gdp/GrowthIndustries

Figure 32: Primary land use in Northland (prior to 2015)



Source: Tai Tokerau Northland Growth Study, Martin Jenkins (February 2015)

Forestry, agricultural and horticulture activity is likely to intensify in the areas that have been established already (as shown above) as well as other locations[17]. Anecdotal evidence suggests that there is a heavy shift of dairy farms being converted to avocado and kiwifruit orchards. Farms in areas such as Kaitaia and Houhora have been undergoing extensive landscape changes to cater for the growing horticultural sector. Ministry of Primary Industries has announced recently in December 2019[18], that Far North Iwi, Te Runanga o NgāiTakoto, has started planting its new 20-hectare avocado

[17] Insufficient factual evidence indicating primary growth locations in the Far North District

[18] https://www.mpi.govt.nz/news-and-resources/media-releases/northland-iwi-starts-planting-20-hectare-avocado-orchard/

orchard, Rakau Ora, in Kaitaia. This and other changes in primary industrial land use are likely to change the location and scale of heavy vehicle demand on the transport network.

As shown in Table 8 above, the Maori population in the Far North is projected to increase in the future. This may trigger or promote future potential changes in land use within the District and this may be encouraged by recent Treaty Settlements. The FNDC Infrastructure Strategy states that "A number of Treaty of Waitangi claims have been settled in the Far North and the Ngapuhi settlement process has been invigorated. Current financial and commercial redress amounts equal just over $103 million within the Far North. As a result of the settlement process, the future Maori contribution to the Far North economy is potentially significant."[19]

Figure 33 shows areas where Deeds of Settlement have been signed and those where the Crown has engaged with the Treaty of Waitangi claimants. Investment from these settlements have the potential to change land uses and therefore transport demands in the District and these changes need to be incorporated into district prioritisation processes.

Figure 33: Completed Treaty Settlements and current negotiations

Source: FNDC Long Term Plan, Infrastructure Strategy 2018-48

[19] FNDC Long Term Plan, Infrastructure Strategy 2018-48

Summary of Problem 1

The evidence suggests that changing demographics and land uses exacerbate the existing transport problems regarding safety, road network and travel choices in the Far North. The changing circumstances and needs puts pressure on the District to provide a better, safer transport system with more travel choices.

Changing demographics and land uses in the Far North have a significant influence on the transport system due to the following factors:

- Compromised driver safety and provision of an adequate level of service for all users
- Adverse impacts on community health
- A need for more equitable access to social and economic activities
- Physical isolation of communities and businesses
- Lack of viable and accessible transport choice

7.2 The response

Problem 1 confirms that the Far North District's changing demographics and land uses will influence transport in the Far North and the existing transport system will require adaptation to respond to these ongoing challenges. When the strategic responses below are achieved, it is anticipated that a safer, better transport system with more sustainable transport choices for all will be provided. Table 9 provides further details on the benefits and strategic responses.

Table 9: Benefits of Investment

Benefit	Strategic Response	Description
Benefit 1: A safer system	Improving safety through physical and behavioural interventions	A safe system recognises that people are vulnerable road users and can make mistakes. Mistakes are inevitable, however serious or fatal injuries can be avoided. Physical and behavioural interventions incorporate a safe system approach which includes safe roads and roadsides, safe road use, safe speeds and safe vehicles. A safer system in this District would be achieved through targeted speed environment reviews, change in driver behaviour, localised geometry improvements, consistent road maintenance and managing conflict between heavy vehicles and local users in shared environments. In this regard, high risk areas which may have a high number of crashes, vulnerable road users, high volumes of heavy vehicles, should be targeted first. The overall aim of this benefit is to reduce the number of deaths and serious injuries occurring within the District due to transport issues. The District safety priorities are therefore: • Target highest risk areas first • Protect the tamariki • Improve driver behaviour • Reduce broader harms to health

Benefit	Strategic Response	Description
		• Proactive incremental change
Benefit 2: A better transport network	Proactively manage infrastructure to support growth in communities Make best use of system to optimise network safety, efficiency and affordability	Changing land use and growth experienced in the Far North urban centres will trigger the need for the District to manage and optimise existing assets, drive travel behaviour change, complete missing links for all modes and future proof infrastructure to respond and manage growth. Low growth areas should also be proactively managed by prioritising access and maintaining acceptable level of service. A substantial asset in the Far North is its roading network and therefore it is important to make best use of the system as opposed to building new roads. Investment and prioritisation of road seal extensions, unsealed road strengthening programmes and proactive and preventative maintenance and renewals is a key action that optimises network safety, efficiency and affordability. Furthermore, investigating fit for purpose solutions and implementing data management / collection systems will assist the District in managing and optimising the transport network. Overall achieving this strategic response prepares the District's transport network for future residential, commercial and industrial growth. To successfully manage growth, FNDC will: • Better manage how it integrates land use planning and transport • Futureproof urban centres and other high growth areas • Maintain acceptable level of service for low growth areas • Collaborate with Treaty Partners and local communities • Future proof for rail connections • Manage the peak summertime demand • Respond to changing agricultural land uses To make the best use of the network, FNDC will: • Continue preventative maintenance • Provide fit for purpose infrastructure solutions • Prioritise road seal extensions • Extend the High Productivity Motor Vehicle (HPMV) network • Unlock greater visibility of heavy vehicle routes for logging and high-volume agriculture activities • Review road classifications • Consider the impact of climate change
Benefit 3: Sustainable transport choices for all	Enhance and promote sustainable transport choices both 'within' and 'between' communities Make best use of system to optimise network safety, efficiency and affordability	Problem 1 confirms that there is a rising need for alternative modes of travel. Sustainable transport choices not only cater for the traditional "green" modes such as electric vehicles, walking and cycling, but also accounts for the viability of the service as well. Due to the geographically dispersed nature of the District, frequent and widespread public transport services are not a realistic option for the District. Alternative travel choices proposed need to satisfy the affordability, viability and accessibility aspect for both the communities and the FNDC. This may be in the form of rideshare and shuttle buses. FNDC priorities for transport choice are to: • Improve the walking network • Improve the cycling network • Increase accessible transport choices • Develop ride share services • Develop our harbour highways • Improve the way travel demand is managed • Sustainable transport choices • Implement Total Mobility scheme

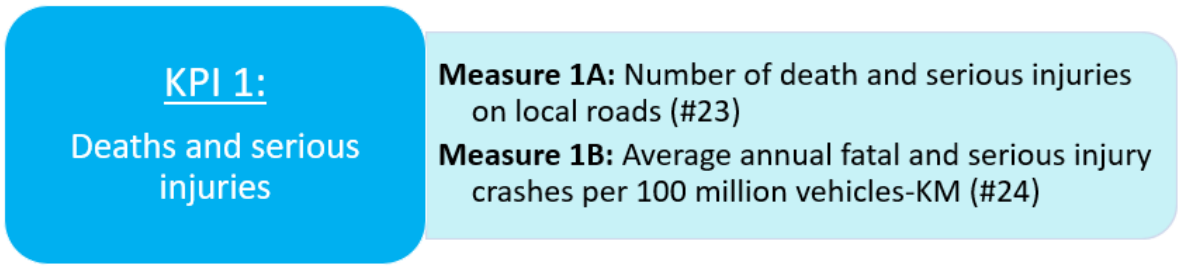
Benefit	Strategic Response	Description
		The provision of sustainable and viable transport choices is a method to optimise network safety, efficiency and affordability. An example of this would be better provision for active modes in terms of footpath and cycle lane quality and connections which improves network safety and efficiency experienced by these users. Another area of improvement could be the provision of school buses to optimise safety and affordability as children are the most vulnerable road user. Other improvement areas in the existing transport system should be explored to provide for alternative transport choices that are sustainable, viable and affordable.

7.3 The investment objective and measurement

The investment objectives (benefit and strategic responses) for the programme of activities were developed with, and agreed by, members of the project team and key external stakeholders. Each of the investment objectives identified have a corresponding key performance indicator/s (KPI). The individual measures are deemed to be appropriate in terms of providing appropriate and measurable outcomes for how each contribute to the benefits.

7.3.1 A Safer Transport System – Investment Objective 1:

Improve safety through a safe system approach of physical and behavioural interventions to reduce deaths and serious injuries in the Far North



Safety is an issue across all the network. Key connection routes between Kaikohe and Ahipara, Kerikeri and Waipapa and Kerikeri and Kaikohe experiencing high crash rates compared to other areas in the District. With the changing demographics and land uses in the District, it is anticipated that the impact of safety hazards will be amplified. In this regard, it is important for the District to prioritise a system wide approach to safety that focuses on delivering safe roads and roadsides, safe speeds, safe vehicle and driver behaviour and safe road use so that if one part of the system fails other parts will compensate to protect people in the system, or reduce the severity of any impacts.

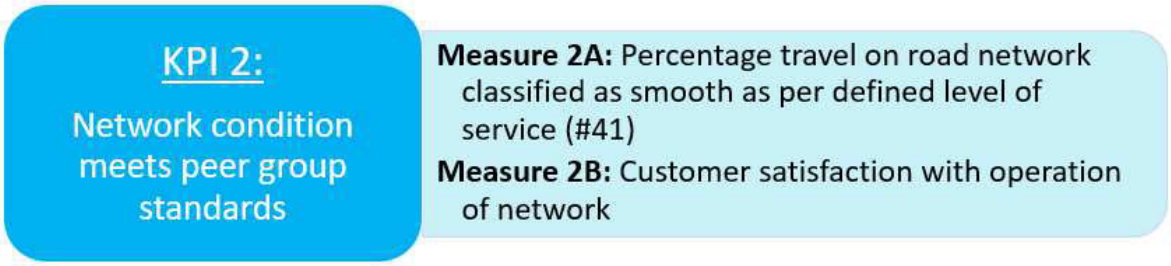
Improvement of road user safety corresponds to the reduction in transport related deaths and serious injuries on the district roads and improved personal risk (crash rate). This can be achieved by annual safety improvement programmes that reviews the whole District, particularly safety hotspots. Crash statistics should be monitored to measure the effects of safety improvement programmes.

7.3.2 A Better Transport Network – Investment Objective 2 & Investment Objective 3:

Objective 2: Proactively manage infrastructure to support growth to make a better transport system that creates equitable access for our communities

Objective 3: Make best use of our existing network by optimising network efficiency and affordability to achieve a better and more sustainable transport system

Note: Objective 3 also ties into *'Benefit 3: Sustainable transport choices for all'* (as shown in Table 9), however the KPIs identified below are considered to better measure this objective as opposed to the KPIs under Section 7.3.2.



The Far North District's road network condition is limited in terms of its level of service and does not provide consistency over the District. It is critical that roads maintain an adequate standard to minimise safety risks and to support the growing and changing communities.

Measure 2A addresses the percentage travel on the road network classified as smooth as per defined level of service. Further to smoothness, other aspects of the road network should be considered to address the current disparity of road conditions in the Far North to REG peer groups[20].

The types of comparable measures or standards applied include:

- Safety
- Resilience
- Amenity
- Accessibility
- Cost Efficiency
- Other

Collecting accurate data on the above measures / standards enables the Far North District to understand network condition (smoothness) and capacity, performance and the timing and cost for future investment requirements. In addition, an accurate database provides an indication as to whether the District is over or under-investing in its network compared with its peer group.

Measure 2B sets out to assess the level of customer satisfaction with the operation of the network. The Far North District council currently conducts surveys that measures customer satisfaction levels of the roading network. These existing surveys should be reviewed for applicability for the next 30 years and updated when required.

[20] Far North District peer groups can be found at https://www.nzta.govt.nz/roads-and-rail/road-efficiency-group/

KPI 3:

Healthier communities

-Reduced dust
-Wellbeing
-Access – perception

Measure 3A: Number of dwellings affected by roading dust
Measure 3B: Increase in wellbeing assessed including social connections (#42)
Measure 3C: Perception of safety and ease of walking and cycling (#28)
Measure 3D: Physical health benefits from active modes (#20)

Air pollution continues to be a priority for the District, particularly with respect to dust, and Measure 3A aims to monitor the level of dust emission from the transport system. Existing research indicates that dust is a significant issue on the unsealed road network especially during dry weather. It is anticipated that dust emission has the most detrimental effect on locals residing adjacent to unsealed roads that are used regularly by heavy vehicles. Currently FNDC is undertaking investigations on households that are affected by roading dust. More robust dust emission monitoring of high-risk unsealed roads and their impact on households should be undertaken to help inform thresholds for seal extension or dust mitigation programmes.

Wellbeing of communities including social connections is another key focus area that is dependent on the overall standard of the transport network. The Treasury has developed its Living Standards Framework (LSF) and an LSF Dashboard to measure and track changes in intergenerational wellbeing outcomes. The LSF Dashboard aims to capture a comprehensive, balanced range of wellbeing outcome indicators, which is made up of three sections[21]:

- **Our people** – describes the distribution of wellbeing across nine current wellbeing domains for different population groups of New Zealanders, using characteristics such as sex, age, ethnicity, family type, region, hours worked and neighbourhood deprivation;
- **Our country** – describes the current wellbeing of New Zealanders at a national level with comparisons within New Zealand population groups and other OECD countries, using 38 indicators that measure the 12 current wellbeing domains, which include: civic engagement and governance, cultural identity, environment, health, housing, income and consumption, jobs and earnings, knowledge and skills, safety, social connections, subjective wellbeing and time use; and
- **Our future** – provides indicators for the resources that underpin the ability to sustain higher living standards in New Zealand now, and in the future. These indicators include natural capital, human capital, social capital and financial and physical capital.

Undertaking qualitative assessment against the four capitals of the Treasury LSF (Natural, Human, Social and Financial/Physical) gives an indication of the wellbeing of communities. Regular and extensive assessment should be carried out to measure and monitor that effects of a better transport system on the wellbeing and overall health of communities.

Promoting the use or development of active modes (such as walking or cycling) particularly in urban areas and within communities contributes to the improvement in overall public health. Measure 3C and 3D sets out to measure perception of safety and ease of walking and cycling and physical health benefits from active modes (respectively). It is anticipated that improved perception of safety and ease of walking and cycling from improved or convenient facilities will lead to increased numbers of people walking and cycling. It is noted that KPI 7 of Investment Objective 4 will specifically measure the increase in number of people using footpaths and cycle trails (ped counts). Existing surveys

[21] https://treasury.govt.nz/publications/tp/living-standards-framework-introducing-dashboard-html#section-1

conducted by the FNDC collects data on customer satisfaction levels for walking and cycle facilities. These surveys should be reviewed for applicability for the next 30 years and updated when required.

KPI 4: Access to key destinations – all modes	**Measure 4A:** Percentage within travel threshold to key social and economic activities by different modes

Given the dispersed nature of communities, access has been an ongoing problem for the Far North District. This measure sets out to understand how people can gain access to social and economic opportunities particularly from an urban perspectives. A specific aspect to consider for this measure is the ability for communities to access non-private modes of travel.

There is currently no system in place to measure the equitability of access to social and economic activities. As such, it should be a priority to investigate a method of measuring this threshold via discussion with relevant departments and engagement with communities. This process should be conducted as a rolling basis as access improvements over the District are likely to be implemented in forms of ride share or upgrades to key transport connections over the next 30 years. Programmes to monitor access should therefore be reviewed over time and updated when required.

KPI 5: Uses or enhances existing infrastructure, facilities and services	**Measure 5A:** Project uses or enhances existing network

Whilst new capital works is beneficial for the Far North transport network, optimising network efficiency and affordability in the way of maintaining or enhancing the existing infrastructure, facilities and services is expected to achieve greater outcomes with minimal level of investment. This would be achieved predominantly through maintenance, operation and renewal works.

As such, this KPI seeks to measure the proportion of projects that use or enhance the existing network to ensure that the value for money is maximised.

7.3.3 More Travel Choices – Investment Objective 4:

Enhance and promote transport choices both 'within' and 'between' communities to provide a` viable, accessible and sustainable transport system

KPI 6: Ease of use + Traffic – mode share	**Measure 6A:** Percentage of low floor and wheelchair accessible services (#39) **Measure 6B:** Number of transport users by mode, expressed as percentages (#46)

The provision of accessible transport in the Far North District is restricted due to the heavy reliance on private vehicles and the reduced affordability given the dispersed geographic nature of the District.

The provision of accessible transport services for mobility impaired passengers is currently inadequate. It is important for the District to be able to accommodate the changing needs of the aging population in terms of access and mobility. Initiatives such as rideshare, total mobility and community-based schemes and footpath improvements should be investigated to support the vulnerable community to meet their daily needs and enhance their community participation. Transport services and footpaths providing access to mobility impaired customers should be managed and tracked to ensure the increase in provision as well as to inform the public.

To grasp the changing demand and use of alternative modes of travel, it is important to measure and monitor the number of transport users by mode. Means of measuring this should be investigated by the FNDC and undertaken and reviewed accordingly over the next 30-year period.

KPI 7: Increase in number of people walking and cycling (People – throughput + Spatial coverage)	**Measure 7A:** Number of pedestrians and cyclists (#45) **Measure 7B:** Percentage completion of the planned walking and cycling network (#32)

As a growing District, promoting active modes such as walking, and cycling ensures the sustainability of the transport system. This KPI seeks to measure the use and the provision of footpath and cycle facilities.

Data on the usage (routine pedestrian / cyclist counts) and the provision (km) is not currently collected by FNDC, however is a planned activity at this stage. It will be important to proactively monitor active modes in the form of adequate District-wide programmes or customer surveys over the next 30-year period. The data should be managed and analysed to an adequate standard to support the increasing need and demand following the changing demographics and land uses experienced by the District. It is noted that cyclist and pedestrian user counts for the Twin Coast Cycle Trail have been undertaken recently, of which results indicate a total annual count of 111,672 (and showing rapid growth).

8. PROBLEM 2

Problem 2: Increasing impacts of climate change disrupt a vulnerable transport network, essential services, critical supplies, and commerce (25%)

Problem 2 relates to the resilience of the transport network in the District. Roads across the District primarily operate as feeder routes for economic activities, providing direct connections between key product sources (i.e. forestry and agricultural activities) and regional distribution routes (i.e. SH1 / SH10 / SH15).

The transport network in the Far North is vulnerable to environmental impacts such as flooding, slips and inundation. The impacts of climate change such as the increasing scale and severity of weather events and sea level rise further puts the transport network in risk of failures and road closures. As a result, resilience is a key challenge for the District as road closures have a significant impact on communities and freight movements to, from and through the District. Particularly, a State Highway closure puts pressure on vulnerable District roads which may not be suitable for high and heavy volumes of traffic.

Given the location and relative isolation of the District, there is an identified need to provide reliable road services to support local economic operations and transport connections for those living in, working in or visiting the region. The provision of reliable and effective links is also important for people and goods travelling between Far North and other parts of New Zealand.

Unplanned network closures have implications on the ability for producers to transport goods and services from source to their intended markets (both local and regional destinations). This is particularly problematic for products with a limited lifespan, such as horticultural produce. The significance of this issue is emphasized with the unreliability of emergency services and critical supplies transported on the road network and their inability to reach their destination in time during unplanned road closures.

It is noted that there are factors other than climate change that cause closures and failures of the transport network, a key factor being poor safety / road crashes. However, road crashes have been addressed under Problem 1, therefore has not been considered under Problem 2 to avoid duplication. During the stakeholder workshop, climate change and weather-related incidents emerged as being the more critical contributor to road closures in comparison to road safety.

The cause, effect and consequences of the problem statement are summarised within Table 10.

Table 10: Problem 2 – Cause, Effect and Consequences

Cause	Effect and Consequence
• The existing road network and surrounding environment are located on unstable soils, have poorly maintained drainage systems and are within flood risk areas that are vulnerable to failure, particularly during high rainfall and storm weather events.	• Natural events such as slips, flooding, high weather events or structure failures can lead to unplanned closure of the road network for both local and regional roads within the region, resulting in severance and isolation of businesses and communities who need to move goods and access key facilities such as shops and medical facilities. • In the event of closures due to weather conditions, it is common for multiple locations to be blocked simultaneously, preventing freight and supplies from being distributed through the area.

- The impacts of climate change are becoming a significant problem year-on-year. The Far North is surrounded by the marine environment and thus a large section the existing road network near the coastline is highly susceptible to sea level rise.
- The existing rural district roading network primarily functions to provide access to residents, forestry or farms and lacks network connectivity or permeability. There are limited viable alternative routes on the district road network in the event of unplanned closures on the State Highway.
- Communities within the Far North District are geographically dispersed and rely on roading connections.
- Increasing scale and severity of weather events and the rising sea level will impact a large section of the existing road network that are currently providing critical connection routes between communities. The impacts of climate change are likely to be permanent or long-term, therefore posing a detrimental limitation on the transport of all essential services, critical supplies, commerce and people via the road network.
- The forestry, agriculture and produce (fruit) industries rely on the road network being available to send products to market and maintaining a sustainable/viable business. Furthermore, the changing weather patterns may negatively, or positively, affect the harvesting regimes of these industries. The loss of transport connections within both the local and regional network and the changing weather patterns result in financial loss for local industries, impacting on the productivity and competitiveness of the region.
- Many local industries operate on a "just-in-time" basis that relies on accessible and reliable transport connections. Unreliable transport connections results in a loss of business confidence for both existing and prospective investors within the region, inhibiting potential for economic growth and business profitability.
- Closures on key connection routes between dispersed communities' impact important lifelines, particularly disrupting the transport of emergency services and critical supplies.

8.1 The evidence

The problem around network resilience is focused on both the occurrence and consequence of unplanned closures and the lack of viable alternative routes for high-impact high-risk routes across the District. Unplanned road closures occur as a result of both road crashes and environmental incidents. As road safety is addressed in Problem 1, Problem 2 focuses on closures resulting from environmental factors such as flooding, slips, washouts, rock falls and drop-outs.

8.1.1 Climate Change

The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report[22] outlines the prospects of global warming. The Far North cannot avoid the implications of climate change and evidence suggests that changing weather patterns and rising sea levels will have a critical impact on the District's transport system. These effects are expected to increase in scale and severity year-on-year.

A recent report produced by the National Institute of Water and Atmospheric Research (NIWA)[23] details the impacts of the changing climate specifically for Northland. Overall, the report specifies that by 2090:

- Seasonal rainfall patterns will change - with eastern areas experiencing up to 20% less rainfall in spring and up to 10% increase in summer and autumn.
- Conversely, it is expected drought frequency will increase by 10%.
- Mean annual flows in rivers will decrease.
- Sea levels are expected to rise by anywhere from 20cm to 1m (depending on various carbon emission scenarios).

[22] www.ipcc.ch/report/ar5/syr/.
[23] NIWA (2016) Climate change projections and Implications for Northland.

- The frequency of storm events may reduce, although there is some uncertainty with this projection.

The Ministry for the Environment Guidance[24] has recommended for Councils to plan for 0.5m rise in sea level by 2100 and 1cm rise per year thereafter. Projections for rising sea level has major implications on the Far North transport system. The road network situated below sea level are expected to be impacted by inundation, while the increased frequency and severity of coastal flooding and erosion will damage pavement surfaces beyond repair. The risk exposure of sea level rise was estimated for the Far North District as part of a national risk assessment of coastal low-lying areas undertaken by NIWA[25]. In urban and semi urban areas, the study estimated that over 100km of roads were situated 3m or less above sea level, therefore exposing them to coastal hazard risk by 2100.

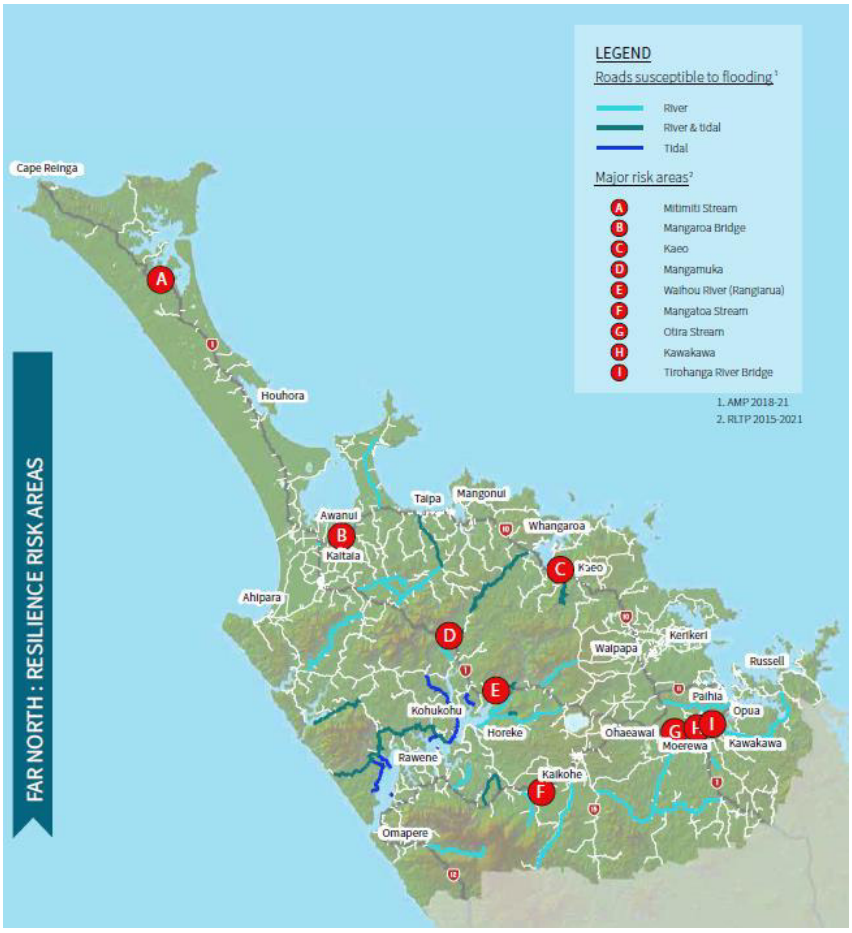
Climate change is also anticipated to increase the magnitude and frequency of storm events. However, predictive models for precipitation are inconclusive for regions of the North Island, therefore the impacts of storm events are currently uncertain for the Far North District. However, it can be assumed that the frequency and magnitude of ex-tropical cyclones will increase. This exposes the road network to serious resilience risks such as flooding and surface damages, and therefore the frequency and duration of road closures are expected to increase.

8.1.2 Resilience risk areas

Figure 34 sets out key resilience risk areas - district roads impacted by flooding, surface slips, washouts and erosion. These locations have been identified in the Northland Activity Management Plan (AMP) and the Northland Regional Land Transport Plan (RLTP).

[24] Climate change effects and impacts assessment: A guidance manual for local government in New Zealand.
[25] NIWA (2015). National and regional risk exposure in low-lying coastal areas.

Figure 34: Roads susceptible to flooding and major risk areas



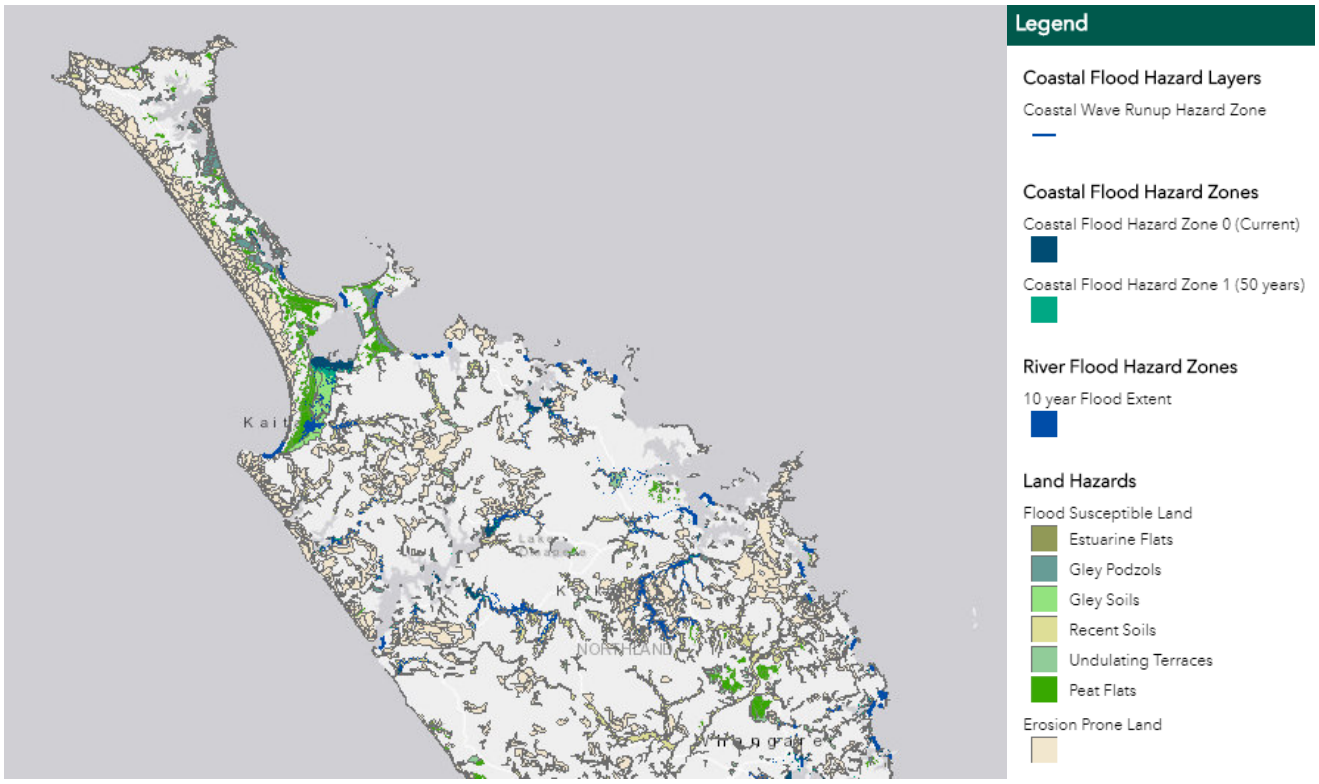
The key resilience risk areas are widespread over the District and affect a large section of the district road network. Workshop discussion with key stakeholders familiar with the District has confirmed and emphasised that the following roads or areas are susceptible to resilience risks. These hotspots are consistent with those shown in Figure 34.

- Ruapekapeka Pa – SH1 diversion route is not fit for purpose and has unsatisfactory levels of service
- Matawaia-Maromaku Road – prone to flooding
- Motatau-Opahi – section prone to flooding
- Rungarunga Road
- Panguru – risk area that is prone to flooding
- West Coast Road
- Waikare Road
- Taheke-Horeke
- Te Iringa Road-Dargaville
- Okaihau, top of Mangamuka and Kaeo and 90-mile beach – black spot telecommunication.

In addition to the sites above, Northland Regional Council has produced flood maps for the 26 Northland catchments (which includes the Far North District) identified as having the highest level of potential flood risk.

Figure 35 shows the likely extent of river flooding during a 10-year flood event and the 50-year coastal flood hazard zone. It indicates flood susceptible and erosion prone land.

Figure 35: Northland flood and coastal hazards



Source: Northland Regional Council (flood and coastal hazard maps)

As can be seen above, the zones impacted by river and coastal flooding hazards are generally spread over the District, while the majority of the Far North is sitting on erosion prone land. The identified hazard areas are particularly vulnerable considering that the District will face an increasing severity and scale of storm events resulting from the changing climate.

To determine the impacts of climate change, the map also considers the current and future sea level rise over the next 50 and 100 years. However, it is noted that the maps currently do not cover all sections of the Far North coastline and therefore the impacts of sea level rise may have been underestimated.

8.1.3 Lack of viable alternative routes

Like many rural areas, the Far North has several areas where there is a history of frequent transport network closures, but it is the lack of alternatives and strong reliance on the road network which heightens the disruption to business and communities in the District.

Details of local road closures is not currently recorded by FNDC, however analysis of the road closures on the State highway network within the Far North has been undertaken as shown in Figure 36 and Figure 37.

Figure 36 Analysis of road closures (TRIES Data for Far North 2009-2019)

Description	SH10	SH11	SH12	SH15	SH1N	Grand Total
Crash	26	7	14	2	67	116
Fallen tree/s across highway			3			3
Fire			1		1	2

Description	SH10	SH11	SH12	SH15	SH1N	Grand Total
Flooding	5	4	4	2	18	33
Object/Obstruction	1				1	2
Other	1		2		1	4
Slip	1	3			3	7
Spillage					1	1
Washout					3	3
Grand Total	**34**	**14**	**24**	**4**	**95**	**171**

Figure 37 Analysis of duration of events (TRIES Data for Far North 2009-2019)

State Highway	Average Duration of all events (hh.mm)	Number of events	Average duration for events <1-week duration (hh.mm)	Number of events < 1 week
SH10	5.86	34	5.86	34
SH11	132.93	14	15.35	13
SH12	13.76	24	13.76	24
SH15	19.38	4	19.38	4
SH1N	68.57	95	9.87	93

The analysis shows that over the 10-year period, 171 road unplanned road closures have occurred on State Highways in the Far North District. Almost 70% of these closures were attributed to crashes, and 20% to flooding. Over half these incidents occurred on SH1N. The average duration of events is shown in Figure 37. Three significant closures were reported:

- SH1: Slip Near Callaghan Rd, Maromaku (between Kawakawa & Towai) – 216 days
- SH1: Washout Kaitaia to Cape Reinga – 17 days
- SH11: Slip Paihia to Kawakawa (Lemons Hill) – 69 days

These closures were in excess of a week and were removed from the data to further understand general closure trends across the network. The evidence shows that an average closure in the Far North is under a day, notwithstanding catastrophic weather or geological events. The geological conditions in Northland make some of the network prone to flooding and slips which can be difficult to predict and control. Flooding and slip events are recurrent in the north of Kaitaia, Paihia, Kaeo, Taheke, Rangiahua and Moerewa indicating these are areas that are repeatedly requiring the use of local roads as detours.

Figure 38 shows high resilience risk areas as well as the roads currently utilised as detour routes in the event of a road closure on the State Highway or nearby district roads.

Figure 38: Resilience areas and detour routes

Major resilience risk areas (marked with red letters) have been identified mainly on the State Highway network as traffic in the Far North is concentrated on the State Highway network relative to the district road network. The road network connects farmland, forestry and townships and therefore communities and businesses are inherently reliant on State Highways and district roads for access. A lack of alternative modes such as rail, ferries and coastal shipping further emphasises this issue.

With the road network prone to resilience failures due to severe weather events and climate change, high and heavy volumes of traffic are likely to be diverted onto district roads. As can be seen above, road closures on sections of the State Highway near areas A, C, D and E are not supported by an adequate detour route. The lack of detour routes is evident along the west coast and near Kohukohu and Rawene. This has a significant impact on customers travelling via the Hokianga Ferry connection as only one route is currently provided to access the Hokianga Harbour.

Furthermore, Figure 34 illustrates that most of the identified district road detour routes are in fact susceptible to river or tidal flooding. This is a significant issue for the Far North with several events in recent years where parts of the District have been cut-off entirely or diversions required using long and unsuitable detour routes.

Approximately 65% of the road network within the Far North is unsealed, many district roads have notably narrow carriageways and shoulder widths and comprise of sharp bends and corners. As such, a significant proportion of identified detour routes are unsuitable for HPMV and 50MAX vehicles such as freight trucks. In addition, the level of service of these detour routes do not meet the

expected standard, with maintenance initiatives and funding limited to repair damaged district roads and bridges.

The provision of a viable detour route in the event of a road closure is critical given that a significant section of the road network in the Far North are high-impact and high-risk routes. The current provision and condition of district road detour routes is not adequate to withstand the pressures of high and heavy traffic volumes and therefore considered a critical resilience problem.

8.1.4 Impact of road closures

The importance of key district roads and the condition and suitability of these roads as alternative routes in the event of unplanned road closures is summarised in Table 11.

Table 11: Key district road routes within the District

District road	Route	Key Function	Road Condition
Mataraua Road and Kaikohe Road	SH12 to Waimatenui East Road	Mataraua Road / Kaikohe Road is likely to serve as a detour route in the event of a road closure on SH15. SH15 is Northland's inland freight route via Te Pua Road and Mangakahia Road. This SH15 route is utilised by an average of 300 heavy vehicles per day. As such, trucks expected to carry consolidated general freight including logs and domestic and export produce will be diverted onto Mataraua Road and Kaikohe Road.	Mataraua Road and Kaikohe Road are identified as roads susceptible to flooding from rivers. Mataraua Road is partially unsealed, while Kaikohe Road is fully unsealed, leading to dust being discharged. In addition, both roads have narrow shoulders and an alignment consisting of sharp curves and bends.
Ngapipito Road	Mangakahia Road to Otiria Road	Ngapipito Road is a key forestry route carrying high volumes of logging trucks. The road provides a direct connection between SH1 and SH15, therefore is utilised frequently as an alternative route for freight.	Ngapipito Road is identified to have a low resilience rating against forestry traffic in the Northland AMP, therefore has been prioritised for pavement strengthening and sealing. Ngapipito Road is partially sealed, with a 4km section of the road from the eastern end sealed due to potential adverse human health impacts caused by dust discharge. The road is relatively narrow and consists of sharp curves and bends.
Matawaia Maromaku Road	Callaghan Road to Orakau Road	Matawaia Maromaku Road is a key forestry route carrying high volumes of logging trucks. The road provides a direct connection between SH1 and SH15, therefore is utilised frequently as an alternative route for freight.	Matawaia Maromaku Road is identified to have a low resilience rating against forestry traffic in the Northland AMP, therefore has been prioritised for pavement strengthening and sealing. The majority of Matawaia Maromaku Road is unsealed however dust reduction and strengthening work has been undertaken. Matawaia Maromaku Road is extremely susceptible to river flooding. The road is relatively narrow and consists of sharp curves and bends.

District road	Route	Key Function	Road Condition
Kerikeri Road, Heritage Bypass and Waipapa Road	Adjoins SH1 at the western end of Kerikeri Road and Waipapa Road	Kerikeri Road, Heritage Bypass and Waipapa Road are key commuter routes and provide direct access to industrial activities, therefore carrying high heavy vehicle volumes. These district roads also serve as a detour route in the event of a road closure on SH10.	These roads are all sealed and provide a satisfactory level of service. However, these roads especially Kerikeri Road carry the highest volume of traffic in the Far North District.

Closures and the associated disruption to the transport network have a variety of effects on different customer bases as discussed in the following sections

Agriculture producers

Many agriculture providers including fruit and vegetable growers, livestock farmers and other agricultural industries such as apiculture experience significant cost in the event of a closure. Direct costs incurred by these businesses include additional time and cost associated with using significant detours. Due to the nature of the products, additional time affects the value of the product due to limited shelf life and just in time delivery. In addition to the reduced value of product, unreliability of transport affects suppliers through undermining customer confidence and impacting on supplier agreements and contracts.

Forestry industry

The forestry industry is highly reliant on the roading network to transport logs from the forestry areas through to the processing facilities for export. Unprocessed timber is relatively low in value and not time sensitive. On many occasions' logs can be stockpiled as opposed to using longer alternative routes. Stockpiles at the processing facilities mean that minor closures do not have a fundamental effect on production. The cost of road closures to the industry relates to both the cost associated with transport costs (either a longer detour route or sunk cost associated with equipment not being used), but also the inability of forestry crews to assess the site.

As noted previously, a significant issue impacting the forestry industry resulting from road closures is that the identified detour routes are not fit for heavy volume traffic. Most district roads used as detour routes have a narrow carriageway and shoulder width and consist of sharp curves and bends. As such, compromising the safety of forestry truck drivers and slow driving speeds reduce the efficiency of delivery. Furthermore, this results in an overall impact on the community as dust induced from trucks driving on unsealed roads have immense health effects on the community. There is also a perceived safety issue with local drivers meeting these heavy vehicles on narrow, windy and unsealed roads. The slow-moving traffic and unsatisfactory levels of service on the district roads due to heavy loads results in lower community satisfaction.

A few key district roads (not mentioned in Table 11) being utilised as logging routes and considered unfit for this use include: Pipiwai Road, Diggers Valley Road, Iwitaua Road, West Coast Road, Tapuhi Road and Gammons Road.

Community impacts

Given the isolation of many communities in the District, and high reliance on the road network for access, the effect of a closure has a crippling effect on the local communities living in the vicinity. Closures can isolate communities from local amenities such as shops, schools, medical facilities and access to jobs. They can also restrict basic supply chains and remove the ability for tourists to access

the area. The impact of these unplanned closures was also a common talking point in both stakeholder interviews and workshops.

The following map shows the location of key essential services such as hospitals, schools and grocery stores in the Far North.

Figure 39: Indicative locations of essential community services

As can be seen above, for communities located along the west coast and near the centre of the District, the roading network would be considered as lifelines providing access essential services. It is therefore critical that the roading network is secure or provides alternative routes in the event of a closure to ensure that these communities have reliable access to essential services.

As concluded in stakeholder discussions, one of the most critical impacts of unplanned road closures on the local community would be the disruption to emergency service routes. Emergency services travelling between townships regularly utilise the State Highway network, however district roads such as Matauri Bay Road, Ngapipito Road, Te Ahuahu Road and Waiarie Road are also used often as connection routes. In addition, the district roads frequently function as detour routes in the event of a closure on the State Highway network. This creates a considerable risk for on-time delivery of emergency services as the district road network is prone to road closures and furthermore unfit for high-speed vehicles in terms of road condition and alignment. The following summarises the roads

regularly used as detour routes by emergency services, which are also susceptible to resilience issues such as river and tidal flooding and prone to frequent road closures[26]:

- Pokapu Road
- Orakau Road
- Mataraua Road
- Waimatenui Road
- Horeke Road
- Hupara Road
- Waikare Road
- Paponga Road
- Maromako – Matawaia
- Ruapekapeka Road – unfit road conditions for SH1 diversion route.

Summary of Problem 2

The evidence suggests resilience is an issue on the district road network. Frequent road closures resulting from the increasing scale and severity of weather events put pressure on the vulnerable district road network, particularly the availability of viable alternative routes.

Road closures within Far North have a significant influence on businesses and communities due to several factors including:

- Lack of alternative modes
- Lack of viable detour routes
- Physical isolation of communities and businesses
- Nature of business - transport contributes to a significant portion of the value of the product

[26] Unsealed roads taken from Civil Defence list

8.2 The response

Problem 2 confirms resilience as a key issue for the Far North transport network.

As set out in Table 12, proactively improving network resilience and reliability will result in improved resilience of key roads in Far North.

The priority is to protect the FNDC transport lifelines by:

- Prioritising high-risk locations first
- Prioritising bridge network
- Prioritising detour routes
- Protecting transport infrastructure from climate change
- Enhancing 'harbour highways' to be viable alternatives to land transport
- Lifeline planning

Table 12: Benefits of investment

Benefit	Strategic Response	Description
Improved resilience of key roads in Far North	Proactively improve network resilience and reliability	• Reducing of the number and duration of unplanned road closures will enable goods and services to reach the intended destination as planned. • The region is geographically dispersed, and many local communities and industries are at a risk of severance in the event of significant unplanned road closures. • By investing to provide a more resilient and reliable network, the risk of isolation in the event of significant unplanned closure events will be reduced. • The overall aim of this benefit is to achieve the availability of lifelines. • Lifelines recognises the provision of viable alternative routes however it also caters for access and provisions off-road such as maintaining access for 4-wheel emergency vehicles, air support, medical equipment and supplies located in isolated communities and supplies stockpiles.

8.3 The investment objective and measurement

8.3.1 Investment Objective 5:

Proactively improve network resilience and reliability to improve resilience of key roads in the Far North

KPI 8 and KPI 9 below are performance indicators that measure improved network resilience and reliability. These KPIs provide appropriate and measurable outcomes for how each contribute to the investment objective above.

KPI 8:	
Reduced number and duration of unplanned closures (Temporal availability – road)	**Measure 8A:** Number and duration of resolved road closures: urban >=2 hrs; rural >=12hrs (#52) **Measure 8B:** Reduction in school days lost

It is the impact of unplanned closures which is important to highlight. Across the District, businesses and communities place a heavy reliance on the road network, as there are very few alternatives. Therefore, incidents have an amplified impact on road users.

Measure 8A adopts a structured approach to reducing the impact of closures on road users in the region through minimising the occurrence of closures and improving the efficiency of responses. At present, information on the frequency and duration of district road closures within the network is limited, and it is recognised that more robust records are required to monitor unplanned road closures in the future. Robust data will enable the development of future proof renewals approaches on resilience and climate change.

Measure 8B aims to address the impacts of road closures on school children. A potential consequence of unplanned road closures, either short-term or long-term, is that students are unable to travel to school, therefore resulting in school days lost. Measure 8B recognises that a reduction in school days lost will demonstrate improved network resilience and reliability.

KPI 9:	
Increase in high-risk and high-impact routes with viable alternatives	**Measure 9A:** Percentage of high-risk, high-impact routes with a viable alternative (#49)

High-impact routes are essential lifeline corridors that provide access for critical services such as hospitals, school and grocery stores. High-risk routes are those (including surrounding environment) that are susceptible to environmental factors such as flooding, erosion and coastal inundation. Due to the nature of the transport network in the Far North, a large part of the road network has no viable alternative route in the event of a road closure. A viable route is defined as a road that is fit for purpose in relation to road condition and level of service, while capable of maintaining efficiency and safety along the route. Whilst all roads having a viable detour route is ideal, given the nature of the District, Measure 9A prioritises high-impact high-risk routes within the road network to each provide a viable alternative route.

9. PROBLEM 3

Problem 3: Limited funding to deliver disparate transport needs of the Far North leads to dissatisfied communities (15%)

The problem statement identifies that the District is challenged by the lack of funding and prioritisation processes to satisfy the disparate transport needs of widespread communities.

The intention of this problem and the outcomes sought is essentially addressed by the development of this programme business case. The overall PBC seeks to define the prioritisation process of the various transport projects in the Far North to better achieve successful funding and delivery. However, this issue was intentionally identified as one of the key problem statements of the PBC to acknowledge the community's strong perspectives on this issue to be highlighted in the PBC.

The districts resource allocation fails to meet community transport needs and the causes associated with this issue are identified in Table 13.

Table 13: Problem 3 – Cause, Effect and Consequences

Cause	Effect and Consequence
• Far North District's roading network is extensive, providing access to urban and rural areas with 2,508 km of road, 1,650 km (65%) of which are unsealed and in rural areas. Rural communities are geographically isolated from key facilities and employment opportunities • The Far North District currently has 37,647 rate payers out of total population of 63,200 (as of 2018). To achieve funding for any NLTF eligible transport related projects, FNDC needs to support 34% of the project funding, while Waka Kotahi provides the remaining 66% (Funding Assistance Rate). • The changing demographics of the Far North indicate an ageing population. • The Far North has one of the highest deprivation rates in the country and high unemployment rates, with average household income well below the national average. • The Far North District has limited forms of funding sources.	• Being one of the most socio-economically deprived populations in the country, the District has a relatively high proportion of the rate payer base paying discounted rates or a low rate percentage in general. This issue is further exacerbated with the projected trend in changing demographics resulting in the gradual decrease of the number of full rate payers. As a result, the Council is unable to meet their local share of funding which results in delays to implementation. • With a limited amount of revenue from rates, the Far North District is challenged with managing their extensive roading network. As a result, District roads (especially in rural areas) have variable levels of maintenance and fail to provide an adequate level of service which leads unsatisfied communities. • Given that funding streams are limited, it is important for the District to investigate alternative funding sources such as developer contributions to achieve a more viable funding approach. • Each community will have different transport needs and problems. A key issue lies in communities being unsatisfied with the way transport investment is being prioritised. This problem is emphasized between high growth and low growth communities.

- Maintenance costs are higher in the Far North which is less cost efficient for infrastructure delivery.
- Maintenance value for money is reduced which results in less improvements being delivered and lower customer satisfaction for the level of service on local roads.

9.1 The evidence

9.1.1 Funding sources

FNDC's infrastructure is primarily funded by rates. Rates increases have been limited to 2.5% per year (above inflation) to support the rising costs of providing infrastructure. In its current Long Term Plan, FNDC has declared their commitment to limit rates to a maximum of 90% of total Council revenue.

Funding for the district's transport related projects are primarily made up of funding assistance provided by central government via the NLTF and the FNDC's local contributions. Waka Kotahi investment via the NLTF currently covers 66% of the gross operating and capital cost across the transport sector. This is an acceleration from the previously assumed 1% increase each year from 62% in 2018/19 to a cap of 66%[27]. The remaining 34% is funded via the FNDC's funding mechanisms which include rates, fees and charges.

Attaining the required FNDC local share has proved to be challenge to support transport funding in the District. Historically, some transport projects proposed by FNDC have failed to gain approval altogether due to insufficient local share funding. The rates collected by Council are insufficient to fund the local capital and operating expenditure required to release the NLTF funding. This issue is further exacerbated by the fact that Council does not currently collect development contributions. Given the recent growth and increased demand experienced on the transport infrastructure, implementing a development contribution policy is an opportunity and would contribute to an effective and viable approach to local funding.

The following figure shows the percentage contributions of public rates to works undertaken by FNDC. It indicates that at least 20-30% of collected rates directly or indirectly help fund the operation and improvements of the District's overall transport system.

[27] FNDC Long Term Plan, Infrastructure Strategy 2018-48

Figure 40: FNDC public rates contribution per dollar

Source: FNDC[28]

9.1.2 Far North District Council Rates

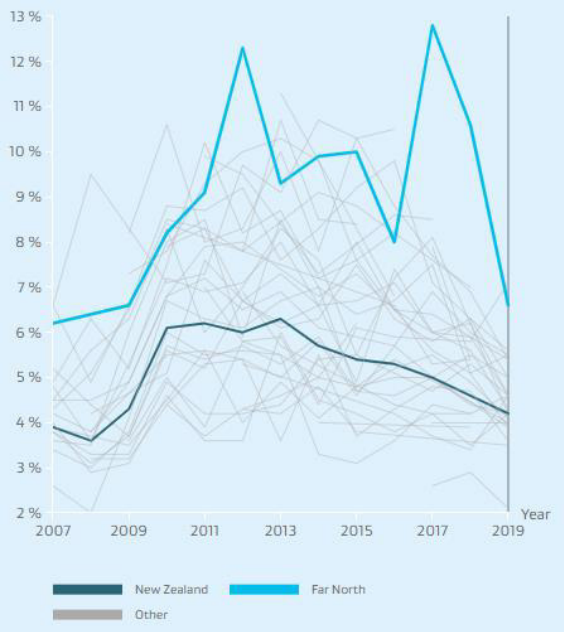
Rates are based on property value and historically, the Far North has reported weak property value growth. Between 2007 and 2016 population growth has been steady, however it has not been accommodated with property value growth, especially in Paihia where the median property value was measured to be 8.9% lower in 2016 compared to 2007. A key cause associated to this issue is high unemployment rates and low-income levels, which limit households' ability to borrow and afford property. In this regard, property rates collected by the Council are restricted by the generally low property values in the District. It is however noted that property values are now recovering, with most recent data indicating a 5.6% increase in property value[29] between March 2018 and March 2019.

[28] https://www.fndc.govt.nz/services/rates

[29] REINZ Monthly Property Report – March 2019

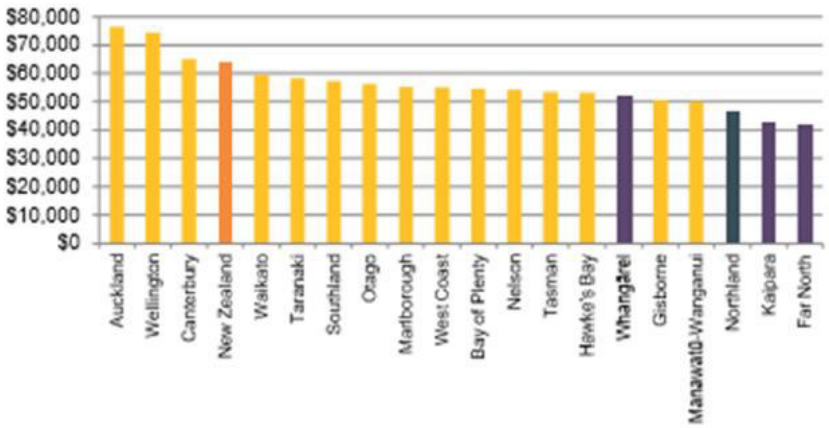
In addition to a low value of rates due to property value, the Far North District has notably high unemployment rates, with average household income well below the national average as shown in Figure 41 and Figure 42.

Figure 41: Unemployment rate for Far North District and New Zealand



Source: MBIE regional economic data

Figure 42: Average Annual median Household income



Source: Figure 5, Tai Tokerau Regional Growth Study – Martin Jenkins

Being one of the most socio-economically deprived populations in the country, the District has a relatively high proportion of the rate payer base paying discounted rates or a low rate percentage in general. This issue is further exacerbated due to the changing demographics in the District indicating growth in the aging / retired population, while the working age population is projected to decrease contributing to an overall population decline forecasted by 2043[30]. Low income households and most retirement villages can apply for a rates rebate which assists them in meeting the cost of their rates, and overall reducing rate contributions. This change in ratepayer base is expected to have an impact on the level of transport funding collected by the Council, which therefore limits the District's ability

[30] Refer to Section 2.3.1 for evidence.

to maintain the existing transport network as well as improve or introduce transport infrastructure and services.

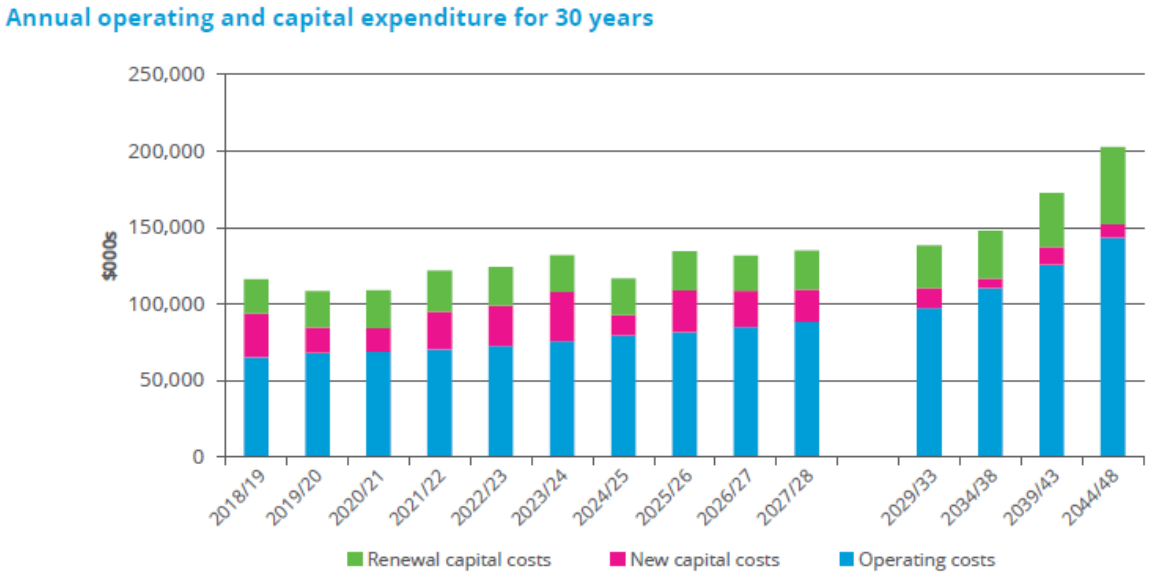
It is also noted that unpaid rates are an ongoing issue for FNDC, given the relatively deprived population.

Therefore, a low rating value base, higher rate of rates rebates and an ageing population are all contributing to a static if not reducing funding source for FNDC to use to invest in transport infrastructure.

9.1.3 Maintenance expenditure history

A large proportion of the District's expenditure is invested in asset maintenance and operational costs. As shown in the graph below, the 30-year projection shows a further increase in the proportion of operational costs from the total yearly expenditure.

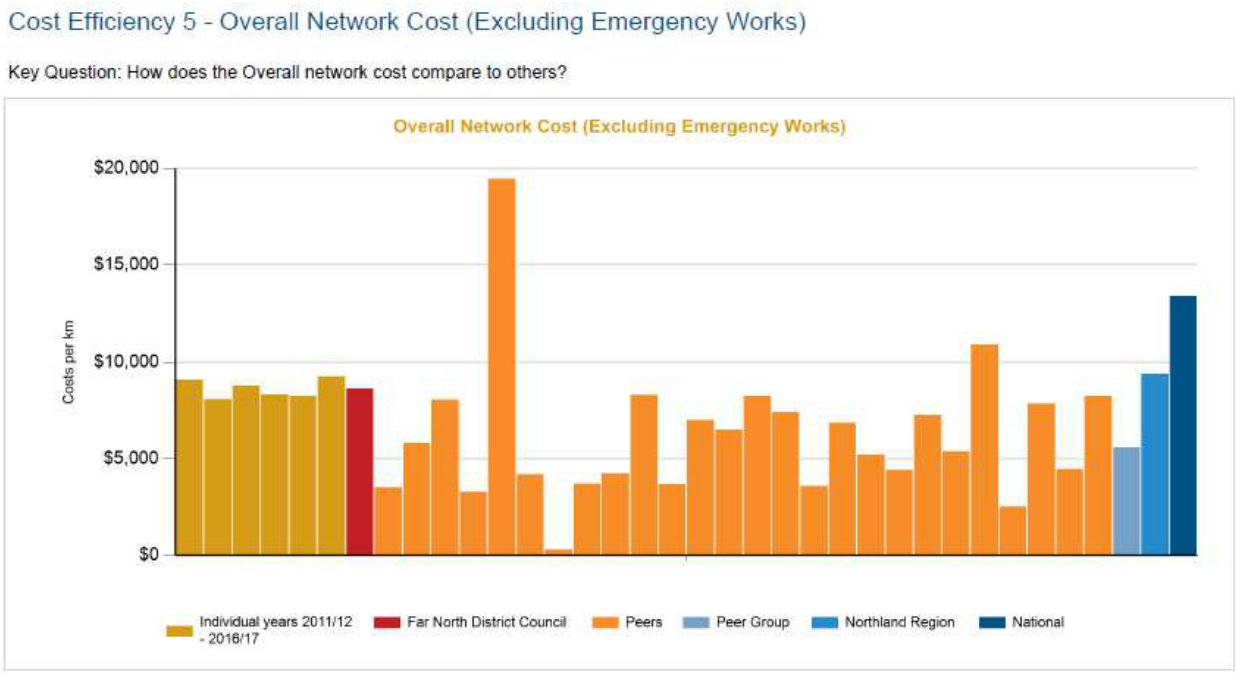
Figure 43: Far North District annual operating and capital expenditure for 30 years



Source: FNDC Long Term Plan, Infrastructure Strategy 2018-48

Similarly, a high proportion of transport allocated funding is used for maintenance and operational costs, as the cost of maintaining roads is high given the District's large road network. Data from Waka Kotahi indicates that the cost of maintaining roads in the Far North District is higher than its peer networks. This is shown in Figure 44 below.

Figure 44: Maintenance costs per km between 2012 to 2016



Source: Waka Kotahi TIO Work Category funding reports

Unsealed and sealed pavement maintenance costs for the Far North are one of the highest compared to its peer groups. Waka Kotahi has calculated the average sealed pavement maintenance cost to be approximately $2,000/km which is higher than the average cost of $1,600/km for peer groups. This information is shown below.

A key cause of the limited funding for road maintenance lies in not fit-for-purpose maintenance schemes and programmes. Road maintenance in the Far North is heavily focused on reactive maintenance which has exposed the road network to a 'treating worst first' scenario. Reactive maintenance works are undertaken following public complaints to repair damaged roads that can no longer function at the minimal level of service or generally when the assets are beyond repair. This method adds considerable costs for the District, which can be avoided by taking a preventative maintenance approach under a structured road maintenance programme. Over the past 10 years, the Council has spent an average of $7.1m per year on emergency road works to mitigate and repair storm damage. This is approximately 30% of the base maintenance programme[31].

It is noted that public complaints on damaged road conditions are usually heard through the 'Request for Services' webpage that is managed by FNDC. However, anecdotal evidence or public perception suggests that Council responses to repair the damaged roads are slow and often not carried out, further suggesting that reactive maintenance processes are not sufficiently addressing the level of service issues.

Therefore, the evidence shows that the limited maintenance budget is under pressure from higher costs and a reactive maintenance approach which is reducing the ability for FNDC to deliver transport infrastructure. This is then reducing the customer satisfaction.

[31] FNDC AMP 2018-21

9.1.4 Planned future transport projects

The FNDC Long Term Plan (LTP) (2018-48) outlines major transport projects that are ongoing or to be undertaken in the next 30 years, as summarised below. The LTP is refreshed every three years and the recommendations from this PBC will be used to inform updates to this document.

Figure 45: FNDC Long Term Plan key transport projects

Project	Description	Timing	Estimated cost	Purpose
Transport networks				
Responding to growth in the District	Implementation of initiatives from the District-wide transport plan	Years 3-10	$38.2 million	LOS
Minor lighting improvements	Infill and water lighting improvements across the District	Years 1 - 10	$9 million	LOS
Dust seals	Sealing of critical risk roads that pose a threat to public health through dust generation	Years 1-10	$11 million	LOS
Unsealed road metalling	Pavement rehabilitation and strengthening of unsealed roads	Years 1-10	$43 million	Renewal
Tourism byway sealing to major attractions	Twin Coast Discovery Highway – tourism byway sealing to major attractions Motuti Road, Ruapekapeka Road, Pungaere and Waiare Roads	Years 1-5	$2.7 million	LOS
Twin Coast Cycle Trail	Permanent route Taumarere to Opua	Years 3-4	$4.64 million	LOS
Develop the Twin Coast Cycle Trail to support tourism growth	Develop the Twin Coast Cycle Trail in line with strategic case	Years 4-15	$45.0 million	LOS
Improve freight productivity	Strengthen and maintain key forestry routes and bridges to enable HPMV and 50MAX vehicles throughout the term of this strategy	Years 1-30	$30 million minor improvements	LOS
Hokianga ferry (Kohu Ra Tuarua)	Equipment renewals	Years 1-7	$1.13 million	Renewal

Source: FNDC Long Term Plan 2018-48

Specifically, FNDC currently plans to spend approximately $278m in the next 10 years on roading maintenance. Around 61% of this is expected to be used for road operations and maintenance, while 27% is allocated towards renewals and about 12% towards new works and improvements. This programme includes the following[32]:

- $4.3m each year to repair and maintain our rural, unsealed roading network
- $1.9m each year to reduce the dust nuisance on heavily used unsealed roads
- $6.6m to repair and rehabilitate sealed roads
- $1.1m maintaining bridges and culverts
- $1.7m each year improving road drainage to minimise damage caused by rain
- $1.3m a year for flood mitigation works and slip repairs.

The transport projects listed above are key projects that will assist with the District's long-term position. The District is exposed to growth, changing demographics, development of primary industries and changing transport needs of the communities. It is therefore critical for the Far North to have the capacity to cater for the projected growth and to be able to satisfy the changing transport

[32] https://www.fndc.govt.nz/communication/consultation/long-term-plan-2018-28/ltp-2018-documents/FAQ-Roading-PDF-for-upload-to-web.pdf

needs of the communities. In order to fund projects such as these, securing local share funding is a key issue for the FNDC to resolve.

It is noted that FNDC has budgeted local share funding for years one to three years of the RLTP to complete the transport actions set out in the strategy. Funding for remaining years is yet to be secured.

9.1.5 Community dissatisfaction

Whilst there is limited empirical data available, anecdotal evidence was offered during our stakeholder workshops and interviews that referenced community dissatisfaction with the way the Far North transport network was maintained and developed. Key issues raised included:

- Community concerns about unsealed roads and the resulting issues from dust and heavy vehicle damage. In general, the community understood there was limited funds for sealing roads but expressed frustration at the lack of transparency in how roads are prioritised for sealing or proactive maintenance.
- General project inertia as lack of agreement about District transport priorities has resulted in delays to new transport projects.
- A perception that "whoever shouts the loudest" is better placed to receive transport funding, rather than perhaps what is best for the district and all its people, particularly the most vulnerable.

Summary of Problem 3

The evidence suggests that limited funding to meet the disparate transport needs are leading to dissatisfied communities. The local share funding collected primarily through public rates is insufficient to fund district-wide transport projects.

Limited transport funding has a significant impact on the communities and the District due to several factors including:

- Limited local share funding to match NLTF funding results in lost funding opportunities
- High maintenance burden resulting in less funding available for development of the transport system
- Current investment prioritisation processes not responding to communities needs

9.2 The response

Limited funding in the Far North restricts the District's ability to undertake necessary transport improvements and maintenance to ensure that the disparate transport needs of communities are met. Problem 3 is considered a critical problem for the Far North's transport system as it restricts the funding and delivery of vital transport projects.

As set out in Table 14 it is anticipated that improving affordability by transparently prioritising investment and diversifying funding streams for transport will result in community transport needs being satisfied.

FNDC could achieve this prioritisation by:

- Focusing on outcomes
- Transparency of prioritisation
- Providing what is needed

As well as prioritising investments FNDC will seek to increase the funds available for transport investment by:

- Diversifying funding sources
- Partnership opportunities
- Improving how FNDC compete for contested funds.

Table 14: Benefits of investment

Benefit	Strategic Response	Description
District resource allocation delivers community transport needs	Improving affordability by transparently prioritising investment and diversifying funding streams for transport	Prioritisation is an underlying principle for the transport strategy. Prioritisation is complex as FNDC seeks to balance the communities' disparate needs and concurrently maintain its existing network to a suitable level of service while being flexible to respond to future challenges. By transparently prioritising investment and providing community transport needs, the number of projects being funded and successfully delivered increases. The Far North has a constrained funding environment with limited funding sources available to support the District's transport needs. FNDC will review its funding mechanisms (including rates, fees and charges and development contributions) to develop a sustainable long-term funding stream that can support the aspirations of its communities. With more projects accessing a wider range of funding sources, increased funding will be available to cater for the disparate transport needs of communities and therefore improving community satisfaction.

9.3 The investment objective and measurement

9.3.1 Investment Objective 6:

Improve affordability of transport infrastructure by transparently prioritising investment and diversifying funding streams for transport so our communities have a clearer understanding of why and how decisions are made

KPI 10 and KPI 11 below are performance indicators that measure improved investment prioritisation procedures and increased funding sources for transport. These KPIs provide appropriate and measurable outcomes for how each contribute to the benefit of communities supporting District resource allocation.

KPI 10: Ability of projects to be funded	**Measure 10A:** Percentage of PBC projects delivered **Measure 10B:** Efficiency of network spend / km

The increase in the number of transport projects funded and delivered demonstrates the District's ability satisfy for community transport needs. Measure 10A seeks to understand the ability of projects to be funded by measuring the percentage of Programme Business Case projects that receive funding and get delivered.

At present, data on the efficiency of network spend / km is collected by the REG group, where their 'Performance Measure Reporting Tool' is the key peer group measurement mechanism. This data should be further investigated and adopted as a baseline measure for this KPI.

KPI 11: Range of funding sources	**Measure 11A:** $ projects funded outside of NLTF subsidy

Alternative funding sources creates further opportunity for increased local funding for transport projects. Currently, public rates fund most Council projects and operations, including transport projects. Introducing additional local funding mechanisms (such as fees and charges and development contributions) allows the District to develop a sustainable long-term funding stream that can support the aspirations of the communities. In this regard, Measure 11A monitors the $ of transport funds collected outside of the NLTF subsidy, specifically indicating the change in local share funding and therefore the implementation of new funding sources.

10. SUMMARY OF RESPONSES

Transport investment for the Far North will focus on addressing three key problems through six strategic responses as shown in Figure 46. By doing these things, the Far North will benefit from:

- A better, safer transport system with more transport choice.
- Improved resilience of key roads in Far North
- Community transport needs will be met.

Most importantly, these benefits can be measured using identified KPIs, measures and baselines as shown in Figure 47.

Proposed interventions in the Integrated Transport Plan will be measured for investment against their ability to deliver these benefits and how they address the identified strategic responses.

Figure 46: FNDC ITS problems, benefits and objectives

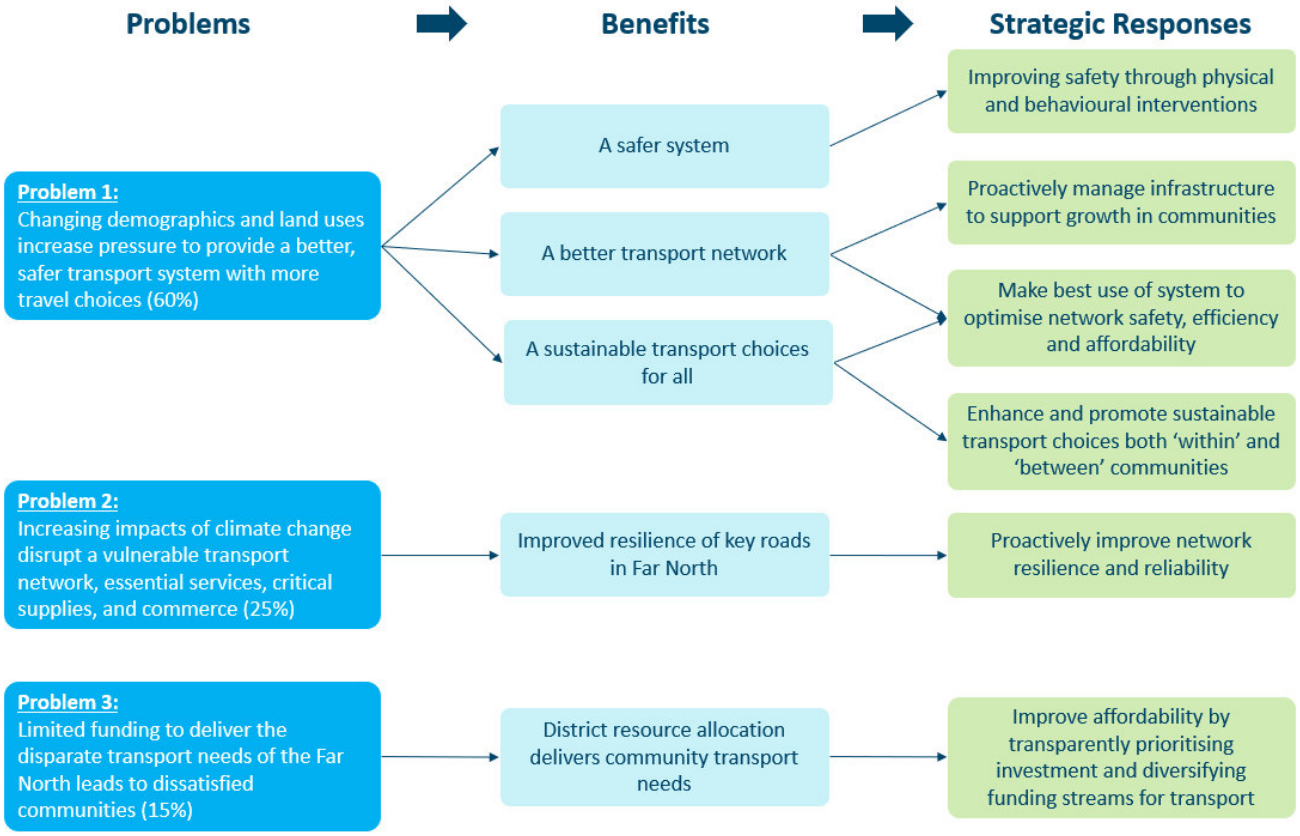
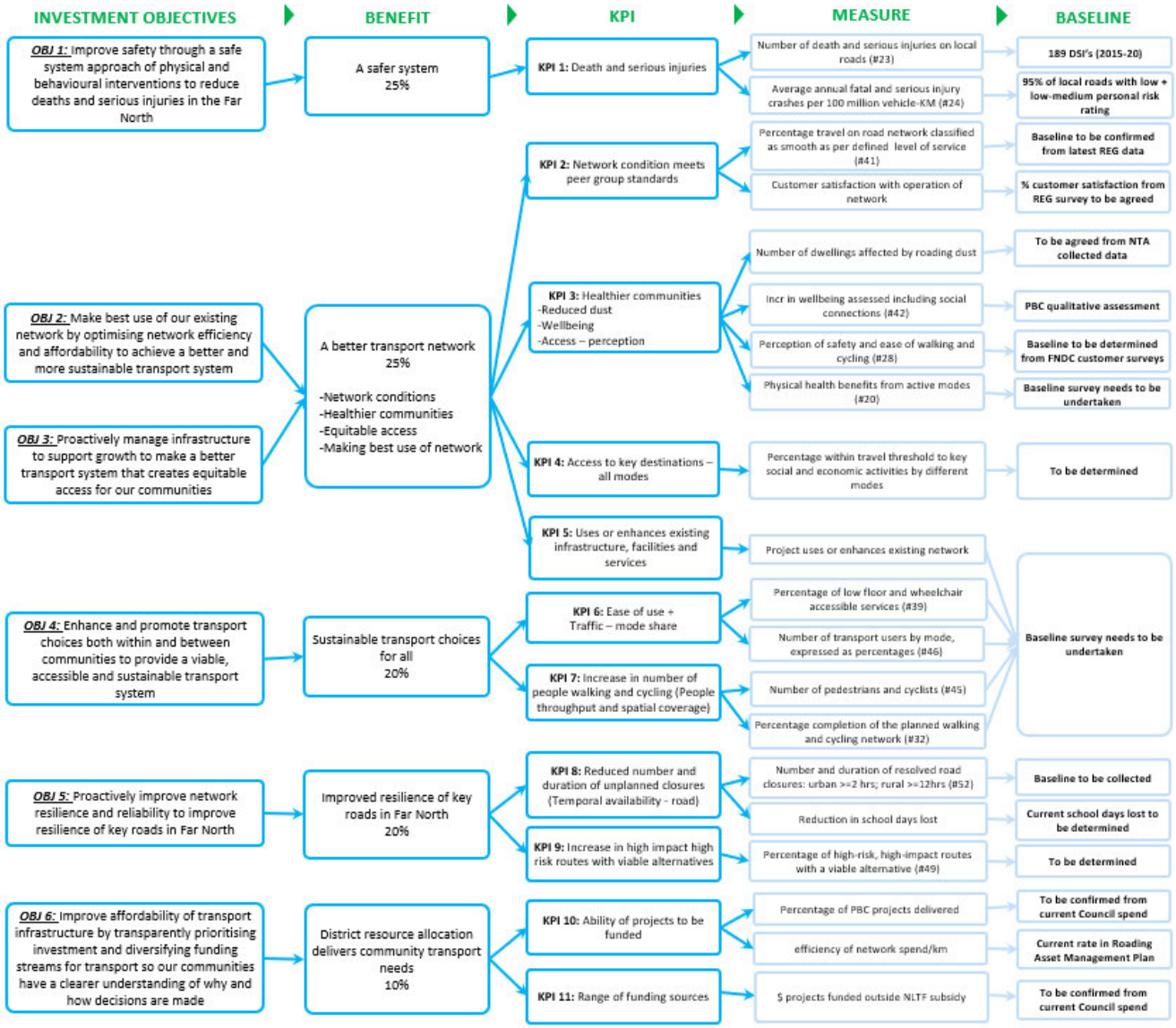


Figure 47: Performance measures



Note: # referenced from Waka Kotahi's Investment Performance Measures: Benefits and Measures Framework (https://www.nzta.govt.nz/assets/P-and-I-Knowledge-Base/docs/Investment-performance-measures-for-download-update-2019-08.pdf)

It is noted that the PBC contains a high number and wider spectrum of projects which makes it difficult at this stage to provide a simple list of benefits for a benefits realisation framework. However, the KPIs and measures have been mapped against the PBC benefits as shown in Figure 47.

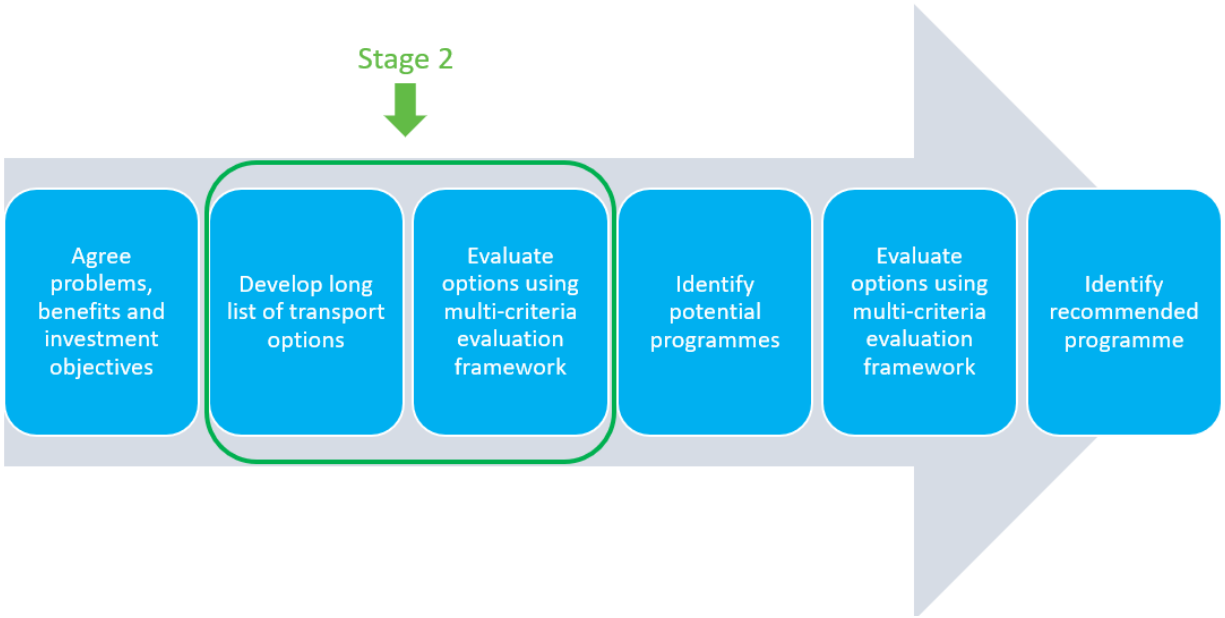
This creates an initial "benefits bank" which future projects could use as a starting point for identifying benefit measurements. The measurement of these benefits will vary depending on the availability of data. The figure above also indicates where a coordinated approach to measurement mechanisms such as surveys may be required. In general, these measures will need to be collected before and after implementation to track either completion of networks or understand the level of change in the measure. Once a baseline is agreed, then the measures and KPIs can be further refined and provide more specificity.

Part B
DEVELOPING THE PROGRAME

11. ALTERNATIVE AND OPTIONS DEVELOPMENT

The second stage in the PBC process is to develop and evaluate a long list of options to respond to the identified problems as shown in Figure 48. A full option evaluation report is included in **Appendix E.**

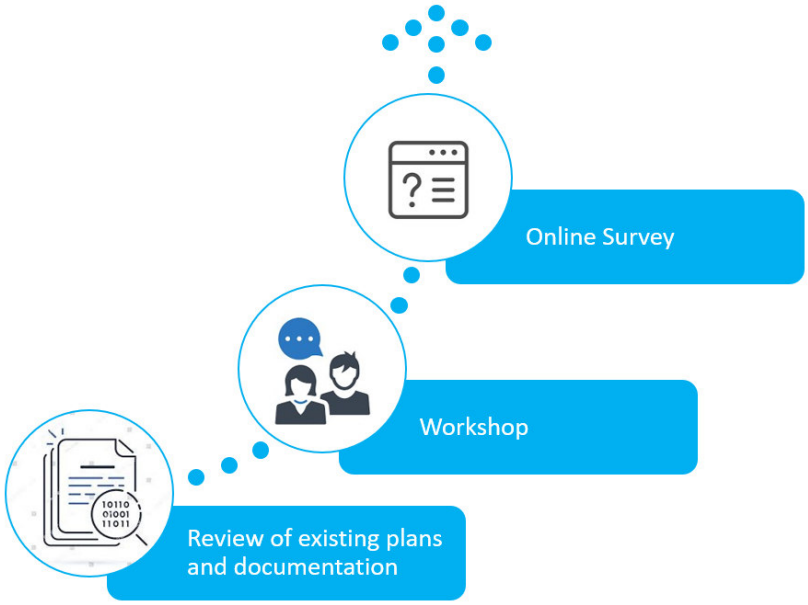
Figure 48 PBC Process – Stage 2



11.1 Alternative and option generation

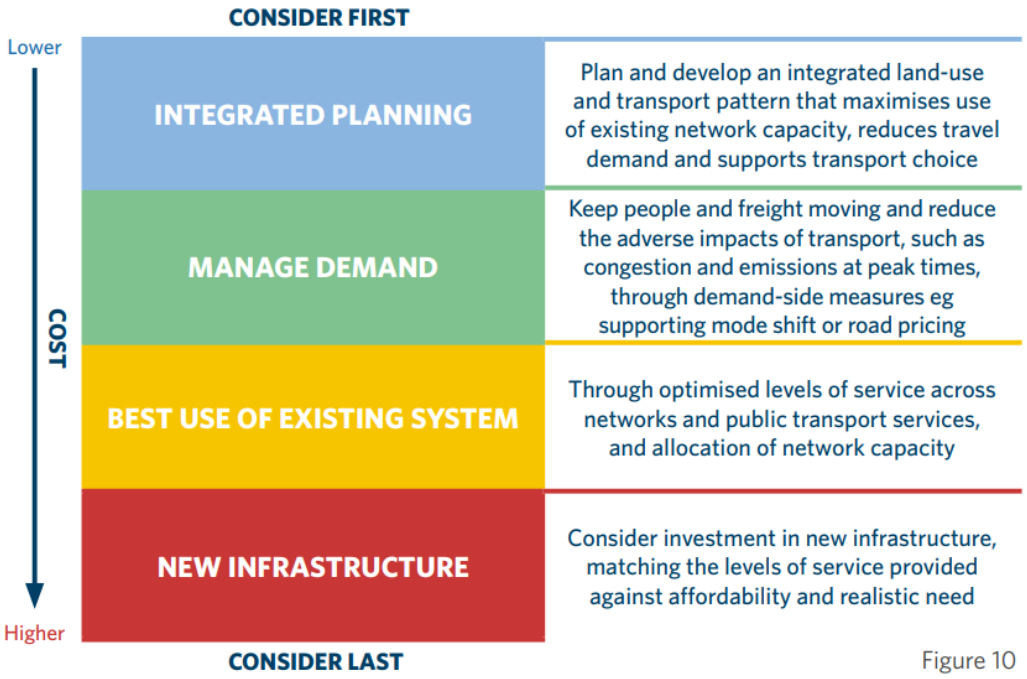
A comprehensive process has been undertaken to determine a list of alternatives and options for this PBC as shown in Figure 49.

Figure 49: Option generation process



The option generation process undertaken was broadly based on the Waka Kohai Intervention Hierarchy. The intervention hierarchy is a staged method to identify potential interventions to achieve the greatest outcome from existing infrastructure and available travel options and avoid or delay investment in new infrastructure, therefore shaping the right combination of responses. The intervention hierarchy is summarised below.

Figure 50: Waka Kotahi Intervention Hierarchy



Source: Waka Kotahi

During the Option Longlist Workshop, stakeholders were encouraged to apply the Intervention Hierarchy, therefore improvements to the existing network, infrastructure and services were prioritised. Given the extent and nature of the existing transport network in the Far North, this hierarchy was utilised to guide the development of the programme and allow Far North to achieve the most appropriate and greatest outcome with the limited funding available.

Whilst following the Intervention Hierarchy, the options identified were required to address the strategic responses described in Section 10 and summarised below in Figure 51.

Figure 51: Strategic Responses

Seven Action Plans have been developed to describe specific activities for each focus area as shown in Figure 52. Options identified using the process described above have been allocated to the relevant Action Plans.

Figure 52: Action plan areas

The Maintenance, Operations and Renewals programme (or MOR action plan) will be developed as part of the Activity Management Plan that is currently being prepared by Northland Regional Council. The MOR programme will be included as a line item in the Integrated Transport Plan Recommended Programme to ensure that it encompasses all transport related projects proposed for Far North District Council. However, going forward, the MOR programme (or MOR action plan) will not be assessed in Part B of this PBC. The MOR programme will be assessed and prioritised under the AMP.

11.1.1 Review of existing plans and documentation

In order to capture ongoing projects and planned future projects in the Far North district, a review of existing plans and documents was undertaken. The review covered the following documents:

- Regional Land Transport Plan (2015-2021)
- FNDC Activity Management Plan (2018-2021)
- FNDC Long Term Plan (2018-2048)
- Twin Coast Discovery Route PBC
- Kerikeri Waipapa Strategic Road Network Plan
- FNDC Low Cost Low Risk Activity List
- FNDC Footpath Priority Matrix

Transport projects that were relevant to the seven Action Plan areas were extracted and incorporated into the long list. This draft long list was distributed as briefing material for Long List workshop participants and used as a starting point for discussion during the workshop.

11.1.2 Option Long List Workshop

The option long list for this PBC was developed through a collaborative process with active involvement from key stakeholder groups at a workshop that was held on 12th November 2019.

The workshop's primary focus was to develop a long list of transport project options to address the key strategic responses under each of the seven Action Plan areas and to explain the process going forward. As part of this process, two facilitated group activities were undertaken with workshop attendees to gather possible transport solutions for each strategic response. Stakeholders were then given an opportunity to individually prioritise the transport solutions gathered.

Stakeholders that were unable to attend the workshop were individually approached (where possible) to provide insight and feedback on possible transport options. All participants (attendees and those that were unable to attend in person) received workshop briefing documentation (including a draft long list), workshop minutes and the presented slides. Post-workshop feedback was also received via the project email and incorporated into the long list option development process, where appropriate.

A record of invitees and outcomes of the workshop are included in **Appendix B.**

11.1.3 Online Survey

An online survey was also organised to gather further feedback on possible transport options. This online 'Have Your Say' survey was made available via the FNDC website to the Council's Elected Members and a wider stakeholder group, including those who were not present at the workshop as well as to the workshop participants for post workshop feedback. A total of nine additional responses were received from the stakeholders. These responses have been incorporated into the option long list where appropriate.

11.1.4 Summary

The outcomes of the process described above were collated to generate a final long list of options, grouped by Action Plan. The full list of options is included in **Appendix E**.

11.2 Alternative and option assessment

This section describes the methodology for how long list options were evaluated and provides a summary of the key outcomes for each action plan. A full option evaluation report, describing how individual options were scored is included in **Appendix E.**

11.2.1 Assessment methodology

Full details of the assessment framework are included in Appendix E.

A Multi Criteria Analysis (MCA) framework was used to assess all options included in the long list. These criteria were taken from Waka Kotahi guidelines for option evaluations for business cases. This process enables options to be ranked against each other with the option ranking informing the development of programmes.

The MCA framework includes consideration of each Investment Objective, the benefits derived if the objective is achieved, KPIs and measures to evaluate how successfully each identified project delivers against each objective. It includes an assessment of the likely effects of each project, grouped into economic, environmental, social and cultural wellbeing as well as an assessment of how implementable each option is. The long list of options was assessed against the MCA and each criterion was allocated a score from an eleven-point scale. Assumptions for scoring was also documented.

It is noted that some options that were identified as part of the long listing process were not included in the MCA for the following reasons:

- Principles and concepts were not considered as specific projects for assessment and are instead reflected in the Integrated Transport Strategy.
- Some options do not belong within the scope of FNDC funding i.e. are undertaken by other districts or Waka Kotahi. These options are noted and will be passed on for consideration to the relevant organisation.
- Duplicated options were included in the long list under broader overarching options or included as more detailed options.
- Infeasibility. However, it should be noted that other options in the long list provide an alternative solution to the problems that these excluded options intended to resolve.

Appendix E provides the full list of options that were excluded from the MCA assessment.

11.2.2 Action Plan outcomes

Evaluating each long list option using the methodology outlined above identified the following key results for each action plan, as summarised in Table 15.

Table 15: Action Plan – Long List Outcomes

Action Plan	Indicative activities included in plan	Long list option assessment outcomes
Safety	Improve safety through a safe system approach • Ongoing review of safety • Physical safety interventions such as localised geometry improvements, intersection improvements, speed management and incremental improvements during regular maintenance. • Education with focus on driver behaviour, cyclists and visitors	Options achieved a high positive score against investment objective 1, which focuses on improving the safety of users in the transport system.
Travel Demand Management	Integrate, implement and coordinate travel behaviour changes across the Far North. Key focus areas are: • Integration of land use and transport initiatives • School, workplace and community travel • Parking management • Promotion of alternative modes of transport	Options scored well against investment objectives 2 and 3, as they are designed to provide a better transport network, proactively managing infrastructure to support growth, optimise network efficiency and affordability. This action plan delivers well against social and economic wellbeing by supporting healthier communities and enhancing existing infrastructure.
Active	Increase cycling and walking activity within the District. Key focus areas are: • Completing walking and cycling infrastructure • School trips • Urban journeys • Strategic recreational cycling links	Options scored well against investment objectives 1, 2 and 4, as they are specifically designed to enhance and promote transport choices within and between communities, to increase the number of people walking and cycling. They are also intended to make good use of the existing network by encouraging better use of existing facilities. These options typically have a negligible impact on investment objective 5. This is an expected outcome given active modes in general have very limited impact on network resilience, reliability and road closures.
Public Transport & Ride Share	Short, medium and long-term aspirations to improve: • Patronage of existing public transport services • Access to ride-share options • Vehicle occupancy of private vehicles • Access to accessible transport options	Options typically scored well against social wellbeing and investment objectives 2, 3 and 4, by creating more equitable access for the community and enhancing transport choices within and between communities so that there are sustainable transport choices for all.
Harbour	Utilisation of the harbours to improve resilience and travel choices. This could	Options scored well against investment objective 2, 3 and 6, indicating that they

Action Plan	Indicative activities included in plan	Long list option assessment outcomes
	include increased services and frequencies, wharf infrastructure as well as consideration of a long term Hokianga Harbour crossing.	improve multi-modal accessibility and customer satisfaction. Most options also deliver well against economic and social wellbeing benefits. Some options achieved a negative score against implementability, on the basis that they are generally large-scale projects that are likely difficult to deliver within the 2018-28 period or are financially infeasible for the Far North within that 10-year period. In this regard, the perceived positive impact of these options may be high, but they are restricted by challenges with implementability.
Road Network	Transport activities that improve the efficiency, accessibility and connectivity of our transport network. Activities might include: • Road improvements - seal extension, pavement strengthening • Resilience activities • HPMV and 50max routes • Capacity and congestion management • Route protection for future growth • Review of existing growth strategies to determine how well these strategies align with our district transport strategy and its desired outcomes • Provision of new transport technology infrastructure	This action plan includes a broad range of options. In general, the better scoring options are those that deliver against a number of the investment objectives, for example township planning and upgrades deliver benefits by providing transport choices within communities, make good use of existing infrastructure and proactively manage infrastructure to support growth. Options that address network resilience also score well as they keep lifelines open and available and make best use of existing infrastructure. Options that score less well are typically quite localised, not delivering ward or district-wide benefits and likely only deliver benefits against one or two investment objectives. These options may be grouped with other similar projects in subsequent stages to form programmes of investment with broader benefits across the district.

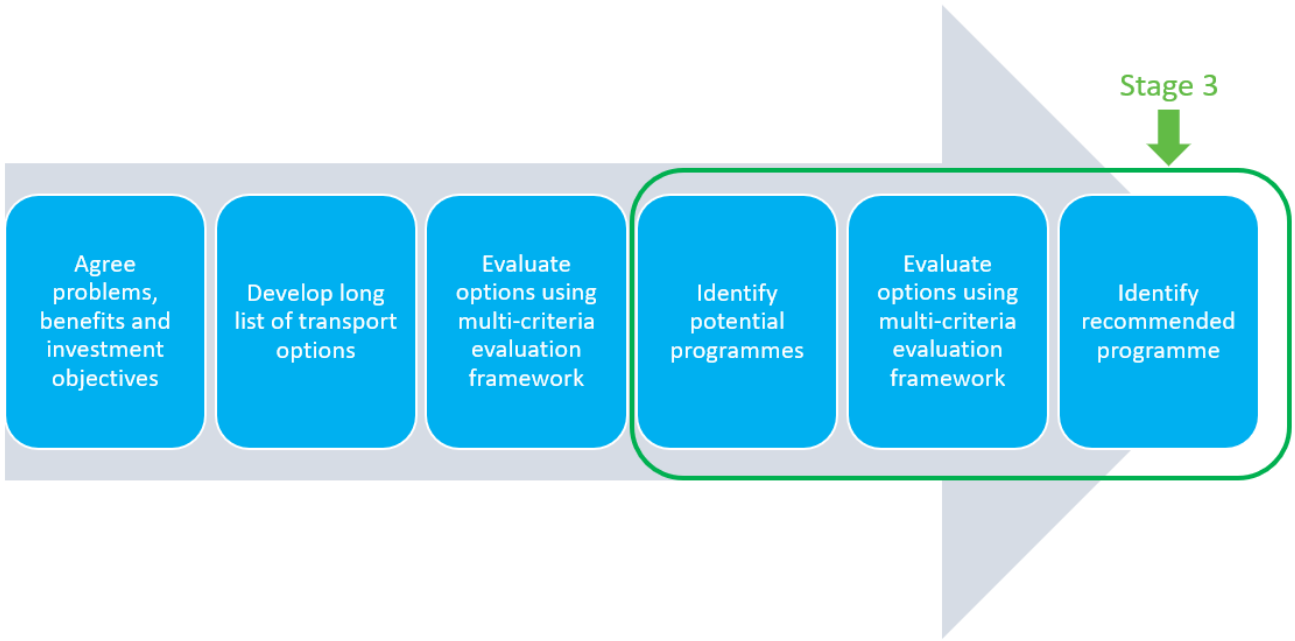
The conclusion of this option long list assessment is that a wide range of options could address the corridor problems, ranging from operational improvements or demand management through to large-scale, capital-intensive interventions.

The better performing options within each Action Plan will be used to develop programmes to address the problems identified for the Far North district. The economic efficiency of each of the options will be quantified as part of the programme development process, described in Section 11.2.2. It is noted that although some options may not score well on an individual basis, when combined as part of a holistic response have merit within the PBC programme.

12. PROGRAMME OPTIONS DEVELOPMENT AND ASSESSMENT

The final stage in the PBC process was to use the options identified in Section 11 to develop a recommended programme that best addresses the key problems of safety, growth, transport choices, road conditions, resilience and limited funding issues as shown in Figure 53.

Figure 53 PBC Process Stage 3

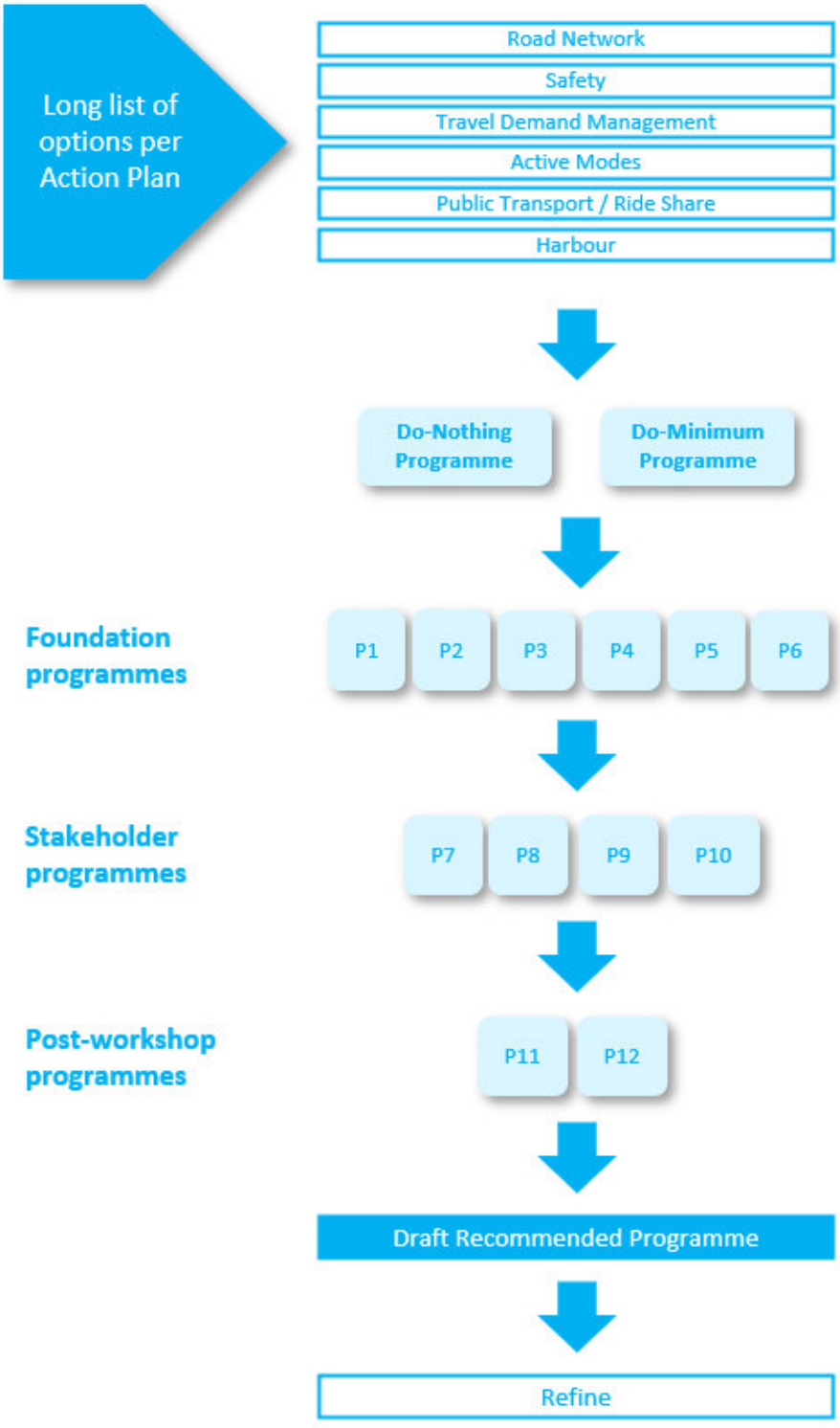


12.1 Programme development process

The Far North District Integrated Transport Plan is programme of works to deliver on the investment objectives of improving safety, securing our transport system, making best use of our existing network, improving transport choices, managing for growth and prioritising investment.

This section summarises how the proposed programmes were developed using a robust and transparent manner. The assessment of long list options against the investment objectives and wellbeing effects, and relative scoring between options was a key consideration when developing each programme. Further consideration was given to the performance of the options against the individual KPI measures. The process of programme development is shown in Figure 54.

Figure 54: Programme development process



The initial assumptions and prioritisation process considered for the programme development process are outlined in Table 16 below.

Table 16: Programme development assumptions

Subject	Assumption / Summary
Existing FNDC transport spend	• With reference to the RLTP, FNDC currently has a total spend of around $45m per year on transport, which includes all MOR spend. Of this, approximately $11M - $20M per year is spent on capital investment (or non-maintenance spend), depending on the level of MOR spend. It is noted that at this stage of programme development, FNDC's anticipated MOR spend for the next 10 year period was yet to be finalised. • As such, programmes were developed based on a quantum similar to the higher end of the current range of capital investment (as indicated in the RLTP). • Programmes provide opportunity for high spend scenarios which allow for additional funding to be considered. These programmes have been kept within an achievable range, therefore being realistic while maintaining flexibility.
Option selection	• Not all options will make the 10-year programme. These longer-term options have been assessed at a high level against the strategic responses to determine their potential contribution to the FNDC ITS • It is intended that the programme would be reviewed every 3 years to ensure the spend is still relevant
Post-workshop programmes (P11 & P12)	• Programmes incorporate stakeholder feedback received during and following the Programme Development Workshop • Some options have been packaged for investment. Individual projects have been listed as line items to be considered for prioritisation within the package. Other locations / projects can be added during the implementation period to allow flexibility for FNDC to respond to changing future needs. • A few packaged options have been allocated a limited 10-year cost rather than the actual total cost of the option. This is to ensure that the option is feasible for the 10-year period, therefore enabling high priority projects within the option to be funded and delivered.
Refined process	• The draft recommended programme was further refined to ensure consistency with the FNDC Draft Long Term Plan 2021-31 and the Twin Coast Discovery Route PBC.

Initially six foundation programmes (P1-P6) were developed. These included:

- P1: Balanced programme (top 10 within each action plan)
- P2: Safety programme
- P3: Network improvements programme
- P4: Mode neutral programme (active modes, PT, TDM and harbour)
- P5: Maintenance / Asset management programme
- P6: Top 30 programme (over all action plans)

These programmes were assessed using the MCA to establish their effectiveness. The programmes aimed to incorporate a range of options from some or all action plan areas depending on the focus of the programme. Fundamental to each programme was to ensure that the total anticipated cost was within a reasonable range of the existing Far North District 10-year transport spend.

The results of these programmes were presented at the Programme Development Workshop for stakeholders to review and use as input for the development of stakeholder programmes. At the workshop, there was general agreement that these programmes had individual merits, however, some stakeholders found that key projects which could contribute to addressing the investment objectives were not included in the programmes. With the knowledge of how each foundation programme performed with respect to the MCA, stakeholder groups were then asked to develop programmes that best responded to all the investment objectives. Groups were asked to take the best

aspects of each foundation programme (as well as any other options that they felt would be appropriate) to create a preferred programme.

Using this approach, four stakeholder programmes (P7-P10) were further developed. Following the workshop, stakeholders were given the opportunity to provide any further refinement or commentary for the programme development activity. Any post workshop feedback was incorporated into the stakeholder programmes.

After reviewing the output from the stakeholder groups, it was apparent that the foundation programmes and stakeholder programmes could be further enhanced to cater for additional options. Therefore, two post-workshop programmes were further developed by the project team for consideration:

- **P11: Base programme** – further enhancement of a balanced scenario incorporating stakeholder feedback. This programme was developed based on the expected non-maintenance transport spend of approximately $11M - $20M per year
- **P12: Stretch programme** – further enhancement of a balanced scenario incorporating stakeholder feedback. This programme comprises of the same options as P11 however this programme was developed without considering the limited spend. Therefore, the full cost of the option was incorporated, or a higher allocation of funds was given to certain options compared to P11.

A summary of the key features of the individual programmes is included in Table 17 and details of each programme are included in **Appendix F**.

Table 17: Summary of programmes

Programme		Highlights
Foundation Programmes	P1: Balanced	Programme has been developed using a two-stage approach: • Top 10 ranking options based on overall MCA scoring within each action plan were considered • Of those options, a sub set of top ranking options were selected to match ballpark programme spend
	P2: Safety	Programme focused on options within the safety action plan and included infrastructure upgrades such as: • Upgrades to existing roads • Road sealing • Gateway treatments Furthermore, included a number of active mode options that improved the condition of existing pedestrian and cycle paths or provided new facilities, therefore ensuring a safer environment for vulnerable users.
	P3: Network improvements	Programme focused on maintaining or improving overall network: • Investigations / future planning • New roading projects • Climate change mitigation measures • Township upgrades • Stormwater upgrades • Access improvements • Safety improvements • New / improved pedestrian and cycling facilities
	P4: Mode Neutral	Programme includes options that encourage modal shift and focus on options within the active mode action plan: • Access improvements • Pedestrian and cycle safety • Parking improvements

		• Pedestrianisation of urban areas • New cycle connections • Cycling plans • New / improved footpaths and cycle facilities • PT / ride share future planning • Improving existing PT services
	P5: Maintenance / Asset Management[33]	Programme includes only options involving business as usual maintenance (excluding the AMP MOR programme): • Road sealing • Bridge improvements • Stormwater upgrades • Resilience slip mitigations • Safety improvements
	P6: Top 30	Programme includes top 30 ranked options across all action plan areas. The ranking was based on overall MCA scoring.
Stakeholder Programmes	P7: Stakeholder group 1	• Focus on mode neutrality / safety / balanced programmes • Better management of driver behaviour (focus on foreign drivers, improved advanced signage) • Improving speed management across network ie. signage and speed limit reviews • Improving access to DOC and Tourism destinations • Improving network to keep pace with growth • Maintenance collaboration of non-FNDC roads • Categorised and weighted prioritisation to seal extension project selection (resilience, detour, tourism) to open opportunities for third party funding • Dust management prioritisation • Re-categorising options under the Road Safety Action Plan
	P8: Stakeholder group 2	• Focus on safety, active modes and network improvements • Emphasis on Kerikeri CBD bypass and other Kerikeri road network projects • Recognised the importance of strategic planning
	P9: Stakeholder group 3	• Safety as first priority. Encourage mode shift, rather than just mode neutral • Strong support for walking and cycling particularly in urban areas and for school children • PT/ride share had value in Kerikeri particularly and possibly rural communities for ride share • Interested in what could be done on forestry routes and for detour routes • Kerikeri CBD bypass was highlighted • KiwiRail investment in line to Otiria – need to consider transport requirements around heavy vehicle access to rail head at Otiria • Rail safety education campaign – trains will be running on lines after none for years. Also review of level crossings – signage, clear vegetation for visibility etc
	P10: Stakeholder group 4	• Focus on connectivity • Kerikeri should be looked at as a whole package with strategy / investigation and recommendations for implementation

[33] P5 was previously developed to include the AMP MOR programme. The MOR programme has now been removed from the PBC assessment.

		• Kawakawa-Otiria bypass to respond to new investment in rail line • PT in Kerikeri for elderly and children
Post-workshop programmes	P11: Base	Programme is a further enhancement of a balanced scenario incorporating stakeholder feedback. This programme was developed based on the expected non-maintenance transport spend of approximately $11M - $20M per year.
	P12: Stretch	Programme is a further enhancement of a balanced scenario incorporating stakeholder feedback. This programme comprises of the same options as P11 however this programme was developed without considering the limited spend. Therefore, the full cost of the option was incorporated, or a higher allocation of funds was given to certain options compared to P11.

12.2 Do Nothing and Do Minimum Programme

The do-nothing programme for FNDC has been agreed as providing no additional capital expenditure for transport. For this assessment, the do-nothing is therefore assumed to be the activities that are included in the existing Maintenance, Operations and Renewals programme.

The do-minimum programme represents the minimum level of expenditure required to maintain a minimum level service on the FNDC transport network. For this PBC it has been agreed with FNDC and Waka Kotahi to include the existing Maintenance, Operations and Renewals programme with the additions of regular annual spends including Road based education, footpath renewals and road sealing.

12.3 Programme assessment

A three-stage programme assessment approach was used, as shown in Figure 54. Firstly, the foundation programmes were assessed against the MCA criteria and then the programmes developed in collaboration with the stakeholders were assessed against the same criteria. The third step was the consideration of the performance of the programmes against a potential BCR. Key principles used in the programme MCA are outlined in **Appendix E**. These are based on the 10-point scale also described in **Appendix E**.

The MCA criteria includes weightings for each investment objective (as shown in **Appendix E**). These weightings were established during the ILM workshop, which was held in the early stages of the PBC. The outcome of this showed that the first 5 investment objectives had similar weightings. For the purpose of this programme assessment, the investment objectives were initially considered to have equal weighting. Weightings were then considered in later stages of the assessment (i.e. sensitivity testing of each developed programme).

12.3.1 Foundation programme assessment

The foundation programmes were developed to best address an individual investment objective, a balanced scenario and a scenario with the top-ranked options based on the MCA scoring only. The results of the initial MCA are shown in Figure 55. The MCA results of the do-nothing and do-minimum programme has been included for comparison purposes.

Figure 55: Foundation programme MCA

		PROGRAMME MCA							
		PA	PB	P1	P2	P3	P4	P5	P6
		Do nothing	Do minimum	Balanced (top 30 within each Action Plan)	Safety	Network Improvements	Mode Neutral (Active modes, PT, TDM, Harbour)	Maintenance / Asset Management	Top 30 (over all Action Plans)
Investment Objectives	***KPI***								
Objective 1 - Improve safety through a safe system approach of physical and behavioural interventions to reduce deaths and serious injuries in the Far North	Death and serious injuries	2	2	4	4	4	2	2	2
Objective 2 - Proactively manage infrastructure to support growth to make a better transport system that creates equitable access for our communities	Network condition – road	4	5	3	3	4	2	5	3
	Healthier communities -Reduced dust -Wellbeing -Access – perception	2	2	3	3	4	4	2	3
Objective 3 - Make best use of our existing network by optimising network efficiency and affordability to achieve a better and more sustainable transport system	Uses or enhances existing infrastructure, facilities and services	5	5	3	3	3	4	5	3
	Access to key destinations – all modes	1	2	4	2	3	3	2	4
Objective 4 - Enhance and promote transport choices both 'within' and 'between' communities to provide a` viable, accessible and sustainable transport system	Ease of use + Traffic – mode share	0	0	1	1	1	4	1	1
	People – throughput + Spatial coverage	1	1	2	1	2	4	1	2
Objective 5 - Proactively improve network resilience and reliability to improve resilience of key roads in Far North	Temporal availability – road	2	3	1	1	3	0	4	1
	Availability of a viable alternative to high-risk and high-impact route	2	3	1	0	2	1	3	1
Objective 6 - Improve affordability of transport infrastructure by transparently prioritising investment and diversifying funding streams for transport so our communities have a clearer understanding of why and how decisions are made	Ability of projects to be funded	0	0	0	0	0	0	0	0
	Range of funding sources	0	0	0	0	1	1	0	0
IMPLEMENTABILITY									
Impact on other modes **Deliverability** **Financial feasibility**		0	0	0	0	-1	0	0	0
ASSESSMENT OF EFFECTS									
Economic Wellbeing: **Transport system integration** **Cost and construction risk**		1	1	3	2	3	3	1	3
Cultural Wellbeing: **Mana whenua values** **Heritage and archaeology impacts**		0	0	0	0	0	0	0	0
Social Wellbeing: **Land use integration** **Social cohesion** **Urban design outcomes** **Construction impacts, disruption**		1	1	3	2	3	3	1	3
Environmental Wellbeing: **Landscape, visual effect** **Ecological effects**		1	1	1	1	1	1	1	1
TOTAL AVERAGE SCORE		13.5	15.5	20	16	21.5	20.5	16.5	18
PROGRAMME RANKING		8	7	3	6	1	2	5	4

Not surprisingly, the do-nothing and do-minimum programme performed the lowest overall compared to the foundation programmes against the MCA assessment criteria.

The foundation programmes performed strongly against some criteria, but not so well against others. All foundation programmes performed well against investment objectives 1-3, in particular P1, P2 and P3 scored relatively higher. As expected, resilience focused programmes (P3 and P5) had high positive impacts against the resilience criteria, while the active mode focused programme (P4) scored well against the multimodal criteria. All programmes achieved a positive score against the economic, social and environmental wellbeing effects, of these, P1, P3, P4 and P6 performed strongly against the economic and environmental wellbeing effects.

Overall, P3 and P4 achieved the highest total average score as they delivered well against additional investment objectives relative to other programmes. However, the foundation programmes highlighted the need for a combination of the foundation programmes if all outcomes sought from the programme were to be delivered.

12.3.2 Further programme assessment

The foundation programmes P1-P6 and qualitative MCA scoring was presented to the stakeholder group who then developed P7-P10. Two additional programmes (P11 and P12) were then developed by the project team to further enhance the balanced scenario by incorporating feedback received during and following the workshop. These additional programmes were all assessed against the same criteria. Interestingly, although developed separately by each stakeholder group, the programmes all show common themes and aim to include a balanced range of options to address modal shift and safety. The full programme assessment is included in Figure 56.

Figure 56: Programme MCA assessment

		PROGRAMME MCA													
		PA	PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
		Do nothing	Do minimum	Balanced (top 30 within each Action Plan)	Safety	Network Improvements	Mode Neutral (Active modes, PT, TDM, Harbour)	Maintenance / Asset Management	Top 30 (over all Action Plans)	Stakeholder Programme 1	Stakeholder Programme 2	Stakeholder Programme 3	Stakeholder Programme 4	Base Post Workshop Programme	Stretch Post Workshop Programme
Investment Objectives	***KPI***														
Objective 1 - Improve safety through a safe system approach of physical and behavioural interventions to reduce deaths and serious injuries in the Far North	Death and serious injuries	2	2	4	4	4	2	2	2	2	3	2	2	3	3
Objective 2 - Proactively manage infrastructure to support growth to make a better transport system that creates equitable access for our communities	Network condition – road	4	5	3	3	4	2	5	3	3	3	3	3	3	3
	Healthier communities -Reduced dust -Wellbeing -Access – perception	2	2	3	3	4	4	2	3	3	3	3	3	4	4
Objective 3 - Make best use of our existing network by optimising network efficiency and affordability to achieve a better and more sustainable transport system	Uses or enhances existing infrastructure, facilities and services	5	5	3	3	3	4	5	3	3	3	3	3	4	4
	Access to key destinations – all modes	1	2	4	2	3	3	2	4	3	2	3	3	3	4
Objective 4 - Enhance and promote transport choices both 'within' and 'between' communities to provide a` viable, accessible and sustainable transport system	Ease of use + Traffic – mode share	0	0	1	1	1	4	1	1	3	3	2	2	3	3
	People – throughput + Spatial coverage	1	1	2	1	2	4	1	2	3	3	3	1	3	4
Objective 5 - Proactively improve network resilience and reliability to improve resilience of key roads in Far North	Temporal availability – road	2	3	1	1	3	0	4	1	2	1	2	1	2	2
	Availability of a viable alternative to high-risk and high-impact route	2	3	1	0	2	1	3	1	1	1	2	2	2	2
Objective 6 - Improve affordability of transport infrastructure by transparently prioritising investment and diversifying funding streams for transport so our communities have a clearer understanding of why and how decisions are made	Ability of projects to be funded	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Range of funding sources	0	0	0	0	1	1	0	0	0	0	0	0	1	1
IMPLEMENTABILITY															
Impact on other modes **Deliverability** **Financial feasibility**		0	0	0	0	-1	0	0	0	0	0	0	0	0	-2
ASSESSMENT OF EFFECTS															
Economic Wellbeing: **Transport system integration** **Cost and construction risk**		1	1	3	2	3	3	1	3	3	3	3	3	3	3
Cultural Wellbeing: **Mana whenua values** **Heritage and archaeology impacts**		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Social Wellbeing: **Land use integration** **Social cohesion** **Urban design outcomes** **Construction impacts, disruption**		1	1	3	2	3	3	1	3	3	3	3	3	3	3
Environmental Wellbeing: **Landscape, visual effect** **Ecological effects**		1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL AVERAGE SCORE		13.5	15.5	20	16	21.5	20.5	16.5	18	19.5	19.5	19.5	18	22.5	21.5
PROGRAMME RANKING		14	13	5	12	2	4	11	9	6	6	6	9	1	2

Following the assessment of all programmes, the top four programmes in the MCA were:

1. P11: Base post-workshop programme (project team)
2. P12: Stretch post-workshop programme (project team)
3. P3: Network improvements (foundation programme)
4. P4: Mode Neutral (foundation programme)

The stakeholder programmes generally performed well against investment objectives 1-5.

The post-workshop programmes performed strongly overall as they include a balanced range of options, therefore targeting all investment objectives. Furthermore, the packaging of options allows these programmes to cater for a more extensive range of options from the longlist. P12 performed slightly better than P11 against the investment objectives as P12 had a higher overall programme cost therefore allowing a greater number of options addressing investment objectives 3 and 4 to be delivered. However, it performed measurably worse in the implementability and feasibility criteria compared to P11 due to the higher cost and additional large capital works.

With regards to investment objective 6, the funding aspect is generally unknown at this stage, therefore most options were assumed to have negligible effects against this objective. However, P3, P4, P11 and P12 achieved a positive score against this objective as the programmes comprised of a higher proportion of options that have possible opportunities for alternative funding streams such as developer contributions, private funding, PGF, TIF and co-funding with communities.

Comparison of performance against BCR and incremental BCR

Further to the assessment against the MCA scoring, the indicative transport benefits, benefit-cost-ratios (BCR) and incremental BCR's were calculated to understand the potential economic viability of each programme. It is noted that the programmes are not mutually exclusive therefore the incremental analysis does not accurately represent the incremental BCR's. However, for the purpose of this assessment, an 'incremental type' analysis has been undertaken to compare the programmes to the lowest cost programme (P5). Note that the NPV cost and NPV benefits of the programmes were compared to the Do-minimum programme.

The ranking of the programmes was based on the value of BCR and incremental BCR and indicative BCR for all programmes are shown in Table 18.

Table 18: Programme KPI and BCR outcomes

	PA	PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
	Do-nothing (MOR programme)	Do-minimum	Balanced	Safety	Network improvements	Active modes	Maintenance / Asset management	Top 30	Stakeholder Programme 1	Stakeholder Programme 2	Stakeholder Programme 3	Stakeholder Programme 4	Base post-workshop programme	Stretch post-workshop programme
# PROJECTS IN THE PROGRAMME	18	10	32	31	27	39	8	31	65	77	38	21	62	62
AVERAGE CAPITAL COST (10 year) - EXCLUDING MOR PROGRAMME	$0M	$71.04M	$138.89M	$168.15M	$291.64M	$174.09M	$52.71M	$117.12M	$262.74M	$1223.2M	$209.67M	$383.96M	$218.38M	$260.97M
Costs NPV (compared to Do-min)	$0M	-	$64.91M	$92.68M	$210.7M	$98.51M	-$17.32M	$44.13M	$182.89M	$1099.51M	$132.47M	$298.76M	$140.69M	$180.46M
Benefits NPV (Compared to Do-min)	$0M	-	$33.41M	$86.23M	-$2.42M	-$35.58M	-$22.64M	-$74.45M	$180.08M	$277.58M	$70.22M	-$11.56M	$203.81M	$233.61M
BCR	n/a	n/a	0.5	0.9	0.0	-0.4	1.3	-1.7	1.0	0.3	0.5	0.0	1.4	1.3
Incremental BCR (compared to P5)	n/a	n/a	0.7	1.0	0.1	-0.1	n/a	-0.8	1.0	0.3	0.6	0.0	1.4	1.3
BCR Ranking	n/a	n/a	7	5	9	11	2	12	4	8	6	10	1	3
Incremental BCR Ranking	n/a	n/a	5	4	8	10	n/a	11	3	7	6	9	1	2

The programmes have been ranked under two categories: BCR ranking and incremental BCR ranking. For the 'incremental type' assessment, all programmes were compared to P5 which was the lowest cost programme. P11 and P12 results in the top 2 incremental BCR values of 1.4 and 1.3 (respectively), which are both over 1.0. This suggests that these programmes achieve greater benefits for the additional money spent and are therefore financially justifiable. P11 and P12 are comprised of the most optimal combination of activities that achieve the highest value for money, with 'packaged' options further enhancing the potential for benefits and better investment objective outcomes. P11 achieved a slightly better BCR than P12 due to the lower capital cost. Given that the types / number of options included in P11 and P12 were the same, the outcomes against the KPI measures were identical.

The differences between the MCA ranking (Section 12.3.1) and BCR ranking of the foundation programmes (specifically P2 – P5) was an expected outcome as the two methodologies are testing different outcomes/boundaries of the programme. The MCA tests the breadth of the programme and the BCR tests in more detail the availability of transport benefits and the overall value for money. Both P2 (Safety) and P5 (Maintenance) scored well in the BCR assessment as the activities in these programmes align well with standard EEM transport benefits and have lower implementation costs. In particular, the safety programme demonstrates the value in investing in safety. However, when these two programmes were tested against the range of investment objectives, their narrow focus did not score as well in the MCA assessment. Conversely, the P3 (Network) and P4 (Active Modes) scored well in the MCA assessment against meeting a wide range of investment objectives, but the activities selected had a lower benefit profile. This was due to a range of factors including a lack of site-specific detail in some selected activities to generate benefits and the benefits of some activities not being readily attributable to EEM transport benefit methodologies. The dual nature of the MCA and BCR assessments clarified how a balanced programme could be developed to address the District's transport problems and remain a good return on investment.

Summary

Therefore, it can be concluded that P11 performs the best against the two criteria: BCR and incremental BCR, whilst also keeping within a reasonable range of the current level of transport investment and therefore achieving a programme that is realistic and feasible for FNDC to adopt.

12.3.3 Sensitivity tests

Sensitivity testing of the MCA was done by doubling the weighting for each of the investment objectives and assessment criteria to understand how the rankings may change if one criterion was considered more important than another. The results are summarised in Figure 57, which shows the ranking of 1 (highest) to 12 (lowest) for each of the programmes under different scenarios.

The results of the sensitivity testing are summarised below:

- Doubling the weighting of investment objectives 1, 3, 4 and 5 resulted in the mid to lower ranked programmes to change order, however the general trend remained relatively consistent with the original programme ranking.
- P12 dropped outside the top four programmes when implementability / affordability was more valued.
- The performance of all programmes was unchanged when more weighting was given to the wellbeing effects.

Figure 57: Sensitivity tests

		MCA PROGRAMME RANKING													
		PA	PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
SENSITIVITY TEST SCENARIOS		Do nothing	Do minimum	Balanced (top 30 within each Action Plan)	Safety	Network Improvements	Mode Neutral (Active modes, PT, TDM, Harbour)	Maintenance / Asset Management	Top 30 (over all Action Plans)	Stakeholder Programme 1	Stakeholder Programme 2	Stakeholder Programme 3	Stakeholder Programme 4	Base Post Workshop Programme	Stretch Post Workshop Programme
Scenario 0	Original Programme MCA scoring	14	13	5	11	2	4	11	9	6	6	6	9	1	2
Scenario 1	Investment Objective 1 weighting x2	14	13	4	9	1	5	12	9	7	5	7	9	1	3
Scenario 2	Investment Objective 2 weighting x2	14	13	5	12	2	4	11	9	6	6	6	9	1	3
Scenario 3	Investment Objective 3 weighting x2	14	12	5	13	3	4	11	9	6	8	6	10	1	2
Scenario 4	Investment Objective 4 weighting x2	14	13	8	12	4	3	11	9	5	5	7	9	1	2
Scenario 5	Investment Objective 5 weighting x2	14	12	5	13	2	5	10	10	5	8	4	9	1	3
Scenario 6	Investment Objective 6 weighting x2	14	13	5	12	2	4	11	9	6	6	6	9	1	2
Scenario 7	Implementability weighting x2	14	13	4	12	2	2	11	9	5	5	5	9	1	5
Scenario 8	Economic wellbeing effects weighting x2	14	13	5	11	2	4	12	9	6	6	6	9	1	2
Scenario 9	Cultural wellbeing effects weighting x2	14	13	5	12	2	4	11	9	6	6	6	9	1	2
Scenario 10	Social wellbeing effects weighting x2	14	13	5	11	2	4	12	9	6	6	6	9	1	2
Scenario 11	Environmental wellbeing effects weighting x2	14	13	5	12	2	4	11	9	6	6	6	9	1	2

12.3.4 Recommended Programme

After completing all the analysis, P11: Base post-workshop programme has been identified as the recommended programme. P11 provides a good balance of delivering strongly against the investment objectives as well as the wellbeing effects, while being financially feasible and deliverable within the next 10-year period. This is highlighted in the economic performance of the programme, with it resulting in the highest indicative BCR compared to other programmes. It is also consistently one of the top ranked programmes against the investment objectives and provides a balanced response to the problems facing the district.

RECOMMENDED PROGRAMME

Programme 11 has been selected as the recommended programme for this business case

13. RECOMMENDED PROGRAMME

The Integrated Transport Plan (ITP) recommended programme is a comprehensive and holistic programme of initiatives that supports the Far North District transport system and the delivery of the Integrated Transport Strategy (ITS). This 10-year transport programme is shown Figure 58 and seeks to achieve:

- A safer, better transport system with more transport choices for people and businesses
- Improved connectivity and access to social and economic activities
- Secure and reliable transport network
- Community supported prioritised transport investment to best use resources and attract funding

The ITP recommended programme is an investment map that prioritises and stages the delivery of 62 transport activities to best achieve the investment objectives within the 10-year implementation period. Many of the options are investigations or planning documents that encourage modal shift and focus on the strategic planning of the future road network. A large proportion of the programme also includes physical improvements to the network such as safety, road upgrades, improved resilience and enhanced connectivity / condition of walking and cycling networks.

The programme includes packaged transport activities, which in some cases, are broad and overarching and are therefore supported by a list of potential individual projects to be further prioritised within this activity. This list contains specific projects / locations identified to date and its purpose is to provide a starting point for the prioritisation of activities. It should be noted that other projects / locations can be considered within each transport activity during this process. This will retain flexibility for FNDC to respond to changes in the future.

The ITP recommended programme ensures consistency with FNDC planning documents being developed simultaneously such as Far North 2100 and the FNDC Long Term Plan (2021-31). The programme captures the transport aspects of these documents and ensures that these are reflected through the programme.

The programme has been developed based on the seven action plan areas. Collectively, they all have an integral role in delivering programme-wide benefits. Table 19 summarises the role and benefit of each action plan for the recommended programme.

A full list of options in the ITP recommended programme is included in **Appendix G**. Options from the longlist that were not selected for the recommended programme are also summarised in **Appendix G,** where they have been assessed at a high level against the strategic responses to determine their potential contribution to the FNDC ITS in the longer term(>10 years).

Figure 58 Recommended Programme

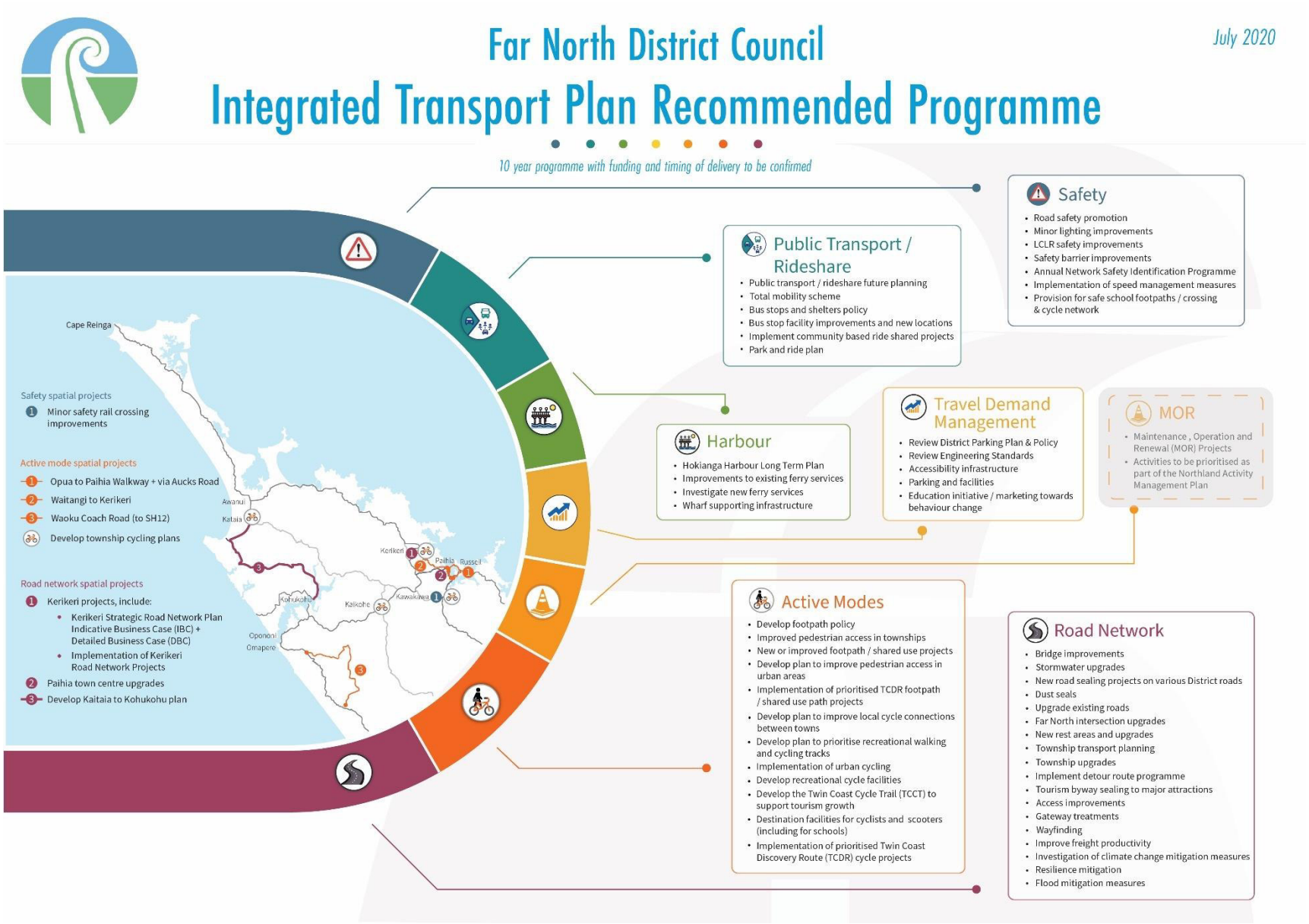


Table 19: Recommended programme action plan areas

Action Plan	Benefit for the recommended programme
Road Network 	Activities in the Road Network action plan include: • Roading / infrastructure improvements • Township planning and upgrades • Access improvements • Resilience improvements and response to climate change These options address network condition, connectivity, resilience and access: • Improve the quality of the journey through infrastructure upgrades and resilience mitigation measures • Enhance connectivity of the transport network by improving access via new roads and township upgrades • Keep the road open addressing journey reliability, disruption to businesses and community severance
Safety 	Activities in the Safety action plan include: • Road Safety Promotion • Safety projects (planning and implementation options such as Annual network safety identification programme, speed management, LCLR safety improvements) • Schools These options improve safety through a safe system approach through physical safety interventions, education and safety reviews.
Travel Demand Management (TDM) 	Activities in the TDM action plan include: • Parking and facilities • General TDM projects (i.e. Review Engineering Standards, Accessibility infrastructure, Education initiatives) These options aim to integrate, implement and coordinate travel behaviour changes
Active Modes 	Activities in the Active Modes action plan include: • Pedestrian / shared paths planning and implementation activities • Cycling planning and implementation activities These options focus on improved access to walking and cycling in the district through enhancements of existing facilities and the provision of new facilities to ensure the safety of vulnerable users, improve connectivity within and between communities for regional and commuter customers and promote recreational and tourist activities.
Public Transport / Ride Share 	Activities in the Public transport / Ride share action plan include: • Total mobility scheme • Public transport / ride share future planning and implementation • Bus stops / facilities The programme recognises the importance of public transport and community transport options as well as improving public transport facilities and provision for mobility impaired users.
Harbour 	Activities in the Harbour action plan include: • Hokianga Harbour Long Term Plan • New / improved ferry services • Wharf supporting infrastructure These options enhance community access through improvement of existing ferry services, provision of new services and wharf supporting infrastructure.
Maintenance, operations & renewals 	This category captures all business as usual activities that focus on maintenance, operations and renewals. Investment in this action plan will occur on an annual basis, where activities will be further prioritised for implementation within the FNDC Activity Management Plan (2021-24).

13.1 Land use integration

The recommended programme recognises the importance of integration between land use and transport and includes various options that support land use integration, which are summarised below.

Table 20: Options addressing land use integration

Themes	Option Name	Commentary
Primary land use changes	Road Network: • Bridge Improvements • New road sealing projects – various district roads • Dust seals • Upgrades to existing roads • Implement detour route programme • Improve freight productivity	The primary industry growth of forestry, agriculture and horticulture results in changes to location and scale of heavy vehicle demand on the transport network. These options seek to improve the road condition / infrastructure in various locations to cater for the growing HCV volumes as well as to implement programmes to better manage freight routes.
Support District Plan update	TDM: • Review District Parking Plan and Policy Active Modes: • Footpath policy Public Transport / Ride Share: • Bus stops and shelters policy	FNDC is currently in the process of revising its District Plan. It is anticipated that regulations and policies will be updated to better address the changing land use in the Far North. These options provide the opportunity to undertake a detailed review of key transport policies to support land use integration and provide input to the District Plan.
Growth	Road Network: • Intersection upgrades • Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC) • Develop Kaitaia to Kohukohu Plan • Township transport planning • Township upgrades • Access improvements • Implementation of Kerikeri Road Network Projects TDM: • Review engineering standards Active Modes: • Develop plan to improve pedestrian access in urban areas • Develop plan to improve local cycle connections between towns • Develop township cycling plans • Implementation of urban cycling	The increasing number of residents and growing subdivision activity in the Far North generates the need to better manage changing land use and connect land use. The programme responds through a variety of mechanisms such as new or upgraded physical infrastructure / roading upgrades that improve connectivity between land uses as well as developing township / walking and cycling plans that ensure the integration between land use and transport in the future. These options are designed to address the specific land use and transport problems and effectively respond to growth.

13.2 Programme implementation strategy

The ITP recommended programme has been developed based on the Far North District's current investment levels for transport. Given that the existing average annual non-maintenance transport spend is forecast to be approximately $11M - $20M per year depending on MOR spend, the recommended programme ensures that the total spend each year is within a sensible range to the current level of investment.

The staging of the recommended programme was consulted with appropriate members of FNDC and further refined as per the feedback received. The general principles for programming are shown in Table 21. Overarching principles for the entire programme are as follows:

- 'Planning' options are expected to be staged earlier than 'implementation' options
- Business as usual activities (including the MO&R action plan) are likely to be spread over the 10-year implementation period
- Options that are currently supported by a detailed business case (such as some TCDR projects) will generally follow the staging set out in the DBC

Table 21: Recommended programme staging principles

Programme Timing	Staging Principles
Short term 1-3 years	• 'Planning' options such as investigations, programmes, future planning, policy updates and review of standards • Safety projects – including minor improvements, township safety improvements and provision for safe school footpath / cycle network • Minor road network improvements – including wayfinding and gateway treatments • Minor infrastructure upgrades – focused on parking and accessibility infrastructure • Education initiatives
Medium term 4-6 years	• Second tier roading upgrades – predominantly road enhancing options such as tourism byway sealing, intersection upgrades and bridge improvements
Long term 7-10 years	• Options with a longer implementation timeframe • Options that have an economic trigger in the long-term range

It should be noted that these are the suggested priorities based on the level of analysis undertaken to date. As further information is obtained from more detailed investigations, the priorities may require adjustment to reflect funding opportunities, effects of weather events or changes to industry forecasts in the region.

The full staged programme of works is shown in **Appendix G**.

13.3 Contribution to the Integrated Transport Strategy

FNDC has developed a 30-year Integrated Transport Strategy which confirms the key strategic responses to address the transport problems. The PBC has been developed using these strategic responses and focuses on delivering the first 10 years of the strategy.

As previously discussed, the PBC is focused on completing key planning activities, embedding prioritisation processes, and then implementing the first groups of infrastructure projects. This combination of activities has been developed to:

- Lift the existing infrastructure closer to an appropriate level of service across the district

- Ensure robust planning is undertaken to develop a clear implementation plan for high value growth-related interventions
- Provide a baseline programme of active mode and safety improvements to complement the MOR programme

Going forward to the next two decades it is expected that regular annual investment will continue for improvement programmes such as footpath improvements, dust seals, new road sealing and safety improvements.

The middle decade is likely to see the start of significant investment in growth projects such as implementing the Kerikeri road network and completing the Paihia town Centre upgrade. More investment in 'primary' walking and cycling links to contribute towards the planned urban and interregional networks from the first decade would also be expected. Further investment could be expected for activities that address travel choice such as new ferry services or the implementation of permanent ride share programmes following initial planning and short-term trials in the first decade.

The third decade might expect the completion of long-term improvement road network programmes and potentially address some of the wider tourist related projects. During this decade it is anticipated that the walking and cycling investment would be focused on 'secondary' networks that complement the existing primary networks already completed.

13.4 Parallel Opportunities

Throughout the development of this PBC a number of Waka Kotahi and Northland Regional Council (NRC) owned activities were raised as potential responses to the identified problems. Whilst being delivered by other parties, these projects were considered relevant to maximise the benefits of FNDC owned investments and therefore result in a greater combined benefit for the wider Northland network. Many of these have a genesis in the Twin Coast Discovery Programme (which was developed by Waka Kotahi in 2019).

A summary of these activities and how they align with the Far North transport system is shown in Table 22. It is recommended that these activities be considered for parallel investment by Waka Kotahi via the NLTF.

Table 22: Opportunities for parallel investment

Option Name	Source	Owner	Comment	FNDC Strategic Priority					
				Safety	Resilience	Make Best Use	Transport Choice	Support growth	Affordability
SH11/10 – Puketona Roundabout	TCDR SH11 SSBC	Waka Kotahi	The project involves the construction of a new roundabout to improve safety and efficiency of travel.	✓		✓			
SH1/SH11 - Kawakawa Roundabout	TCDR SH11 SSBC	Waka Kotahi	The project involves the construction of a new roundabout to improve safety and efficiency of travel on SH1 and provide a gateway to SH11.	✓		✓			

SH Intersection Upgrades	TCDR SH12 SSBC / Township s plans	Waka Kotahi	The TCDR identified a range of SH intersection upgrades. These are primarily for safety and access improvements and would support access onto the FNDC network.	✓	✓	✓
New / extending passing lanes	TCDR Passing opportuni ties SSBC / SH12 SSBC	Waka Kotahi	Passing opportunities were identified in the TCDR programme to reduce driver frustration and provide a consistent and frequent level of passing opportunities in Northland.	✓	✓	
Corridor wide Safety Improvements	TCDR SH11 SSBC	Waka Kotahi	This project involves the review of existing safety infrastructure along the SH11 corridor, where improvements to signage, line markings and safety barriers are recommended. Safer strategic corridors support the safety improvements on local roads that FNDC is responsible to deliver. Investment in both sections of the road network ensures the safety of the overall route, therefore resulting in a greater combined benefit.	✓	✓	
Mobile driver license and WOF	TCDR	NRC	Improved access to driver licensing and WOF facilities allows for educated drivers and safer vehicles on the roads. Whilst physical safety works on the road network are important, safer drivers and vehicles play a critical role in maximising the safety of the road user, therefore both areas of investment should be considered simultaneously.			✓
Improve Bus Connections in Northland	TCDR SH11 SSBC	NRC	The project considers public transport connections to Kaitaia, Kaikohe, Paihia and Cape Reinga in order to meet walking and cycling demand. Bus services to these key townships are additional to any ride share projects proposed by the FNDC, therefore further improving connectivity and access within and between communities. This project is expected to be supported by improvements to bus stop facilities, in which FNDC is responsible for delivering.			✓

14. RECOMMENDED PROGRAMME ASSESSMENT

14.1 Investment Objective Programme Outcomes

The recommended programme investment outcomes are shown in Figure 59. Overall, the programme achieves the transport objectives.

Figure 59: Recommended Programme Outcomes

Recommended Programme Outcomes

	KPI Measures	Project Contribution	Transport Outcomes
IO 1 Improving safety	Number of death and serious injuries on local roads (#23)	25% of the options in the recommended programme contribute to the transport outcome of 49 DSI savings over 5 years. 69% of the programme holistically contributes to improving the safety of the transport network.	49 DSI's over 5 years. Approximately 26% DSI reduction.
	Average annual fatal and serious injury crashes per 100 million vehicle-KM (#24)	28% of options contribute to improving personal risk. This is likely to increase the proportion of low-medium personal risk from 95% to 96%.	
IO 2 Managing for growth	Percentage travel on road network classified as smooth as per defined level of service (#41)	49% of options within the recommended programme contribute to this measure at a total of $164m investment	
	Customer satisfaction with operation of network	95% of the options increase customer satisfaction of the overall network	
	Number of dwellings affected by roading dust	4 options contribute to reduced roading dust (predominantly road sealing projects)	
	Incr in wellbeing assessed including social connections (#42)	87% of the options contribute to increased wellbeing	
	Perception of safety and ease of walking and cycling (#28)	28 options increase perception of safety and ease of walking and cycling facilities	
	Physical health benefits from active modes (#20)	Investment in walking and cycling infrastructure is likely to increase the number of users therefore increasing associated monetary benefits.	
IO 3 Making best use of our existing network	Project uses/enhances existing network	Recommended programme heavily focuses on the existing network, with 92% of the options using / enhancing the existing network.	
	Percentage within travel threshold to key social and economic activities by different modes	This KPI essentially measures the level of travel undertaken. 93% of options contribute to improved quality of travel and accessibility to key social & economic activities in some form.	
IO 4 Improving transport choices	Percentage of low floor and wheelchair accessible services (#39)	8 options contribute to improve accessibility for mobility impaired. This would generally include any improvements to public transport / ferry services or infrastructure and total mobility scheme.	
	Number of transport users by mode, expressed as percentages (#46)	59% of the options promote modal shift in some form. This equates to approximately $90m investment.	
	Number of pedestrians and cyclists (#45)	59% of the options encourage walking and cycling by providing new / improved facilities increased convenience, better connectivity and safer facilities. This equates to $111m of investment	
	Percentage completion of the planned walking and cycling network (#32)	10% of the options in the recommended programme achieve the transport outcome 163km of new or improved footpaths / cycle paths. .	• 77km of new or improved footpath / shared paths • 86km of new or improved cycle paths
IO 5 Securing our transport system	Number and duration of resolved road closures: urban >=2 hrs; rural >=12hrs (#52)	13 options can potentially reduce the effects of potential local road closures or support State Highway closures.	
	Reduction in school days lost	Programme contributes to reducing school days lost through increased reliability of roads: • Resilience mitigation • Provision of detour routes or viable alternative methods of travel • MO&R programme – preventative maintenance	
	Percentage of high-risk, high-impact routes with a viable alternative (#49)	15 options focus on or may result in increased number of routes with viable alternatives	
IO 6 Prioritising funding	Percentage of PBC projects delivered	Programme aims to increase the number of projects funded and delivered: • Providing strategic content to support funding applications	
	Efficiency of network spend/km	Programme seeks to ensure efficiency of network spend through: • Increased investment on MO&R activities to maintain or improve level of service • Prioritisation within packaged options to ensure funding is spent efficiently to achieve desired outcomes	
	$ projects funded outside NLTF subsidy	32% of options can be potentially fully or partially funded by alternative funding sources such as developer contributions, private funding, PGF and TIF	

Note: *The remaining transport outcomes (left blank above) are to be developed following the targeted data collection and benefit management work. In addition, the transport outcomes identified above may be subject to change following the prioritisation work to be undertaken in later stages of the programme.*

14.1.1 Investment objective 1 – Safety

Road to Zero outlines a strategy to guide improvements in road safety in New Zealand over the next 10 years (2020-2030). The key vision is to achieve "a New Zealand where no one is killed or seriously injured in road crashes. This means that no death or serious injury while travelling on our roads is acceptable". A target of 40% reduction in death and serious injuries has been set as a step towards achieving this vision by 2030.

The DSI crash history on both local roads and State Highways in the Far North District over the last five years are shown in Table 23 below.

Table 23: Far North DSI crash history

	Local Roads only	State Highways only	TOTAL
# DSI crashes	**160 crashes**	197 crashes	357 crashes
# Fatal crashes	27 crashes	38 crashes	65 crashes
# DSI's	**189 injuries**	263 injuries	452 injuries
# Fatal injuries	28 injuries	44 injuries	72 injuries

As shown, a total of 160 fatal and serious injury crashes (or 189 DSI's) occurred on local roads within the District. The economic analysis indicates that the recommended programme is forecast to achieve a reduction of 9 DSIs over 10 years or approximately 1 DSI per year on Far North local roads, therefore resulting in a DSI reduction of approximately 3% (from 189 DSI's). Due to the Economic Evaluation Manual (EEM) methodology used to calculate the estimated DSI reduction, only site specific projects were considered in this assessment.

Given the nature of a programme business case and the 'package' approach undertaken for this programme, the majority of options have been developed at a high-level and cannot be spatially identified at this stage. As such, the high-level DSI reduction calculated using the EEM is considered to be conservative and does not capture all the potential safety benefits of the recommended programme. In this regard, the following table shows the estimated DSI reduction per common contributing cause factor to holistically determine the potential safety benefits of the overall programme (in addition to the EEM calculation).

Table 24: Estimated DSI reduction per common contributing cause factor

Common contributing cause factors	# of related DSI injuries 2015-20	Assumed % reduction[34]	Estimated DSI reduction for 5 years	Estimated DSI reduction per year
Alcohol or Drugs	122	20%	25	5
Fatigue (Drowsy)	10	5%	1	0.2
Inappropriate Speed	90	20%	18	3.6
Total	**222**		**44**	**9**

The following table summarises the total DSI reduction forecasted based on both the EEM (site specific) and common contributing cause factors (holistic assessment).

Table 25: Total forecasted DSI reduction

# of DSI injuries 2015-20	Estimated DSI reduction for 5 years (site specific)	Estimated DSI reduction for 5 years (holistic assessment)	Total estimated DSI reduction for 5 years	Total estimated % reduction
189	5	44	49	**26%**

[34] Assumed % based on the number and type of options in the Recommended Programme that positively contribute to improving the cause factors

As such, the Recommended Programme is expected to reduce DSI's by 26%. This is lower than the target of 40%, however given the high-level stage of the PBC, the safety assessment has been undertaken on a conservative basis and is furthermore influenced by the under-reporting of crashes. There are also other complementary programmes such as the Safe Network Programme which is likely to contribute to safety outcomes in the Far North. Therefore, there remains further opportunities for crash savings to be realised on the Far North network.

Currently, the proportion of low and low-medium personal risk on the Far North local roads is approximately 95%, which is relatively high. 28% of the recommended programme is expected to contribute to further increasing the proportion of low and low-medium personal risk by 1% (to overall 96%).

The DSI savings and improved personal risk rating are mainly attributable to the Safety, Road Network and Active Mode action plan areas. Recommended safety activities include road upgrades (including sealing), intersection upgrades, access improvements, road safety promotion, general minor safety improvements, safety barrier improvements, implementation of speed management measures and new / improved walking and cycle paths. In this regard, the recommended programme has addressed the most significant safety concerns in the district identified through the CAS search as well as stakeholder discussions. This includes:

- Over representation of alcohol / drugs in crashes has been addressed through education initiatives, policing, road safety promotions and community transport
- History of DSI on local roads due to loss of control crashes has been addressed through speed management projects and speed limit reviews
- DSIs involving vulnerable users such as pedestrians and cyclists has been addressed through the provision of off-road cycle paths and footpath / crossing improvements near schools
- Local roads with medium, medium-high and high personal risk are expected to be prioritised. Activities such as road sealing and implementation of Kerikeri road network projects will contribute to improving personal risk ratings.

Overall, it is considered that the recommended programme has a key contribution to the safety objective.

14.1.2 Investment objective 2 – Growth

A range of outcomes are expected to proactively manage infrastructure to support growth in the District and focus on improving network conditions, increasing customer satisfaction and ensuring healthier communities.

Approximately 49% of the options in recommended programme contributes to improving network conditions and is predominantly located within the Road Network, Safety and Active Modes action plan areas. Activities including capital works such as road sealing, upgrades to existing roads and improvements to walking and cycling facilities aim to improve or maintain the level of service provided on the network. This equates to approximately $164m of investment.

The recommended programme is expected to have a high positive impact on customer satisfaction. Any improvement to the transport network is likely to benefit customers in some form and therefore will contribute to increasing customer satisfaction of the overall network. The walking and cycling aspect of the programme is designed to include a range of regional, urban and recreational activities, therefore improving the perception of safety and ease of walking and cycling. customer satisfaction for a range of users. Investment in walking and cycling infrastructure is likely to increase the number

of users, therefore increasing associated monetary benefits as per Waka Kotahi's 'Health and Active Modes Impacts'[35].

Four options in this programme specifically contribute to reducing dust on the Far North road network. These activities are predominantly road sealing projects and are as follows:

- New road sealing projects
- Dust seals
- Tourism byway sealing to major attractions
- Improve freight productivity – strengthening and maintaining key forestry routes

At this stage, it is uncertain exactly how many dwellings will be positively affected by the implementation of the above projects. However, these options are wide-reaching and target a number of unsealed roads over the whole district, therefore are expected to contribute towards achieving healthier households at a district-wide level.

87% of the recommended programme contribute to increased wellbeing. The Treasury Living Standards Framework can be a way of measuring wellbeing and therefore the programme has been assessed against this framework in Section 14.3.2.

14.1.3 Investment objective 3 – Best use of existing network

This investment objective seeks to make best use of the existing network by optimising network efficiency and affordability and to provide improved and more equitable access to social and economic activities.

The recommended programme includes a range of options that use or enhance the existing network and are spread evenly across all action plan areas. These options equate to approximately $203M of investment.

The options work together holistically to improve access to social, recreation, education and employment opportunities. These options connect the right places and people, improving interregional connections and access within and between townships for these key social and economic activities. The recommended programme also includes many projects from the TCDR township plans, which specifically focus on accessibility. As such, the programme addresses all types of users such as freight, commuters, locals and tourist.

14.1.4 Investment objective 4 – Transport choices

Eight options in the recommended programme directly improve accessibility for mobility impaired users or indirectly contribute by accommodating mobility user needs. These activities are as follows:

- Accessibility infrastructure
- Parking and facilities
- Total Mobility Scheme
- Public transport / rideshare future planning
- Park and ride plan
- Implement community based rideshare projects
- Improvements to existing ferry services
- Providing new ferry services

[35] https://www.nzta.govt.nz/assets/planning-and-investment/docs/health-and-active-modes-impacts-march-2020.pdf – March 2020

At this stage, there is no data to accurately measure modal shift, however, this will be further assessed through the benefit management process. 59% of the recommended programme or approximately $90m of the programme investment promotes modal shift by reducing the dependence of motorised vehicles in some form. Most of these options are covered under the Active Mode action plan, where approximately 163km of new or improved walking and cycling facilities are proposed. In addition, 59% of the programme encourages walking and cycling by providing new / improved facilities, improved convenience, better connectivity and safer facilities. This equates to approximately $111m of investment.

It is noted that NRC is responsible for delivering new or improved bus services within the Far North District. With regards to public transport, FNDC will work in parallel with NRC, therefore the recommended programme focuses on supporting policies or infrastructure such as the bus stops and shelters policy and bus stop facility improvements and new locations.

14.1.5 Investment objective 5 – Resilience

Approximately 25% of options in the recommended programme contribute directly towards either reducing the number and duration of unplanned road closures or increasing the number of routes with viable alternatives.

As part of the recommended programme, resilience improvements have been addressed at a district-wide level, considering both planning stages and physical improvements. These activities are predominantly provided within the Road Network action plan and include the following types of projects:

- Bridge improvements
- Road upgrades / sealing
- Road safety improvements
- Implementation of detour route programme
- Resilience / flood mitigation projects

In addition to the resilience of the road network, the recommended programme also focuses on providing an active response to climate change through investigation of climate change mitigation measures including the protection of low-lying coastal townships and road network.

It is noted that the maintenance, operation and renewal programme in the AMP will significantly contribute towards maintaining level of service and reducing road closures.

Overall, it is considered that the recommended programme strongly contributes to the improvement of resilience throughout the district. More comprehensive base data on local FNDC roads will contribute to a better understanding of the impact of this programme on the objective.

14.1.6 Investment objective 6 – Prioritising investment

The recommended programme aims to ensure efficiency of network spend through continued investment on MO&R activities to maintain or improve the level of service on the road network. The MO&R allocation is consistent with the parallel process to develop the Northland Activity Management Plan.

Furthermore, the programme has been tailored to include packaged options that require further prioritisation of individual projects. In this regard, this prioritisation criteria will ensure that funding is spent efficiently to achieve the desired outcomes.

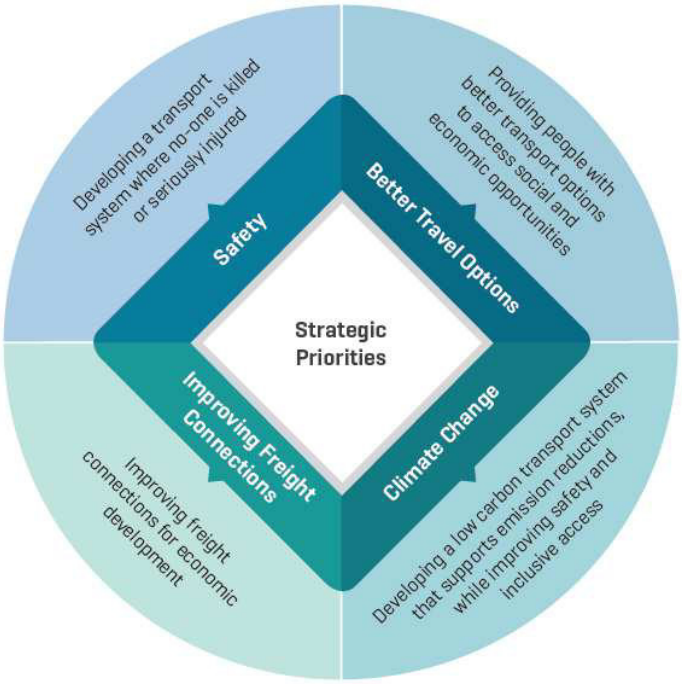
Approximately 31% of the options in the recommended programme can potentially be fully or partially funded by alternative funding sources such as developer contributions, private funding, PGF and TIF. These options are predominantly the TCDR projects included in the recommended programme.

14.2 Alignment to Draft GPS 2021/22 – 2030/31

A draft issue of the GPS 2021/22-2030/31 was released towards the end of the development of this PBC. The refined strategic priorities as shown in Figure 60 build on the current GPS 2018.

The strategic priorities of Climate Change and Safety have been updated to reflect policy work that has taken place since GPS 2018 was published, such as the development of Road to Zero. Access has been separated into Better Travel Options and Improving Freight Connections. Value for money is expressed as a principle that applies to all investments, rather than a strategic priority that could change as Government changes.

Figure 60: Strategic direction of the Draft GPS 2021



The table below outlines how the PBC aligns to the new draft GPS 2021.

Table 26: PBC alignment to GPS strategic priorities

GPS Strategic Priorities	Commentary
Safety **Primary outcome:** Healthy and safe people **Co-benefits:** • Inclusive access • Economic prosperity • Resilience and security	The GPS aims to deliver reduced number of deaths and serious injuries and a safer land transport network in the short to medium term (by 2031). Safety is a key area that is prioritised in Problem 1, Benefit 1, Investment Objective 1 and associated KPI / measures identified for the PBC and therefore ensures a high alignment with the GPS. A number of options in the recommended programme focus on improving safety, with a total of 41 options achieving a high, medium or low alignment with this strategic priority and a dedicated action plan area fully targeting a safer transport system in the Far North. The recommended programme includes infrastructure safety treatments on both urban and rural roads, safety enhancements and improved accessibility of footpaths and cycleways,

	education and policing enforcements, road safety promotions and speed limit reviews. As noted, the recommended programme is forecast to reduce approximately 26% of death and serious injuries on Far North local roads.
Better Travel Options **Primary outcome:** Inclusive access **Co-benefits:** • Healthy and safe people • Environmental sustainability • Economic prosperity • Resilience and security	The key short to medium term outcomes of this strategic priority that the GPS aims to achieve are as follows: • Improved access to social and economic opportunities • Public transport and active modes are more available and/or accessible • Increased shared of travel by public transport and active modes • Reduced greenhouse gas emissions • Reduced air and noise pollution As with safety, the PBC has been developed based on a key theme of better travel options, therefore ensures a high alignment with the GPS. A number of options in the recommended programme contribute towards providing better travel options, with a total of 50 options achieving a high, medium or low alignment with this strategic priority and four dedicated action plan areas (public transport / ride share, active modes, harbour and travel demand management) and Investment Objective 4 focusing on this strategic priority. The recommended programme optimises and maintains the existing transport network to improve accessibility, supports transport investments to shape growth, contributes to modal shift initiatives and supports 'Total Mobility' Schemes.
Climate Change **Primary outcome:** Environmental sustainability **Co-benefits:** • Inclusive access • Healthy and safe people • Resilience and security	The key short to medium term outcomes that the GPS aims to achieve are as follows: • Reduced greenhouse gas emissions • Reduced air and noise pollution • Improved resilience of the transport system Problem 2 and Investment Objective 5 directly relates to climate change (mainly weather related) with respect to the resilience and security of the road network, therefore ensures alignment with the GPS in this aspect. The PBC strongly encourages walking and cycling (and travel by modes other than private vehicles) in urban areas by proposing improved facilities and connectivity, therefore indirectly contributes to reducing elevated concentrations of land-transport related air pollution. A number of options in the recommended programme contributes towards climate change interventions through various approaches such as improving resilience of the road network, flood mitigation, road sealing including dust seals and encouraging modal shift. A total of 29 options achieving a high, medium or low alignment with this strategic priority, including specific climate change initiatives such as 'Investigation of climate change mitigation measures'.
Improving Freight Productivity **Primary outcome:** Economic prosperity **Co-benefits:** • Inclusive access • Healthy and safe people • Resilience and security	The key short to medium outcomes that the GPS aims to achieve are as follows: • Freight routes that are more reliable • Freight routes that are more resilient • Reduced greenhouse gas emissions • Reduced air and noise pollution As with the Climate Change above, Problem 2 and Investment Objective 5 focuses on the resilience and security of the overall Far North road network, therefore ensures alignment with the GPS. In addition to this, a specific option in the recommended programme 'Improve freight productivity' directly addresses this strategic priority. This option aims to improve the safe and efficient movement of freight through logistics planning and network optimisation. A number of other options in the recommended also contribute towards improving freight productivity and resilience of the road network, with a total of 10 options achieving a high, medium or low alignment with this strategic priority.

As such, the overall PBC remains wholly consistent with all four strategic GPS priorities. **Appendix G** provides further details on the Recommended Programme and the alignment of each option to the four GPS strategic priorities.

14.3 Programme Risk

The uncertainties established in Section 5 have been referenced by the project team throughout the development of the programme to ensure the programme is robust and as flexible as possible to respond to external changes. The key programme risks are highlighted in Table 27.

Table 27: Risk register

Risk	Description	Consequence	Likelihood
Preferred programme is unaffordable	There is a risk that items identified within the programme are unaffordable or may not attract NLTF (or other) funding due to lower assessment profile resulting in problems for implementation. The projects range in levels of individual viability. However importantly, the overall PBC programme is achieving a transport BCR of 1.4, therefore still returning value for money. Wider economic impacts have not been considered for this programme, so there remains further opportunities for these benefits to be realised on the Far North network. The programme comprises of types of solutions that will holistically deliver value for money, while some items deliver less benefits however still form an integral part to the transport response. Mitigations may include: • Accounting for NLTP prioritisation when prioritising activity packages as well as the wider programme • Forward planning by FNDC to secure additional year 4-10 local funds.	High	Med
Financial risk	Financial risks for delivering the programme are currently considered high as a confirmed funding plan has not been developed by relevant funding parties. There are known local funding constraints which may limit the ability for local government shares. In addition, there are other third-party funding requirements which may not be forthcoming, and the programme benefits are not fully realised. The PBC acknowledges this risk and mitigations include: • Managing the PBC through right sizing and diversifying funding streams where possible. • Regular prioritisation of the programme to best respond to changing funding constraints • Potential for deferred delivery if required	High	High
Stakeholder support	Stakeholders feel the programme does not deliver improvements in the right location or within a timely timeframe. The technical stakeholders have been involved in the development of the programme and the ultimate prioritisation process. Options have been included into the assessment throughout the process. Additional engagement with communities and other stakeholders will be undertaken as each individual activity is	Med	Med

Risk	Description	Consequence	Likelihood
	progressed thus further mitigating this risk. Key package areas have been identified that allow further prioritisation to take place.		
Delivery risk	Some projects have a limited scope definition at this stage, therefore inherent delivery risks remain in all cases until the specific pre-implementation phase is complete. This is particularly the case for larger, road network improvements or identified capital investment projects which may require land-take, or potentially affect sites of cultural, heritage or environmental significance.	Med	Med
Costs	The costs have been developed at a high-level and may change following detailed investigation. A 30% contingency has been added to all costs not already at a DBC level of detail.	Med	Med
Effects of COVID-19	Due to the recent COVID-19 pandemic, there is a risk for delayed adoption of the Integrated Transport Plan (or parts of), predominantly due to limited funding. This is assumed to have a rather short-term impact on the ITP particularly on tourism related projects, therefore staging of the programme may be affected. However, this risk is mitigated to an extent as domestic travel is anticipated to strengthen. Furthermore, high-cost capital investment projects have been staged to commence in the medium to long term period (2024-30), therefore COVID-19 impacts on these projects should be minimal.	Med	High

14.4 Value for money

14.4.1 Indicative programme costs

Costs were developed for each individual option included in the recommended programme. These individual costs were them combined to give a total capital cost.

These costs were developed through knowledge of previous costing for similar options, feedback from stakeholders and costs of existing projects extracted from relevant FNDC documents. Given the strategic nature of a programme business case, detailed option development has not been undertaken and therefore an indicative cost best represents the costs at this stage in the programme life cycle. Where ranges were given for independent activities an average value has been used for the calculation of the NPV cost.

Table 28 shows the estimated net present value (NPV) cost of all options per action plan within the programme.

Table 28: Summary of recommended programme costs

Action Plan	Cost $M (NPV)
Road Network	114
Safety	31
Travel Demand Management	1

Active Modes	56
Public Transport / Ride Share	1
Harbour	5
Total	**208**

Note that $208M is the total NPV cost of the recommended programme. The NPV cost of $141M (which excludes the do-minimum programme NPV cost) has been used to calculate the programme BCR.

14.4.2 Programme benefits

Transport benefits

This BCR analysis has been based on assumptions appropriate for a programme at this stage, with further benefits envisaged as more detailed analysis is undertaken.

The Economic Evaluation Manual (EEM) assessment is primarily for transport benefits and is based on a 6% discount rate and a 40-year evaluation period. The EEM benefits calculated considered six factors including: Travel Time (TT) savings, Safety benefits (i.e. reduction is death and serious injury related crashes), Vehicle Operating Cost (VOC) savings, Walking and Cycling benefits, Public Transport benefits and Travel Behaviour Change benefits.

The benefits of each programme were calculated on a case by case basis following the broad assumptions set out below:

- Safety benefits were calculated by applying a crash reduction factor of between 5% and 40% depending on the type and extent of intervention. Where applicable, the Crash Compendium guidelines were used to determine the crash reduction factor.
- Travel time benefits have been calculated based on the estimated reduction in travel time depending on the level of intervention.
- Vehicle operating cost savings were determined based on the travel time benefits calculated, where it was assumed that 14% of the TT savings would be amounted to VC savings.
- Vehicle, pedestrian and cyclist AADT was broadly assumed based on the length and location of the options including the surrounding network, environment and nearby activities.
- The start and end of construction years were assumed as 2021 and 2023 (respectively) and kept constant for all options. The resulting BCR of each option was therefore developed for comparison purposes.
- The annual maintenance costs were only included on projects that were applicable.

Table 29 shows the estimated net present value (NPV) transport benefits of all options per action plan within the programme.

Table 29: Recommended programme transport benefits

Action Plan	Total transport benefits $M (NPV)
Road Network	223
Safety	40
Travel Demand Management	0.4
Active Modes	94

Public Transport / Ride Share		2
Harbour		2
	Total	**361**

Note that $361M is the total value of NPV transport benefits achieved by the recommended programme. The NPV transport benefit value of $204M (which excludes the do-minimum programme NPV transport benefits) has been used to calculate the programme BCR.

Wider Economic Benefits (WEB)

Wider economic benefits were not assessed as part of this PBC. Agglomeration (where firms and workers cluster), imperfect competition and increased labour supply were not considered relevant for this region. Whilst tourism is an important contributor to the Far North GDP, in this instance the strategic responses are not focused on tourism opportunities. This PBC includes activities that have been identified in the Twin Coast Discovery Route Programme, however it was felt that tourism benefits were captured comprehensively as part of that business case and could be duplication if considered in this PBC.

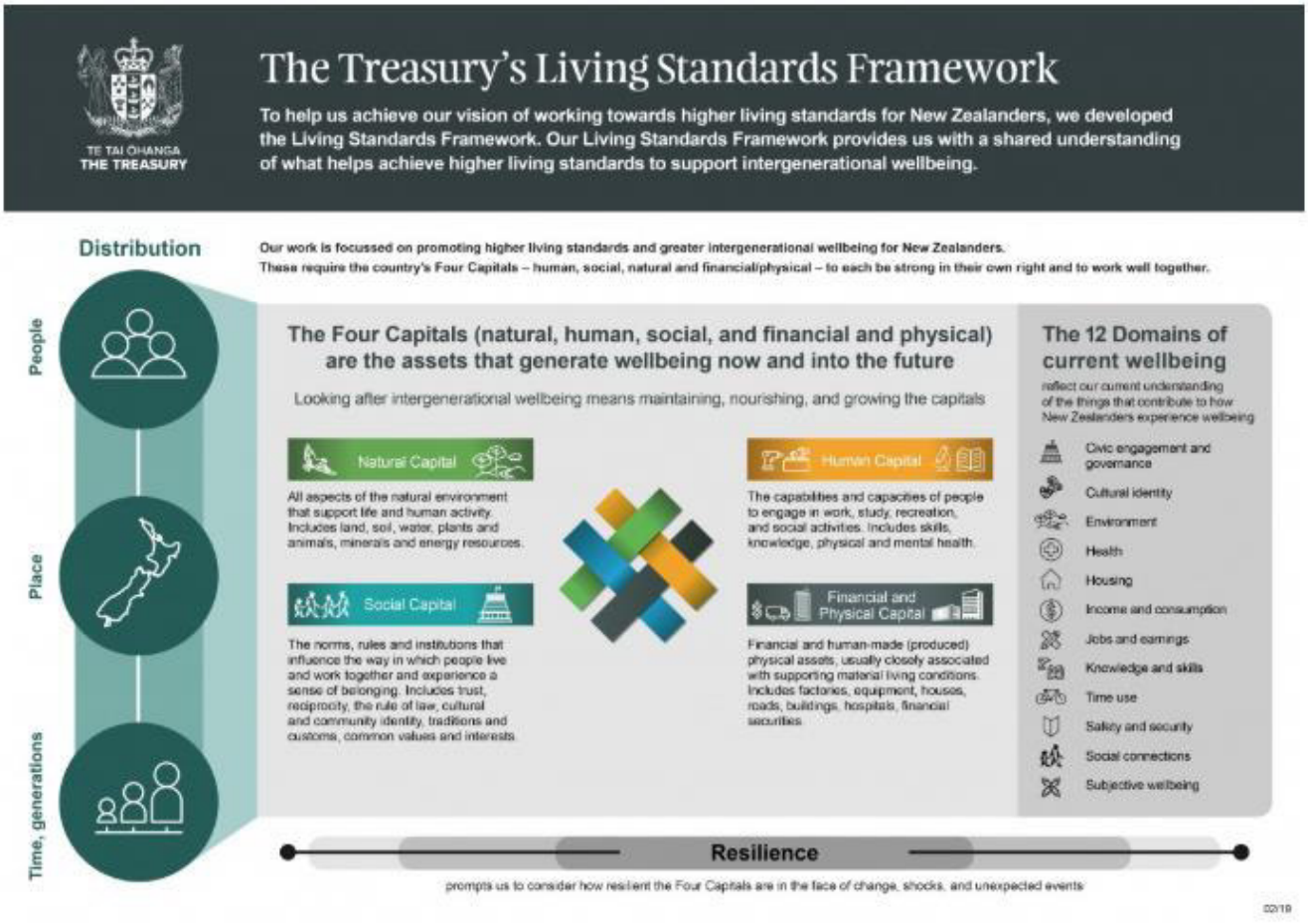
NZ Treasury Living Standards Framework

A key benefit of this recommended programme is the contribution to increased living standards of communities within the district.

The Treasury recognises that there is more to wellbeing than just a healthy economy and has developed a Living Standards Framework to help advise governments about how the policy trade-offs they make are likely to affect everyone's living standards.

The Treasury Living Standards has four components or "capitals". These are natural, social, human and physical / financial capital as shown in Figure 61.

Figure 61: Treasury Living Standards Framework



The programme has been qualitatively assessed against the Treasury Living Standards Framework to understand the potential contribution of the PBC to interdependently generate wellbeing as shown in Figure.

Figure 62: ITP recommended programme measured against the Treasury Living Standards Framework

Action Plan	Natural	Social	Human	Physical/Financial
Road Network	M	M	H	H
Safety	L	M	M	H
TDM	L	M	L	L
Active Modes	H	M	H	M
PT / Ride Share	L	L	L	L
Harbour	L	L	L	L
MO&R	L	L	L	H

The road network and active mode action plans are likely to generate the highest overall wellbeing benefits.

The resilience and climate change mitigation measures and sea wall restoration activities as well as options promoting modal shift have a positive impact on the natural capitals. Some of the activities in the recommended programme may have a negative impact on natural capital through emissions but overall this is balanced by the increased access to natural resources through improved roads, new active mode access to key tourism areas, new rest areas and better wayfinding and signage. The new / improved 163km of walking and cycle facilities have the potential to contribute to a significant reduction in emissions. The programme also supports the expansion of electric charging sites within the study area and investigation of the feasibility of electric ferries.

Social capital for the recommended programme best relates to human connectivity and cultural and community identity. All action plans contribute to this through improvements such as connectivity to support people to travel to from or sustain new relationships or the recognition and promotion of community and cultural values. The TCDR cycle trails provide places for common interest to bring communities together.

The recommended programme best represents human capital through the increase in access to social, recreation, education and employment opportunities. Projects that support this are the resilience-based activities that seek to keep the transport system open for people to access these opportunities. Similarly, improved roading connections between townships as well as community transport initiatives such as rideshare projects and Total Mobility Scheme supports access to key medical facilities. Health and physical wellbeing's are another component and the large focus on cycling and walking measures in this programme supports healthier lifestyles.

The programme proposes a large investment in the transport network which will increase and rejuvenate the physical capital in the Far North District which will improve the quality of assets as well as contribute to improving destination appeal, thus supporting the vibrant tourism industry. In addition to developing new infrastructure, the programme focuses on promoting a better journey on the Far North local network including projects such as resilience works to keep roads open, detour route programmes, improving freight productivity, safety improvements to minimise personal and collective risks on the network and implementation of wayfinding and rest areas. A transport network that supports easier people and goods movements will contribute to better financial outcomes for the district.

14.4.3 Programme BCR

A BCR has been estimated for the recommended programme as shown in Table 30. The NPV costs and benefits below exclude the do-minimum programme NPV costs and benefits.

Table 30: Recommended programme BCR

Costs	Benefit Stream	Cost $M (NPV)	Benefit $M (NPV)	BCR
Full recommended programme cost	Transport benefits (EEM)	**141**	**204**	**1.4**

The BCR of the recommended programme has been calculated using the full recommended programme cost and transport EEM benefits. This returns a BCR of 1.4, indicating that the transport benefits are greater than the transport investment required.

It should be noted that some options within the recommended programme do not have a traditional transport benefit however they have been included in the overall programme as they contribute to the investment objectives and may have other intangible benefits.

14.4.4 Incremental BCR

The incremental BCR of the recommended programme was calculated to be 1.4. This suggests that this programme achieves greater benefits for the additional money spent, therefore financially justifiable.

As noted in Section 12.3.2 of the PBC, the programmes assessed are not mutually exclusive therefore the incremental analysis does not accurately represent the incremental BCR's. However, for the purpose of this assessment, an 'incremental type' analysis was undertaken which compared the programmes to the lowest cost programme (P5).

14.4.5 Sensitivity analysis

In addition, five other scenarios were tested to determine the sensitivity of the recommended programme. These included:

- A discount rate of 4% (this programme used a discount factor of 6%)
- A discount rate of 8%
- NPV Cost +30%
- NPV Cost - 30%
- NPV Benefit +20%
- NPV Benefit -20%
- COVID-19 impacts on transport benefits (13.6% reduction in tourism related benefits + 5% reduction in other transport benefits)

The costs, benefits and associated BCR's for each scenario are provided in Table 31 below. The values below exclude the do-minimum programme NPV costs and benefits.

Table 31: Sensitivity analysis

Scenario	Transport benefits ($M NPV)	Cost ($M NPV)	Indicative BCR
Base	**204**	**141**	**1.4**
Discount rate 4%	**221**	**143**	**1.5**
Discount rate 8%	**193**	**139**	**1.4**
NPV Cost +30%	**204**	**183**	**1.1**
NPV Cost -30%	**204**	**99**	**2.1**
NPV Benefit +20%	**245**	**141**	**1.7**
NPV Benefit -20%	**163**	**141**	**1.2**
COVID-19 impacts	**160**	**141**	**1.1**

It should be noted that the cost sensitivity methodology is an approximation and has been tested by applying a +/-30% on the NPV costs. This allows a high level view on the potential effects of cost changes. As shown above, this results in a BCR range of 1.1-2.1. The same principle has been applied to the NPV benefits (however +/-20% instead), which resulted in a BCR range of 1.2-1.7.

The sensitivity results show that a change in discount factor has a direct impact on the NPV cost and benefit of the programme. With a higher discount factor of 8%, the cost of the programme decreased to $193M, with the reverse occurring using a lower discount factor of 4%.

The full impacts of COVID-19 are unknown at this stage, however a sensitivity analysis has been undertaken based on realistic assumptions from the data currently available. In this regard, it is assumed that the impacts of COVID-19 relevant to transport are broadly based on two factors: reduced tourism demand and reduced general traffic demand. These impacts are likely to reduce the overall PBC transport benefits in the order of 13.6% reduced tourism related benefits and 5% reduced other transport benefits, which were applied to all relevant projects accordingly. For the purpose of this assessment the 'worst-case scenario' was considered, with the following assumptions made:

- A 13.6% reduction in tourism benefits was applied to all TCDR cycle and footpath projects and the tourism byway sealing project
- A 5% reduction in transport benefits was applied to all remaining projects for a conservative assessment

As shown above, this results in a BCR of 1.1.

The % reduction in tourism related transport benefits used a weighted average % that was calculated as shown below.

Table 32: % reduction of tourism transport benefits

	% Reduction	% Contribution
International Tourism	25%[36]	24%[37]
Domestic Tourism	10%[38]	76%
	Weighted Average	**13.6%**

The forecasted % reduction in traffic demand in the District was assumed to be 5% with reference to Waka Kotahi Weekly traffic count information[39]. This was calculated based on an average % variation of traffic volumes compared to 2019 (considering both light and heavy vehicles) in five regions: Auckland, Wellington, Christchurch, Hamilton and Dunedin. As such, to reflect the forecasted reduction in traffic demand, a 5% reduction was applied to all transport benefits (excluding tourism related transport benefits) that the PBC is expected to achieve.

Overall, the results of the sensitivity tests indicate that the BCR of this programme remained constant or sits in the mid-range of all scenarios tested.

14.4.6 Assessment profile

The recommended programme has been assessed against the Investment Assessment Framework (IAF) 2018-2021. High level commentary assessing the alignment with GPS 2021 is included in this table. Further information is provided in Section 14.2.

The recommended programme contains a wide range of options to form a holistic programme that addresses the identified problems of improving road condition, transport choices, safety and resilience as well as addressing growth and limited funding issue faced by the District. As such, in

[36] Assuming no international tourism for 2.5 years of the 10-year transport programme

[37] https://www.mbie.govt.nz/assets/key-tourism-statistics.pdf - Regional Tourism Spend. Domestic = $855M, International = $269M.

[38] Assuming lower reduction percentage of 10% for domestic tourism

[39] https://www.nzta.govt.nz/about-us/coronavirus-disease-covid-19-services-update/weekly-traffic-count-information/ - as at 12 June 2020

discussion with the Waka Kotahi Design Practice & Solutions team, the programme has been assessed against the activity class "Local Road, Regional and State Highway improvement category".

Table 33 details the assessment of the alignment to the GPS and shows that overall, the recommended programme has a **High** alignment.

Table 33: Results alignment for the recommended programme

GPS alignment	Comment	Rating
Safety • A safe transport system free of death and serious injury **High Criteria** • Addresses safety issues presenting a high crash risk, affecting communities subject to high safety risk, and/or in Safer Journeys area of high concern	Safety is an ongoing issue for Far North transport network, which experiences a wide variety of users including locals, freight / industry and a high level of domestic and international visitors. Each of these user groups has a different purpose for using the network and there is a wide range of knowledge regarding the roads and driving conditions. The programme includes a wide range of activities to address the risk of personal and collective safety on the Far North transport network. The FNDC road network can be unforgiving with windy, narrow, and often unsealed roads. As 70% of crashes can be attributed to Loss of Control or Head on crash types the programme includes a suite of safety measures to address this such as implementation of speed management, upgrades to existing roads and intersections, minor road safety improvements and targeted road sealing. An annual crash identification study will prioritise the high-risk roads in the region to ensure funding is being implemented in the right locations. In addition to physical safety interventions, driver behaviour is a secondary contributor with 45% of existing crashes related to alcohol or drug use. Police report low compliance with wearing seatbelts and driver licensing. This programme continues significant annual investment into supporting driver safety education. Specific activities in the programme have also been targeted at improving safety outcomes for vulnerable road users. These programme activities include safer and improved active mode facilities, a targeted school safety programme and an annual investment in footpaths across the district. These activities have been set up in the programme with a specific investment value that will be prioritised annually to ensure the programme delivers the footpaths required to achieve the safety outcomes sought. The safe system approach is further supported by a detour route programme that seeks to identify key detour routes and provide the necessary safety upgrades to support the secondary function for these key FNDC roads. Heavy vehicles from primary industry remain a perceived safety issue in the district and this will be targeted as part of the complementary Maintenance, Operations and Renewal programme in the Regional Asset Management Plan which is being developed in parallel to this PBC.	**HIGH**

GPS alignment	Comment	Rating
	These safety criteria align well with the draft GPS 2021 document which champions the Road to Zero strategy. State Highways provide key movement corridors within FNDC and safety improvements on these roads are delivered directly by Waka Kotahi. This PBC develops a plan to prioritise safety on the supporting local FNDC road network. The GPS 2021 targets high DSI risk locations, enhanced safety for active modes, supporting road policing and road safety campaigns. These priorities directly align with the PBC identified activities. The PBC also includes a number of urban form/ township upgrades which support better street design.	
A land transport system that provides: • Increased access to economic and social opportunities • Increased transport choice and is resilient • Thriving regions **High Criteria** • Enables a significant regional economic development opportunity in an approved RED programme Addresses a gap in an approved RED programme in high priority RED regions • Makes best use of key corridors that prioritise national freight and tourism	Northland has been identified as a Regional Economic Development (RED) area. This programme is a direct response to the Tai Tokerau Northland Economic Action Plan (TTNEAP). The underlying premise of the programme is therefore to improve access to social and economic opportunities. The programme also focuses on improving the provision of transport choices, resilience of the networks and keeping the lifelines open. • Resilience projects seek to reduce road closures on the Far North local road network and improve access for locals to work and social opportunities and for visitors to access visitor attractions. In addition to the regular Maintenance, Operations and Renewals workstream this programme includes investment in bridge upgrades, local resilience mitigations, road sealing / tourism byway sealing, stormwater upgrades, flood mitigations and investigation of climate change mitigation measures in coastal and flood prone areas. The safety improvements, investment in detour routes, road upgrades and targeted road sealing will support improvement of key freight movements within the District. • Improved travel choice through new or improved bus and ferry services and/or facilities, community-based ride share initiatives and over 163km of new or improved cycle and walking facilities including a number of TCDR projects. • Community access improvements such as township amenity improvements, improved community transport and gateway treatments • Improved access to key tourist destinations thus improving access for both tourists and locals to enjoy the outstanding natural offerings of the region • Many of the initiatives will form activities that could be serviced by the Northland Delivery Framework, which seeks to involve the local community in the workforce that delivers the Northland improvements. This access criteria directly aligns with the GPS2021 Better Travel Options priority and seeks to improve	**HIGH**

GPS alignment	Comment	Rating
	people's ability to get to places where they live, work and play. The programme is focused on improving access to social and economic opportunities. The proposed significant investment in active mode facilities across the District demonstrates FNDCs commitment to increasing non vehicular travel and reduced greenhouse gas emissions. Reduction of dust is a key measure for the programme and an annual road sealing activity is targeted at improving the air quality on unsealed roads. The inclusion of a number of Waka Kotahi Twin Coast Discovery Route activities in this business case supports the Tourism Strategy to provide resilient and safe infrastructure to support visitor-based journeys.	
		HIGH
	OVERALL ASSESSMENT	**HIGH**

Funding Prioritisation for improvement activities

The IAF has determined a prioritisation profile. With a results alignment of **HIGH** and a cost-benefit appraisal **Low (BCR 0.9)** and therefore is a priority order **5**.

It is noted that the Investment Assessment Framework is not yet available for the Draft GPS 2021-2024. However, a high-level assessment of the recommended programme shows strong alignment to the four Draft GPS strategic priorities of safety, better travel options to access social and economic opportunities, climate change and improving freight connections. Therefore, it is likely that this programme will still achieve a high alignment against the Draft GPS which is due to be operative in mid-2020.

15. PROGRAMME FINANCIAL CASE

15.1 Indicative cost

Cost estimates were developed for each individual option in the recommended programme. These costs were developed from existing work already undertaken by Waka Kotahi or FNDC, knowledge of previous costings for similar type projects and feedback from stakeholders. The following assumptions have been considered regarding option cost estimates.

- Where a cost has been derived from an endorsed DBC or SSBC (such as the Twin Coast Discovery Route projects), no cost range has been included.
- A +/- 30% cost range have been applied to standalone options (such as planning options). However, the average cost has been used for the economic and funding assessment.
- For 'packaged' options (including multiple individual projects), no cost range has been included as the number of projects delivered will be subject to the availability of the total package spend.
- For standard business as usual activities or standard annual programmes (generally extracted from the RLTP 2015-21, LTP 2018-28 and FNDC LCLR Activity List), no cost range has been included.

The total capital cost of the FNDC Integrated Transport Plan for 2021-2031 is estimated to be $211M-$226M. The preliminary staging plan below is based on the average programme cost of $218M. This is staged over the six action plans as shown in Table 34.

Table 34 Indicative Capital Cost and staging of the Recommended Programme

Action Plan	Short Term $M	Medium Term $M	Long Term $M	Capital Cost $M
Road Network	13	34	73	119
Safety	10	11	12	33
Travel Demand Management	1	0.1	0	1
Active Modes	8	25	26	59
Public Transport / Ride Share	0.5	0.5	0	1
Harbour	1	2	2	5
Total	**33**	**72**	**113**	**$218M**

A detailed staging plan for each activity is included in the Integrated Transport Plan in **Appendix G**.

15.2 Ongoing maintenance and operations costs

The cost of operations and maintenance has been included in the associated economic assessment. The following assumptions have been considered:

- The options include the maintenance / operational cost in the present value cost.
- The maintenance / operational cost was calculated by assuming 10% of the capital cost.
- Maintenance / operational costs were excluded for some options that do not require ongoing maintenance. These types of options include investigations / plans / policy updates, promotions, education initiatives, minor road improvements (such as signage, lighting and safety).

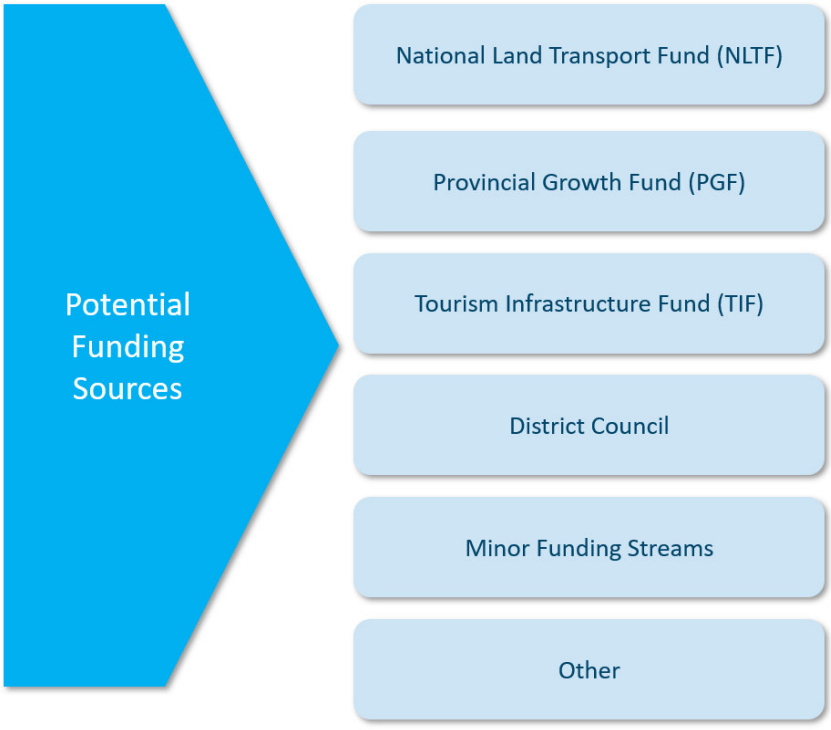
This programme is being developed in parallel to the Northland Regional Activity Management Plan (AMP). The AMP team have been included as key stakeholders during the development of the PBC and are therefore aware of what is being requested in terms of MO&R. It is expected that this team will further refine the maintenance costs associated with this programme.

15.3 Funding Arrangements

The overall FNDC Integrated Transport Programme is aligning to a priority **5** which means it is eligible to be included in the National Land Transport Plan. Because of the size, complexity and range of opportunities, an individual assessment of each activity, along with discussions with funding partners will need to be undertaken before funding requests are made.

There are a range of potential funding options as shown in Figure 63. Additional information about each of these funding streams is provided in **Appendix H**.

Figure 63 Potential funding options



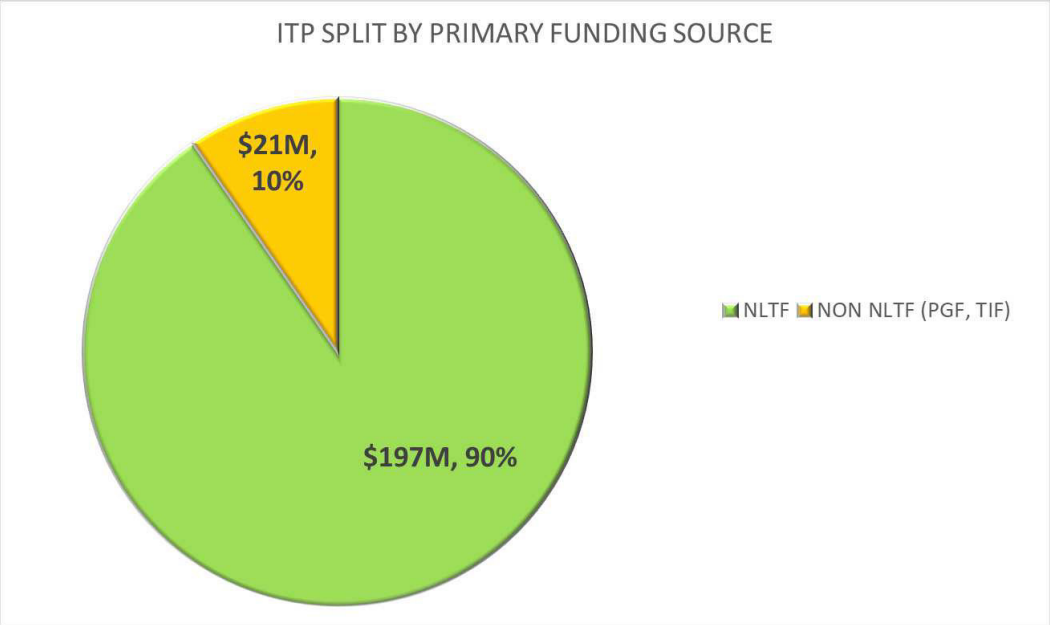
15.3.1 Overall Programme Funding

Sustained investment of $211M-$226M is required to implement this programme of transport enhancement and renewal for the Far North. The current timeframe for this implementation is 10 years. Due to the constrained funding available for FNDC, this programme has been staged to retain funding at a similar level of non-maintenance transport spend (around $11M per annum[40]) for the first three years then increasing over the remaining seven years of the programme. This is to allow FNDC the opportunity to secure and plan for additional funding.

There is clear opportunity to spend more and this PBC provides commentary in section 15.4.2 where additional spend would add the most value to the desired outcomes.

The estimated recommended programme split by primary funding sources is shown in Figure 64 and shows that NLTF remains the most significant source of funding. Note where an activity might include a package of works, the primary funding source or majority funding source has been used in this assessment. The median capital cost of $218M has been used for the following calculations.

Figure 64 Recommended Programme split by primary funding sources

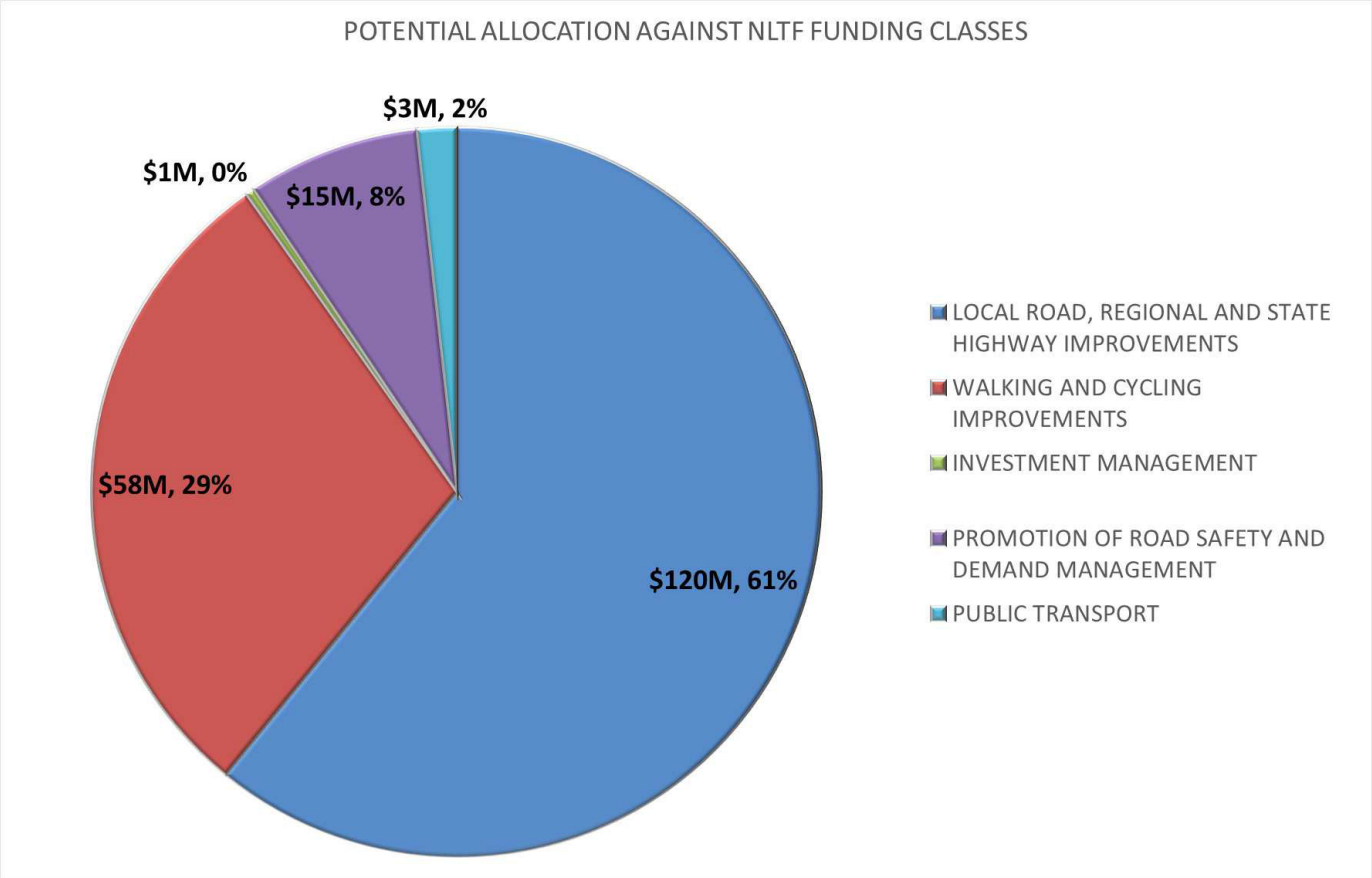


NLTF Funding

Figure 64 shows that 90% or $197M of the programme is potentially eligible for NLTF funding. Figure 65 provides an indicative split between activity classes within the NLTF.

[40] Based on 2019 TIO spend and committed LTP spending on non-maintenance related transport activities.

Figure 65 Potential allocation against NLTF funding classes



It should be noted that just because a project is potentially eligible for an NLTF work category, it does not guarantee it will receive NLTF funding and normal NLTF funding prioritisation processes will apply. It does however provide some insight into the proportion of the programme which has an NLTF transport focus. This analysis shows that most of the funding is likely to be sourced from the following activity classes:

- Local road, regional and state highway improvements
- Walking and cycling improvements.

Provincial Growth Funding

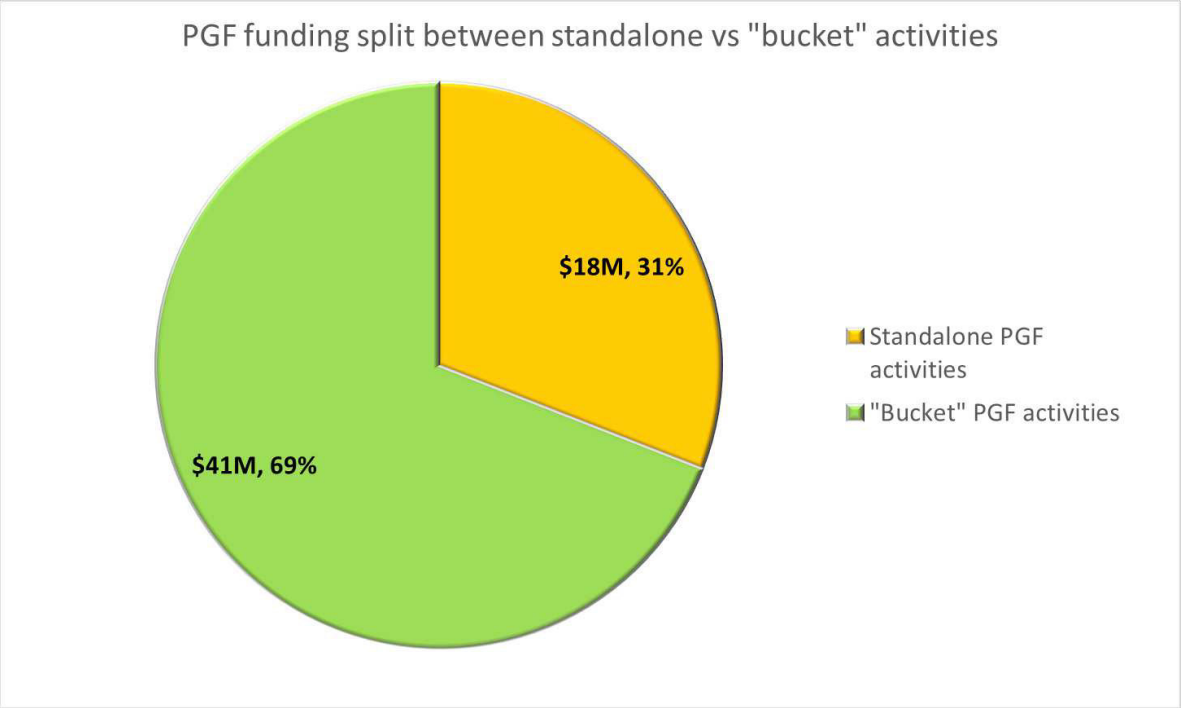
The ITP has also been assessed for eligibility against the Provincial Growth Fund (PGF). PGF funding may be applicable for two types of activities:

- Stand-alone activities such as: New rest areas and upgrades, Paihia town centre upgrades, TCDR Waoku Coach Road cycle route, destination facilities for cyclists and scooters and wharf supporting infrastructure.
- Specific activities within a broader "bucket" such as: New road sealing projects, Upgrades to existing roads, Township upgrades, Access improvements, Gateway treatments and TCDR footpath / shared path and cycle projects.

For activities within a broader "bucket", the percentage of PGF funding applicable for that "bucket" has been estimated based on the cost of PGF eligible projects over the total cost of the "bucket". Figure 66 shows the split in PGF funding applicable for stand-alone activities versus activities within a broader "bucket". This high-level analysis shows that there is potentially $41M of PGF funding that

might be sourced for activities within broader funding buckets. The effects of this on programme affordability is discussed further in Section 15.4.

Figure 66: PGF funding split between standalone vs "bucket" activities



TIF Funding

One option ("Tourism byway sealing to major attractions") has been identified as potentially being eligible for the Tourist infrastructure Fund (TIF). This equates to $2.7M of the overall programme.

15.3.2 FNDC contributions

Using the above funding distribution, potential FNDC contributions have been calculated using the assumptions summarised in Table 35.

Table 35: Funding contributions

Funding source	Funding assumption
NLTF	Funding Assistance Rates (FAR) 66% with FNDC paying for 34% of eligible projects
PGF	Assuming 100% grants
TIF	FNDC to co-fund 50% of the costs

Figure 67 Potential funding contributions for the Recommended Programme (10-year period):

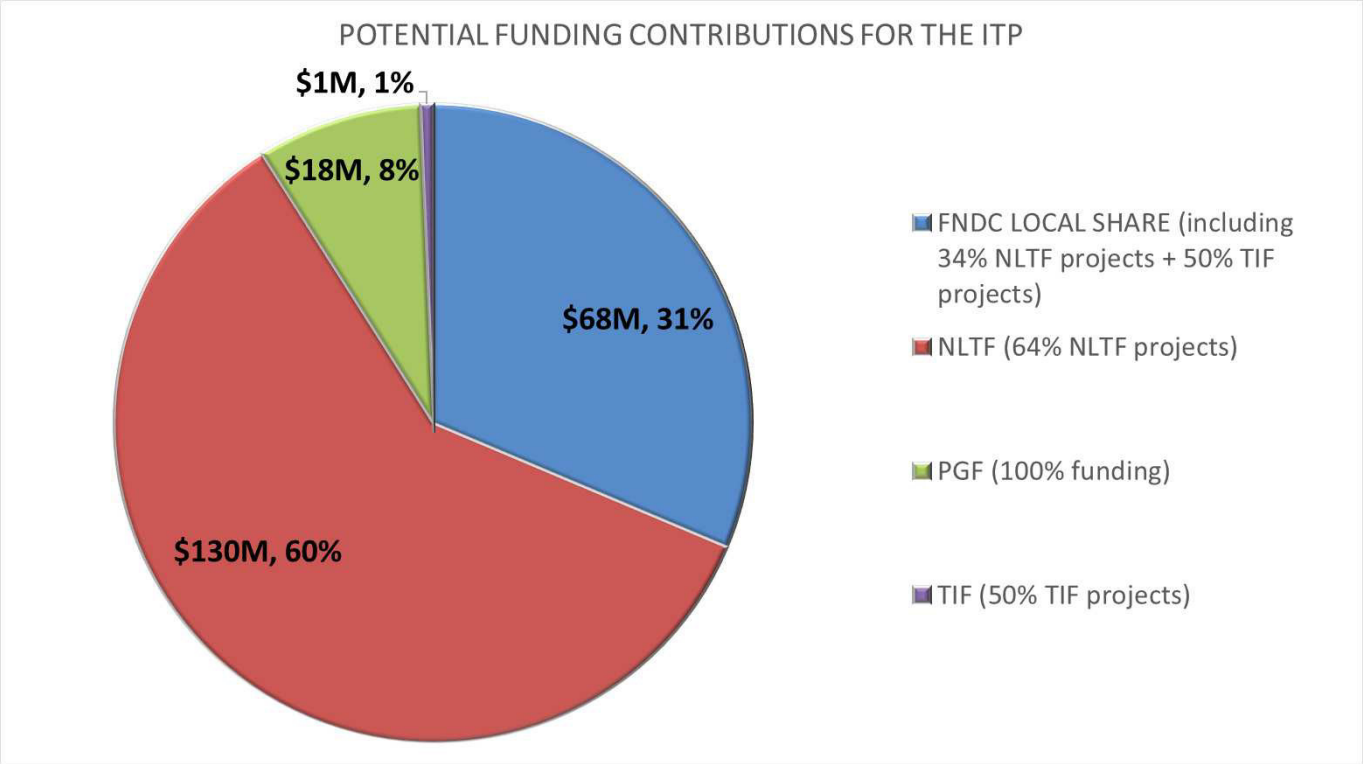


Figure 67 shows that assuming funding is achieved, FNDC's actual contribution for this programme is forecast to be around $68M for the 10-year implementation period. The largest funding contribution would be $130M from the NLTF.

15.3.3 Short term programme funding

The short-term programme is currently valued at $34M and approximately 96% is potentially eligible for NLTF funding as shown in Figure 68 below. Figure 69 provides an indicative split between activity classes within the NLTF. Local Road improvements and walking and cycling activity classes make up the largest proportion of the short term programme.

Figure 68: Recommended Programme split by primary funding source - short term

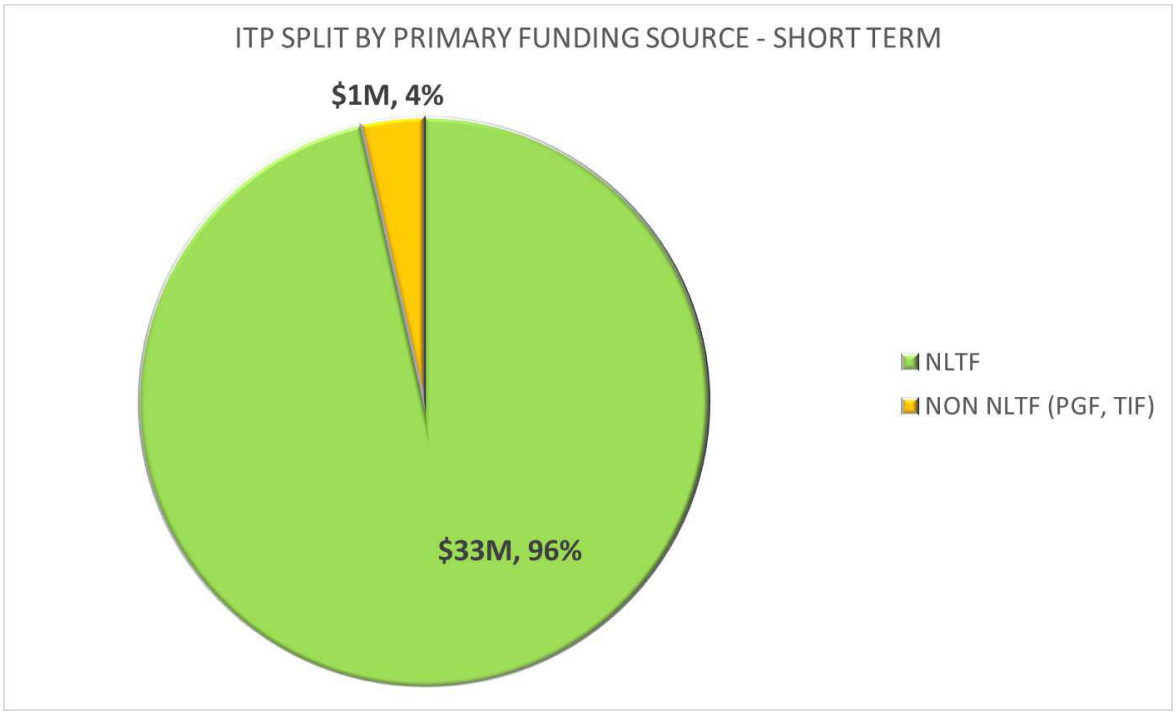
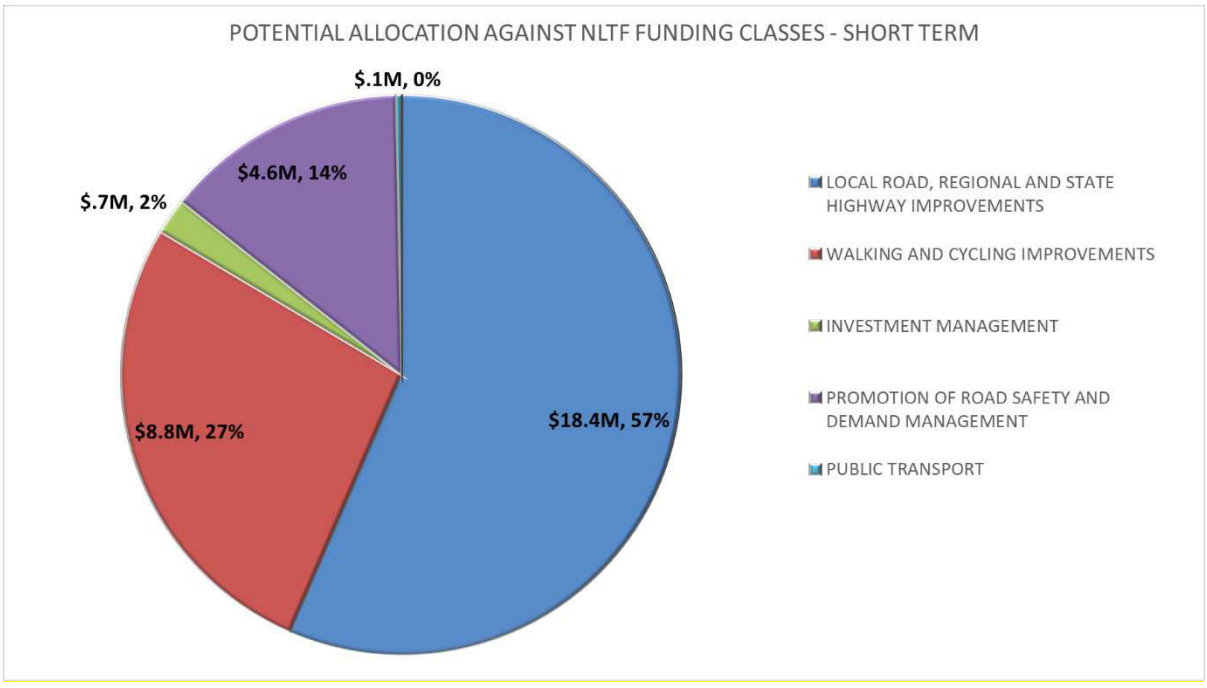
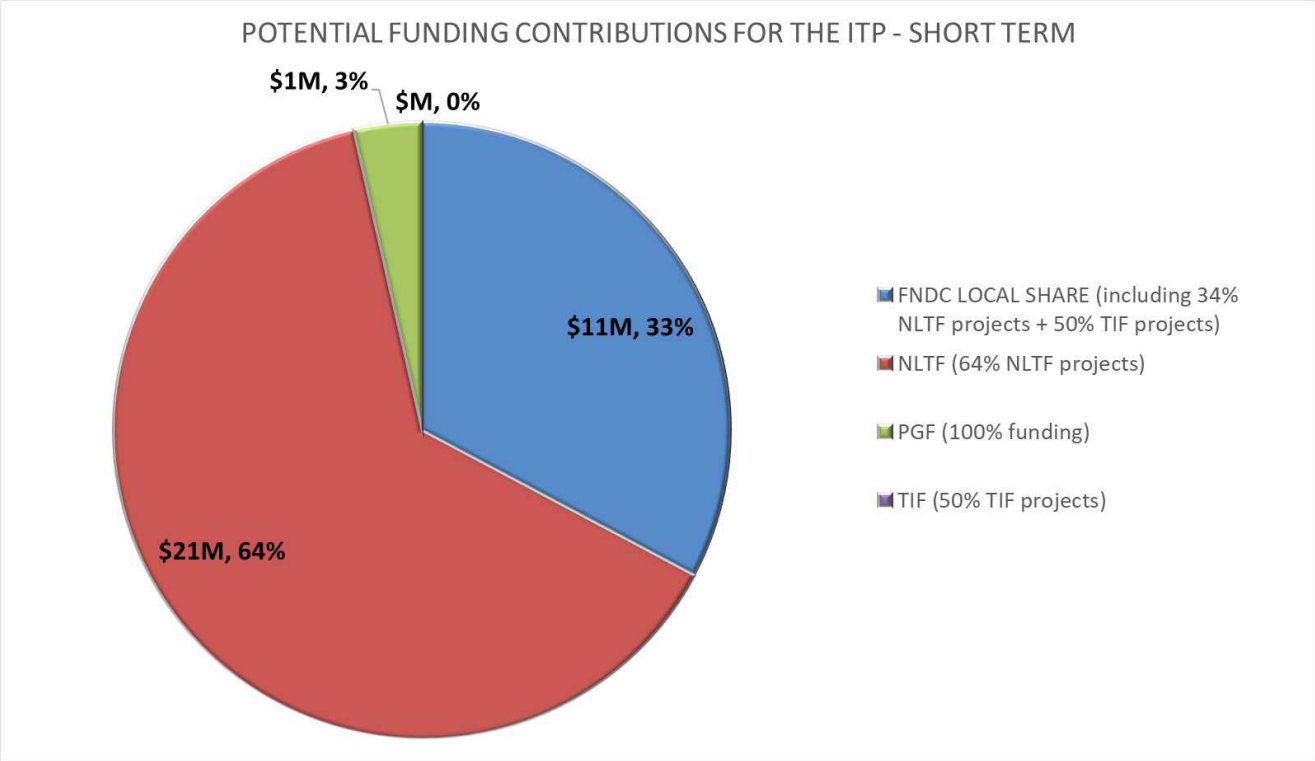


Figure 69: Potential allocation against NLTF funding - short term



The short-term funding contributions are shown in Figure 70 below. Assuming funding is achieved, FNDC's actual short-term contribution for this programme is forecast to be $11M. The largest funding contribution would be $21M from the NLTF for the short-term period.

Figure 70: Potential funding contributions for the Recommended Programme - short term



15.3.4 Programme funding gap

The short and medium term recommended programme has been compared against the Northland RLTP (2015-2021) to understand how much of the programme is already regionally prioritised (although regional prioritisation does not guarantee funding). This is shown in Table 36.

Table 36: Comparison of FNDC RLTP activities and Recommended Programme (Source RLTP2015-2021)

Activity Class	FNDC RLTP Anticipated Expenditure 2021-2025
State Highway Improvements	N/A
State Highway Maintenance	N/A
State Highway Minor Improvements	N/A
Local Road Improvements	$12,000,000
Local Road Maintenance	$131,382,000
Local Road Minor Improvements	$10,000,000
Public Transport	$0
Walking and Cycling	$6,800,000
Road Safety Promotion	$4,256,336
Investment Management	$1,000,000
Rail and Sea Freight	$0
Domestic Sea Freight Development	$0
TOTAL	**$165,438,336**
TOTAL EXCLUDING MAINTENANCE	**$34,056,336**

The recommended programme has a short term cost (assuming first three years of this programme) of **$34M.** This is broadly commensurate with the existing forecasted RLTP three year spend.

The overall 10-year recommended programme is valued at an average value of **$218M**. If the above RLTP annual spend is maintained at the same level for the 10-year period, the 2021-2030 RLTP anticipated expenditure is estimated to be **$113M.** As such, the funding gap over the whole 10-year programme is currently estimated to be around **$105M.** This equates to an increase in value from current provisions in the RLTP by approximately $38M[41] in the medium term and $67M[42] for the final 4 years of the programme. This reflects the increase in proposed capital investment for the Far North transport network and will need to be planned for in future RLTPs.

The gap assessment confirms there is a current funding gap. As such, it is critical that the recommended programme activities are promoted for inclusion in the RLTP 2021-2024 refresh otherwise the programme could experience significant delay in implementation and a slower realisation of benefits.

[41] Medium term cost of $72M less $34M current RLTP spend

[42] Long term (last four years of programme) cost of $112M less $45M current RLTP spend for 4 years

15.4 Affordability

As discussed, the FNDC Recommended Programme has been developed to be broadly similar to current transport spend in the district. Overall, NLTF eligible activities will be the most cost efficient for the District due to the high FAR rate currently assigned to FNDC. If this rate reduces during the 10-year period, then there would be a corresponding drop in affordability of the programme.

It should be noted that the maintenance, operations and renewals portion of the programme is similar to current spend and will be prioritised by the Northland Transport Alliance (NTA) as part of the Activity Management Plan process which feeds into the Regional Land Transport Plan process. The NTA has been a part of the process to develop the ITP and are aware of any activities which may have a future impact on operational expenditure.

15.4.1 Alternative Funding Sources

PGF eligible projects have the greatest potential to add value to the delivery of the programme. Due to the criteria of the PGF, the activities which have been highlighted as contributing to economic growth within the region would not likely score as well against current NLTF assessment criteria. This therefore means that by accessing a number of funding sources, a wider and more comprehensive set of interventions could be delivered in the Far North, ultimately realising higher benefits for the District. Like all competitive funding, there is uncertainty about the success for individual PGF eligible projects in the ITP throughout the 10 year span.

Five standalone projects have been identified as potentially eligible for PGF: 'New rest areas and upgrades', 'Paihia town centre upgrades', 'TCDR Waoku Coach Road', 'Destination facilities for cyclists and scooters' and 'Wharf supporting infrastructure'[43]. These projects have been identified as being integral to the success of the overall programme. Should PGF funding not be realised for these projects, then given the relative importance of these projects there is an expectation that FNDC would take steps to either find another funding source or consider funding directly from FNDC funds. This could increase FNDC funding liability by an additional $18M over 10 years, increasing the overall FNDC contribution to $173M. Over 10 years this sum is considered manageable. Some of these projects, such as Waoku Coach Road, are scheduled to be implemented in the short term, so if funding is not realised, FNDC still has a significant portion of the programme to develop a funding solution.

The other type of PGF eligible projects are those that are included for prioritisation within a wider "package" in the recommended programme such as: New road sealing projects, Upgrades to existing roads, Township upgrades, Access improvements, Gateway treatments and TCDR footpath / shared path and cycle projects. These activity packages have been allocated to a total investment pool and individual activities within this bucket will need to be prioritised for implementation. In this instance, it is expected that all PGF eligible project applications would be progressed with priority to ensure the best chance for achieving PGF funding. Should this PGF funding be achieved then this releases additional money within that specific package for the next project on the prioritised list. Therefore, the more PGF funding that is secured, then the more additional projects could be delivered against that line item. Should PGF funding be declined then that activity would be returned to the prioritisation process for delivery. This process is not considered to have any additional risk for FNDC.

There is one potential TIF funded project ("Tourism byway sealing to major attractions") which on the surface has the least affordability for FNDC with a 50% contribution required by FNDC. However, this

[43] Refer to Appendix G for further details on the individual projects

project is considered part of the holistic transport response and would traditionally not have achieved funding under NLTF. So, the relatively small investment by FNDC ($1.35M) is considered important to achieve the broader objectives of the programme. If TIF funding is not achieved, then FNDC will need to consider how this project could otherwise be funded. This project could be included in the scoring criteria as part of the planned review of the New Road Sealing Prioritisation Matrix, which allows it to be considered for funding.

15.4.2 Where should FNDC spend any additional funds?

During the next 10 years, FNDC could develop other mechanisms to help fund transport infrastructure, such as development contributions, which could potentially increase Council's ability to fund new capital transport works or increase maintenance spend.

The recommended programme has been assessed to understand which projects could potentially add the most value to transport outcomes and achieving the district's strategic objectives.

Table 37 shows the following areas which are considered desirable for further funding if it is available. The outcomes that can be maximised by providing additional funding for these options are also shown.

Table 37: Options desirable for further funding

Action Plan	Option name	Allocated cost	Anticipated full option cost	Programme Outcomes					
				Improving safety (IO 1)	Managing growth (IO 2)	Making best use of existing network (IO 3)	Improving transport choices (IO 4)	Securing our transport system (IO 5)	Prioritising investment (IO
Road Network	Upgrades to existing roads	$10M	$20.61M	✓	✓	✓	✓	✓	
	Implementation of Kerikeri Road Network Projects	$10M	$18M	✓	✓	✓	✓	✓	
	Paihia Town Centre Upgrades	$10.05M	$19.45M	✓	✓	✓	✓		✓
	Access improvements	$10M	$40.30M	✓	✓	✓	✓		✓
Safety	Road Safety Promotion	$15M	$18.17M	✓	✓	✓	✓		
	Minor safety rail crossing improvements	$100,000	$200,000	✓	✓	✓	✓	✓	
Active Modes	Implementation of prioritised TCDR footpaths / shared use path projects	$10M	$41.73M	✓	✓	✓	✓		
Harbour	Wharf supporting infrastructure	$2M	$4.98M		✓	✓	✓		✓

The categories above include specific projects identified to date for consideration during the prioritisation process. The estimated cost of these individual projects makes up the anticipated full option cost. However, given funding constraints, the recommended programme only includes an "allocated cost" of these options.

As such, achieving additional funding in the areas above would maximise the applicable investment outcomes and significantly contribute to realising the associated benefits faster.

PART C DELIVERING AND MONITORING THE PROGRAMME

16. COMMERCIAL CASE

The PBC contains a wide range of activities and it is expected that the majority of the programme is likely to be delivered by the Northland Transport Alliance (NTA). The NTA has been a stakeholder through the development of this PBC and confirm they are satisfied that any concerns regarding deliverability have been accommodated.

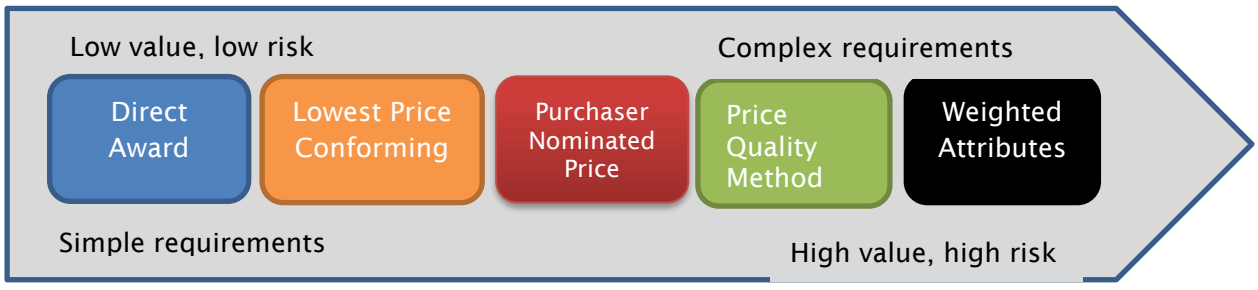
For the work package to be agreed with NTA it is expected that the NTA procurement Strategy will be applied. It should be noted that this strategy is due a refresh this year. The *Northland Transport Alliance Procurement Strategy 2017-2021* provides the opportunity for an integrated approach to local government transportation procurement across Northland. This strategy provides for procurement of activities that are not MOR and can be considered under the "Other Physical Works Category". This selects suppliers from the following methods:

- Direct Appointment
- Closed Contest
- Lowest Price conforming
- Price Quality

The NTA strategy confirms that the works proposed in the strategy are within the capability of the resources available to the Northland market and supports the supply chain to improve its skill base. FNDC will work directly with the NTA to agree the PBC work package to be included for delivery under this strategy.

For activities to be delivered directly by FNDC the *2018 Far North District Council Procurement Policy* will be applied. These principles of procurement are based on *Government Rules of Sourcing* and encourage open and competitive tendering where possible based on best value for money. The Council will also seek to promote the Far North Economy by ensuring local suppliers are included in invitations to tender wherever practical. The types of tendering methodology are shown in Figure 71.

Figure 71 FNDC Procurement Manual (2018)



If the type of service is not already covered by an existing supply arrangement, then the procurement approach is determined by financial thresholds:

- <$100K - Direct Appointment
- $100K<$200K - Closed Tender
- $200K<$500K - Open Market / Supplier Panel
- $500K- $3M - Open Market
- >$3M – Open Market with procurement board and council approval.

17. MANAGEMENT CASE

The FNDC Integrated Transport Plan has identified a comprehensive and prioritised programme of improvements for the whole district to address the key strategic responses of safety, resilience, making best use of the existing network, transport choice and managing for growth as shown in Figure 72.

Figure 72 Key strategic responses

It is intended that this PBC is an investment map for the district and that the projects identified within the recommended programme will holistically provide a response to the identified problems. Some projects will individually perform well economically, and others will have a low individual economic benefit. However, their value should not be underestimated as they form an integral part of the overall programme.

This PBC by nature is a snapshot in time however, it is intended that the programme is "live" and as such the projects have been deliberately packaged to allow types of measures to be delivered as a "best fit" for the network. An example of this is the footpaths package which has an associated annual cost for infrastructure improvements. A detailed footpath prioritisation matrix has been developed by FNDC to assess each potential location and ensure footpath improvements are being provided in the right place at the right time, maximising benefits to the district. Therefore, a prioritised list will allow individual projects to be progressed according to their merits. If footpath priorities change over the ITP period, then implementation can be adjusted accordingly.

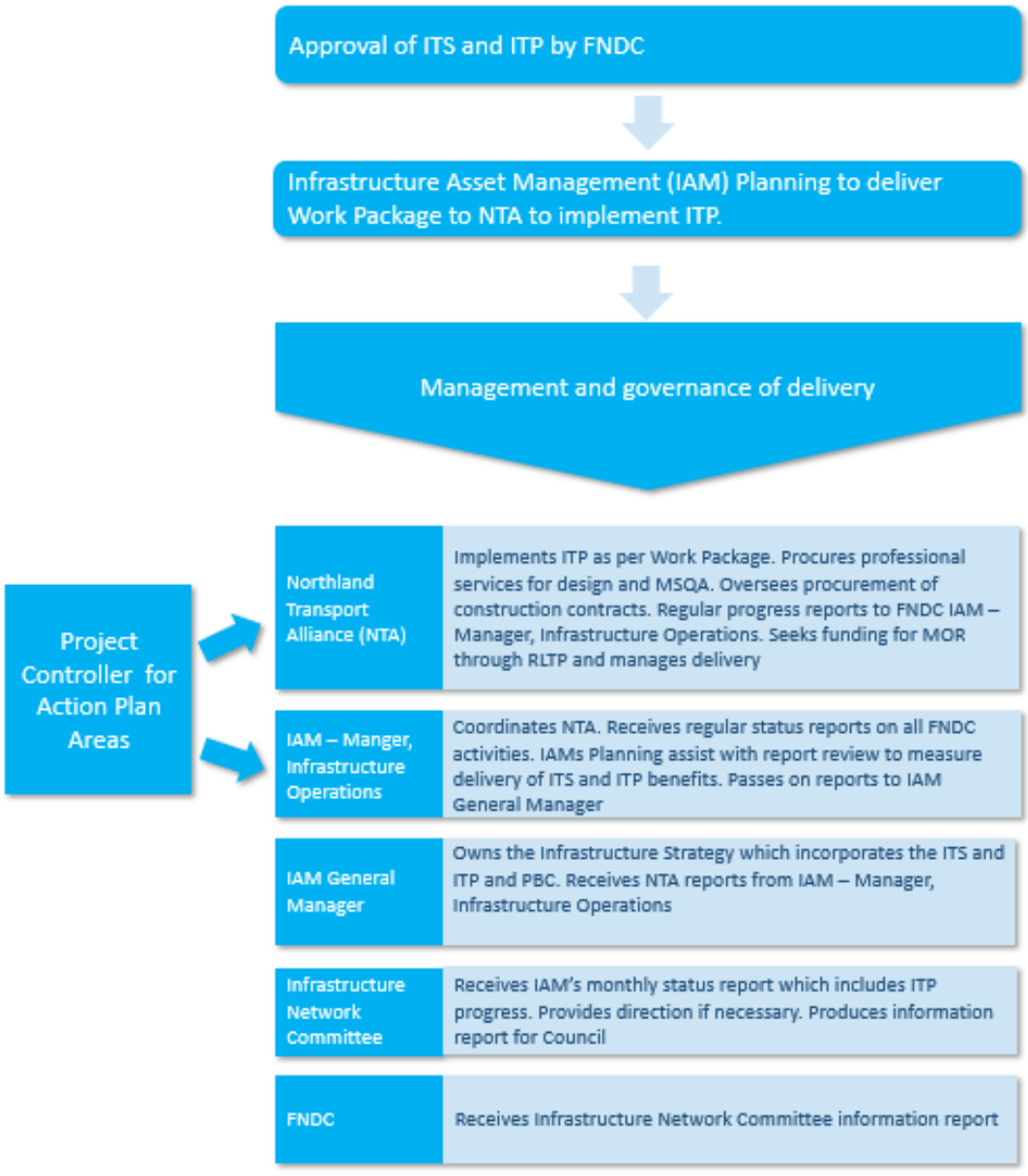
Ultimately, the realisation of benefits of this programme will result from the coordinated implementation of options from all action plans.

17.1 Programme governance and reporting

The PBC has identified a range of activities for implementation across the FNDC transport network. It is expected that the implementation of these activities will be delivered via a range of management and governance structures depending on the location, scale and nature of each activity.

Much of this PBC is considered business as usual and will fall under the remit of FNDC departments (such as transport and district facilities) or the NTA to manage and deliver. It is assumed that all maintenance, renewal and operation activities will be managed and delivered through the NTA. An indicative governance process for this delivery is shown in Figure 73.

Figure 73 FNDC management process



Funding will still need to be secured and this ITP will form a key input into the appropriate RLTP process, which is being undertaken in parallel to the development of this PBC. The ITP has deliberately been divided into seven key Action Plan Areas (APA) to ensure all projects are being tracked and managed from planning through to implementation. The action plans and the activities within them will be championed as shown in Figure 74.

Day to day management and reporting for each APA will need to be confirmed with relevant IAMs and NTA Managers. They will in turn nominate project managers for specific projects and activities within the Action Plan Areas. An overall Project Controller is desirable to champion, coordinate and monitor/control delivery of the ITP APAs, in liaison with the managers and reporting to IAM – Manager, Infrastructure Operations.

Figure 74 Day to day delivery of the Action Plan Areas

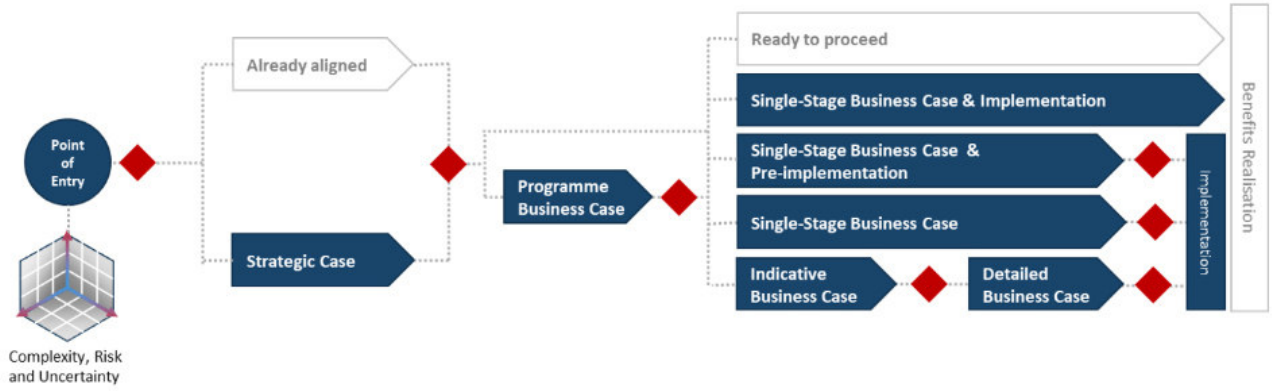
Some activities may require partners such as Hapu, Iwi or other government departments such as Waka Kotahi, Northland Regional Council and the Department of Conservation. In this instance specific governance and reporting structures will need to be developed to ensure a funding plan is in place for ultimate implementation.

17.2 Delivering the PBC

The PBC includes a wide range of projects for implementation. The majority of these will be delivered through business as usual mechanisms such as MO&R projects to be delivered by the NTA or bus services to be delivered by NRC.

It is expected that the large stand-alone projects (such as road upgrades within the Road Networks Action Plan) will be progressed according to the Waka Kotahi Business Case Approach as shown in Figure 75. The most suitable type of business case will be selected and progressed through to gaining resource consents (if required) and then implementation.

Figure 75 Waka Kotahi Business Case Approach



The activities that are likely to need a 'next step' in the business case process have been classified in Appendix G. Three activities have been immediately identified as requiring the next stage business case in Table 38.

Table 38 Future Business Case Requirements

Action Plan	Activity	Commentary
Road Network	Kerikeri Strategic Road Network Plan	SSBC or IBC/DBC. To be confirmed with Waka Kotahi
Road Network	Paihia Town Centre Upgrades	Was included in the Twin Coast Discovery Route SSBC. However further investigation and detailed design is required for this activity. Point of entry to be discussed with Waka Kotahi.
Harbour	Long Term Hokianga Plan	SSBC or IBC/DBC. To be confirmed with Waka Kotahi

As further prioritisation occurs for the packaged transport activities it is expected that additional needs for business cases will be identified. These next steps have also been indicated in Appendix G.

Due to the complexity and range of projects, this PBC itself will not deliver a financial or operation plan. These will need to be worked through by the respective project owners on a case by case basis to support funding applications.

However, some key considerations for these plans are detailed in Table 39.

Table 39 Key considerations for delivering the PBC

Consideration	Discussion
Financial plan	This is the mechanism for funding projects. A large part of the PBC will be suitable for traditional funding paths such as the NLTF. Due to the regional economic considerations of this PBC it is likely that some projects might qualify for alternate government funding e.g. stimulus or growth funding or contributions from the MBIE Tourist Infrastructure Fund (TIF). Additional funding sources to be investigated could include: • Māori partnerships • DoC community fund • Te Puni Kōkiri Moving the Māori Nation fund • Council community funds
Co-funding prospects	Some projects might best be delivered as partnerships. Other elements may provide opportunities to attract co-funding. This may speed up project delivery as if external contributions are forthcoming then Waka Kotahi will generally prioritise their funding assistance rate (FAR) rated cost share.
Operations	An issue frequently raised by stakeholders is the ability for the region to afford to maintain what is built. The management plans will need to carefully consider how a project would be funded through its lifetime. Projects need to seek out operational opportunities such as handing the maintenance of local asset over to the customers for a period. Some of the proposed resilience activities may alter the focus or extent of existing maintenance activities within the region. For example, investing in capital resilience improvements will reduce the cost of reactive maintenance (i.e. clearing slips) which allows current funds to be allocated to other/new maintenance activities.
Activity management plans	It is noted that some of the ITP projects included in this programme will likely be integrated into future local AMPs. This process will be managed by the Northland Transport Alliance

17.2.1 Prioritisation of work packages

Where transport activities have been identified as a package of works, further prioritisation processes will need to be undertaken to confirm the implementation programme. Some of these processes exist and others will need to have repeatable prioritisation processes established as detailed in Table 40. This will ensure interventions are being implemented according to community needs and their contribution to the overall Far North district-wide transport response.

Table 40 Action Plan Prioritisation processes

Action Plan	Activity	Prioritisation process
Road Network	Bridge improvements	Prioritisation matrix does not exist and needs to be developed
	New Road Sealing Projects – various district roads	Prioritisation matrix exists ('FNDC Road Prioritisation to Guide the Delivery of Road Asset Upgrades') and has been adopted by FNDC up to June 2021. Prioritisation criteria will require review for the 21-30 LTP
	Upgrades to existing roads	Prioritisation matrix does not exist and needs to be developed
	Far North intersection upgrades	Prioritisation matrix does not exist and needs to be developed
	New rest areas and upgrades	Prioritisation matrix does not exist however projects are generally from the TCDR Rest Areas Business Case which can provide guidance for prioritisation
	Implementation of Kerikeri Road network projects	Prioritisation matrix does not exist; however, the programme includes an option to develop the Kerikeri Strategic Road Network Indicative Business Case and/or Detailed Business Case, which will provide guidance for prioritisation within this activity.
	Township upgrades	Prioritisation matrix does not exist and needs to be developed
	Tourism byway sealing to major attractions	Prioritisation matrix exists ('FNDC Road Prioritisation to Guide the Delivery of Road Asset Upgrades') and has been adopted by FNDC up to June 2021. Prioritisation criteria will require review for the 21-30 LTP
	Access improvements	Prioritisation matrix does not exist and needs to be developed
	Gateway treatments	Prioritisation matrix does not exist however projects are generally from the TCDR Rest Areas Business Case which can provide guidance for prioritisation
	Resilience mitigation	Prioritisation matrix exists ('FNDC Road Prioritisation to Guide the Delivery of Road Asset Upgrades') and has been adopted by FNDC up to June 2021. Prioritisation criteria will require review for the 21-30 LTP. Low-cost low risk (LCLR) resilience mitigation activities can also be prioritised under 'Roading related LCLR activity' prioritisation matrix. This matrix is endorsed by FNDC
	Flood mitigation measures	Prioritisation matrix does not exist and needs to be developed
Safety	LCLR safety improvements	'Roading related LCLR activity' prioritisation matrix exists and has been endorsed by FNDC
	Implementation of speed management measures	Prioritisation matrix does not exist and needs to be developed
TDM	Parking and facilities	Prioritisation matrix does not exist and needs to be developed following completion of the district parking strategy

Active Modes	Improved pedestrian access	Prioritisation matrix does not exist and will be developed during the review of the footpath prioritisation matrix.
	New or improved footpath / shared use projects	Footpath prioritisation matrix exists and has been endorsed by FNDC. Prioritisation criteria will require review for the 21-30 LTP
	Implementation of prioritised TCDR footpath / shared use path projects	Prioritisation matrix does not exist however projects are generally from the TCDR Business Case Programme which can provide guidance for prioritisation
	Implementation of urban cycling	Prioritisation matrix does not exist and needs to be developed
	Implementation of prioritised Twin Coast Discovery Route (TCDR)	Prioritisation matrix does not exist however projects are generally from the TCDR Business Case Programme which can provide guidance for prioritisation
Public transport/ ride share	Bus stop facility improvements and new locations	Prioritisation matrix does not exist. The prioritisation of this option should be consulted with NRC.
Harbour	Wharf supporting infrastructure	Prioritisation matrix does not exist and needs to be developed in partnership with FNHL

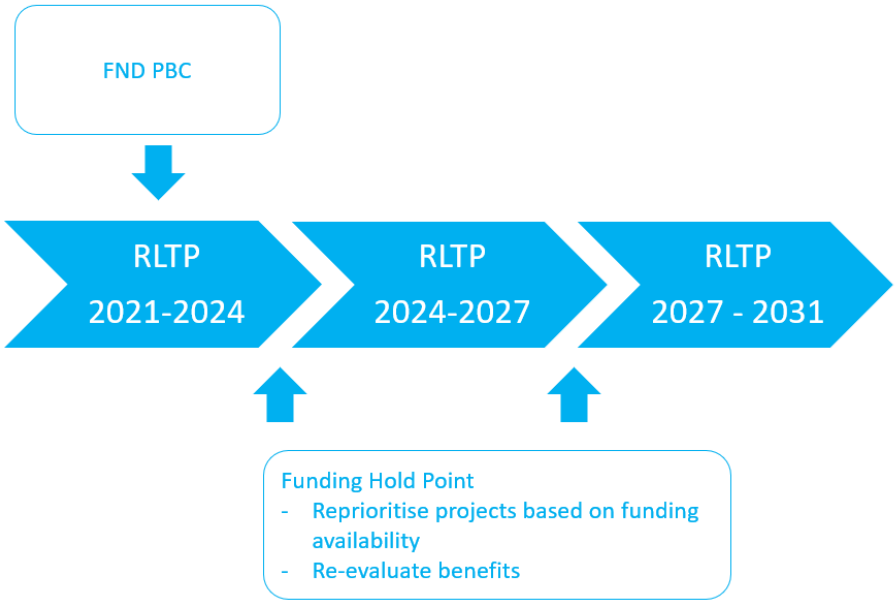
17.2.2 Managing programme funding gap

There is a clear programme risk for this PBC related to a funding shortfall. This may be further exacerbated in the short term with the effects of COVID-19, unexpected events such as emergency works and reduced funding available from either FNDC or Waka Kotahi through the NLTF.

The PBC manages this risk in the first instance by the proposed programme staging which constrains year 1-3 to be to a similar level of current FNDC transport annual spend (around $11M p.a. Years 4-6 have a projected increase to an average of $24p.a and then a larger increase in the last part of the 10 year term to around $28p.a. This staged response acknowledges the need for increased spend on transport to achieve the strategic responses, but also allows FNDC time to secure additional funding sources such as the consideration of development contributions or applications to alternative funding streams to the NLTF.

The proposed approach for years 1-3 is to implement the first stage of the PBC which focuses on completing the necessary planning steps to inform the future stages of the PBC and maintains base spends for key business as usual activities such as footpaths, speed reduction, safety improvements and safety promotion. It is noted that planning activities themselves do not generate benefit streams but are key enablers to unlock benefits later in the programme as infrastructure is delivered. Figure 76 identifies the proposed process for how the PBC activities will be reprioritised.

Figure 76 PBC Funding hold points



Should the local funds be insufficient for delivery or FNDC is unable to secure the contestable funds it requires, then further prioritisation of the programme may be required. This prioritisation would need to be undertaken with key stakeholders so the associated delay in programme benefits is clearly understood. This prioritisation process could consider aspects such as:

- A reduction of spend equally over all action plans
- Sustained spend on key action areas such as safety or maintenance and reduction across other action plans
- Delay in delivery of high cost infrastructure items so District wide investment for other action areas can be maintained
- Delay in tourist related infrastructure to ensure outcomes for local communities is maintained.

Reduction in transport spend will result in a slower realisation of benefits so it is important that re-prioritisation is considered carefully to ensure that activities that contribute the most benefits for FNDC are still delivered and the overall outcomes for the Transport strategy are being upheld. It is anticipated that a reduction of spend equally across the programme would likely reduce the benefits in a similar manner so the overall value for money could be similar. High cost infrastructure items such as new roads often realise significant benefit streams so it is possible that the delay of these types of projects might have an overall reduction in benefits for the programme. Some tourism projects such as byway sealing are not expected to contribute significantly to traditional EEM benefit streams, however they contribute to the overall holistic outcomes of the programme, and wider tourism benefits as part of parallel programmes such as the Twin Coast Discovery Route PBC.

17.2.3 Impact of COVID-19

The extent of impact of COVID-19 on this PBC is not yet known. As detailed above, one impact of COVID-19 could be to reduce the availability of funding due to decreased revenues

to FNDC and central government thus lowering the amount of NLTF funded projects. This would most likely be mitigated through the reprioritisation of the transport programme which could result in a delay to implementation of the projects identified in the PBC and a subsequent delay in benefit realisation.

Published data from Waka Kotahi [44] indicates that in Level 1, traffic in key urban areas is between 85%-95% when compared to the same time as last year, with significant reductions in demand for PT services. Given the Far North has only a few urban centres and a lot of rural towns it is expected that its travel patterns would be different from national urban centres. Given the current lack of travel choices in the Far North it is considered likely that the traffic volumes could return to near pre-Covid levels. Traffic demand may however be supressed if extensive travel behaviour change is realised and large numbers of people continue to work from home. Some businesses such as FNDC are already encouraging people to regularly work from home as part of new business as usual protocols. A reduced demand profile could influence the timing for implementation of PBC projects. For example, the larger capital investments of new links in growth urban areas may not be required as quickly. The PBC recommends that all these larger projects proceed in the first instance with the next stage of detailed work (e.g. SSBC or DBC) with an implementation currently staged towards the end of the 10-year programme. Therefore, it is considered there is time to understand and manage the risk of reducing demand.

The impacts of COVID-19 on Far North tourism is not yet known. International tourist numbers are currently very low due to the closed borders, however domestic tourism has traditionally always been a large proportion of the Far North visitors. As the domestic tourism markets recover, the Far North may be less affected compared to other regions. As the tourism response is further understood, additional prioritisation within the PBC for tourism related activities might be needed.

Similarly, the effects of COVID-19 on the primary industries in the Far North is yet to be seen. The Ministry of Primary Industries (MPI)[45] has released an economic update which shows that most sectors are showing little sign of slowdown with the exception of forestry and seafood which have been significantly affected by the slowdown in demand in China. The report forecasts that most sectors are likely to face “additional headwinds” to some degree during recovery. The effects for this PBC are likely to be related to changing travel demands and patterns for heavy vehicles. For example, the unavailability of some migrant seasonal workers may reduce horticultural output which could reduce the heavy vehicle movements on the Far North transport network. Or decreased forestry demand might delay harvesting schedules. The PBC has been developed with flexibility in mind, and where possible funding buckets rather than individual locations have been provided for activities such as road sealing, intersection improvements, detour routes etc. This allows FNDC to respond quickly to changing travel patterns and undertake regular re-prioritisation of these activities to ensure the improvements are implemented where they are most needed.

Considering the potential impacts from COVID-19 it is recommended that the APA coordinator undertakes an annual review of the short term PBC activities to understand the need for further reprioritisation of the programme.

17.2.4 Delivery of safety

[44] https://www.nzta.govt.nz/about-us/coronavirus-disease-covid-19-services-update/weekly-traffic-count-information/

[45] https://www.mpi.govt.nz/dmsdocument/40808-economic-update-for-the-primary-industries-june-2020

The PBC clearly contributes to the delivery of overall safety benefits to align with the Road to Zero target of 40% across NZ by 2030. Key contributions from the PBC include:

- Road safety promotion
- Annual network safety identification programme
- Infrastructure improvements such as the 'Low cost low risk' safety improvements, safety barriers, lighting improvements, safe school facilities and rail safety
- Safety benefits from improved intersections, better walking and cycling facilities and better road conditions.

To best achieve these Road to Zero desired safety outcomes the FNDC will also need complementary elements to those proposed in the PBC. These include activities such as the Safe Network Programme, enhanced policing, support to improve the quality of vehicles in the district, implementation of a regionwide scheme for mobile driver licensing and substantial community buy in for behaviour change around alcohol and speed which are two key factors in the cause of crashes in the Far North.

17.2.5 Interaction with parallel programmes

The PBC is focused on the FNDC controlled activities and is designed to be complementary with any works being delivered on the State Highway network or by other parallel workstreams. This PBC is therefore broadly interdependent with these other workstreams to ensure a holistic response is delivered for the whole of the FNDC transport system. At this stage, the PBC projects are considered complementary and work towards a common transport outcome rather than a specific intervention being required from either the PBC or parallel programmes to enable another project to proceed.

This PBC will interact with a number of parallel programmes as follows:

- The ITP has been developed to meet the timing for the draft RLTP process. It is expected to be a key resource to confirm which projects FNDC will commit to funding in the RLTP.
- The Transport Agency Investment Proposal (TAIP) 2018-2027 provides clear guidance about the types of activities Waka Kotahi will be investing in for Northland. The PBC activity plans align well with the TAIP activity classes and identified opportunities.
- The Twin Coast Discovery Route (TCDR) Programme identified a holistic range of projects to address safety, resilience, and access to tourism and economic opportunities. FNDC was identified as the owner of many activities within this programme and these activities have subsequently been included at the long list stage of this PBC. They have then assessed against the FNDC outcomes and where appropriate prioritised within the PBC. Therefore, this PBC is also helping to deliver the outcomes from the wider Waka Kotahi TCDR programme.
- The Te Hiku o Te Ika Revitalisation Plan includes a wide range of projects to create employment and vibrant town centres in the Far North. It is understood that most of this programme has been funded by a range of funding sources. There is potential for any un-funded transport related projects from this masterplan (such as footpaths and shared paths) to be assessed for prioritisation under the appropriate action plan buckets within this PBC.
- The Safe Network Programme (SNP) is currently undertaking speed reviews at three state highway locations in the Far North. It is expected that other Far North safety sites might be identified throughout the life of the PBC. The PBC focuses on safe

system interventions on the local roads which is expected to be complementary to the SNP programme. The APA controller will need to establish contact with this team to understand how the two programmes can work together.

- The Waka Kotahi Resilience Programme identifies and rates nationally important risks from natural hazards. In the Far North, sites have been identified on SH12 and SH11. The PBC resilience activities have been identified for local roads and is expected to be complementary to resilience works undertaken by Waka Kotahi.

It is acknowledged that having multiple programmes delivering improvements in the Far North can be complex, however the relationship between Waka Kotahi and local authorities is replicated around NZ. The PBC manages this as follows:

- The PBC has clearly demarcated its geographical focus to FNDC roads to avoid cross over with Waka Kotahi
- The PBC objectives clearly align with the GPS and MoT outcomes to ensure they are working with the Waka Kotahi led improvements
- The PBC has referenced and aligned with the Twin Coast DBC programme
- The PBC has promoted planning activities in the short term to allow robust development of the implementation works for later years. Interdependencies will be considered as part of these next steps.

17.3 Stakeholder engagement and communications plan

The PBC has been developed through a Programme Business Case approach to ensure effective and efficient engagement with key investment partners and stakeholders within the district. This has allowed the project team to gain a greater insight into the key problems, constraints, interdependencies and drivers for businesses and communities with the District, and to identify potential improvements that support the needs of the district.

A summary of the overall stakeholder support for the Recommended Programme is provided in the table below.

Table 41: Summary of overall stakeholder support for the Recommended Programme

Stakeholder groups	Commentary
FNDC	FNDC staff members were consulted regularly throughout the development of the Recommended Programme and the details of the programme were shaped in collaboration with FNDC. The collection and prioritisation of all existing and proposed transport related projects involved FNDC, whereby all input and feedback received was incorporated into the programme. Therefore, all options included in the Recommended Programme were supported by the Council and ensured alignment with their transport vision for the Far North.
NTA	The NTA's priority in the Recommended Programme was with regards to maintenance, operation, and renewal (MOR) projects. The NTA is responsible for the prioritisation of the MOR programme, which will be reported in the Activity Management Plan (AMP). To ensure the consistency and distinction between the Recommended Programme and the AMP, all MOR projects were excluded from the Recommended Programme and noted to be prioritised under the AMP. With regards to capital work projects, any feedback or input from the NTA project team was incorporated in the Recommended Programme, which was reviewed to confirm alignment.

Iwi	Iwi groups were invited to all workshops and were provided opportunities to further contribute to the development of the Recommended Programme. However, the limited engagement with Iwi is acknowledged and going forward it is anticipated that more transport projects may emerge. This is considered acceptable as the PBC has been designed to allow further transport projects to be incorporated into the flexible transport packages in later stages of the implementation period. Overall, from the limited discussions with Iwi, it can generally be concluded that there is consensus with the identified transport issues and direction of the Integrated Transport Strategy and Plan.
Waka Kotahi	Ongoing discussions were held with the Waka Kotahi including the IQA team and Senior Investment Advisor from early stages of the PBC, who were also represented at the workshops. The project team has worked with the IQA team to provide any additional information as requested and to incorporate their feedback on the Recommended Programme and overall PBC.
NRC	The NRC's priority in the Recommended Programme was public transport related projects. The NRC is responsibility for the provision of public transport services in the Far North, which will be detailed in the Regional Public Transport Plan for Northland (RPTP). To ensure consistency and distinction between the Recommended Programme and the RPTP, all projects directly relating to public transport services were excluded from the Recommended Programme. The Recommended Programme is complementary to the RPTP in the way that infrastructure projects or policy updates that support the operation of public transport services were prioritised and included in the programme.
Community & Business associations / Industry groups	Community and business associations and industry groups (such as forestry and farmers) in the Far North were consulted throughout the development of the Recommended Programme and all feedback was considered and incorporated where possible. Viable projects proposed by Community and Business associations and Industry groups were included where possible in the Recommended Programme as a standalone option or within flexible transport packages, therefore enabling all proposed projects to be further prioritised in later stages of the implementation period. This method and the overall Recommended Programme were supported by this stakeholder group as it ensures continued consideration of their proposed projects as well as transparency of the prioritisation process.

The geographic breadth of this PBC means there are many stakeholders. As this PBC progresses through various delivery schemes, a detailed plan to coordinate engagement should be developed. Specific engagement plans should be developed as part of detailed business cases or another implementation mechanism.

The Stakeholder Engagement and Communications Plan developed for this PBC will form a basis for future communications. Utilising the same key stakeholders will provide continuity and coherence between work completed to date and future work streams. It will also help continue to keep these projects in consideration for the relevant funding streams.

Māori engagement is fundamental to the success of the delivery of the PBC. Whilst there has been some involvement by Maori in the PBC to date there is an opportunity to further build on the partnership. It is likely that this process will evolve as the programme progresses and will seek to align with consultation being undertaken by other FNDC workstreams such as the Far North 2100 and the Long Term Plan.

The proposed future Māori engagement process is suggested as:

- Preliminary discussions with identified Māori leaders to provide a briefing of this PBC and to provide visibility of the next steps.

- For each new project, during the project set up, the appropriate Māori groups will be identified, and a plan implemented to ensure early conversations are held. The scale of this engagement will be considered on a case by case basis to ensure it best fits the project e.g. personal engagement on a specific project may be preferable over large sessions.
- The FNDC will seek to engage in a coordinated manner, so Māori have consistency with personnel and demands on their time.
- Consideration will need to be given by FNDC regarding costs to Maori for ongoing participation in engagement.

To further support land use integration, it is recommended that FNDC engage with Ministry of Housing and Kaianga Ora to understand if there are any planned developments for the Far North. This can then be used as an input into appropriate prioritisation processes for capital improvements.

17.4 Benefits management

Monitoring of the network forms a critical element of determining the efficacy of improvements against the investment objectives. The investment objectives identified through this PBC have been developed in such a manner that they can be attributed to investment within the network and can be assessed and monitored over the lifetime of the investment period.

Monitoring of the programme will be managed by FNDC and will involve reporting through to Councillors and the Regional Land Transport Committee.

The collection of evidence for Part A of the PBC has highlighted some evidence gaps for the FNDC which flows through into the availability of baseline data for benefits measurement. An important early task for delivering the PBC will be for FNDC to complete a full audit of available data compared with data required for the benefits management plan. Data collection processes may need updating or adjusting to ensure an appropriate and consistent data set is being collected. It is important that these data sources in the benefits realisation plan are retained into the future to allow for trend analysis.

17.4.1 Benefits realisation plan

The PBC contains a high number and wider spectrum of projects which makes it difficult at this stage to provide a simple list of benefits for a benefits realisation framework. However, the KPIs and measures have been mapped against the PBC benefits as shown in Figure 77.

This creates an initial "benefits bank" which future projects could use as a starting point for identifying benefit measurements. This map also highlights where a coordinated approach to measurement mechanisms such as surveys may be required. In general, these measures will need to be collected before and after implementation to track either completion of networks or understand the level of change in the measure.

An assessment has also been provided for the direct alignment between the FNDC measures and the Draft GPS 2021 measures. As noted in the earlier results alignment assessment, the FNDC benefits align very closely with the Draft GPS strategic priorities. The measurement of these benefits will vary depending on the availability of data. The table shows that FNDC has some alignment of measures on key aspects such as access and safety and bespoke measures on many other KPIs.

In addition to benefits realisation at a project level which will have its own sub-set of metrics, it is recommended that benefits realisation is also considered at a programme level to understand how the overall benefits are being delivered. Detailed development of this programme wide benefit realisation is recommended to be undertaken once the PBC has been endorsed. This will ensure the benefits of all subsequent project implementation can be consistently tracked.

Management of the benefits realisation and associated data collection is expected to be a key task for APA Project controller.

Figure 77 Benefits Realisation Plan

Benefits	KPIs	How we measure this	Data Source	Baseline	Alignment with Draft GPS 2021 measures			
					Safety	Better Travel Options	Freight connections	Climate Change
A Safer System	Decrease in deaths and serious injuries	Reduction in Deaths and Serious Injuries (DSI)	Waka Kotahi CAS data	2010-2019 data	✓			
		Average annual fatal and serious injury crashes/ 100M vehicle KM	KiwiRAP	95% of local roads with a low-low/medium personal risk rating	✓			
A better transport network	Network condition meets peer group standards	Percentage travel on road network classified as smooth	Waka Kotahi Road Efficiency Group One Network Road Classification (ONRC) performance measures.	NTA to lead data capture for appropriate measures		✓		
		Customer satisfaction with operation of network	1. FNDC annual Resident Opinion Survey. FNDC "Request for Service (RFS) system. 2. Customer satisfaction from REG survey	1.Baseline data includes local roads, parking facilities and local footpaths. FNDC to consider if other questions should be added. 2. To be agreed from REG survey		✓		
		# dwellings affected by roading dust	FNDC Dust Matrix	To be confirmed from NTA collected data. Initial 2020 data suggests 6,483 dwellings affected by roading dust.		✓		✓
	Healthier community	Increase in wellbeing assessed including social connections	Qualitative assessment . Consider using Treasury Living Standards Framework	Qualitative assessment in PBC		✓		
		Perception of safety and ease of walking and cycling	FNDC customer satisfaction surveys	Will need baseline surveys		✓		✓
		Physical health benefits from active modes	Active mode volume counts. Benefit value from Waka Kotahi Health and Active Mode impact report[46]	Baseline survey needs to be undertaken		✓		✓
	Access to key destinations – all modes	% within travel threshold to key social and economic activities by different modes	Using census data and GIS. (15 min, 30 min and 45 min threshold)	Need a baseline accessibility assessment		✓		
	Uses or enhances existing infrastructure, facilities and services	Project uses or enhance existing network.	NTA or FNDC data	Baseline survey needs to be undertaken				
Sustainable transport choices for all	Ease of use and traffic mode share	Percentage of low floor and wheelchair accessible services	Audit of registered mobility service providers. Analysis of total mobility date (once implemented).	Baseline audit needs to be undertaken		✓		
		Number of transport users by mode, expressed as percentages	Measure base mode share from census data. Consider bespoke baseline surveys	2018 census data		✓		

[46] https://www.nzta.govt.nz/assets/planning-and-investment/docs/health-and-active-modes-impacts-march-2020.pdf

	Increase in number of people walking and cycling (People throughput and spatial coverage)	Number of pedestrians and cyclists	Project measurements. FNDC to consider annual surveys of key facilities.	Need base counts at key locations				
		% completion of planned walking and cycle facilities	Project measurements	Existing km of footpath and cycling infrastructure. Confirm planned walking and cycling measure				
Improved resilience of key roads in Far North	Reduced number and duration of unplanned closures (Temporal availability -road)	Number and duration or resolved road closures: urban >=2 hrs, rural >+12hrs	Waka Kotahi TREIS data for State Highways. FNDC to consider how to collect local road closure data for the district.	Annual monitoring of road closure data	✓	✓	✓	
		Reduction in school days lost	Ministry of Education school closure data	School closure data for last 5 years. To be determined		✓		
	Increase in high impact high risk routes with viable alternatives	Percentage of high risk, high impact routes with a viable alternative	FNDC detour route mapping. Consider LOS and type of vehicles permitted in mapping e.g. HPMV or HCV	To be developed			✓	✓
District resource allocation delivers community transport needs	Ability of projects to be funded	Percentage of PBC projects delivered	FNDC	To be confirmed				
		Efficiency of network spend/km	Current rates in Northland Activity Management Plan	Rate from Activity Management Plan (in development)				
	Range of funding sources	$ Projects funded outside NLTF subsidy	Monitoring of PGF, TIF and other funding successes	To be confirmed from current Council spend				

Note the FNDC benefits strongly align with the Draft GPS 2021 Criteria. This assessment shows which of the PBC measures align directly with the proposed GPS 2021 measures. Not all will match due to different data being available.

Appendices

APPENDIX A - PROGRAMME CONTEXT

This chapter outlines the relevant contextual information for the strategic case. A PESTLE analysis framework has been undertaken to assess relevant factors against the following six themes:

- Political factors
- Economic factors
- Social factors
- Technological factors
- Legal factors
- Environmental factors.

This chapter is not intended to describe or analyse the key problems or opportunities but rather provides relevant context to the area where investment is being sought.

Political Factors

THREE YEARLY ELECTION CYCLE

The New Zealand Government is elected in three-year cycles which can create a challenging environment for strategic, long term infrastructure management and investment. As an example, a new Government Policy Statement (GPS) for transport was released in 2018. This has the intent of mode neutrality and focuses on improving safety and access in the forms of resilience, travel choice and access to social and economic opportunities. The GPS determines how investments from the NLTF are prioritised which directs how the funding is distributed to the regions. Therefore, the investment profile is directly related to the current GPS priorities which can result in uncertainty for the Far North in managing the delivery of its long-term transport infrastructure. However, it is noted that most of the District's expenditure will be directed towards maintenance, operations and renewal (MOR) programmes rather than capital improvements. In this regard, the GPS priorities do not impact MOR.

FUNDING

Whilst the NLTF remains a consistent source of funds for the Far North, there will always be new and contestable funds that may help fund and deliver the transport infrastructure required. Currently there are two main additional sources of funds:

- Provincial Growth Fund (PGF) which is a fund to invest in regional economic development
- Tourism Infrastructure Fund (TIF) which is a fund to support regions where tourism has resulted in increased pressure on local infrastructure.

These funds have specific investment eligibility criteria and a discrete lifespan. As such the focus of funds like this are likely to change throughout the next 30 years. Therefore, the ITS needs to be flexible enough to respond to these changing funding priorities and sources.

FAR NORTH RATES

The Far North Long Term Plan 2018-2018 has advocated to optimise the way in which infrastructure is funded. This includes a *"comprehensive review of our own funding mechanism (including rates, fees and charges and development contributions".* For example, currently there is no provision in the Far North to collect development contributions for infrastructure which means the cost of growth is being borne by the District.

Economic Factors

GROSS DOMESTIC PRODUCT (GDP)

Northland has historically been one of the most economically deprived areas in the country, despite its relative proximity to Auckland. Recent economic indicators show an improvement in Northland however there is potential for an even stronger performance in the region. The Tai Tokerau Growth Study[47] describes Northland's economy as small and underperforming relative to other New Zealand regions and its resource base.

The Far North's relatively low population density and geographic remoteness have contributed to its economic underperformance. This has led to social problems, with unemployment and underemployment, crime and relatively higher poverty levels.

Gross Domestic Product (GDP) in the Far North District (as shown in Table 42) was $1,936m in 2018 equating to 6.5% of the national GDP. The Far North economy has seen 7.5% growth in the manufacturing industry between 2017 and 2018, making the largest contribution of 0.57 percentage points to the District's total of 2.4% overall growth.

Table 42: Key Economic Indicators for Far North District – 2018/2019

INDICATOR	FAR NORTH DISTRICT	NEW ZEALAND
Regional GDP ($m)	$1,936	$296,000
GDP per capita ($)	$33,525	$58,271
Total Employment	24,185	2,658,000
Employment Rate	55.5%	67.6%
Unemployment Rate	6.6%	4.2%

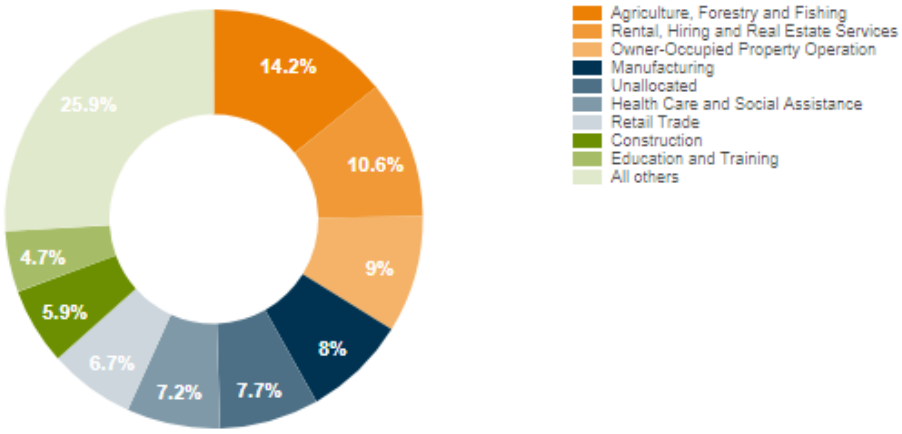
Source: MBIE Regional Data, Statistics NZ

STRUCTURE OF THE ECONOMY

Forestry, agriculture and fisheries are the largest contributors to the District's economy, accounting for 14.1% of the total GDP in the Far North and 13.7% of employment as shown in Figure 78.

[47] https://www.mpi.govt.nz/dmsdocument/5428-tai-tokerau-northland-growth-study-opportunities-report

Figure 78: Far North GDP, 2018

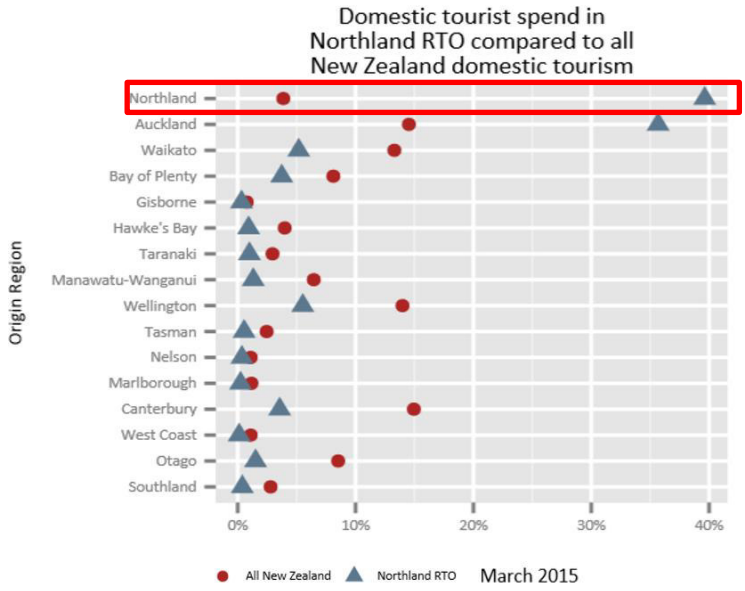


Source: Ecoprofile Infometrics[48]

TOURISM

The 2019 annual estimate of tourism income for the Far North District is $510M[49] which makes the industry a significant part of the District's economy. The total spend shows an increase of approximately 25% between 2015 and 2019, although this has slowed to 1% between 2018-2019. $347M of this can be attributed to the domestic visitor market with the remainder from international visitors. The domestic spend in Far North and indeed Northland, is amongst the highest in New Zealand as shown in Figure 79.

Figure 79: Domestic tourism spend in Northland (2015), MBIE Regional data[50]



The Bay of Islands has a growing cruise ship industry with approximately $21M of cruise ship expenditure by end of June 2019[51]. This is an increase of 30% from 2018 and 150% from 2015.

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[48] https://ecoprofile.infometrics.co.nz/Far%20North%20District/Gdp

[49] MBIE Monthly Regional Tourism Estimate, July 2019, https://www.mbie.govt.nz/immigration-and-tourism/tourism-research-and-data/tourism-data-releases/monthly-regional-tourism-estimates/latest-update/data-download/

[50] https://www.mbie.govt.nz/assets/57fcc0423e/regional-tourism-summary-northland-rto.pdf

[51] https://www.stats.govt.nz/information-releases/cruise-ship-traveller-and-expenditure-statistics-year-ended-june-2019

Discussions with Far North Holdings confirmed it is expected that the cruise industry is forecast to continue to grow.

Overall tourism continues to provide opportunities for economic growth and creation of jobs.

EMPLOYMENT AND INCOME

With respect to employment, Table 42 indicates that at 6.6%, the Far North has a higher rate of unemployment compared with the national rate of 4.2%. It is however noted that employment grew in the Far North by 4.4% (between March 2018 and March 2019), which is significantly higher than the national growth in employment rate of 0.1%. In the previous year, employment in the Far North grew by 3.3%, while it grew by 3% nationally.

Between 2017 and 2018, the following industries recorded the highest growth in employment numbers[52]:

- Forestry and Logging – annual growth of 23%
- Polymer Product and Rubber Product Manufacturing – annual growth of 22.7%
- Machinery and Other Equipment Manufacturing – annual growth of 20.2%

It is noted that steady growth of the forestry and logging industry is expected given the upcoming harvesting seasons. The National Exotic Forest Description 2016[53] indicates that approximately 10,000-15,000 ha of forest will be due for harvesting every 5-year period for the next 15 years. As such, employment in this industry will continue to increase.

Despite the high levels of unemployment, the Tai Tokerau NEAP states that skills shortages are consistently highlighted by employers. Accordingly, in 2018, the Far North had 28.6% of those employed working in highly skilled occupations, which is comparatively lower than the national figure of 33.3%.

The combination of high unemployment and under skilled workers results in a lost economic opportunity for Northland.

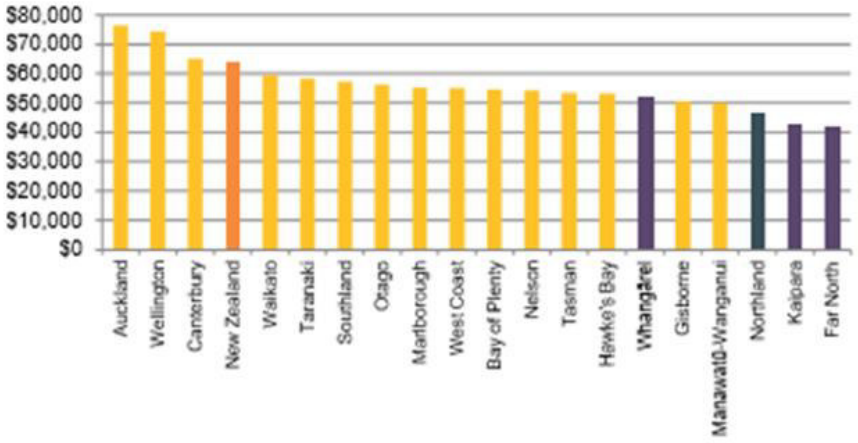
Northland's personal and household income is well below the national average. Of all Northland's districts, the Far North recorded the lowest annual median household income of just over $40K (as shown in Figure 80). This is well below the national average of $63,800 and is the lowest of all New Zealand districts.

Figure 81shows Northland's median personal incomes. As can be seen, the median personal income in the Far North is typically less than $20,000, with a small area around Kerikeri and Paihia and having incomes between $20,000-$30,000 per annum.

[52] https://ecoprofile.infometrics.co.nz/Far%20North%20District/Employment/GrowthIndustriesBroad

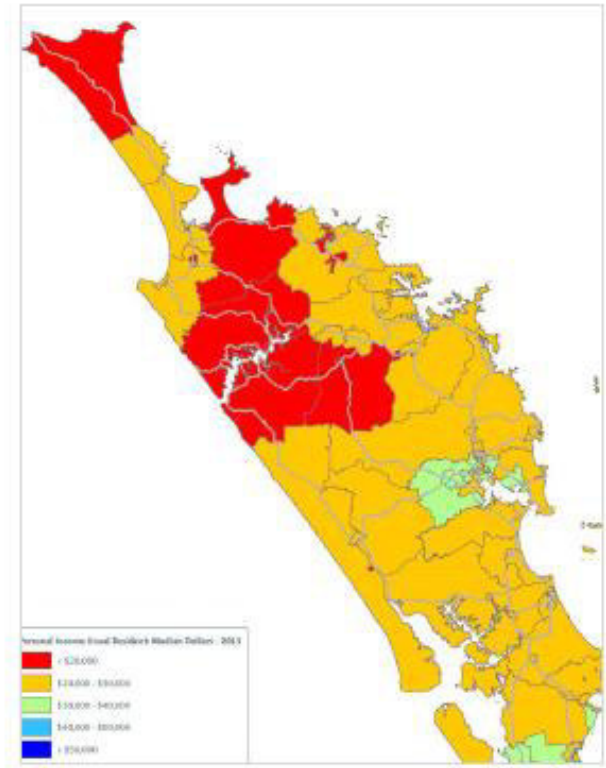
[53] https://www.nzfoa.org.nz/images/stories/pdfs/2016-NEFD-report_web.pdf

Figure 80: Annual median household income (2013)



Source: Figure 5, Tai Tokerau Regional Growth Study – Martin Jenkins

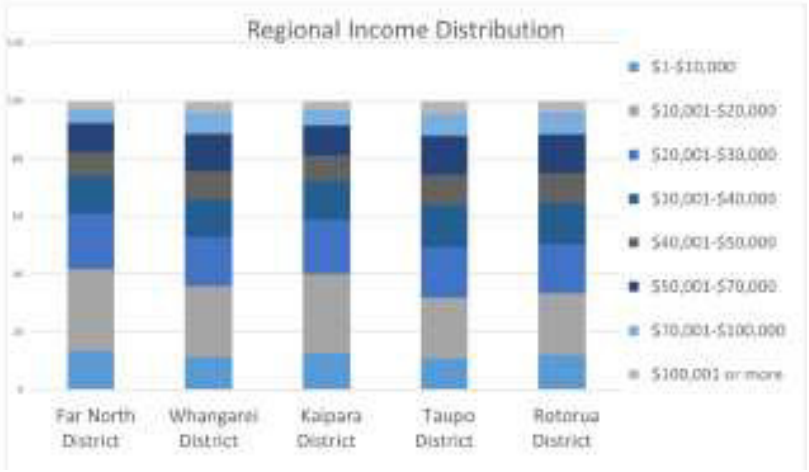
Figure 81: Median personal income ($)



Source data: Statistics NA, LINZ, Boffa Miskell, Whangarei District Council

Figure 82shows that the Far North District has a much greater proportion of the population earning less than $20,000 per year than Taupo and Rotorua Districts. Those Districts have been used for comparison as they are of similar scale to Far North and are similar distance from Auckland and are popular visitor destinations.

Figure 82: Regional income distribution (2013)



Source: NZ Census, 2013

Social Factors

People and Communities

The Far North District is experiencing population growth. As of June 2018, the estimated resident population was 64,000 representing a population density of around 9 people / km[54]. This is a population growth of 1.9% from 2017 and indicates an average growth of 1.2% over the past five years.[55] The majority of population increase has been focused in urban areas located throughout the District, with 85% of growth occurring in and around Kerikeri. Along with Kerikeri, larger urban areas such as Paihia, Kaitaia and Kaikohe cater for around half of the population within the Far North. Most growth will be focused in and around Kerikeri, followed by Mangonui, Coopers Beach and Cable Bay areas, offsetting the ongoing population decline to the north end and west of the District. The following figure shows the projected population change between 2013 and 2043 for different areas in the Far North District.

According to the Census 2013, the District's population comprised the following predominant ethnic groups[56]:

- European 66%
- Maori 45%
- Pacific peoples 3.8%
- Asian 2.2%

The District has a high Maori population of over 40% compared with 15% nationally.[57] Its Māori population ranks 5th in size out of the 67 districts in New Zealand[58] and it is forecast that Maori will become the majority ethnic group in the Far North by 2033[59]. The Far North District has a high dependency ratio (proportion of people aged under 15 and over 65 years to the working age

[54] Statistics New Zealand, Subnational Population Estimates: At 30 June 2018 (Provisional)

[55] Infometrics, Far North District: Annual Economic Profile, 2018

[56] Note that this data doesn't add to 100% as some people identified with multiple ethnicities

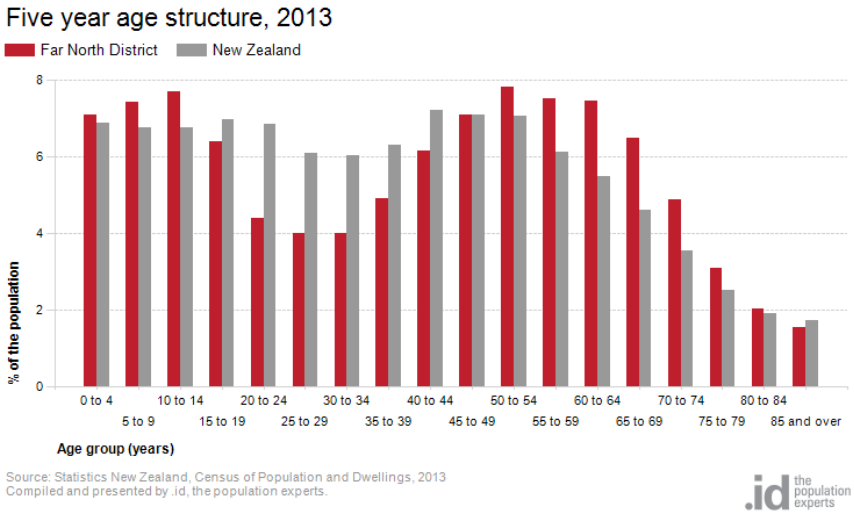
[57] Far North Council Community Profile, https://profile.idnz.co.nz/far-north/population?EndYear=2006&BMID=30

[58] http://archive.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx?request_value=13069&parent_id=13068&tabname=#13069

[59] Statistics New Zealand subnational population estimates, 2017 Release and Far North Long Term Plan 2018-28

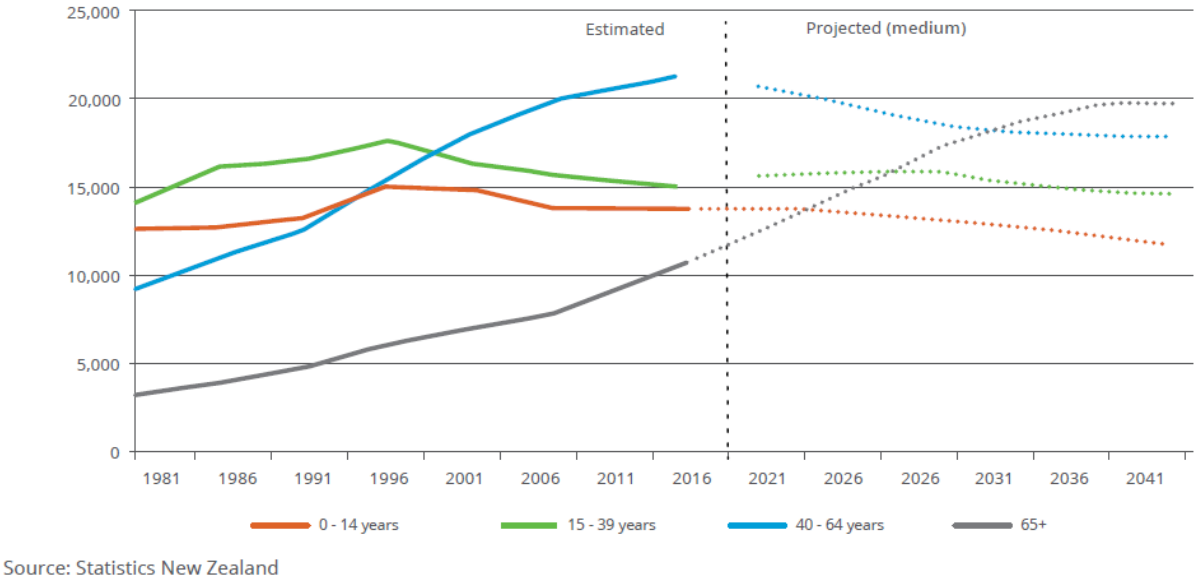
population) of any New Zealand region indicating a low proportion of working age people as shown in Figure 83. An increase in employment potential is a significant opportunity for this District.

Figure 83: Population age range



Source: .id the population experts

Looking to the future, this trend is anticipated to be further emphasised, with the proportion of residents aged 65 years or older forecasted to have the highest population growth. This information is shown in Figure 84Figure 84: Forecast population by age group in the Far North.



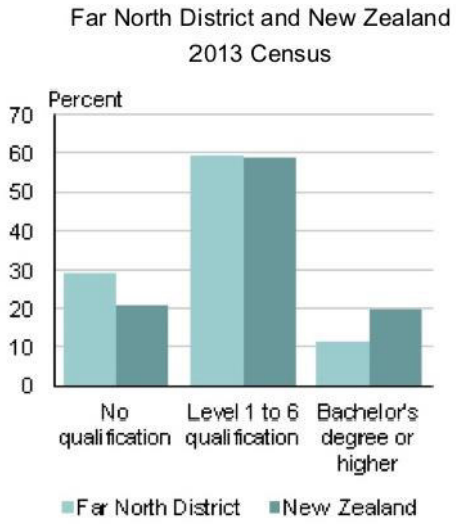
Source: FNDC Long Term Plan, Infrastructure Strategy 2018-48

Education

At the time of the 2013 Census, 29.3% of Far North's population aged 15 years and over had no formal educational qualification, compared to 20.9% nationally. Figure 85 shows the qualification proportions in the Far North compared to the national average (in 2013).

A lack of education can limit the job opportunities available to a candidate and with an already sub-scale labour market, this can result in the need for people to migrate to bigger employment centres.

Figure 85: Highest qualification for people aged 15 and over



Source: 2013 Census data

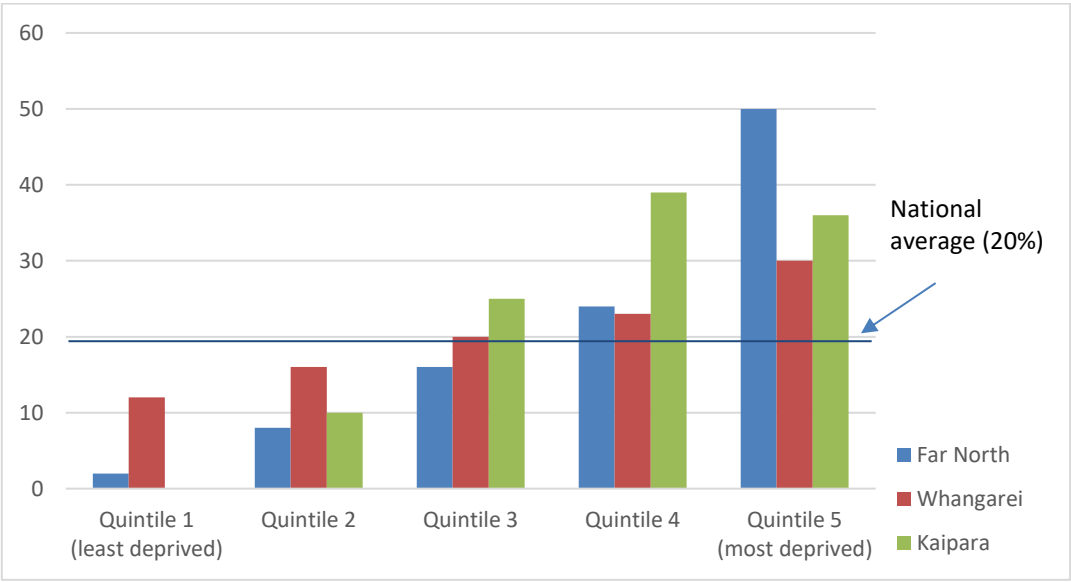
Deprivation Levels

The Environmental Health Indicators index shows that Far North has one of the most socio-economically deprived populations in the country.

While 20% of New Zealand's population is in the lowest quartile of the deprivation index, the equivalent measures the Far North is 50%. Within the Far North, Kaikohe, Rawene and Omapere-Opononi recorded the highest socio-deprivation index in 2013.

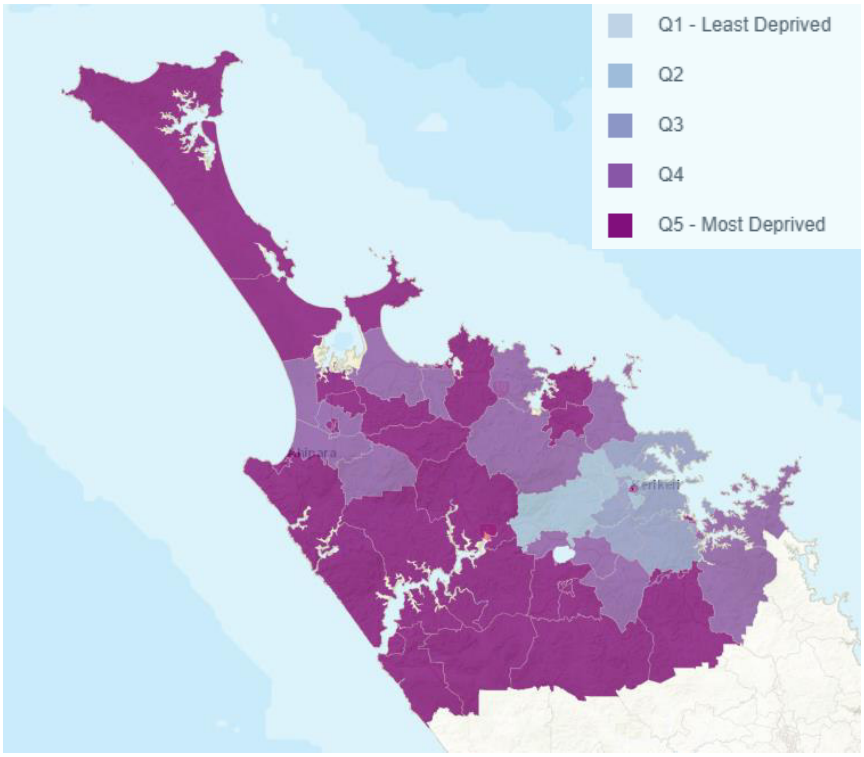
Figure 86 and Figure 87 show this information.

Figure 86: Northland Population per deprivation quintile, 2013



Source data: Environmental Health Indicators

Figure 87: New Zealand Index of Multiple Deprivation (IMD) – Far North District



Source data: The University of Auckland[60]

Technological Factors

TRANSPORT INFRASTRUCTURE

ECONOMIC IMPORTANCE

Due to its geographic position and widespread communities, the Far North's transport connections are critical for its economic development. Efficient access and connectivity between urban and rural communities and to key business markets will help underpin future growth.

The Northland RLTP (2018-21) has identified the importance of transport connectivity as a key enabler of economic growth in Northland along with route resilience and security.

MULTI-MODAL NETWORK

The Far North is supported by local bus services operating within communities including Kerikeri, Kaitaia and Mangonui. However due to the widespread nature of communities, local bus services are limited to connections between and within more urbanised communities. The current inter-city bus services operating in Far North are shown in Figure 88. These services connect Auckland to Paihia, Kerikeri, Kaikohe and Kaitaia. In addition, there are a number of tourist buses and other privately-operated services throughout Far North.

Connectivity is a critical aspect for small communities and consideration should be given to the likely benefit any improvements in the range or frequencies of buses will provide, particularly with respect to those with mobility impairments and those that are less able.

[60] http://www.imd.ac.nz/NZIMD_Single_animation_w_logos/atlas.html

Cycling is an emerging activity in Northland and has the potential to generate economic and health benefits among visitors and local residents. Figure 89 shows that there are four cycle trails already existing with six new cycle trails proposed. In addition, cycling is an alternative form of transportation for commuters and has potential growth opportunities within key communities such as Kerikeri, with cycle facilities being established on main connection routes.

Ferry services within the Far North currently link Paihia and Russell, Opua and Okiato and Rawene and Kohukohu (which serves as a critical connection for the Twin Coast Discovery Route). These are also shown in Figure 88.

Air travel is an important way for people to access the Far North. The District is served by the Bay of Islands Airport, at Kerikeri, and an airport in Kaitaia. Both airports provide domestic flight services to and from Auckland. As a result of increasing demand, the Bay of Islands airport has recently undergone an expansion programme and a new terminal was opened in 2019.

There is currently no active rail service operating in the Far North, however there are existing tracks between Whangarei to Moerewa.

Figure 88: Multi-modal transport system

Figure 89: Walking and cycling trails

Road Network

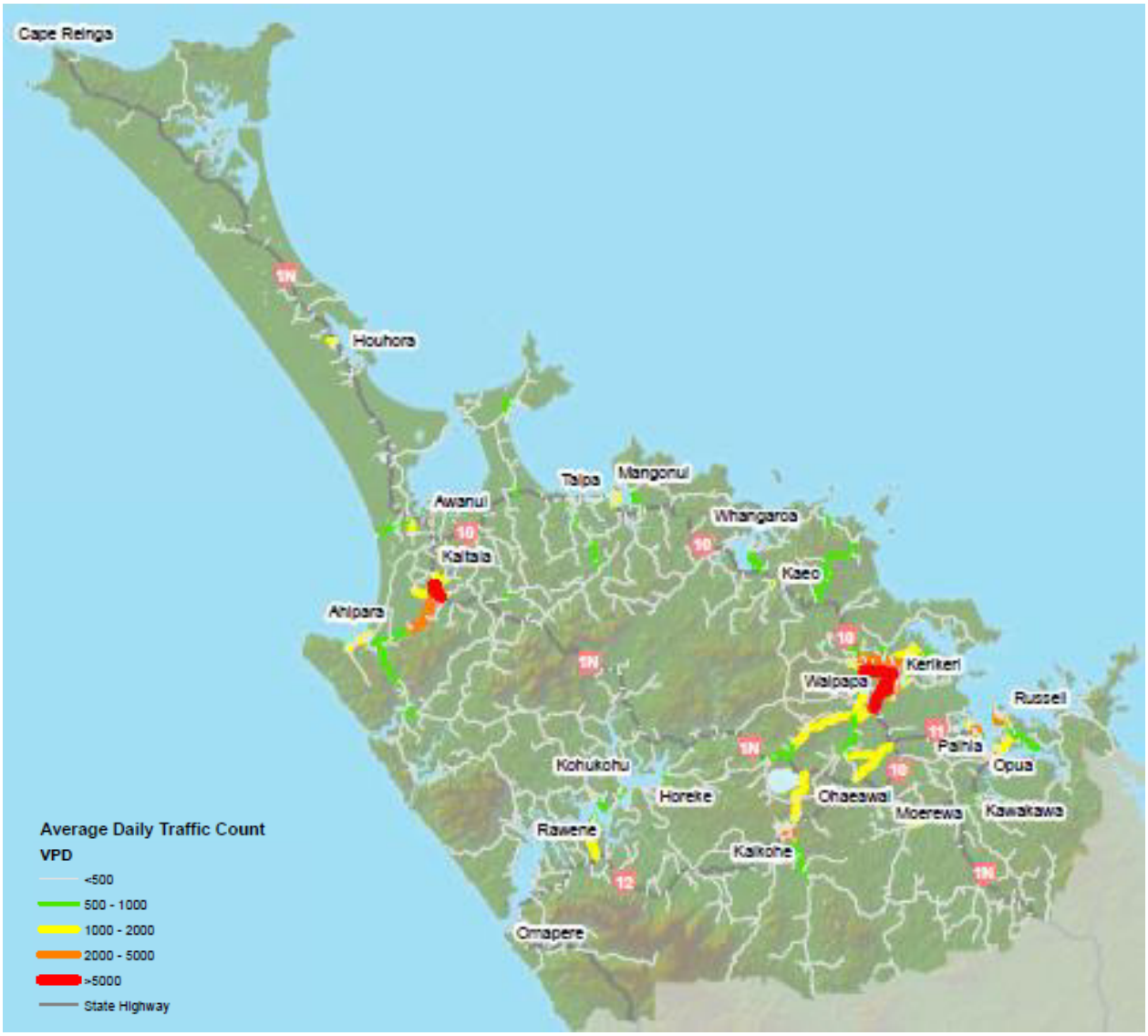
The Far North encompasses a large road network which serves as the main transportation method for industry, tourists and people residing in dispersed communities located around the region. This is due to the geographic and topographic nature of Far North, which limits the development of other alternative transport methods. It is noted that most of the road network is unsealed and is part of an ongoing programme and review by FNDC.

The One Network Road Classification (ONRC) identifies the level of service, function and use of road networks, including State Highways. Figure 90shows the road classifications across the District.

Figure 90: One Network Road Classification (ONRC)

Figure 91 shows 2019 traffic volumes on Far North District roads. Key urban areas such as Kerikeri and Kaitaia carry the highest volumes.

Figure 91: Average daily traffic count



Legal Factors

Laws affect the way businesses operate and our communities behave. Depending on changes in laws these could affect the viability of certain markets or economic outcomes. It is worth noting that the visitor and agricultural/horticultural industries depend heavily on seasonal workers and this could be affected with changes in employment law.

A number of Treaty of Waitangi claims have been settled in the Far North and the Ngāpuhi settlement process has been invigorated. Current financial and commercial redress amount to just over $103M[61].

[61] Far North Long Term Plan 2018-2048, Infrastructure Strategy

Environmental Factors

CLIMATE CHANGE

There is a greater awareness about the changes we are all experiencing from climate change. The Far North is yet to declare a climate change emergency, however there are clear signs that the weather events are becoming more severe and frequent. The Far North Long Term Plan references that "*Hazards from the impacts of climate change such as flooding, sea level rise and storm surge, drought, landslides and erosion are affecting the performance of our infrastructure".* The cost of managing these disturbances to the network are felt both socially and economically as lifelines cannot be kept open. An example of this in the Far North is the Lemons Hill slip on SH11 which resulted in months of road closures and disruption for locals and visitors to the Bay of Islands.

In addition, the cost of reactive maintenance is much higher than preventative maintenance as referenced in the Far North Activity Management Plan. This results in money being diverted for more costly immediate repairs rather than being used to proactively improve the transport network.

CARBON EMISSIONS

Managing Carbon emissions are a continuing consideration of our successive Governments. The Ministry for the Environment[62] currently has three greenhouse gas reductions targets:

- A 2020 target to reduce emissions to 5% below 1990 levels.
- A 2030 target to reduce emissions to 30% below 2005 levels.
- A 2050 target to reduce emissions to 50% below 1990 levels.

The focus on reducing emissions has potential ramifications for the dairy and farming industries in the Far North and may result in changing land uses in the District. It also will require people to change the way we travel by moving to more emission friendly types of transport such as electric vehicles, achieving higher vehicle occupancies for private vehicles, more patronage on public transport and an increase in walking and cycling.

Summary of PESTLE

The Far North has a rich cultural history with significant economic advantages from the tourism and primary industry sectors. It is however underperforming economically and experiences significant deprivation amongst its communities. The District is exposed to environmental factors such as climate change and carbon emissions. Long term infrastructure investment is a challenge due to funding constraints and political cycles. The transport network is the lifeline for the region and is currently dominated by private vehicle use. The State Highway network is an important part of the Far North District's road network serving most of the road traffic. It is noted that the PBC will focus on the Far North controlled roads that provide access to the State Highway network and support road users within local townships.

[62] https://www.mfe.govt.nz/climate-change/climate-change-and-government/emissions-reduction-targets/about-our-emissions

APPENDIX B – STAKEHOLDER WORKSHOP COLLABORATION

FNDC Integrated Transport Strategy

Problem Definition Workshop – 29th July 2016 (9am-12pm)

Attendees:

Attendee	**Organisation**
Neil Geerkens	Northland Forest Managers
Riki Green	Summit Forests
Bob Shirley	Summit Forests
Roger Ackers	FNDC
Ann Court	FNDC RLTC
Mariella Trynes	MBIE / INZ
John Blackwell	Fed Farmers
Normie Raine	Fonterra
Anaru Rieper	Te Aupouri
Jude Thompson	Northland Inc – Northland Action Plan
Makerena Dalton	FNDC
Logan Negus	PFO
Trevor Green	FNDC
Holli Rudolph	FNREAP
Wiremu Britton-Rua	FNREAP
George Riley	Te Rarawar
Wayne Ewers	NZ police
Alicia Taylor	NZTA
John Gardiner	NZ Walking Access Commission
Franz Wagner	FNDC
Martin Taylor	NZTA
Melissa Nathan-Patuawa	NDHB
David Senior	Disability Action Group FNDC

Apologies:

Invitee	**Organisation**	**Provided input prior to workshop?**
Shaun Clarke	FNDC	N
Andy Finch	FNDC	N
Glenn Rainham	FNDC	N
Jon Pheloung	FNDC	N
Helen White	Ministry of Transport	N
Kim Brown	Ministry of Primary Industries	N
Sue Reed-Thomas	Department of Conservation	**Y**
Chris Powell	Northland Regional Council	N
Jeff Devine	Northland Transportation Alliance	N
Prue Younger	Forest Industry Contractors Association	N
Paula Rogers	National Road Carriers Association	**Y**
Peter Ramsey	KiwiRail	N
Irwin Wilson	Far North Holdings LTD	**Y**
Jonathan Kennett	The New Zealand Cycle Trail	**Y**
Mark Weatherall	Te Araroa Trust Inc	N

Ian Crayton-Brown	Northland Road Safety Team	N
Leigh Knightbridge	St John Ambulance Service	N
Blair	Far North Youth Council	**Y**
Sian Smith	FN2100 Team	N
Mereraina Piripi	Te Hiku Development Trust	N

It is noted that the Far North District Council sent a joint FN2100 / DTS invitation to all Iwi to attend prior meetings or attend the problem definition workshop.

Meeting minutes:

The Far North District Council is currently undergoing the preparation of an Integrated Transport Strategy and as part of this process, a problem definition workshop with key stakeholders was carried out on Monday 29th of July.

A power point presentation was prepared by Commute and presented to the stakeholders. The presentation outlined the purpose of the ITS and the workshop, background information and illustrated key maps representing all aspects of the Far North transport system. Please refer to **Attachment A** for these presentation slides.

The workshops primary focus was to understand the problems faced by all users of the transport network through the perspectives of key stakeholders. As part of this process, Commute facilitated two group activities with the key stakeholders to gain a thorough understanding of the key transport problems in the Far North.

Activity 1 prompted stakeholders to break into groups for discussion and record their thoughts on high-level transport problems in the Far North.

The key transport problems identified during Activity 1 are summarised below:

1. **Road conditions** – dust, poor geometry, narrow, lack of shoulders or pull over areas, lack of investment and associated investment planning (proactive vs reactive), poorly maintained roads
2. **Resilience** – lifelines, detour routes (quality, quantity), flooding, slips, sea level rise, black spot telecommunications
3. **Growth** – visitor pressures, high growth areas, aging demographic
4. **Transport choice** – accessible travel, ferries, cycling, footpaths, school buses, airport, limited taxi and bus services
5. **Safety** – driver behaviour, driver attitude, speed environments, alcohol, lack of license/licensing facilities, managing conflict between heavy vehicles and local users

Please see **Attachment B** for details on the identified transport problems above.

Activity 2 aimed to identify more specific information about the transport problem themes (identified in Activity 1).

The following summarises the details that were discussed between the stakeholders on the five transport themes.

Road Conditions	**Specific Locations:**
	- Dust: Motatatou Rd, Ngapipito Rd, Ruapekapeka Rd (detour route) - Overall poor road conditions: Runaruna Rd, Pawarenga Rd, Waikare Rd, Te Hapua Rd, Broadwood Awaroa Rd (expected increase in HCV volume), Hayter Rd
	Specific details:
	- Conflict between HCV (logging trucks) and LV arises from narrow road (too narrow to pass), high speed environment and narrow bends / corners, which causes a dangerous driving environment - Needs coordinated response to investment, currently are reactionary responses rather than planned - No schedule for road maintenance by council / maintenance is poorly done - Lack of signage for HCV on roads / education - Resealing causing roads to be higher than footpath (uncomfortable for mobility impaired) - Dust impacting resident health - Lack of investment / planning on roads due to small rate payer base which funds road maintenance - Water table maintenance (drainage) effects road condition - Material used on roads not fit for purpose – not consistent / controlled throughout the district - Existing metal roads → extreme corrugation and maintenance issues - Forestry companies not notifying development (poor planning) → surrounding roads may not be fit for HCV
	Evidence:
	- Dust: Northland Regional Council have conducted dust monitoring and have result available online - Roading matrix (ranked / weighted roads) → Interim findings pending validation process
Resilience	**Specific locations:**
	Ruapekapeka Pa, Hokianga ferry vulnerable, North Hokianga geology unstable, Matawaia, Maromaku, Motatau-Opahi, Rungarunga Rd, Pangoru, West Coast Rd, Waikare Rd, Taheke-Hareke, Iwitawa Otangaroa Rd diversion unsuitable, Te Iringa Rd-Dargaville
	Specific details:
	- Civil defence and NRC flood /sea level rise plan overlays and more planning (realistic expectations) - Mobile phone black spots all through Okahau, top of Mangamuka and Kaeo area, 90 mile beach-Hokianga - Wild pines / screening trees on or near road - Limited inappropriate access through forestry roads for diversions

	Evidence:
Growth	**Specific locations:**

	- Access routes into Kerikeri (peak periods)
	- North Hokianga – harvest pressure
	- Issue with Te Araroa trail → increasing traffic volumes / reduced safety
	- Growth:
	  - Opua
	  - Kerikeri area – funding issues, retirement, pressure on housing
	  - Waipapa
	  - Kaitaia
	  - Kawakawa

	Specific details:
	- Forests growing for 25 yrs and now ready for harvest → no upgrade or investment during that 25 years - Growing horticulture (avocado, kiwifruit) - Freedom → responsible camping - Cruise ships – 60 per annum - Greater use of unformed legal roads for recreation purpose - How do we capture peak effects – don't want to overprovide facility - Seasonal changes depending on tourist visits - Not so reliant on NZTA – capturing other sources of funding - How to utilise growth of areas to influence and get a service running (ie. bus services) - How to integrate Kiwirail with strategy
	Evidence:
Transport Choice	**Specific locations:**
	- Hokianga – lack of access for vehicles - Motatau / Matawaia - Te Araroa – pinch points - Kaitaia / Awaroa Rd – cycle trail comes through → not suitable
	Specific details:

	- Equity issue – Rawene ferry
	- Opua ferry price
	- No taxi / PT services in Kaitaia
	- Aging demographic
	  - Buses to Auckland are not accessible with a wheelchair
	  - Planes not accessible
	  - Shuttle services to Kerikeri is $75
	- Footpaths not wide enough for mobility scooters

	- Lack of cycle to school facilities (connections between existing cycle facilities and main destinations) - Cycle route within townships - Other modes include e-bikes and e-scooters - Ride sharing opportunity - School buses not safe to stop - Rail needs connection to port → opportunity but needs to be economic
	Evidence:
Safety	**Specific locations:**
	- 90 mile beach
	Specific details:
	- Alcohol / drugs / seatbelts / underreporting / driver ability varies - Hokianga licensing problem - Foreign visitor unsafe driving - Bad driving habits / attitude - Truck driver fatigue - Rural areas- lack of police pressure - High speed environments - Logging – conflict with HCVs, dust / debris / water - Further north – no passing lanes / slow traffic shoulders - Lack of enforcement on basic road rules - Parking unsafely / disrespect - HCV signage - Narrow road – insufficient for trucks to pass - Time enforcement
	Evidence:
	- Trucks carry GPS – keep evidence of speed + incab videos

Please refer to **Attachment C** for detailed notes on the discussion summarised in the table above.

Workshop 2: Investment Logic Mapping Workshop (ITS)

The workshop attendees were as follows:

- Keith Kent (FNDC)
- Alicia Taylor (NZTA)
- Ann Court (FNDC)
- Trevor Green (FNDC)
- Roger Ackers (FNDC)
- Makarena Dalton (FNDC)

Workshop 3: Benefit Mapping Processes Workshop (ITS)

The workshop attendees were as follows:

- Keith Kent (FNDC)
- Wayne Wallace (NZTA)
- Ann Court (FNDC)
- Trevor Green (FNDC)
- Roger Ackers (FNDC)
- Chris Powell (NRC)

FNDC Integrated Transport Plan

Longlisting Workshop

Date: 12th November 2019
Time: 10:00am – 2:00pm
Location: Kaikohe Council Chambers

Attendee	Organisation
Donald Chandler	Our Kerikeri
Lasse Pedersen	Our Kerikeri
Blair Houlihan	Northern Edge = TIF Fund
Manuwai Wells	BOI Whangaroa Community Board
Melissa Nathan-Patuawa	Northland District Health Board
Janet Planet	Russell Business Association
Chris Powell	Northland Regional Council
Martin Taylor	NZTA
Ann Court	FNDC
Darrell Sargent	FNDC
Rod Brown	Vision Kerikeri
Rolf Mueller-Glodde	Carbon Neutral NZ Trust
Arwen Page	Bike Northland
Adele Gardner	Te Hiku Community Board
Dave Wilson	Fed Farmers
Andy Finch	FNDC
Glenn Rainham	FNDC
Jane Johnston	Paihia Residents and Ratepayers Association and Kerikeri Ratepayers Association
Jaco Cronje	FNDC
Martin Taylor	NZTA
Franz Wagner	FNDC / NTA
Mark Seakins	NTA
Ravi Trivedi	NTA (graduate)
John Blackwell	Fed Farmers
Nick Marshall	NTA
Sandi Morris	NTA
Greg Wilson	FNDC
Shaun Clarke	FNDC
Malcom Francis	Kawakawa Business and Community Association
Jonny Wilkinson	Tiaho Trust
Alec Cox	Kerikeri Ratepayers Association
Roger Ackers	FNDC
Alicia Taylor	NZTA
John Gardiner	Walking Access Commission (WAC)

Invitee (apologies)	Organisation
Makarena Dalton	FNDC
Sian Smith	FNDC
Jeffrey Devine	NTA
Trevor Green	FNDC
Mike Edmonds	Kaikohe Hokianga Community Board
Dave King	Hokianga Ferry Liaison Group
Jo Lumkong	Vision Kerikeri
Grant Harnish	Focus Paihia Community Trust
Diana Ellis	Opononi and Omapere Ratepayers and Residents Association
Cliff Colqhoun	CBEC
Lise Strathdee	Hokianga Tourism Association
Craig Johnston	Business Paihia Association
Peter Boyd	Opua Business Association
Shirley Williams	Kaitaia Business Association
Mike Kanji	Kaikohe Business Association
Jason Vokes	Kerikeri District Business Association
Sarah Curtis	Waipapa Business Association
Eddie Aickin	Doubtless Bay Promotions Inc
Wayne Wallace	NZTA
Sue Reed-Thomas	Department of Conservation
Al Symonds	NZ Police
Irwin Wilson	Far North Holdings Ltd
Clare Davies-Colley	Bike Northland
Jude Thompson	Northland Inc
Ian Crayton-Brown	Northland Road Safety Team
Holliday Rudolph	Far North REAP
Angelene Waiohi	Far North REAP
David Senior	Disability Action Group
Blair Kapa	Far North Youth Council
Ian Broadhurst	Horticulture (avocados)
Adrienne Tari	Twin Coat Cycleway Trust
Manga Nathan-Patuawa	Kiwirail
Alistair Nicholson	NZ Avocado Growers Association
Lorraine Toki	Te Rūnanga A Iwi O Ngāpuhi
Pita Tupene	Te Rūnanga o Ngāti Hine
George Riley	Te Rūnanga o Te Rarawa
Tajim Mohammad-Kapa	Te Rūnanga o Ngāti Rehia
Anaru Rieper	Te Rūnanga Nui o Te Aupouri Trust
Mereraina Piripi	Te Hiku Development Trust
Carol Berghan	Te Hiku Development Trust

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

commute TRANSPORTATION CONSULTANTS

Meeting minutes

The Far North District Council is currently undergoing the preparation of an Integrated Transport Strategy (ITS) and Integrated Transport Plan (ITP) and as part of this process, a longlisting workshop with key stakeholders was carried out on Tuesday 12th November 2019.

A power point presentation was prepared by Commute and presented to the stakeholders. The presentation outlined the purpose of the ITP and the workshop, key problems, strategic responses and action plan areas identified in the draft ITS and the prioritisation process going forward. The presentation slides were sent to all invitees via email on Tuesday 12th November 2019.

The workshops primary focus was to draw up a longlist of transport project options addressing the key strategic responses under the 7 Action Plan areas identified in the draft ITS and to explain the process going forward. As part of this process, Commute and FNDC facilitated two group activities with the key stakeholders to gather ideas on possible transport solutions, which then stakeholders were given an opportunity to individually prioritise the transport solutions gathered.

The following summarises the possible transport solutions that were discussed and prioritised between stakeholders under each of the 7 Action Plan areas (Activity 1 and Activity 2).

	Transport solutions prioritised by stakeholders:

Safety	• Speed limits are too high for the quality of the road (compared to OECD), therefore either upgrade roads or reduce limits (speed limit reviews). Examples:
	  ○ Wainui Road → Ratcliffe Bay incl Gamefish Club & boat ramp (Whangaroa)
	  ○ Opito Bay → Rangitare
	  ○ Okiato → Russell
	  ○ Te Wahapu Road, Russell
	  ○ Flagstuff and Tapeka Road
	  ○ Otina Road, Moerewa
	  ○ Bridges to widen due to driver behaviour (drive over centreline)
	• Unsealed roads strategy addressing fit for purpose widths and drainage
	• Pedestrianisation in urban areas → high quality footpaths / crossings
	• Schools:
	  ○ Provision of safe footpath and cycle network
	  ○ Pedestrian crossings
	• Provide consistent and fit for purpose shoulder widths and lane markings
	• Sufficient width on footpath to include cycle lanes
	• Engineering standards:
	  ○ Footpaths
	  ○ Pedestrian planning design guide
	  ○ Crossings
	  ○ Future modes
	  ○ Future focus on urban from with high quality W & C infrastructure
	• Land use development → not urban sprawl
	• Barriers:
	  ○ Removal of barriers to uptake active modes
	  ○ Compliance checks / improve quality
	• Driver licensing
	  ○ Easy access to training / testing facilities

Safety	• Improve standard of teaching • Reconsider costs • Provision of safe passing lanes / opportunities (warning signs) • Investigate alternative travel mode options to address drink driving issue • Cycle / shoulder for route treatments
	Possible transport solutions:
	• Standard for new / existing roads for new developments • School patrol crossings • Lobby government for subsidy • Safety wire rope barriers • Driver education and enforcement • Educate urban drivers on gravel roads • School children education (REAP) • Cycle skills / bike to school • SCRIM • Consistent road signage • Especially at bends • Share the road signs • Separation between active modes and vehicles • Improving sight lines/ visibility ie. Heritage Bypass • Increase frequency of cycle surface maintenance • Adequate road surface conditions / corridor treatments • Forgiving road network • Provision for foreign drivers on key routes: • Arrows • Signage (ie. at intersections) • National training • Roundabouts in place of T-intersections • Wandering stock – safety issue
Travel Demand Management	**Transport solutions prioritised by stakeholders:**
	• Parking bylaw review (esp Russell) and Parking management plan • Peripheral parking + info boards – 'distance + time' → active mode linkages, scooters for hire • Mobility scooter facilities – ramps etc • Education initiative / marketing • Greater use of unformed roads • Urban planned W & C environments • Plan connectivity
	Possible transport solutions:
	• Vehicle regulation timing → HCV's outside school times • Parking and facilities at tourist destinations (Shipwreck Bay, Ahipara foreshore, Kaka Street) • TDM problem areas → schools, Kerikeri, Kaitaia • Loop routes → for tourists and domestic, recreational, promotional opportunities • Town bypass for long haul as a fast route and HCV dedicated • ONRC review for changing zone / environment • Data collection shared with communities (traffic/ped counters) • Barrier Removal Programme (AT) – Human Rights Commission Councils

	• Relocation of community facilities
Active (walking and cycling)	**Transport solutions prioritised by stakeholders:**
	• Walking and cycling hubs in townships • Motor vehicle separation from active modes • Town entrance adjustments → slow speeds • Pedestrianise Kerikeri Road • Footpath policy – add shared use within distance of CBD + width / widen • Walking buses for schools and alternative drop off zone • Prioritise Road Cycle Network • Destination facilities → Bike parks • Accessibility – distance to parking
	Possible transport solutions:
	• Off Road Cycle Network • Wayfinding Signage (TDC Role Only) for active modes • Bridleways – horse trekking – tourism + transport
Public Transport / Ride Share	**Transport solutions prioritised by stakeholders:**

	• Safe cycle routes for everyone (e.g. school children)
	• Direct cycle paths not necessarily following road network
	
	• Absorbing school transport system into overall PT system in Kerikeri
	• School destination facilities for cyclists
	
	• Park'n'ride facilities near PT services
	• Improving existing bus stop facilities (shelters, signs, timetables and lighting) and locations
	• Wheelchair accessible PT / shuttles
	• PT /ride share provision for medical / retail access for elderly
	
	• Linking bus service with Intercity routes (ie. timetable and location of stops)
	• PT / Rideshare connection between Kerikeri and Waipapa
	• Mobility accessible bus route: Paihia → Waipapa → Kerikeri → Kawakawa
	
	• Subsidises for rideshare apps (for communities)
	• Community based operations (ie. ride share)
	  ○ Borrow /leasing vans
	  ○ Utilising existing school bus operations
	• Promotion of UBER for drink drivers
	
	• Reducing the need for travel via private vehicles
	• Subsidise services transporting both people and freight/posts
	• Provision of taxi pick up / drop off areas in Paihia and Kerikeri
	
	• Co-sharing funding on PT services with other governments
	• Improving access to driver licensing facilities /assisting vehicle warranting (REAP funding in Kerikeri)
	
	• Total Mobility Scheme

<table>
<tr><td rowspan="3">Public Transport / Ride Share</td><td>

Community raised solutions to accessible transport
Subsidise shuttle services
Provide routes in the Far North

Partnerships with DHB and other organisations (schools, communities)

Ride share systems to medical facilities and Maraes

Provision of facilities

Sufficient bike parks, electric vehicle / bike charging stations

</td></tr>
<tr><td>Possible transport solutions:</td></tr>
<tr><td>

Proper / frequent PT services in Kerikeri (consider electric vehicles)
Distribution centres
PT services near schools (ie. Kerikeri primary and high school)
Key routes in need of PT / ride share services:

Kaeo → Whangaroa
Kaikohe → Moerewa
Between Hokianga, Kaitaia, Kerikeri, Kaikohe, Kawakawa, Piahia

PT / ride share planning to address changing land use
Consider aesthetics when determining PT routes
Autonomous PT services / pick up services
Support infrastructure for PT / ride share services
PT mobile apps / online portal for locals and visitors

timetables / arrival times
easy payment /easy access to PT / ferries cycle routes
online incentives

Developing a night-time economy to bring people rather than cars and increase demand for PT
Electric scooters (provision of safe infrastructure)
Tourism / industries to have own subsidised worker shuttles
Trialling once a week type services on key routes
Intracommunity carpooling services
Formalise informal ride share facility at Puketona Junction
Regular interim bus stops between CBD’s
Council marketing
Regional bus card (senior citizen bus card)
Dedicated stop shelters for hitch hikers
Parking management plans to reduce attractiveness of driving individually with private vehicles

</td></tr>
<tr><td rowspan="3">Harbour</td><td>Transport solutions prioritised by stakeholders:</td></tr>
<tr><td>

Forestry on seas → Doubtless Bay to Marsden Point
Security / CCTV at parking lots near wharfs

</td></tr>
<tr><td>Possible transport solutions:</td></tr>
<tr><td>

Increase subsidy for locals using Ferries (ie. Hokianga)
Opononi / Opua / Whangarora boat ramps congested → increase size of boat ramps to accommodate tourists during peak seasons
Provide pedestrian / cyclist Hokianga ferry service (Horeke → Kohukohu → Rawene → Omapere)

</td></tr>
</table>

Road Network	**Transport solutions prioritised by stakeholders:**
	• Encourage more walking around / inside townships (pedestrianalise)
	• Safe ped crossings at Waipapa
	• Tree planting / street trees
	
	• Roundabout cyclist safety
	• Paihia + Kerikeri complete cycle route (long term vision)
	
	• Matthews Avenue roundabout – reduce congestion
	• Improve SH1 Kawakawa roundabout
	• Pak'n'Save roundabout too small + poor footpaths
	• Improve Kerikeri Countdown junction
	
	• Mangakahia Road alternative route limit to only SH15 for trucks
	• Designated logging routes
	• Seal roads – prioritise heavy vehicle routes
	  ○ Old Mill Road
	  ○ Matawaia
	  ○ Pokapu
	  ○ Waiomio
	• Passing bays – review network for opportunities eg. 5km (ie. Waiomo to Kawakawa SH1)
	
	• Flooding
	  ○ Kawakawa / Moewera
	  ○ SH11 spring tides
	  ○ Taumere
	• Bypasses
	  ○ Integrated of land use and transport
	  ○ Development cul de sacs connected
	  ○ Control adhoc development
	  ○ Greater planning for future network
	• Widening / laybys / passing lanes for safety
	• Footpaths / cycleways need for
	  ○ Wellington St, Flagstaff Hill
	  ○ Te Araroa Trail
	  ○ Haruru Falls
	  ○ Bledisloe
	  ○ Paihia
	  ○ Opua
	  ○ Watea
	  ○ Taipa
	  ○ Houhora
	• Low lying coastal townships – protection for climate change (Foreshore Road, Ahipara)
	• Secondary routes will be used more and requires resilience planning and investment in detours (Mangakahia Road, around Kaeo)
	• Kerikeri → Paihia, alternative route through Waitete Forest
	• Kaitaia → Cape Reinga – provide alternative route
	• Kaitaia / Northpark / schools poorly linked → better connectivitiy
	• Network connections eg. Ngawha industrial area, Kerikeri, Russell, Paihia, Waipapa
	• Population growth in Kerikeri – connectivity to affordable areas
	• Kerikeri / Kaitaia / Kaikohe long term arterial planning
	• TCDR – Kaitaia to Kohukohu needs strategy (EES road standard)

	• Future corridor protection (Maranui Drive problem) • Strategy to acquire land early • Alternative routes during crashes / short term detours • Mapping growth hubs + strategic planning • Liveable towns • 2007 Structure Plan → Long term Kerikeri Plan • Link Waipapa and Kapiro Road (consider active modes) • Early interventions to development strategy / plans • Development contributions re-introduced • Introduce Rail

Road Network	**Possible transport solutions:**
	• Adequate form + function of road
	• Fit for purpose tourist routes / signage
	• DOC campgrounds → maintain access roads
	• Provision of rest stops at scenic points (TCDR)
	• Long beach pathway connect to beach
	• Transport in Bay of Islands for peak summer periods
	  ○ Shuttles, parking, cruise ships
	  ○ Another terminal location that can accommodate cruise ships
	• Replace ferries with bridges (long term plan for Hokianga)
	• Kerikeri → Kaikohe – high speed, 4 lane road
	• Apply user hierarchy to ONRC road types by times of day
	• HCV routes maintained to higher standard
	• Ruapekapeka Road – high priority key detour routes
	• Detour routes fit for purpose – short response time
	• Mobile app showing road closures (FNDC + civil defence +NZTA)
	• Investigate effluent dump stations – Pakaraka SH1
	• Seal prioritisation – improve access to local communities
	• Review submissions from all Ratepayer Associations and include projects from Community Plans
	• Subdivisions to vest roads as public for maintenance
	• Protect for resilience in rural areas – coast + main road both affected by slips
	• Gateways in sensitive locations eg schools
	• Improve Waiomio / SH1 intersection
	• Direct more traffic via SH15 / Twin Bridges / Murrays Road to Dargaville as detour + main designated route
	• Mangamukas SH1 bottleneck
	• Investigated funding subsidy for logging routes (esp Wekaweka north of Waipona Forest)
	• Overseas investment office opportunities
	• Agility to respond fast enough to problems and ensure network fit for purpose

Asset Management	**Transport solutions prioritised by stakeholders:** • Fit for purpose roads with appropriate shoulders with separation for cycleways / footpaths • Culvert replacements and graders blocking culverts when carrying out grading (Waiomio near SH1 – culvert sinking) • Stormwater treatment (both urban and rural) • Greater use of unformed roads for off-road greenway walk / cycle • FNDC / Regional Council Plans to be tied into each other • Keeping important routes open during emergencies • REG initiative and ONRC framework to be embedded into strategy and communicated to stakeholders (could show by spend per ONRC classifications) • Analyse insurance risk to map out where future investment should be (eg health care) • Capture data on maintenance activities • Plan and adapt transport network for climate change and sea level rise
	Possible transport solutions: • Poor ground conditions of roads reduce design life • Chip loss on new reseals • Aggregated tracked onto sealed roads particularly at intersection • Aggregate loss on steep grades (due to run off) • Vegetation clearance important particularly on lower use roads • Separation within urban areas between vulnerable mobility and vehicles • Provide pram crossings on footpaths to link up on other side (eg. Paihia main road) • Stock effluent disposal facilities required, also compliance of trucks carrying stock • Communicate to public the ONRC plan and visual guide • Lack of historical data (in old contracts due to lump sum payments) • Limited funding for funding partners • Lots of roads in North Hokianga and other areas that are unstable → consider long term solutions and alternative routes

Please refer to **Attachment A** for detailed notes on the discussion summarised in the table above.

Post workshop:

Following the workshop, we have received further submissions from organisations on transport solution options, which are summarised as follows:

TDM	• Strategic planning and design to not promote car-dependence of the ~200ha block of land between the golf course, SH10, and Waipapa Rd and ~24ha 'Woodlands' block near Kerikeri Centre (Our Kerikeri) • Incentivise collaboration and sharing and facilitate transport to Centre. Improve utilisation of existing parking areas such as Rugby Fields, Turner Centre, Baptist Church, Northtec, Packhouse Market, Kerikeri High School (Our Kerikeri)
Active Modes	• Beautify and pedestrianalise "superblocks" adjacent to Kerikeri Road (Our Kerikeri)
PT / Ride Share	• Buses to connect the Centre with park'n'ride locations such as Redcliffs Rd, Inlet Rd, Puererua Rd, Pungaere Rd (Our Kerikeri)
	• Absorb the Kerikeri school transport operation into a public bus service (Our Kerikeri)
Road Network	• New loop road for Kerikeri Rd - connection from King St or Clark Rd to Butler Rd or Aranga Rd (Our Kerikeri) • New Bypass Road connecting Shepards / Inlet / Mill Lane area with SH10 or Kerikeri Road (well to the west of the Centre) (Our Kerikeri) • Kerikeri CBD bypass - Grid road system (Vision Kerikeri)

FNDC Integrated Transport Plan

Programme Development Workshop

Date: 18th February 2020
Time: 10:00am – 12:30pm
Location: Kaikohe Memorial Hall

Attendee	Organisation
Jo Lumkong	Vision Kerikeri / Our Kerikeri
Makarena Dalton	FNDC
Tracy Dalton	Pou Herenga Tai Twin Coast Cycle
Alec Cox	Kerikeri Ratepayers
Aram Goes	NTA
Cushla Jordan	NTA
Nick Marshall	NTA
Sandi Morris	NTA
Mark Seakins	NTA
Franz Wagner	NTA
Jeff Devine	NTA
Donald Chandler	Our Kerikeri
Jane Johnston	Paihia Residents and Ratepayers Association and Kerikeri Ratepayers Association
Janet Planet	Russell Ratepayers and Business Association
Karly Bent	Department of Conservation
Roger Ackers	FNDC
Ann Court	FNDC
Arwen Page	Bike Northland
Tom Batchelor	Vision Kerikeri
Blair Houlihan	Tourism Infrastructure Fund
John Gardiner	Walking Access Commission
Annika Dickey	Our Kerikeri
Manga Nathan-Patuawa	KiwiRail
Alicia Taylor	NZTA
Martin Taylor	NZTA
Brain Waddell	NZTA
Ian Crayton Brown	Northland Road Safety Team

Invitee (apologies)	Organisation
Shaun Clarke	FNDC
Andy Finch	FNDC
Darrell Sargent	FNDC
Glenn Rainham	FNDC
Ken Lewis	FNDC
Trevor Green	FNDC
Jaco Cronje	FNDC
Adele Gardner	Te Hiku Community Board
Belinda Ward	Bay of Islands Whangaroa Community Board
Mike Edmonds	Kaikohe Hokianga Community Board

Dave King	Hokianga Ferry Liaison Group
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Jason Vokes	Kerikeri District Business Association
Sarah Curtis	Waipapa Business Association
Sue Reed-Thomas	Department of Conservation
Eddie Aickin	Doubtless Bay Promotions Inc
Wayne Wallace	NZTA
Chris Powell	NRC
Irwin Wilson	Far North Holdings Ltd
Clare Davies-Colley	Bike Northland
Jude Thompson	Northland Inc
Angelene Waiohi	Far North REAP
Melissa Nathan-Patuawa	Northland District Health Board
David Senior	Disability Action Group
John Blackwell	Fed Farmers
Ian Broadhurst	Horticulture (avocados)
Lorraine Toki	Te Rūnanga A Iwi O Ngāpuhi
Pita Tipene	Te Rūnanga o Ngāti Hine
George Riley	Te Rūnanga o Te Rarawa
Tajim Mohammad-Kapa	Te Rūnanga o Ngāti Rehia
Anaru Rieper	Te Rūnanga Nui o Te Aupouri Trust
Mereraina Piripi	Te Hiku Development Trust
Adrienne Tari	Twin Coat Cycleway Trust
Peter Boyd	Opua Business Association
Mike Kanji	Kaikohe Business Association
Alistair Nicholson	NZ Avocado Growers Association
Jonny Wilkinson	Tiaho Trust
Rosie Conrad	Te Rūnanga Nui o Te Aupouri Trust
Rolf Mueller-Glodde	Carbon Neutral NZ Trust
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Blair Kapa	Far North Youth Council
Candace Rameka	CBEC
Dave Wilson	Fed Farmers

Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki

commute TRANSPORTATION CONSULTANTS

Meeting minutes

The Far North District Council is currently undertaking the preparation of an Integrated Transport Strategy (ITS) and Integrated Transport Plan (ITP). As part of this process, a Programme Development workshop with key stakeholders was carried out on Tuesday 18th February 2020.

A power point presentation was prepared by Commute and presented to the stakeholders. The presentation outlined the purpose of the ITP / ITS and the workshop, recap on the outcomes of the ITS, summary of the initial prioritisation process and results and the programme development process going forward. The presentation slides have been included as **Attachment A.**

The workshop's primary focus was to further understand stakeholder's views on prioritising transport projects to best address the identified FNDC transport problems and strategic responses. As part of this process, a group activity was facilitated where stakeholder groups (Workshop Groups 1-4) were given the opportunity to prioritise the longlist of transport options and therefore produce a total of four workshop draft programmes.

Due to time restrictions and venue constraints, this exercise was extended for an additional week to allow additional feedback from stakeholders.

Discussions within the workshop highlighted the following themes for prioritisation:

- *Safety and Mode Neutral / Shift focus*
    - Balanced approach on activities that contribute safety and mode neutrality
    - Walking and cycling in urban areas
    - Public transport / ride share opportunities for urban and rural
    - Public transport for elderly and children
    - Activities to support the rail Otiria (level crossings, safety campaign and visibility)
- *Connectivity*
    - Focus on fixing transport network gaps
    - Prioritise active modes to connect strategic and urban infrastructure
- *Base of managing existing network*
- *Develop strategic planning to ensure right solutions in the right places*
- *Kerikeri CBD Bypass (extension of one-way system)*
    - Consider Kerikeri as a single package

Attachment B summarises the longlist of transport options, the initial draft programmes developed by Commute (to provide guidance) and the workshop programmes developed by the four workshop groups (which incorporate post workshop feedback). This has been presented by Action Plan.

Post workshop feedback

Following the workshop, stakeholders were given the opportunity to provide any further refinement or commentary for the programme development activity. The key themes that were received during this period included:

- **Kerikeri CBD bypass** – the ranking of this option should be reviewed and packaging this option with other Kerikeri road network projects should be considered
- **Kerikeri Strategic Road Network Plan update** – this option should further cover the Indicative Business Case (IBC) and Detailed Business Case (DBC) process, which are the next stages towards securing funding

- **Cycling** – some potential projects to be considered as part of the cycling strategy scope. Further suggestions on specific cycle routes was received, which has been captured in the details section of the options list for consideration/prioritisation at a later stage
- **Public Transport** – Further information on specific public transport routes, which have been included in the detailed section of the option list for consideration in later stages
- **CBD upgrades** – Further suggestions on various types of upgrades in townships such Paihia, Kerikeri and Kawakawa, which has been noted in the details section of the appropriate options for consideration in later stages.
- **Packaging of options** – Several opportunities were identified for options that could be packaged for investment.

The post workshop feedback has been incorporated into the longlist. We are now in the process of packaging options, refining option names and developing the post-workshop programme, which will be circulated in due course.

APPENDIX C – ALIGNMENT TO EXISTING STRATEGIES

This section describes how the proposed assessment outcomes align to relevant national, regional, sector and organisational strategies. The strategies with the most direct impact on this Integrated Transport Strategy are outlined below.

17.4.2 Ministry of Transport Outcomes Framework

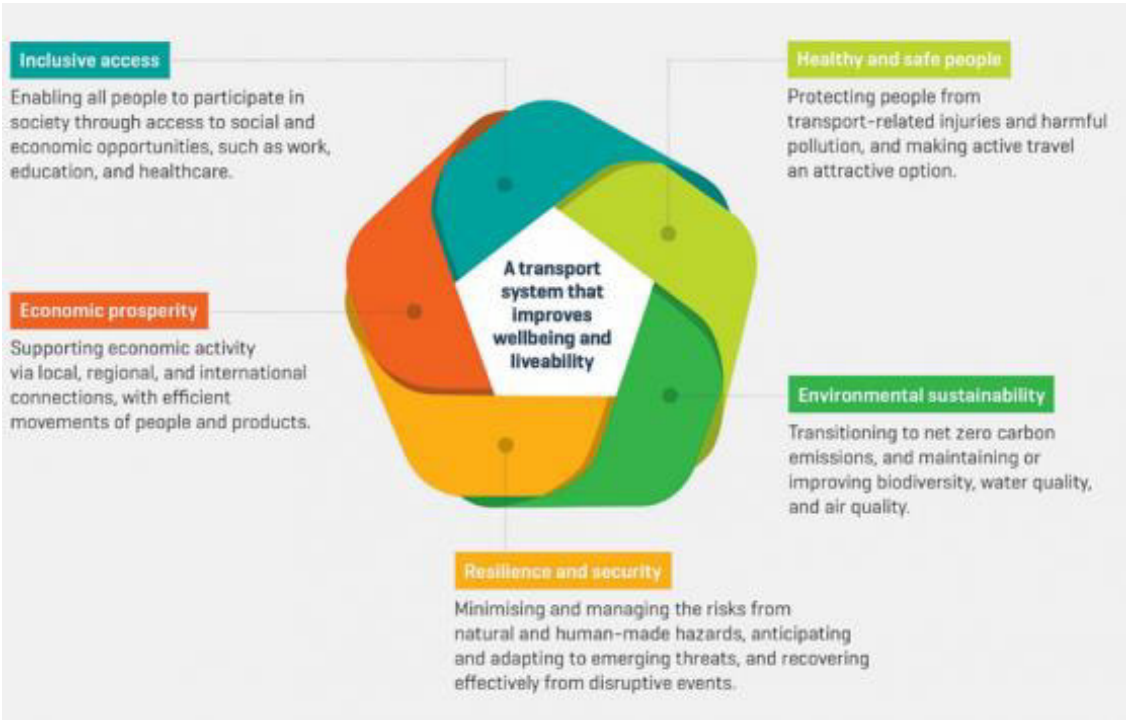
In 2018, the Ministry of Transport and other government agencies worked together to develop an outcomes framework for New Zealand's transport system. This Transport Outcomes Framework outlines what government is aiming to achieve through the transport system.

The key outcomes of the framework are summarised as follows:

- Improve inter-generational wellbeing
- Improve quality of life in cities, towns and provinces
- Transport system needs to be integrated with land use planning and urban development.

These outcomes are split into five areas which are illustrated in Figure 92 below.

Figure 92: Ministry of Transport five key outcomes



A guiding principle for government is 'mode neutrality', which can be defined as:

- All modes and options are considered to find the best system solution.
- Users and decision-makers are aware of benefits and costs of transport choices to incentivise robust decision making and travel choices.

The FNDC ITS aims to improve the transport system to cater for the wellbeing of communities, focusing on the safety and health of communities, providing equitable access and a resilient and secure road network which directly aligns with the Ministry of Transport outcomes framework.

17.4.3 Government Policy Statement on Land Transport Funding

GPS 2018/2019- 2027/2028

The GPS 2018/2019 – 2027/2028 took effect on 1 July 2018. The document sets out a 10-year strategic direction to drive improved performance from the land transport system. The GPS presents a change to the strategic objectives outlined in the 2015-2018 GPS. The Government's commitments make it clear that transformation of the land transport system is a priority. The GPS prioritises a safer transport system free of death and injury, accessible and affordable transport, reduced emissions and value for money as shown in Figure 93.

Figure 93: Strategic direction of the GPS 2018

Improved safety is a fundamental objective for the GPS as it seeks to improve safety outcomes for all road users. The analysis shows that the Far North District has a relatively high personal safety risk which can be attributed to a combination of unforgiving terrain and poor driver behaviour. Therefore, the programme will need to include activities to directly address safety issues for vulnerable users (e.g. pedestrians and cyclists), specific locations and crash factors.

The access section of the GPS has a new focus that prioritises improving New Zealanders' access to economic and social opportunities. This includes regional development that supports thriving regions.

Access as defined in the GPS is underpinned by three sub objectives which include:

- A land transport system that provides increased access for economic and social opportunities
- A land transport system that enables transport choice and access
- A land transport system that is resilient

Problem 1 and Problem 2 as defined for the FNDC PBC are wholly consistent with the GPS access objective. This is a regional based economy heavily reliant on primary industries such as forestry, horticulture and to a lesser extent tourism. There is significant evidence showing repetitive resilience issues in the District and the resulting economic and social impacts of these road closures. There are limited alternatives for the road network and currently the area is not well served by alternative options to private vehicles. Communities are geographically isolated which is exacerbated by lack of transport choice and limited access to key facilities. Tourism is also disadvantaged due to difficult driving conditions, lack of amenities and poor access to key attractions.

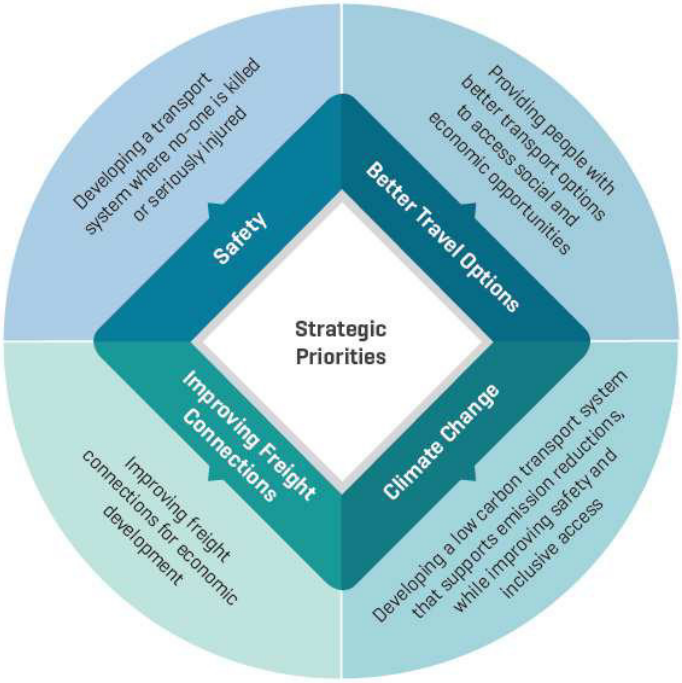
Therefore, the programme will include a focus on activities that improve the safety, resilience and access which aligns with the strategic direction of the GPS. Value for money and better environmental outcomes will underpin the selection of activities to be included in the programme.

Draft GPS 2021/2022- 2030/2031

A draft issue of the GPS 2021/22-30/31 was released towards the end of the development of this PBC. The refined strategic priorities as shown in Figure 94 build on the current GPS 2018 and link directly to the Transport Outcomes Framework.

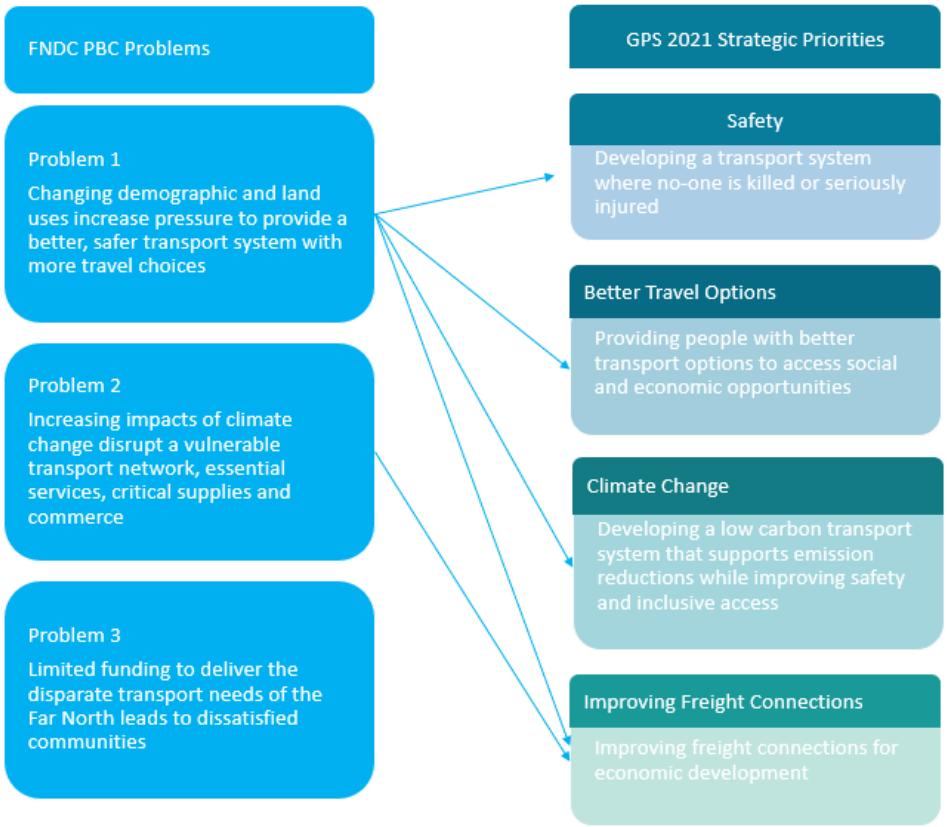
The strategic priorities of Climate Change and Safety have been updated to reflect policy work that has taken place since GPS 2018 was published, such as the development of Road to Zero. Access has been separated into Better Travel Options and Improving Freight Connections. Value for money is expressed as a principle that applies to all investments, rather than a strategic priority that could change as Government changes.

Figure 94 Strategic direction of the Draft GPS 2021



A map of how the PBC problems align to the new draft GPS 2021 is shown in Figure 95.

Figure 95 Map of PBC Problems to Draft GPS 2021

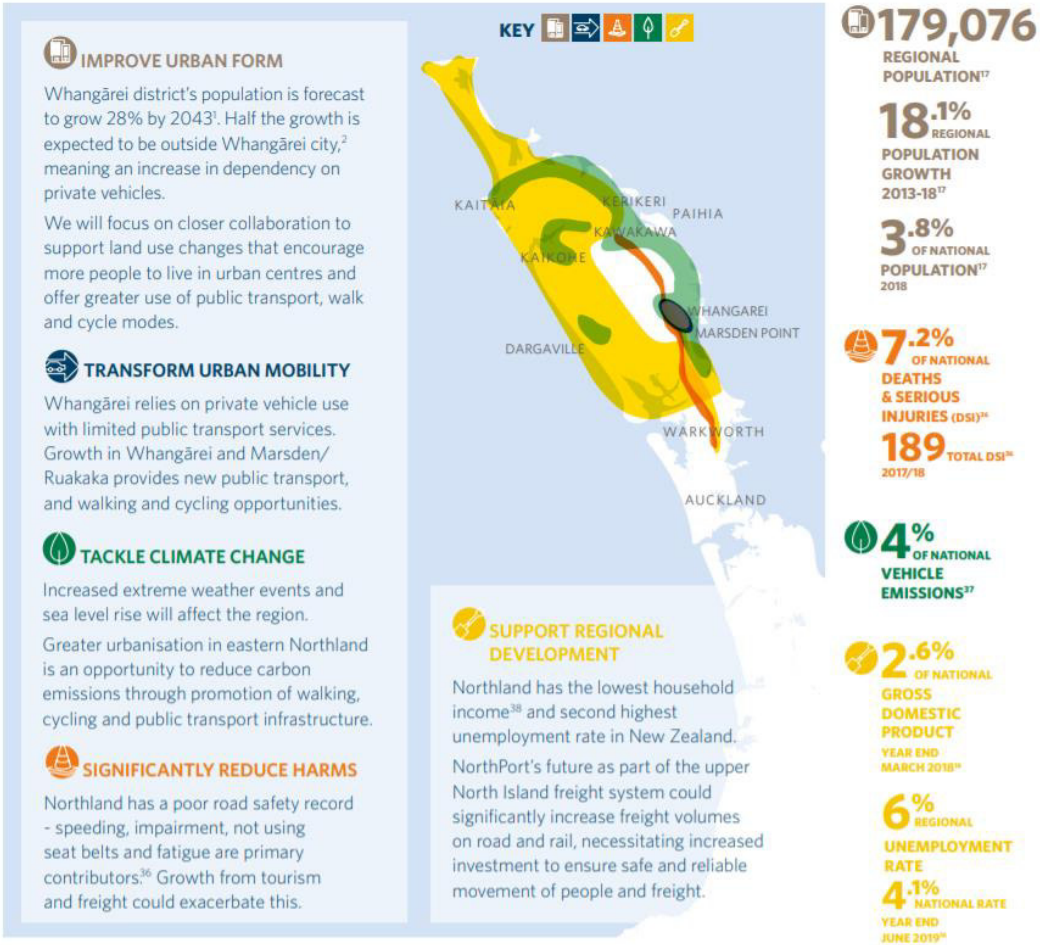


Problem 1 and Problem 2 as defined for the FNDC PBC remain wholly consistent with all four strategic GPS priorities. Problem 3 maps to the underlying principle of value for money for investment.

17.4.4 Waka Kotahi Arataki

Arataki is Waka Kotahi's 10-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system. It is an integrated planning document which uses place-based planning for growth, manages change and ensures that a land transport system is developed that is safer, better connected and supports greater transport choice. The regional summary for Northland is shown in Figure 96.

Figure 96 Arataki Regional summary for Northland



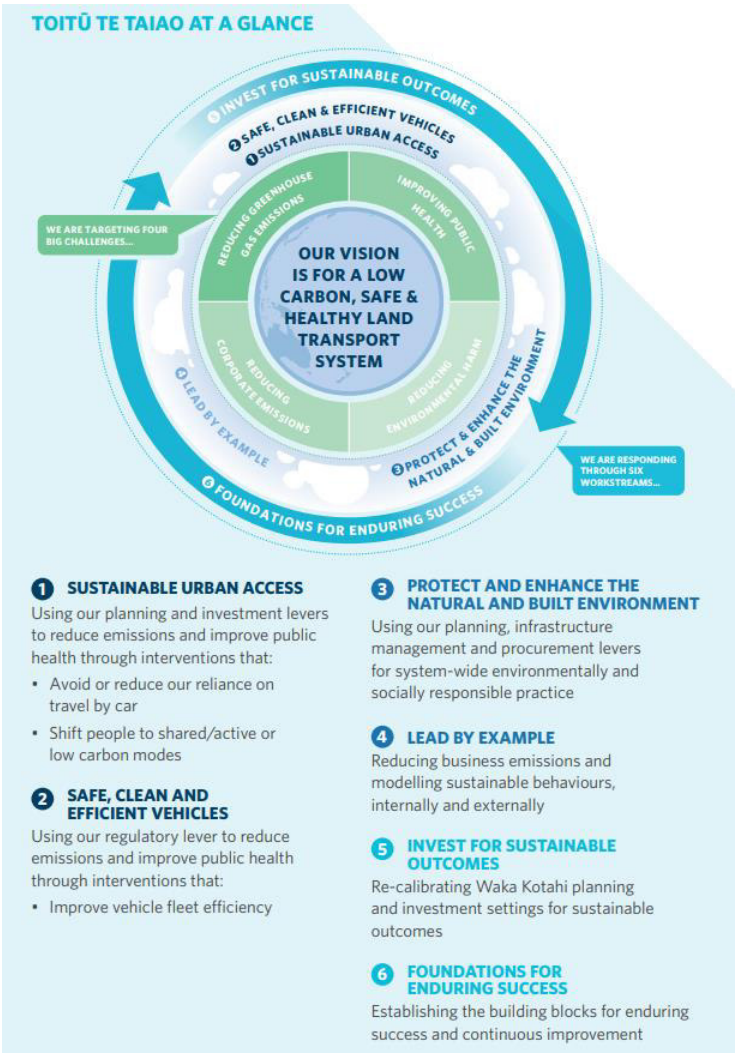
Reducing harm, supporting regional development and to a lesser extent tackling climate change are the key focus areas for Waka Kotahi that are most relevant to the Far North. These Arataki step changes directly align with the priorities identified in the PBC problems of a better and safer transport system with more transport choices and improved resilience.

17.4.5 Waka Kotahi Toitu Te Taiao Sustainability Action Plan (2020)

The key vision of the Waka Kotahi Toitu Te Taiao is for a low carbon, safe and healthy land transport system. This vision responds to some of the greatest challenges that affect Aotearoa and the world; this includes: an urgent need to reduce land transport emissions and limit global warming; poor levels of physical activity and associated public health outcomes; threats to indigenous biodiversity and water quality and escalating resource use. In addition, the vision supports the opportunities that Aotearoa in particular can seize, such as protecting our unique flora, fauna and Māori cultural heritage not found anywhere else in the world; and supporting grass-roots, community-led actions to identify and protect what is important to our culture, our communities and the environment we call home.

The Toitu Te Taiao contains the steps to deliver the climate change and public health related objectives outlined in the Arataki. The key challenges and responses that Toitu Te Taiao aims to address are summarised in the figure below.

Figure 97: Summary of Toitu Te Taiao key challenges and responses



The priorities identified in the PBC have an overall alignment to the workstream responses of the Toitu Te Taiao, however specifically supports Workstream 1 and 5 with respect to encouraging active modes / modal shift and ensuring that strategic planning is undertaken to achieve sustainable outcomes.

17.4.6 Waka Kotahi Mode Shift Plan (Keeping Cities Moving 2019)

Waka Kotahi's Mode Shift Plan aims to increase the wellbeing of New Zealand's cities by growing the share of travel by public transport, walking and cycling, therefore achieving a more accessible, safe and sustainable transport system.

The purpose of the Mode Shift Plan is to outline how Waka Kotahi, in partnership with others, will address the issue of car dependency and support the key Government objectives for mode shift. This is progressed in three main ways[63]:

- **Shaping urban form** - Encouraging good quality, compact, mixed-use urban development will result in densities that can support rapid/frequent transit (and vice versa); shorter trips between home and work/education/leisure; and safe, healthy and attractive urban environments to encourage more walking and cycling.
- **Making shared and active modes more attractive** – Improving the quality, quantity and performance of public transport facilities and services, and walking and cycling facilities, will enable more people to use them. This can involve both optimising the existing system (for example, through reallocating road space), investment in new infrastructure and services, and providing better connections between modes.
- **Influencing travel demand and transport choices** – Changing behaviour may also require a mix of incentives and disincentives (or 'push' and 'pull' factors) to either discourage use of private vehicles (by making them less attractive relative to other options) or making people more aware of their options and incentivising them to try something new. This may include parking policies, road pricing, travel planning and education.

These key concepts are applicable to the Far North District network and are clearly reflected through the identified problems in the PBC, where a key focus is on improving travel choices and encouraging active modes.

17.4.7 One network road classification (ONRC)

The ONRC has been developed by the Road Efficiency Group (which is a collaboration between road controlling authorities across New Zealand) as a classification system that identifies the level of service, function and use of district road networks and State Highways.

The ONRC framework is currently being enhanced and is expected to be ready for release in 2020. The intention for the One Network Framework project is to collaborate with a wide stakeholder group to evolve the current ONRC to better cater for all modes of travel including walking, cycling and public transport. The updated ONRC framework reflects that transport corridors are places where people stop, socialise, enjoy and do business rather than just for travelling through. In summary, the updated ONRC framework aims to deliver the following improvements[64]:

1. Provide a consistent travel experience along elements of the transport system with similar

[63] https://www.nzta.govt.nz/assets/resources/keeping-cities-moving/Keeping-cities-moving.pdf
[64] https://www.nzta.govt.nz/roads-and-rail/road-efficiency-group/projects/one-network-framework/

classifications at the best achievable value for money.

2. Consistently describe the elements of the entire land transport system so strategic, land-use and planning, improvement, operation and management activities use a common language.

3. Describe service levels and outcomes for land transport modes that are appropriate for urban and rural contexts and functions consistent with the wider network and adjacent land use.

4. Provide a clear line of sight between transport interventions and the customer service levels and community outcomes to be useful for strategic, operational and tactical activities.

5. Provide a structured service level and performance framework so transport investment decision-making considers all modes equally.

This classification has been used to inform the function and use of the District road network and level of service that would be suitable for this network. The improvements to the ONRC framework support the problems identified in the PBC, specifically aligning with the need for a better connected system and adequate level of service that supports travel choices in both the urban and rural parts of the District.

17.4.8 Northland Regional Land Transport Plan (RLTP)

The Regional Land Transport Plan 2015-2021 (RLTP) is prepared every six financial years as part of the Land Transport Management Amendment Act 2013, and each regional council must ensure that a new regional land transport plan is prepared.

The RLTP provides the opportunity for Northland Regional Council, FNDC, Whangarei District Council and Kaipara District Council to jointly "bid" for funding assistance from the National Land Transport Fund (NLTF). It is required that the RLTP contains both strategic elements along with the proposed programme of works and financial forecasting.

The Northland RLTP 2015-2021 outlines the regional priorities for the Northland transport system, which are summarised as follows:

- Enhances economic growth.
- Encourages tourism.
- Safety for all road users.
- Well-connected to Auckland and New Zealand.
- Roading network fit for purpose and resilient.
- Transport choices to access jobs, recreation and community facilities.
- Enhance environmental and cultural values.
- Effective ports.

The problem themes identified for the FNDC ITS is aligned with Northland's regional transport regional priorities, specifically focusing on safety, connectivity, resilient road network and transport choices.

17.4.9 Far North 2100 District Strategy and Spatial Plan FN2100 (DRAFT)

The Far North District strategy and spatial plan is currently being developed in conjunction with the FNDC ITS and is due for completion in July 2020. FN2100 upholds the core vision of "He whenua rangatira – A district of sustainable prosperity and wellbeing".

The key principles identified by the FN2100 are summarised as follows:

- Identification of the role of the Far North.
- Identification of transformational opportunities to achieve the core vision, values and expectations of the District.
- Identify opportunities for collaboration and partnerships that will deliver these opportunities.
- Focus on building strong communities with solid foundations including protecting spiritual and special places, digital connectivity, transport infrastructure, secure energy supplies and healthy lifestyles.
- Ground-truthing including being responsive to climate change, managing pests and threats, connectivity within the District and to and from the rest of the country.

17.4.10 Tai Tokerau Northland Economic Action Plan (NEAP)

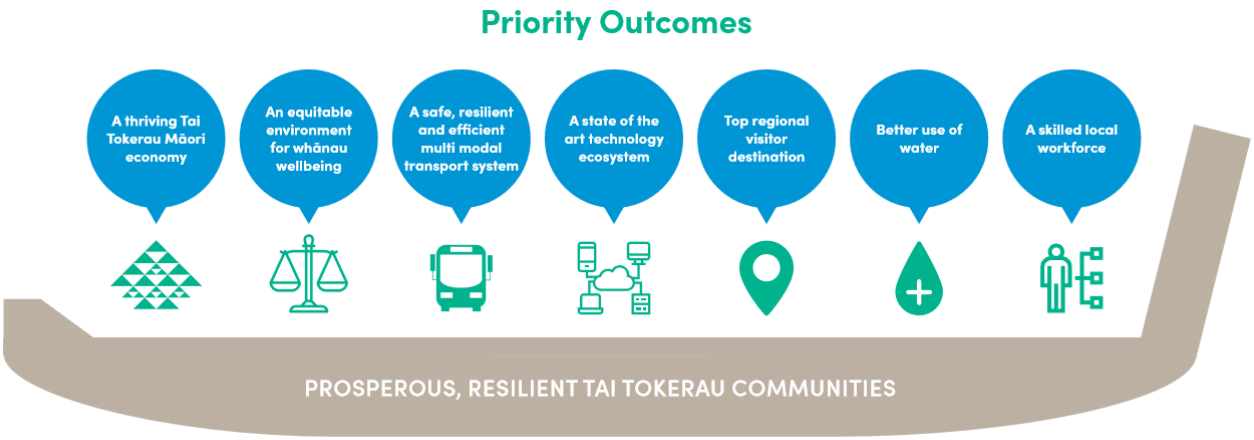
In 2014, central government announced a Regional Economic Development (RED) programme to assist with growth in the regions. The programme was commissioned jointly by MBIE and the Ministry for Primary Industries (MPI), working in partnership with other central government agencies and regional stakeholders, such as businesses, iwi and Māori, economic development agencies and councils.

Regions were selected based on need, which was identified by how the region compared against national averages for income, employment and investment. Based on its metrics, Northland was chosen to participate.

The Tai Tokerau Northland Economic Action Plan (NEAP) was released in February 2016 as a mechanism to implement that programme and a refreshed document was released early 2019. This is an all of government action plan to improve the economic performance of Northland.

The NEAP identifies a range of short to mid-term realistic opportunities (0-10 years) that will assist in increasing investment, employment and incomes in the region. It identifies specific actions, who will lead implementation, resources required and estimated timeframes. Projects within the Action Plan meet the priority outcomes for the region, as shown in Figure 98 below. Working towards these outcomes is vital in assisting economic growth, therefore ensuring that Tai Tokerau communities are both prosperous and resilient.

Figure 98: NEAP workstreams



In the context of the proposed investment, the following elements of the NEAP are immediately relevant to the Far North:

- Visitor industry.
- Logistics and transport infrastructure as an enabler.

The NEAP has identified the visitor industry as an important contributor to economic growth for Northland. Its desired outcome for the visitor industry is to reduce the impact of seasonality, improve product dispersal across the region and enhance tourism promotion.

In order to achieve these outcomes, maximising the existing wide variety of natural attractions, unique cultural and historical experiences, the following actions are recommended:

- Develop a more compelling value proposition linking cultural and natural advantages.
- Create authentic visitor experiences on both coasts and up to Cape Reinga which ultimately encourage the visitor to disperse further and stay longer.
- Improve infrastructure to make the whole region more accessible including road quality, flights and availability of reliable internet access.
- Reduce the seasonality of the sector through all-weather tourism products.

One of the key work areas for growing the visitor industry is the revitalization of the Twin Coast route. Effective connections to and through the region for Northland residents and visitors, and the intended development of additional tourism opportunities such as cycle trails support the need for safe, resilient transport corridors for locals and visitors to use. Effectively delivering this workstream is estimated to bring an additional $60m income into Northland by 2020. The NEAP also identifies that the lack of robust transport accessibility between Northland and the rest of the country is a contributing factor to the area's poor economic situation. It identifies transport as an enabler, where providing better connectivity to Auckland, within the region and with export markets will create an enabling environment for economic development.

The Far North depends on both the visitor industry and access to markets for primary industries and transport is considered an enabler for the district which directly aligns with the goals of the NEAP.

17.4.11 Tourism 2025

This national tourism strategy has been produced by Tourism Industry Aotearoa. The Tourism 2025 growth framework was established to identify the parts of the tourism system that need to be worked on in alignment across the country. Two key areas are seasonality and dispersal as shown in Figure 99 which directly correlate to the issues faced in the District.

Following a review of this strategy two years after inception, two additional areas of emphasis have been included.

Both additional areas are also relevant to the Far North - in particular the need to create new opportunities outside of popular regions for new growth. These strategies may be considered for prioritisation processes for proposed activities in the ITP.

Figure 99: Tourism 2025 areas of emphasis

17.4.12 Te Hiku o Te Ika Revitalisation Masterplan

The Te Hiku o Te Ika Revitalisation Masterplan considers all Te Hiku townships in the Far North, which includes: Cape Reinga, Te Kao, Pukenui, Houhora, Awanui, Taipa, Mangonui, Kaitaia, Ahipara and Mangamuka. The Masterplan delivers a number of township improvement projects (including transport related projects) in the context of the three core principles of People, Economic Opportunity and Cultural Celebration, whereby six key themes are identified:

- Arts and culture
- Access
- Natural environment
- Tourism
- Development
- Recreation

The Integrated Transport Strategy shares the themes of Access, Tourism, Development and Recreation with respect to transport in the Far North. The role of the Integrated Transport Plan is to be complementary to this document and it has been assumed that the Masterplan will be delivered in parallel. It is noted that any transport related township improvement project identified in the Masterplan that does not achieve funding may be incorporated into the ITP's flexible bucket system.

17.4.13 National Policy Statement of Urban Development Capacity

The National Policy Statement of Urban Development 2016 (NPS-UD) provides direction to local authorities under the Resource Management Act 1991 (RMA) on planning for urban environments. The NPD-UD recognises the national significance of[65]:

- Urban environments and the need to enable such environments to develop and change
- Providing sufficient development capacity to meet the needs of people and communities and future generations in urban environments

The National Policy Statement of Urban Development is currently being revised and is expected to take effect in 2020. The new NPD-UD will build on many of the existing requirements for greater development capacity, however, will broaden its focus and add significant new content and address unnecessary regulatory constraints. The proposed NPD-US focuses the role of the planning system in enabling growth and regulating land use in urban areas and the key objectives and policies addressing this is set out in four key areas[66]:

- **Future Development Strategy** – requires councils to carry out long-term planning to accommodate growth and ensure well-functioning cities.
- **Making room for growth in RMA plans** – requires councils to allow for growth 'up' and 'out' in a way that contributes to a quality urban environment, and to ensure their rules do not unnecessarily constrain growth.
- **Evidence for good decision-making** – requires councils to develop, monitor and maintain an evidence base about demand, supply and prices for housing and land, to inform their planning decisions.
- **Processes for engaging on planning** – ensures council planning is aligned and coordinated across urban areas, and issues of concern to iwi and hapū are taken into account.

Although Far North is predominantly made up of rural environments, urban areas such as Kerikeri and Paihia encompass a transport network that requires planning and development to enable growth and regulate land use. The National Policy Statement of Urban Development Capacity is applicable to Far North in this regard and the concepts of urban planning have been reflected in the problem themes identified. Specifically, the PBC recognises the changing land use and demographics in the District and aims to address the effects and resulting pressure on the transport network, whereby a significant proportion of this network is within urban environments.

17.4.14 Road to Zero Strategy 2019

Road to Zero outlines a strategy to guide improvements in road safety in New Zealand over the next 10 years (2020-2030). The key vision is to achieve "a New Zealand where no one is killed or seriously injured in road crashes. This means that no death or serious injury while travelling on our roads is acceptable". A target of 40% reduction in death and serious injuries has been set as a step towards achieving this vision by 2030. Prioritising investment in road safety and adopting this vision in transport design, planning and funding looks to a future New Zealand where a safe road system is in place.

The following outlines the focus areas and principles adopted by Road to Zero.

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[65] https://www.mfe.govt.nz/sites/default/files/media/Towns%20and%20cities/National_Policy_Statement_on_Urban_Development_Capacity_2016-final.pdf

[66] https://www.beehive.govt.nz/sites/default/files/2019-08/planning-successful-cities-discussion-document-proposed-nps-on-urban-dev....pdf

Figure 100: Summary of Road to Zero focus areas and principles

Road safety is a key focus area in the Far North given the extent of the road network and dependency on vehicular travel. As such, providing a safer system, with reduced numbers of death and serious crash injuries, is a priority in the District that directly aligns with the Road to Zero strategy.

APPENDIX D – ISSUES AND CONSTRAINTS

Figure 101: Uncertainty log classifications

Probability	Status
Near certain: The outcome will happen or there is a high probability that it will happen	Policy or funding approval, tenders let or under construction
More than likely: The outcome is likely to happen but there is some uncertainty	Submission of planning consent application imminent, adopted plans
Reasonably foreseeable: The outcome may happen, but there is significant uncertainty	Adopted plans, draft plans, development conditional upon interventions going ahead
Hypothetical: There is considerable uncertainty whether the outcome will ever happen	A policy aspiration

Figure 102: Integrated transport priority plan uncertainty log

Factor	Indicative Time	Uncertainty	Impact	Comments
Demand for Transport				
Agriculture development	2025-2030	Reasonably Foreseeable	Medium	There is reported changes in agriculture land use. Dairy farms are being amalgamated and converted to beef and new horticulture uses are being developed in Kaitaia. If these land uses continue to grow unabated or other hot spots of development occur this will likely have a change in the vehicle demands on the network. The highest effect is likely to be the heavy vehicles, although the housing of workers may affect commuter demand. As the ITP will involve initial prioritisation of action plans and then regular re-prioritisation through legislative processes such as the RLTP, the overall ITS will be able to respond to the land use changes.
Forestry	On going	Reasonably Foreseeable	Medium	There are significant forestry holdings in the Far North and there is some visibility of harvesting schedules. Changes in harvesting patterns, or transport improvements that improve viability of extraction within the region will also impact on freight volumes travelling on the network. This will need to be managed through the prioritisation process in the ITP. A foreseeable outcome is a local road is programmed for a preventative upgrade and the forestry programme changes resulting in an upgrade being undertaken either too far ahead of time at the detriment to other local roads.
Residential Population Forecasts	On Going	Hypothetical	Low	Population forecasts may fluctuate within the region, as outlined within Statistics NZ forecasts, although population growth rates within the region are likely to be marginal compared with forecast national growth rates. Changing residential population would impact on the total volume and composition of traffic on the network. It might affect what is defined as a growth area and result in premature provision of infrastructure.

Factor	Indicative Time	Uncertainty	Impact	Comments
Land Use Changes	Ongoing	Hypothetical	Low	Unplanned changes to land use patterns may influence travel needs, resulting in competing network needs or changes in the way in which the local transport network operates – particularly in main urban areas. This would be captured in a Network Operating Plan (NOP). The PBC should reference the NOP at the start of each individual project to ensure alignment.
Market Value of Products	On Going	Hypothetical	Medium	Fluctuating market values for raw products could reduce the attractiveness of production, particularly products with a longer "shelf life" such as logging. Would result in changes to forecast freight movements through the region.
Factors affecting supply of Transport				
Uptake of HPMV	On-Going	Near Certain	Low	Waka Kotahi is progressively upgrading State Highway routes to full HPMV requirements. The successful uptake of HPMV's would increase the efficiency of freight vehicles by allowing more products to be moved by the same number of vehicles. This would increase pressure for local connection roads to the State highway to be compatible.
Rising Sea Levels	On Going	Reasonably Foreseeable	Low-Medium	Many coastal sections of the FNDC network Sections and around the Hokianga harbour are highly vulnerable to sea level rises which may occur in our 30- year ITS horizon. Given the lack of alternative routes this would impact on network availability and connectivity through the region. The impact on the programme is low as the effects are not expected to be significant within the lifetime of the PBC.
Seasonal Variations (Weather)	On Going	Reasonably Foreseeable	Medium	The network is highly vulnerable to road closures following heavy rains and storm periods. Seasonal variations may affect the frequency of storm events and soil saturation leading to landslips during rainy seasons, requiring diversion of committed capital/maintenance funding to emergency works. Periods of intense rainfall conditions could exacerbate this issue. This could impact on the effective delivery of the programme.
Reopening of North Auckland Railway Line	On Going	Hypothetical	Low-Medium	KiwiRail have received funding to upgrade the North Auckland rail line (NAL) to Otiria and initial funding for the rail link to Northport. It is uncertain when or if freight rail may open on the NAL. There is no indication of resumption of passenger train services during the lifetime of the ITS. Having access to a freight rail option could however change the routes of heavy vehicles as they access this service as well as changing the actual heavy vehicle demand on the FNDC network. This would affect the prioritisation of upgrades.

Factor	Indicative Time	Uncertainty	Impact	Comments
Factors affecting cost of Transport				
Fuel Prices	On Going	Reasonably Foreseeable	Medium	Fluctuation in global fuel costs had an impact on travel demand in the 2008/9. A similar change in markets would impact on the cost of transporting goods and services in the future resulting in lower than forecast movement of heavy goods. This is of particular concern for the geographical spread businesses in the Far North who rely on vehicle transport. It would also influence personal connectivity and affordability of travel and would particularly affect the highest deprived members of the communities
Project Information and Assumptions				
Ability to Estimate Cost	Now	Near Certain	High	Suitable contingency will need to be factored into cost estimates at this stage of the project life. A low to high cost estimate will be provided.
Funding	Now	Near Certain	High	It is unlikely that all identified projects will be fully fundable by Waka Kotahi/Local Government organisations. Cost share arrangements would require suitable buy-in from all funding agencies.
Stakeholders	Now	Near Certain	Medium	There is potential for differing opinions and expectations in terms of decisions and agreements with focus on immediate jurisdiction.

APPENDIX E: OPTION ASSESSMENT REPORT

Full Option Long List

Note: Options greyed out are owned by organisations other than FNDC such as Waka Kotahi and Northland Regional Council.

Road Network Action Plan

Option Name:	Reference Number	Project Name / Description:	Source:
Bridge Improvements	2	Kaipātiki Bridge Upgrades	TCDR SH11 SSBC
		Tirohanga Stream Bridge Replacement	TCDR SH11 SSBC
		Omanaia Bridge future proofing	TCDR SH12 SSBC
		Hōreke bridge and stream access improvements	Horeke TCDR
Sea wall / edge restoration	3	Sea wall / edge restoration (Horeke)	Horeke TCDR
		Sea wall / edge restoration (Kohukohu)	Kohukohu TCDR (Includes Walking and cycling path improvements)
Stormwater Upgrades	4	Stormwater Upgrades	TCDR SH11 SSBC
		Waimamaku River headwater storage	TCDR SH12 SSBC
		Stormwater upgrades - Various Far North District locations	
Smart lighting wifi connectivity	5	Smart lighting wifi connectivity	FNDC IAMS
Smartphone traffic info apps	6	Smartphone traffic info apps	FNDC IAMS
Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	7	Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC) of top priority projects for the next 10 years (REF # 15, 16, 17). Incl REF 97 (this includes population growth in Kerikeri, connectivity to affordable areas, school connectivity)	FNDC IAMS, Longlisting workshop, RLTP 2015-21
Develop Kaitaia to Kohukohu Plan	8	TCDR – Kaitaia to Kohukohu needs plan (EES road standard)	Northland Inc
Township transport planning	9	Urban transport network connectivity - Kaitaia / Kaikohe long term arterial planning	Longlisting workshop
		Consider designations for new corridors eg. Kerikeri	Longlisting workshop
		Peri Urban transport network connectivity - Network connections to industrial areas on the outskirts of townships eg. Russell, Paihia, Kaitaia / Northpark	Longlisting workshop
		Network connections eg. Ngawha industrial area, Kerikeri, Russell, Paihia, Waipapa	Longlisting workshop, Northland Inc
Investigation of climate change mitigation measures	10	Investigation of climate change mitigation measures including the protection of low lying coastal townships and road network	Longlisting workshop
Safe passing lanes and opportunity warning signs for local roads	11	Safe passing lanes and opportunity warning signs	Longlisting workshop
Implement detour route programme	12	Secondary routes will be used more and requires resilience planning and investment in detours (Mangakahia Road, around Kaeo) (in the main report- how each individual routes would get prioritised ie. High impact/high risk routes would get higher priority) how many people used it? How many times closed?	Longlisting workshop
		Keeping important routes open during emergencies	Longlisting workshop
		Kerikeri à Paihia, alternative route through Waitete Forest	Longlisting workshop
		Kaitaia à Cape Reinga – provide alternative route	Longlisting workshop
Improve freight productivity	13	Strengthen and maintain key forestry routes and bridges to enable HPMV and 50MAX vehicles throughout the term of this strategy	LTP 2018-28
Implement FNDC designated logging routes	14	Implement FNDC designated logging routes (review already completed)	Longlisting workshop
Kerikeri CBD Bypass	15	Kerikeri Waipapa Ring Road - (1) Kerikeri Waipapa Strategic Road Network	Kerikeri Waipapa Strategic Road Network Plan, Our Kerikeri, Vision Kerikeri, Longlisting Workshop
Hone Heke Road Upgrade	16	Kerikeri Hone Heke Road upgrade - (2) Kerikeri Waipapa Strategic Road Network	Kerikeri Waipapa Strategic Road Network Plan
Kerikeri South Eastern Bypass	17	Shepards-Maraenui Route, New Bypass Road connecting Shepards / Inlet / Mill Lane area with SH10 or Kerikeri Road (well to the west o fthe Centre) - (4, 5, 6) Kerikeri Waipapa Strategic Road Network	Kerikeri Waipapa Strategic Road Network Plan, RLTP 2015-21, Vision Kerikeri
Shepards - SH10 *<combined with REF # 17>*	18	Shepards-Maraenui Route, New Bypass Road connecting Shepards / Inlet / Mill Lane area with SH10 or Kerikeri Road (well to the west o fthe Centre) - (4, 5, 6) Kerikeri Waipapa Strategic Road Network *<consider combining with REF # 17>*	Kerikeri Waipapa Strategic Road Network Plan, Our Kerikeri

Road Network Action Plan

Kerikeri - Duneside - Kapiro Road Link	19	(11, 12, 13) Kerikeri Waipapa Strategic Road Network	Kerikeri Waipapa Strategic Road Network Plan
SH10 Waipapa Loop Road	20	SH10 Waipapa Loop Klinac lane link, Kahikatea Road Extension - (7, 8, 9, 10) Kerikeri Waipapa Strategic Road Network	Kerikeri Waipapa Strategic Road Network Plan, FNDC LCLR Activity List
Kerikeri to Paihia link road	21	Kerikeri to Paihia link road	FNDC IAMS
Connection of development cul de sacs (including connection of greenways, laneways and cycleways)	22	Connection of development cul de sacs (including connection of greenways, laneways and cycleways) - Kerikeri	Longlisting workshop
New Road Sealing Projects Various district roads	23	New Road Sealing Projects Various district roads 2018-21 (sealing of prioritised metal roads) Hokianga roads sealing Koutu Loop Rd seal improvements Waiotemarama Gorge seal and shape corrections	FNDC LCLR Activity List Hokianga Tourism Association TCDR SH12 SSBC TCDR SH12 SSBC
Dust seals	24	Dust seals (YEARS 1-10)	LTP 2018-28
Tourism byway sealing to major attractions	25	Tourism byway sealing to major attractions (YEARS 1-5) Seal Bayly Road	LTP 2018-28 TCDR SH11 SSBC
Intersection safety seals	26	Road Sealing Hupara Road / SH1 (intersection safety seal)	FNDC LCLR Activity List
Resilience mitigation	27	Resilience Slips - West Coast Road RP17110	FNDC LCLR Activity List
		Resilience Slips - West Coast Road RP15850	FNDC LCLR Activity List
		Resilience Slips - Broadwood Road RP2800	FNDC LCLR Activity List
		Resilience Slips - Pawarenga Road RP6696	FNDC LCLR Activity List
		Resilience Slips - Pawarenga Road RP2580	FNDC LCLR Activity List
		Resilience Slips - Pawarenga Road RP1769	FNDC LCLR Activity List
		Resilience Slips - Motuti Road RP528	FNDC LCLR Activity List
		Resilience Slips - Various locations across the district on the Roading Network (Design and investigations)	FNDC LCLR Activity List
		Resilience Slips - West Coast Road RP15444	FNDC LCLR Activity List
		Resilience Slips - West Coast Road RP16005	FNDC LCLR Activity List
		Resilience Slips - Sullivans Rd 120 Design Stage only	FNDC LCLR Activity List
		Resilience Slips - Hansen Road RP360	FNDC LCLR Activity List
		Resilience Slips - Waikare Rd Mitigation Contract	FNDC LCLR Activity List
		Resilience Slips - Waikare Rd RP10074	FNDC LCLR Activity List
		Resilience Slips - Taumata Rd RP5900	FNDC LCLR Activity List
		Resilience Slips - Kaitaia - Awaroa Rd RP27260 - 30704 Section 1	FNDC LCLR Activity List
		Resilience Improvements (Paihia to Kawakawa)	TCDR SH11 SSBC
		Omapere Slope Stability Improvements	TCDR SH12 SSBC
Flood Mitigation Measures	28	Panguru Road Raising/ Flood Mitigation	FNDC LCLR Activity List
		Flooding - Kawakawa / Moewera, SH11 spring tides, Taumere, Kaeo	Longlisting workshop, Northland Inc
Upgrades to Existing Roads	29	Tāheke / Hōreke Road upgrade improvements Motukiore Road upgrade improvements Hōreke Road, Utakura Valley upgrade improvements *off map Signal Station Rd improvements Te Ruapekapeka Road Improvements	Horeke TCDR Horeke TCDR Horeke TCDR TCDR SH12 SSBC TCDR SH11 SSBC, Northland Inc
		Rawhiti Road to support the planned Eastern Bay of islands Great Walk Wxperience (Rawhiti)	Northland Inc

Road Network Action Plan

		Motuti Road	Northland Inc
SH11/10 – Puketona Roundabout *	30	SH11/10 – Puketona Roundabout	TCDR SH11 SSBC
SH1/SH11 - Kawakawa Roundabout *	31	SH1/SH11 - Kawakawa Roundabout (including new pedestrian connection	TCDR SH11 SSBC, Northland Inc
Far North Roundabout Upgrade (Prioritise)	32	Roundabout - Pak'n'Save roundabout too small + poor footpaths (Kaitaia) Roundabouts - Matthews Avenue roundabout – reduce congestion	Longlisting workshop Longlisting workshop
Far North Intersection Upgrades	33	Station Road/ Park Road Parkway and intersection upgrade Fairlie Cres intersection + safe crossing place Pakia Hill Intersection & Rest Area Old Whangae Road SH1 intersection adjustment, Pedestrian and cycle crossing, south bound surface treatment.	TCDR SH12 SSBC TCDR SH12 SSBC TCDR SH12 SSBC Kawakawa TCDR
SH Intersection Upgrade (Prioritise) *	34	Waiomio/SH1 intersection Waiotemarama Gorge intersection Omanaia Intersection Pakanae Cemetery Rd intersection Rawene SH12 junction SH 1 and SH10, and Duke Street intersection upgrade Signal Station Rd intersection	Northland Inc TCDR SH12 SSBC TCDR SH12 SSBC TCDR SH12 SSBC TCDR SH12 SSBC Awanui TCDR TCDR SH12 SSBC
Paihia town centre upgrades	35	Paihia town centre upgrades - pedestrianisation, improved public amenities. Paihia to Waitangi shared use path. Te Karuwha Parade upgrade Incl REF 102, 174 (additional costs)	TCDR SH12 SSBC, PDRRA/KKRRA
Township upgrades	36	Waimamaku urban treatments Town centre surface treatments SH1 and SH 10 street environment through town centre	TCDR SH12 SSBC TCDR SH11 SSBC TCDR Business Case Programme
New / extending passing lanes (Prioritise) *	37	Extend passing lane (Passing opportunities SSBC) ID: 10_4 New slow vehicle bay (Passing opportunities SSBC) ID: 13, 110, 330 New passing lane (Passing opportunities SSBC) ID: 901, 180, 405, 600 Passing Opportunities (SH12 Rawene to Katui Road SSBC) Passing bays – review network for opportunities eg. 5km (ie. Waiomo to Kawakawa SH1) Additional passing lanes - Kerikeri	TCDR Passing opportunities SSBC TCDR Passing opportunities SSBC TCDR Passing opportunities SSBC TCDR Passing opportunities SSBC Longlisting workshop Northern Edge (Tourism Infrastructure Funding)
Access improvements	38	Improve Access to Waitangi Treaty Grounds Pakanae Marae and Cemetery access Waiwhatawhata Marae access and parking Haruru Falls Road Improvements Seal Bayly Road Horeke TCDR - Mangungu reserve access improvement Williams Rd Car Park - Paihia	TCDR SH11 SSBC TCDR SH12 SSBC TCDR SH12 SSBC TCDR SH11 SSBC TCDR SH11 SSBC, Northern Inc Horeke TCDR PDRRA/KKRRA
Gateway treatments	39	Opononi Gateway Treatment Waipoua Forest Gateway - Includes cultural, amenity and speed markers, electronic signage and rest areas Omapere gateway treatment Gateway markers Kowhai Park gateway threshold SH12 Taheke Road gateway threshold North and South gateway signage Kaiwaha gateway threshold SH12 Broadway/ Guy Road bridge and gateway threshold	TCDR SH12 SSBC TCDR SH12 SSBC TCDR SH12 SSBC Horeke TCDR Kaikohe TCDR Kaikohe TCDR Kawakawa TCDR Kohukohu TCDR Kaikohe TCDR
New rest areas and upgrades	40	Rest area signage (SH12 Rawene to Katui Road SSBC) Opononi-Omapere rest areas SH10 Coopers Beach SH10 (ID:9) (Rest Areas SSBC)	TCDR SH12 SSBC TCDR SH12 SSBC TCDR Rest Areas SSBC TCDR Rest Areas SSBC

Road Network Action Plan

		SH10 Kaeo (ID:10) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH15 Twin Bridges	TCDR Rest Areas SSBC
		SH10 Cable Bay (ID:13) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Kawakawa (ID:14) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Okaihau (ID:42) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Kaitaia (ID:48) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 (ID:57) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Raetea DOC Site (ID:68) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Te Kao (ID:72) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH1 Rarawa Beach (ID:121) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		Kohukohu Ferry (ID:130) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH12 Taheke (ID:404) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		Broadwood (ID:500) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		SH12 Taheke (ID:705) (Rest Areas SSBC)	TCDR Rest Areas SSBC
		Russell Esplanade rest area	Rawene TCDR
		Te Haumi Flats Safety and Beautification Improvements - small sand spit located on the coast, sealing of the rest area and the implementation of lower speeds and safer turning movements	TCDR SH11 SSBC
		Pull over bays (SH12 Rawene to Katui Road SSBC)	TCDR SH12 SSBC
Stock effluent disposal facilities	41	Stock effluent disposal facilities required, also compliance of trucks carrying stock	Longlisting workshop
Wayfinding	42	Wayfinding signs	TCDR Wayfinding SSBC

Safety Action Plan

Option Name	Reference Number	Project Name / Description:	Source:
Road Safety Promotion	56	Road Safety Promotion (10 YEAR PERIOD)	RLTP 2015-21
		Road code promotion - driver attitude adjustment promotion	FNDC IAMS
		Promote and support REAP Safety initiatives	FNDC IAMS
Driver education	57	Driver education and enforcement - Educate urban drivers on gravel road	Longlisting workshop
Cycle safety and cycle skills training	58	Cycle safety and cycle skills training	Bike Northland
Annual Network Safety Identification Programme	59	Annual network crash analysis to identify new projects Speed limit reviews Develop strategy to assess corridor safety (local roads)	FNDC IAMS
LCLR mobility access improvements	60	Minor Safety - Disability access Kerikeri High School	FNDC LCLR Activity List
LCLR Safety Improvements	61	Minor Safety - Kapiro Road Signage	FNDC LCLR Activity List
		Minor Safety - Rawene Road Signage	FNDC LCLR Activity List
		Minor Safety - Whakataha Road Children Ahead Signs	FNDC LCLR Activity List
		Minor Safety - Associated Improvements (with pavement rehabilitation)	FNDC LCLR Activity List
		Minor Safety - Various locations across the district on the Roading Network (signs, pavement markings, guard rails etc)	FNDC LCLR Activity List
		Minor Safety - Hone Heke Road, Kerikeri	FNDC LCLR Activity List
		Minor Safety - Long Beach Road, Russell	FNDC LCLR Activity List
		Minor Safety - Ahipara Road, Ahipara	FNDC LCLR Activity List
		Minor Safety - Kaitaia-Ahipara Roads	FNDC LCLR Activity List
		Minor Safety - West Coast Road, Kohukohu (Rangiora Ferry Terminal Drop Kerb & concrete pad)	FNDC LCLR Activity List
		Parnell Street- slow zone and main street upgrade	Rawene TCDR
		Parnell Street- Mariner Street section- bus stop, speed management and pedestrian movement	Rawene TCDR
		Vogel St/SH1 turning to/from hospital - road marking/surface treatment.	Kawakawa TCDR
		Parnell Street and Marmon Street- school slow zone	Rawene TCDR
		Minor Safety - Pungaere Road Curve Signs Ahead	FNDC LCLR Activity List
		Minor Safety - Te Ahu Ahu Road and Old Bay Road (New curve advisory and delineation)	FNDC LCLR Activity List
		Minor Safety - Kerikeri Road, Wiroa Road and Waiare Road (New curve advisory and delineation)	FNDC LCLR Activity List
		Minor Safety - Oruru Road, Fairburn Road and Peria Road (New curve advisory and delineation)	FNDC LCLR Activity List
		Minor Safety - Route 7 Matauri Bay Loop Roads (New curve advisory and delineation)	FNDC LCLR Activity List
		Minor Safety - Intersection Lighting	FNDC LCLR Activity List
		Minor Safety - Access Road Intersection Upgrades	FNDC LCLR Activity List
Safety barrier improvements	62	Minor Safety - West Coast Road RP17110 (extend safety barrier)	FNDC LCLR Activity List
		Minor Safety - Aucks Road Guardrail	FNDC LCLR Activity List
		Minor Safety - Pawarenga Road RP1769 (extend safety barrier)	FNDC LCLR Activity List
		Minor Safety - Broadwood Road RP6950/RP6970 (extend safety barrier)	FNDC LCLR Activity List
		Minor Safety - Broadwood Road RP350 (extend safety barrier)	FNDC LCLR Activity List
		Minor Safety - West Coast Road RP14768 (extend safety barrier)	FNDC LCLR Activity List
		Minor Safety - Kaitaia Awaroa Rd RP3200 (new safety barrier)	FNDC LCLR Activity List
		Minor Safety - Kaitaia Awaroa Rd RP5690 (new safety barrier)	FNDC LCLR Activity List
		Other FNDC locations	Longlisting workshop
		Safety Barriers + ATP (SH12 Rawene to Katui Road SSBC)	TCDR SH12 SSBC
Minor safety rail crossing improvements	63	Kawakawa - Otiria bypass, to respond to new investment in rail line. KiwiRial investment in line to Otiria - need to consider transport requirements around heavy vehicle access to rail head at Otiria	Programme Development Workshop
		Crossing Improvements at Taumārere	TCDR SH11 SSBC
Implementation of speed management measures	64	Minor Safety - Ahipara Speed Management	FNDC LCLR Activity List
		Side streets parking capacity and slow speed environment	Kohukohu TCDR
		Herald hub slow speed environment	Kohukohu TCDR
		Main street slow speed environment	Kohukohu TCDR
		Rakautapu Road and wharf intersection- slow speed environment	Moerewa TCDR
		Ōtiria Road- slowing and managing traffic speed	Awanui TCDR
		SH1 South 50km environment and slower speed improvements.	Awanui TCDR
		SH1 North 50km environment and slower speed improvements.	Awanui TCDR
		SH 10 East 50km environment and slower speed improvements.	Awanui TCDR
		Hōreke mainstreet, slowing speeds and connecting places	Kaikohe TCDR
		SH15 Mangakahia Rd school route- speed management interventions	Moerewa TCDR
		SH1 slowing and managing traffic speeds into the township	Moerewa TCDR

Safety Action Plan

		Settlement Road- slowing and managing traffic speed	Kawakawa TCDR
		Three Bridges speed management – Hundertwasser themed painting or similar treatment. Speed management – provide edge definition – planting and/or buildings, signs – raised threshold. (Kawakawa) Speed management - Taipa to Awanui to Mangonui (50kmph in Awanui, stricter reinforcement) Lowering the SHW speed limit 100km to 80km, due to high development within Doubtless Bay and high recorded data evidence of tourist visits due to SMART infrastructure technology that will increase the tourist numbers in the future	Kawakawa TCDR Kawakawa TCDR Awanui Progressive Ratepayers Association, Ngati Kahu Environmental Portfolio Rep
Speed Limit reviews	65	Speed limit reviews	FNDC IAMS
Develop strategy to assess corridor safety (local roads)	66	Adequate road surface conditions / corridor treatments	Longlisting workshop
Identification of wandering stock	67	Wandering stock - Identify key locations and develop strategies to address	Longlisting workshop
Implement alternative travel mode options to adress drink driving	68	Drink driving - Alternative travel mode options e.g community shuttles Promotion of UBER for drink drivers	Longlisting workshop Longlisting workshop
Corridor wide Safety Improvements (SH11 Puketona to Kawakawa SSBC) *	69	Corridor wide Safety Improvements (SH11 Puketona to Kawakawa SSBC) Cycle Safety Measures (SH11 Puketona to Kawakawa SSBC)	TCDR SH11 SSBC TCDR SH11 SSBC
Opononi-Omapere Township Improvements	70	Opononi Township Improvements - Opononi-Omapere Township Safety Improvements	TCDR SH12 SSBC TCDR SH12 SSBC
Parnell Street- hospital intersection upgrade (TCDR) Rawene	71	Parnell Street- hospital intersection upgrade: Roundabout intersection option to provide better access, involves speed reduction and improving sightlines	Rawene TCDR
Provision for safe school footpaths/crossing and cycle network	72	Schools - Provision of safe footpath and cycle network Schools - Pedestrian crossings Schools - Provide consistent and fit for purpose shoulder widths and lane markings School patrol crossings Opononi School kea crossing	Longlisting workshop Longlisting workshop Longlisting workshop Longlisting workshop TCDR SH12 SSBC
School children education (REAP) - Cycle skills and safety	73	School children education (REAP) - Cycle skills and safety	Longlisting workshop
Mobile driver license and WOF *	74	Driver licensing - Easy access to training / testing facilities Driver licensing - Improve standard of teaching Driver licensing - Reconsider costs Mobile driver license and WOF - Programme wide activity Community garage facilities - Subsidised or sponsored availability of vehicle maintenance facilities for safer vehicles and driver education Subsidise pre-WOF inspection	Longlisting workshop Longlisting workshop Longlisting workshop TCDR SH11 SSBC FNDC IAMS FNDC IAMS
Minor lighting improvements	1	Lighting improvements - fill in dark spot gaps to increase safety for existing and new non motorised road and footpath users <relocate to Safety Action Plan>	LTP 2018-28, FNDC LCLR Activity List

Active Modes Action Plan

Option Name:	Reference Number:	Project Name / Description:	Source:
Access to Beaches - Reserve Planning Policy	111	Access to Beaches - Reserve Planning Policy	FNDC IAMS
Develop plan to improve pedestrian access in urban areas	112	Strategy to improve pedestrian access in urban areas	Longlisting workshop
Develop plan to prioritise recreational walking and cycling tracks	113	Recreational walking tracks prioritised plan Recreational cycling track prioritised plan	FNDC IAMS FNDC IAMS, Longlisting workshop
Develop plan to improve local cycle connections between towns	114	Consider low volume roads, all types of facilities. Consideration to be given to a full loop recreational cycle route to link Okaihau to Kerikeri.	FNDC IAMS
Overseas Investment Office policy	115	Develop policy to maximise opportunities for investors to add to the districts recreational active mode facilities and improve connectivity	FNDC IAMS
Footpath policy	116	Footpaths policy update Footpath prioritisation criteria update Accessible wide clear footpaths in urban areas Footpath policy – add shared use within distance of CBD + width / widen	FNDC IAMS FNDC IAMS Longlisting workshop
Develop township cycling plans	117	Paihia and Kaikohe cycling plans complete. Consider other urban areas such as Kerikeri, Kaitaia, Kawakawa or others Consider direct routes to CBD's.	FNDC IAMS
Implementation of pedestrian improvements in urban areas	118	Beautify and pedestrianalise "superblocks" adjacent to Kerikeri Road implementation of other township pedestrian measure (would need to be prioritised across districts). Focus on existing improvements and future opportunities of W & C environments e.g subdivision connectivity Implementaiton of REF 112	Our Kerikeri Longlisting workshop
Urban planned W & C environments	119	Focus on existing improvements and future opportunities of W & C environments e.g subdivision connectivity	Longlisting workshop
Reinstatement of unused vehicle crossings (pram connectivity)	120	Reinstatement of unused vehicle crossing mobility (Implement pram crossings connectivity programme, Provide pram crossings on footpaths to link up on other side (eg. Paihia main road))	FNDC IAMS
Identify and develop bridleways	121	Bridleways – horse trekking – tourism + transport	Longlisting workshop
Greater use of unformed roads for off-road greenway walk / cycle	122	Greater use of unformed roads for off-road greenway walk / cycle	Longlisting workshop
Implementation of urban cycling	123	Cycle / shoulder for route treatments Implementation of prioritised local cycle projects Cycleways in Paihia. Suggests change direction of one way system on Williams Road (Maheatai)Taipa bridge footpath/cycleway connectivity	Longlisting workshop, Bike Northland PDRRA/ KKRRA, Ngati Kahu Environmental Portfolio Rep
Barriers - Removal of barriers to uptake active modes	124	Barriers - Removal of barriers to uptake active modes	Longlisting workshop
Implement Paihia cycling plan	125	Implement Paihia cycling plan	FNDC IAMS
Implement Kaikohe cycling plan	126	Implement Kaikohe cycling plan	FNDC IAMS
Develop the Twin Coast Cycle Trail to support tourism growth	127	Develop the Twin Coast Cycle Trail to support tourism growth - Pou Herenga Tai Cycle trail connection with the town Option cost is based on four phases to complete, enhance, extend and link Twin Cost Cycle Trail. Note that REF 134 and REF 135 are part of the Twin Cost Cycle Trail however have been separated from this cost as these options have been developed to a detailed staging	LTP 2018-28
Potential BMX trail on parkway edge	128	Potential BMX trail on parkway edge (subject to investigation and remediation on landfill site), Kaikohe - owned by other Kaikohe and other districts sportsville	Kaikohe TCDR
Ngawha Springs cycle trail	129	Ngawha Springs cycle trail - Kaikohe	Twin Coast Cycle Trail, LTP 2018-28
Kawakawa cycle trail alternative route	130	Kawakawa cycle trail alternative route	Twin Coast Cycle Trail, LTP 2018-28
Okiato to Russell on road cycle route	131	Okiato to Russell on road cycle route	Twin Coast Cycle Trail, LTP 2018-28
Horeke to Wairere Boulders cycle link	132	Horeke to Wairere Boulders cycle link	Twin Coast Cycle Trail, LTP 2018-28
Horeke to Rawene cycle route (removed from TCCT)	133	Horeke to Rawene cycle route	Removed from Twin Coast Cycle Trail

Active Modes Action Plan

Opua to Paihia Walkway + via Aucks Road (Northland Integrated Cycling Implementation Plan)	134	Opua to Paihia (Northland Integrated Cycling Implementation Plan) - Extension of the Twin Coast Cycle trail	TCDR Business Case Programme,Pou Herenga Tai Twin Coast Cycle Trail Trust
Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	135	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	TCDR Business Case Programme, Pou Herenga Tai Twin Coast Cycle Trail Trust
Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	136	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	TCDR Business Case Programme
Horeke to Mangungu Mission House (Northland Integrated Cycling Implementation Plan)	137	Pou Herenga Tai enhancement - Horeke to Mangungu Mission House (Northland Integrated Cycling Implementation Plan)	Twin Coast Cycle Trail, LTP 2018-28
Tokoreireia (Monument Hill): cycle to summit	138	Tokoreireia (Monument Hill), Kaikohe: cycle to summit	Kaikohe TCDR
SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop	139	SH12 Taheke Road, Kaikohe: gateway threshold, cycle trail junction and rest stop	Kaikohe TCDR
Clendon Esplanade shared zone- one way vehicle movement, 2 way cyclists	140	Clendon Esplanade, Rawene shared zone- one way vehicle movement, 2 way cyclists	Rawene TCDR
Pembroke Cycle Connection improving access to the township	141	Pembroke Cycle Connection, Moerewa improving access to the township	Moerewa TCDR
Cycle Link Hundertwasser Park	142	Cycle Link Hundertwasser Park, Kawakawa - owned by other KHPCT	Kawakawa TCDR
Cycleway Rail Crossing, Boswell St and Gillies St to SH1 walkway establishment and upgrade.	143	Cycleway Rail Crossing, Boswell St and Gillies St to SH1 walkway establishment and upgrade - Kawakawa	Kawakawa TCDR
Kohukohu township to ferry landing mangrove boardwalk (covered in REF 152)	144	Kohukohu township to ferry landing mangrove boardwalk project - Prevent cyclists/walkers/visitors from transiting via the main road, also could be a significant attraction.	Hokianga Tourism Association Inc.
Opononi-Omapere Shared User Path	145	Opononi-Omapere Shared User Path - Including Pakia Hill from Omapere to the lookout point	TCDR SH12 SSBC, Hokianga Tourism Association
Develop recreational cycle facilities	146	Cycling Improvements (Develop and implement Urban Rural recreational facilities)	FNDC LCLR Activity List
Destination facilities for cyclists and scooters (including for schools)	147	Provision of secure facilities - Sufficient bike parks, electric vehicle / bike charging stations Improve Destination Facilities for Cyclists (SH11 Puketona to Kawakawa SSBC) School destination facilities for cyclists	Longlisting workshop, Our Kerikeri TCDR SH11 SSBC Longlisting workshop
Township streetscape improvements	148	Moerewa township centre streetscape improvements to pedestrian environment	Moerewa TCDR
Residential streetscape improvements	149	Residential streetscapes - improving footpath connections and amenity	Moerewa TCDR
Improved pedestrian access in townships	150	Minor Safety - Kea Crossing and Bus Bay Walking and cycling path & seawall improvements Relocation of pedestrian crossing to opposite the Horotutu	FNDC LCLR Activity List TCDR FNDC elements PDRRA/KKRRA
New or Improved footpath / shared use Projects	151	Footpath new works (new builds) Minor Safety - Mangonui SH10 Connection - Footpath Rakautapu Road trail/ bush trails Hōne Heke trail to Puriri Tree Laneway trails- Broadway to Lindvart Park (Kaikohe) Footpath Improvements (Opononi-Omapere) [SH12 SSBC] Moerewa School and Kura Kaupapa Māori o Taumārere - trail edges connecting to the cycleway Trail 2 - The River Loop Oxbow Trail, Awanui River edge restoration and esplanade priority areas Opua to Paihia walking track upgrade Te Mirumiru to Station Road Fire Station rear yard walkway. Footpath improvements (SH12 Rawene to Katui Road SSBC) Pedestrian access across SH1 North Bridge (Awanui) Footpath improvements SH1 North - Awanui	FNDC LCLR Activity List FNDC LCLR Activity List Kohukohu TCDR Kaikohe TCDR Kaikohe TCDR TCDR SH12 SSBC Moerewa TCDR Awanui TCDR TCDH SH11 BC + TCCT 10 year plan Kawakawa TCDR SH12 SSBC Awanui TCDR Awanui TCDR

Active Modes Action Plan

		Footpath improvements SH 10 East - Awanui Station Road 'lower parkway' shared path and Cycle Trail entry Lindvart Park - potential walk and cycle links to Twin Coast Cycle Trail- indicative and controlled by Management Plan Beach Road/ Old Beach Road trail and threshold treatment	Awanui TCDR Kaikohe TCDR Kaikohe TCDR Kohukohu TCDR
Implementation of prioritised TCDR footpath / shared use path projects	152	Reclaimed bay heritage trails and saltmarsh boardwalk Simson Park- improving connections and access through the park Moerewa TCDR - Te Rere Tiria waterfall access Trail 1 - Nature and Sports Trail Loop and Awanui River edge restoration. Trail 3 - River trail to Unahi, Awanui River edge restoration and esplanade priority areas. Trails 4 - River Trail to Kaitaia, Awanui River edge restoration and esplanade priority areas. Parnell Street and Manning Street footpath extensions Walking trail and limestone reef viewing platform (SH12 Rawene to Katui Road SSBC) Shared Use Path Extension and Slip Repair at Haruru Rawene TCDR - Rawene Green Links projects Walking and cycling path extension stage one- to Tauteihiihi Marae Walking and cycling path extension stage two- to The Narrows (vehicle ferry) Hōreke Road pedestrian and cycle link from the town to the School (and to Māngungu Mission) Rawene Domain walk and cycle trails	Moerewa TCDR Awanui TCDR Awanui TCDR Awanui TCDR Awanui TCDR Awanui TCDR Rawene TCDR TCDR SH12 SSBC TCDR SH11 SSBC Rawene TCDR Kohukohu TCDR Kohukohu TCDR Horeke TCDR Rawene TCDR
Implementation of prioritised TCDR cycle projects	153	Implementation of prioritised TCDR cycle projects (including REF 138-141, 143, 145)	TCDR Business Case Programme, Longlisting Workshop, Programme Development workshop

Travel Demand Management Action Plan

Option Name	Reference Number:	Project Name / Description:	Source:
Review District Parking Plan and Policy	88	District wide parking survey update - Parking Inventory (incl Paihia) Parking at boat ramps (district wide) - TIF Application District Parking Strategy and Policy (Undertake Parking Strategy) Peripheral parking + info boards – 'distance + time' (active mode linkages) Parking Bylaw review Incentivise collaboration and sharing and faciltate transport to Centre. Improve utilisation of existing parking areas such as Rugby Fields, Turner Centre, Baptist Church, Northtec, Packhouse Market, Kerikeri High School No Freedom Parking Bylaw - Paihia	FNDC IAMS, PDRRA/KKRRA FNDC IAMS FNDC IAMS, PDRRA/KKRRA, TCDR SH11 SSBC Longlisting workshop FNDC IAMS Our Kerikeri PDRRA/KKRRA
Freedom Camping Bylaw Review	89	No Freedom Parking Bylaw - Paihia	PDRRA/KKRRA
Developing parking management plans	90	Parking management plans to reduce attractiveness of driving individually with private vehicles	Longlisting workshop
Barrier Removal Programme (AT) – Human Rights Commission Councils	91	Barrier Removal Programme (AT) – Human Rights Commission Councils. Focuses on accessibility for disabled New Zealanders	Longlisting workshop
Development and promotion of loop route journeys	92	Loop routes (for tourists and domestic, recreational, promotional opportunities)	Longlisting workshop
Develop HCV operation strategy	93	Develop HCV operation strategy - Restrictions around schools Introduce truck free hours per day or set truck free days per week to reduce risk between logging trucks and tourists	Longlisting workshop Hokianga Tourism Association Inc.
Review Engineering Standards (Existing Infrastructure)	94	Review Engineering Standards (Existing Infrastructure) - Footpaths, Crossings, Existing roads for new developments (UNDERWAY)	Longlisting workshop
Review Engineering Standards	95	Review Engineering Standards (Future Provision) - Pedestrian planning design guide, Future modes, Future focus on urban from with high quality W & C infrastructure, Sight lines/ visibility ie. Heritage Bypass	Longlisting workshop
Walking school bus	96	Walking buses for schools and alternative drop off zone	FNDC IAMS, Longlisting workshop
Strategic transport planning and design to reduce car-dependence	97	Strategic planning and design to not promote car-dependence of the ~200ha block of land between the golf course, SH10, and Waipapa Rd and ~24ha 'Woodlands' block near Kerikeri Centre	Our Kerikeri
Health Clinic link and car park upgrade	98	Health Clinic link (improved pedestrian access) and car park upgrade - Horeke	Horeke TCDR
Development of data sharing capabilities	99	Increase traffic data collection. Share with communities via council website eg. 'Ecovisio' ped counters (trialling services)	Longlisting workshop
Town Hall, information kiosk and car park improvements	100	Town Hall, information kiosk and car park improvements Horeke (a stop along the Pou Herenga Tai Cycleway)	Horeke TCDR
Relocation of community facilities	101	Relocation of Bus Depot from the center of Paihia town Study and optimisation of community facility locations. Centralise some, decentralise others	PDRRA/KKRRA Longlisting workshop
Paihia Parking Strategy	102	Paihia parking strategy	Draft Transport Programme for 21-31 LTP
Accessibility Infrastructure	103	Installation of accessibility infrastructure i.e. mobility scooter facilities – ramps, wheelchairs, etc LCLR mobility access improvements	Longlisting workshop
Parking and facilities	104	Parking and facilities at tourist destinations (Shipwreck Bay, Ahipara foreshore, Kaka Street) Parking and facilitites in urban centres (Kerikeri, Paihia)	Longlisting workshop
Education initiative / marketing towards behaviour change	105	Education initiative / marketing - assume included with behaviour change strategy Work from home promotion Barrier Removal Programme (AT) – Human Rights Commission Councils. Focuses on accessibility for disabled New Zealanders	Longlisting workshop FNDC IAMS

Public Transport / Rideshare Action Plan

Option Name:	Reference Number:	Project Name / Description:	Source:
Public Transport / Rideshare promotion	158	Ride share promotion	FNDC IAMS
Application of technology to support public transport	159	PT mobile apps / online portal for locals and visitors (timetables / arrival times, easy payment /easy access to PT / ferries cycle routes, online incentives)	Longlisting workshop
Public Transport / Rideshare subsidy	160	Worker bus support grants	FNDC IAMS
		Subsidise shuttle services	Longlisting workshop
		Co-sharing funding on PT services with other governments	Longlisting workshop
		Regional bus card (senior citizen bus card)	Longlisting workshop
		Subsidise services transporting both people and freight/posts	Longlisting workshop
		Subsidises for rideshare apps (for communities)	Longlisting workshop
Total mobility scheme	161	Total Mobility Scheme - Community raised solutions to accessible transport, Provide routes in the Far North, Subsidise shuttle services (Assists eligible users for parts of the journey)	Longlisting workshop
Bus stops and shelters policy	162	Bus stops and shelters policy - Owner maintenance, locations	FNDC IAMS
Public transport / rideshare future planning	163	PT / ride share planning to address changing land use	Longlisting workshop
		Autonomous PT services / pick up services	Longlisting workshop
		Trialling once a week type services on key routes	Longlisting workshop
		Consider aesthetics when determining PT routes	Longlisting workshop
Park and Ride Plan	164	Park'n'ride facilities near PT services	Longlisting workshop
Implement community based ride share projects	165	Community based operations (ie. ride share, Borrow /leasing vans, Utilising existing school bus operations)	Longlisting workshop
		Intracommunity carpooling services	Longlisting workshop
		Implement Carpooling and Rideshare Services (SH11 Puketona to Kawakawa SSBC)	TCDR SH11 SSBC
		Formalise informal ride share facility at Puketona Junction	Longlisting workshop
Medical / elderly ride share provisions	166	Partnerships with DHB and other organisations (schools, communities) - Ride share systems to medical facilities and Maraes	Longlisting workshop
		PT /ride share provision for medical / retail access for elderly	Longlisting workshop
Improving existing services to township (collaboration with NRC)	167	Buses connect the Centre with park'n'ride locations such as Redcliffs Rd, Inlet Rd, Puererua Rd, Pungaere Rd	Our Kerikeri
		Linking bus service with Intercity routes (ie. timetable and location of stops)	Longlisting workshop
Implement public transport / rideshare projects (collaboration with NRC)	168	PT / Rideshare connection between Kerikeri and Waipapa	Longlisting workshop
		Proper / frequent PT services in Kerikeri (consider electric vehicles) - PT services near schools (ie. Kerikeri primary and high school)	Longlisting workshop
		Key routes in need of PT / ride share services - Kaeo à Whangaroa; Kaikohe à Moerewa; Between Hokianga, Kaitaia, Kerikeri, Kaikohe, Kawakawa, Paihia	Longlisting workshop, Northern Edge (Tourism Infrastructure Funding)
Absorb the Kerikeri school transport operation into a public bus service	169	Absorb the Kerikeri school transport operation into a public bus service	Our Kerikeri, Longlisting workshop
Improve Bus Connections in Northland (SH11 Puketona to Kawakawa SSBC) *	170	Improve Bus Connections in Northland (SH11 Puketona to Kawakawa SSBC)	TCDR SH11 SSBC
Develop transport hubs	171	Integration with car-share hub & EV fast-chargers (needs to be considered in conjun	Our Kerikeri
Improve mobility accessibility on public transport	172	Wheelchair accessible PT / shuttles	Longlisting workshop
		Mobility accessible bus route: Paihia à Waipapa à Kerikeri à Kawakawa	Longlisting workshop
Bus stop facility improvements and new locations	173	Improving existing bus stop facilities (shelters, signs, timetables and lighting) and locations	Longlisting workshop
		New bus stop locations e.g outside of Paihia mall	PDRRA/KKRRA
		Bus Stop Improvements (SH11 Puketona to Kawakawa SSBC)	TCDR SH11 SSBC

Public Transport / Rideshare Action Plan

		Existing Pedestrian Crossing dis-establishment, new crossing, bus parking area upgrade.	Kawakawa TCDR
Taxi pick up / drop off areas	174	Provision of taxi pick up / drop off areas in Paihia	Longlisting workshop
Dedicated stop shelters for hitch hikers	175	Dedicated stop shelters for hitch hikers	Longlisting workshop

Harbour Action Plan

Option Name:	Reference Number:	Project Name / Description:	Source:
Subsidy	179	Ferry local subsidy scheme	FNDC IAMS
		The Pou Herenga Tai Twin Coast Cycle Trail Trust - Experience Development Plan promotes by boat and by bike. The Ranui Ferry is already providing ferry services for cyclists/pedestrians between Horeke, Kohukohu and Rawene. Providing a subsidy to assist with daily operations during quiet months (April to September) will provide sustainability for the service.	Pou Herenga Tai Twin Coast Cycle Trail Trust
Hokianga Harbour Long Term Plan	180	Hokianga Harbour Long Term Plan	FNDC IAMS
		Hydrodynamic survey interpretive report	FNDC IAMS
Electric Ferry feasibility study	181	Electric Ferry feasibility study (some interaction with Hokianga LTP, Option 180)	FNDC IAMS
Investigating sea-shipping feasibility	182	Forestry on seas - Doubtless Bay to Marsden Point	Longlisting workshop
Speed management at wharfs	183	Ferry landing, loading, and waiting - slow speed environment e.g Raurere, Horeke, Kohukohu	Rawene TCDR
Improvements to existing ferry services	184	Hokianga Ferry (Kohu Ra Tuarua) - improving existing services (equipment renewals) - 7years	LTP 2018-28
		Hokianga Ferry - Ferry services should be more frequent and go later at night, particularly during summer	Hokianga Tourism Association
Investigate new ferry services	185	Provide pedestrian / cyclist Hokianga ferry service (Horeke à Kohukohu à Rawene à Omapere)	Longlisting workshop
		Passenger ferry service (Rawene, Kohukohu)	Kohukohu TCDR, Rawene TCDR
Car park security	186	Security / CCTV at parking lots near wharfs	Longlisting workshop
Wharf supporting infrastructure	187	Opononi / Opua / Whangarora boat ramps congested - increase size of boat ramps to accommodate tourists during peak seasons	Longlisting workshop
		Clendon esplanade boat ramp upgrade	Rawene TCDR
Boat ramp parking	188	Boat ramp, wharf and car parking upgrade	Horeke TCDR
		Boat ramp parking improvements (SH12 Rawene to Katui Road SSBC)	SH12 SSBC
		Māngungu wharf and Mission House improvements	Horeke TCDR
Access onto water	189	Improve access onto the water e.g Kohukohu	Horeke TCDR
		Herald Hub water access	Kohukohu TCDR
		Memorial arch rest stop and water access	Kohukohu TCDR
		Paheke waka landing upgrade	Kohukohu TCDR

Maintenance, Operations and Renewal Action Plan

Option Name:	Reference Number;	Project Name / Description:	Source:
Renewals	194	Drainage renewals (WC 213) Environmental renewals (WC 221) Traffic services renewals (WC 222)	AMP 2018-21, RLTP 2015-21 AMP 2018-21, RLTP 2015-21 AMP 2018-21, RLTP 2015-21
Footpath Maintenance	195	Footpath maintenance (WC 125)	AMP 2018-21
Sealed pavement maintenance	196	Sealed pavement maintenance (WC 111) Aggregated tracked onto sealed roads particularly at intersection / chip loss on steep grades (due to runoff) Logging roads maintenance (COVERED IN WC111 AND WC 112)	AMP 2018-21, RLTP 2015-21 Longlisting workshop Hokianga Tourism Association Inc.
Unsealed pavement maintenance	197	Unsealed pavement maintenance (WC 112)	AMP 2018-21, RLTP 2015-21
Routine Drainage maintenance	198	Routine Drainage maintenance (WC 113)	AMP 2018-21, RLTP 2015-21
Structures maintenance	199	Structures maintenance (WC 114)	AMP 2018-21, RLTP 2015-21
Environmental maintenance	200	Environmental maintenance (WC 121) - this WC provides for the routine care and attention of the road corridor to maintain safety, aesthetic and environmental standards ie. Vegetation clearance important particularly on lower use roads snow clearing and ice control vegetation control (see conditions of funding below) litter collection on rural roads removal of, and protection against, graffiti on road structures maintenance and removal of effluent from stock-truck effluent disposal facilities – see Stock effluent facilities any special treatment of run-off from the road to maintain water quality sweeping loose chip and detritus from road intersections removal of rocks and minor slip material from the road or catch fences maintenance of rest areas maintenance of protection planting, including maintenance pruning non-recoverable costs arising from clearing the carriageway of damaged vehicles, crash debris and spillages that are not the responsibility of emergency services, and non-recoverable costs associated with removal of abandoned vehicles from road reserves.	AMP 2018-21, RLTP 2015-21, Longlisting Workshop
Traffic services maintenance	201	Traffic services maintenance (WC 122)	AMP 2018-21, RLTP 2015-21
Operational traffic management	202	Operational traffic management (TMP process etc) (WC 123)	AMP 2018-21, RLTP 2015-21
Cycle path maintenance	203	Cycle path maintenance (WC 124)	AMP 2018-21, RLTP 2015-21
Level crossing warning devices	204	Level crossing warning devices (WC 131)	AMP 2018-21, RLTP 2015-21
Minor events	205	Minor events - weather events which result in less than $100,000 of damage (WC 140)	AMP 2018-21, RLTP 2015-21
Network and asset management	206	Network and asset management - Staffing costs for local road maintenance (WC 151). This includes the following: Traffic data collection strategy Capture data on maintenance activities Pavement strength testing survey Drainage stategy Resilience strategy Maintenance Intervention strategy Improving freight productivity (strategy) Unsealed road strategy Development of HPMV routes (Seal roads – prioritise heavy vehicle routes (Old Mill Road, Matawaia, Pokapu, Waiomio)) We've reclassified our existing road network to national standards. We should now plan an optimised network of self-explaining roads TREIS database app - Informs public on closed roads and detour routes	AMP 2018-21, RLTP 2015-21 NTA, Northern Edge (Tourism Infrastructure Funding) Longlisting workshop NTA NTA NTA NTA NTA Longlisting workshop Longlisting workshop NTA

Maintenance, Operations and Renewal Action Plan

Bridges and Large Culvert Replacements	207	Bridges and Large Culverts Replacement (WC 341). Including the following	AMP 2018-21
		Bridges and Large Culverts Replacement - West Coast Road Bridge G01	FNDC LCLR Activity List
		Bridges and Large Culverts Replacement - Matawherohia Road Bridge I48, Kaeo	FNDC LCLR Activity List
		Bridges and Large Culverts Replacement - Kenana Road Culvert Replacement E94	FNDC LCLR Activity List
		Bridges and Large Culverts Replacement - Otaua Road Bridge N28, Taheke	FNDC LCLR Activity List
		Culverts Replacement - Sawyer Road Culvert F12	FNDC LCLR Activity List
		Culverts Replacement - Tipa Tipa Road UN 22 Kaeo	FNDC LCLR Activity List
		Culverts Replacement - Zidich Road Culvert C35	FNDC LCLR Activity List
		Timber replacement - Churtons Road Bridge C13	FNDC LCLR Activity List
		Culverts Replacement - Okaewai Road Bridge UN11	FNDC LCLR Activity List
		Culverts Replacement - Inksters Road Culvert Replacement W35	FNDC LCLR Activity List
		Culverts Replacement - Kenana Road Culvert Replacement E16	FNDC LCLR Activity List
		Culvert replacements and graders blocking culverts when carrying out grading (Waiomio near SH1 – culvert sinking)	Longlisting workshop
Structures component replacements	208	Structures component replacements (WC 215)	AMP 2018-21, RLTP 2015-21
Sealed road pavement rehabilitation	209	Sealed road pavement rehabilitation (WC 214)	AMP 2018-21, RLTP 2015-21
Existing sealed road resurfacing	210	Sealed road resurfacing (WC 212)	AMP 2018-21, RLTP 2015-21
Unsealed road metalling	211	Unsealed road metalling (WC 211)	LTP 2018-28, AMP 2018-21, RLTP 2015-21
Activity Management Improvement Plan	87	Activity Management Improvement Plan (3 YEAR)	RLTP 2015-21

Options Assessment Report

INTRODUCTION

A Multi Criteria Analysis (MCA) methodology was used to assess all options included in the long list. These criteria were taken from NZ Transport Agency guidelines for option evaluations for business cases. This allowed the options to be ranked against each other with the option ranking informing the development of programmes.

The full assessment criteria framework is shown in Table 43.

Table 43: MCA framework

	Investment Objectives	Benefits	Weight	KPI	Measures
INVESTMENT OBJECTIVES	Improve safety through a safe system approach of physical and behavioural interventions to reduce deaths and serious injuries in the Far North	A safer system	25%	Decrease in deaths & serious injuries	Reduction in transport related deaths & serious injuries Average annual fatal and serious injury crashes/ 100M vehicle KM
	Proactively manage infrastructure to support growth to make a better transport system that creates equitable access for our communities	A better transport network	25%	Network condition meets peer group standards	Percentage travel on road network classified as smooth Customer satisfaction with operation of network
	Make best use of our existing network by optimising network efficiency and affordability to achieve a better and more sustainable transport system			Healthier communities - Reduced dust - Wellbeing - Access - perception	# of dwellings affected by roading dust Increase in wellbeing assessed including social connections Perception of safety and ease of walking and cycling Physical health benefits from active modes
				Uses / enhances existing infrastructure, facilities and services	Project uses / enhance existing network
				Access to key destinations – all modes	% within travel threshold to key social and economic activities by different modes
	Enhance and promote transport choices both 'within' and 'between' communities to provide a` viable, accessible and sustainable transport system	Sustainable transport choices for all	20%	Ease of use + Traffic – mode share	Percentage of low floor and wheelchair accessible services Number of transport users by mode, expressed as percentages
				Increase in number of people walking and cycling (People –	Number of pedestrians and cyclists

	Investment Objectives	Benefits	Weight	KPI	Measures
				throughput + Spatial coverage)	% completion of planned walking and cycle facilities
	Proactively improve network resilience and reliability to maintain our transport lifelines all day, every day.	Improved resilience of key roads in Far North	20%	Reduced number and duration of unplanned closures (Temporal availability – road)	Number and duration or resolved road closures: urban >=2 hrs, rural >+12hrs Reduction in school days lost
				Increase in high impact high risk routes with viable alternatives	Percentage of high risk, high impact routes with a viable alternative
	Improve affordability of transport infrastructure by transparently prioritising investment and diversifying funding streams for transport so our communities have a clearer understanding of why and how decisions are made	District resource allocation delivers community transport needs	10%	Ability of projects to be funded	Percentage of PBC projects delivered Efficiency of network spend/km
				Range of funding sources	$ projects funded outside NLTF subsidy
IMPLEMENTABILITY	Implementability	**Impact on other modes** – is this project likely to introduce conflicts with other modes? This may have negative impacts on overall network efficiency or create consenting risks for the programme. **Deliverability** – is it likely to be difficult to deliver within 2018-2028 due to constructability or consenting, property, safety challenges or dependencies with other transport projects? Are new technologies involved? Are there opportunities to integrate network development with other planned projects? **Financial feasibility** – is the level of planned investment likely to be affordable in the context of funding available through the NLTP? Have whole of life costs been assessed?			
ASSESSMENT OF EFFECTS	Economic wellbeing	**Transport system integration** - connectivity / integration other transport modes (i.e. trains, buses, walking and cycling networks), wider transport system effects/benefits, improve accessibility, increase mode shift to public transport, behaviour change. **Cost and construction risk** - complexity and risk in construction (including consideration of constructability), complexity in programme, cost and complexity of safely undertaking works (including works on contaminated land).			
	Cultural wellbeing	**Mana whenua values** - sites and places of cultural heritage value to mana whenua **Heritage and archaeology impacts** - sites and places of valued heritage buildings, scheduled trees (with heritage value) and places, places of archaeological value			

	Investment Objectives	Benefits	Weight	KPI	Measures
	Social wellbeing	**Land use integration** - integration with existing and future land use scenarios (including Structure Plans or Plan Changes), size and shape of potential development parcels to enable appropriate building typologies, ability to consolidate residual land, access that does not prevent neighbouring development **Social cohesion** - connectivity / accessibility for and to the existing urban areas including use and access to employment, other communities or within the same community, shops / services, severance of the existing community (including consented), scale of effect on existing community facilities community and open space, public access to the coast, rivers and lakes **Urban design outcomes** - context and planned place making, an inviting, pleasant and high amenity public realm, open space integration, active interface between public and private realm, scale of long-term impact on the amenity and character of the surrounding environment. **Construction impacts, disruption** - traffic & noise, earthworks related effects including dust, quality of life and amenity, economic impacts on businesses / community / town centres.			
	Environment wellbeing	**Landscape, visual effect** - natural landscape and features such as streams, coastal edges, natural vegetation and underlying topography – acknowledging planned changes to area considering urban land use / zoning. Natural character and outstanding natural features/landscapes including geological features (mapped and protected features) **Ecological effects** - significant indigenous flora; significant habitats of indigenous fauna; Indigenous biodiversity; stream / waterway / marine ecology			

The long list of options was assessed against the MCA and each criterion was allocated one score from an eleven point scale as outlined in Table 44.

Table 44: Scoring scale

Effects criteria	Scoring	Indicators for Assessment
Very high adverse impact	-5	**Regional Level or Greater Impact** = May impact on a regionally significant resource and / or May have a substantial / complete impact on the feature / resource / community identified; and / or **Long Term / Permanent** = 20+ years.
High adverse impact	-4	**District Level Impact** = May impact on a district significant resource or may be experienced by a district wide audience; and / or May have a high extent of impact on features / resource / community identified; and / or **Long Term / Permanent** = 10 – 20+ years.
Moderate adverse impact	-3	**Ward Level Impact** = May impact on a locally significant resource (e.g. significant within a ward) or may impact on a local board community / geographic scale; and / or May have a moderate extent of impact on the feature / resource / community identified; and / or **Medium term** = 5 – 10 years.

Effects criteria	Scoring	Indicators for Assessment
Low adverse impact	-2	**Local Area Level Impact** = May impact on a locally significant resource (e.g. significant within an ecological district or within a catchment) or may impact on a neighbourhood; and / or May have some extent of impact on the feature / resource / community identified; and / or **Short Term** = 1 – 5 years.
Very low adverse impact	-1	**Individual level impact** = May impact on resources not otherwise identified for their values or with otherwise innominate value or may impact a limited number of households (i.e. 20 households / 50 people); and / or May have a low extent of impact on the feature / resource / community identified; and / or **Very Short Term** = < 1 years.
Neutral impact	0	Negligible impact or change from current situation / neutral
Very low positive impact	1	**Individual level benefit** = Benefits may be experienced for resources not otherwise identified for their values or with otherwise innominate value. Benefits may be experienced by a limited number of households (i.e. 20 households / 50 people); and / or May have a low or small extent of benefits on the feature / resource / community identified; and / or **Very Short Term** = < 1 years
Low positive impact	2	**Local Area Level Benefit** = Benefits may be experienced by defined local environment or sub-catchment. Benefits may be on Census Area Unit or experienced by a neighbourhood; and / or May have a low extent of benefits on the feature / resource / community identified; and / or **Short Term** = 1 – 5 years.
Moderate positive impact	3	**Ward Level Benefit** = Benefits may be experienced for values of a ward wide community / geographic scale; and / or May have some extent of benefits on the feature / resource / community identified; and / or **Medium Term** = 5 – 10 years.
High positive impact	4	**District Level Benefit** = Benefits may be experienced for a district significant resource / experienced by a district wide audience; and / or May have a high extent of benefits on the feature / resource / community identified (and confident of benefit being realised); and / or **Long Term / Permanent** = 10 – 20+ years.
Very high positive impact	5	**Regional Level or Greater Benefit** = Benefits may be experienced for a sub-regionally significant resource / experienced by a sub-regional audience; and / or May have a high extent of benefits on the feature / resource / community identified (and confident of benefit being realised); and / or **Long Term / Permanent** = 10 – 20+ years.

Effects criteria	Scoring	Indicators for Assessment
-	Not scored	If applying a 'score' isn't considered appropriate by the criteria owner / technical specialist, a qualitative assessment (non-scored) or ranking (from 1 (most preferred) to 5 (less preferred)) of the criteria is required. **Explanation and justification should be undertaken to qualify the revised scoring methodology. Agreement with the project team and technical lead is required for the revised scoring approach.**

For the assessment of effects section of the MCA the following scoring assumptions have been applied as detailed in Table 45.

Table 45: MCA scoring assumptions

Subject	Assumption
Implementability criteria	The assessment against the implementability scoring criteria was limited to a 5-point scale of 0 to -5 in order to avoid options being too heavily weighted. It was assumed that implementability will focus more on the negative implications therefore a score of 0 suggesting easy deliverability, no or positive impacts on other modes and financially feasible.
Strategies / promotions	Several options that were strategies or initiatives were scored based on their expected outcomes rather than the strategic document itself. Therefore, strategies covering an extensive area is likely to have scored well against investment objectives relative to other individual projects.
Investment Objective 2 measure	In some circumstances, the measure: 'Customer satisfaction with operation of network' under the KPI: 'Network condition meets peer group standards' was assumed to include other areas of the network without being limited to the road network.
Cultural Wellbeing and Environmental Wellbeing criteria	For most cases, the exact location of the projects work is unknown at this stage, therefore the Cultural and Environmental impacts cannot be determined. In this regard, the options applicable to this assumption have been scored as 0 under the cultural wellbeing and environmental wellbeing criteria.
Investment Objective 6 measure	In some circumstances, the measure: '$ projects funded outside NLTF subsidy' under the KPI: 'More projects access wider range of funding sources' was assessed as a prediction based on the options eligibility as opposed to a confirmed scenario.
NZTA / NRC owned projects	A number of options that are either NZTA or NRC owned have been scored against the MCA criteria. However, for the purposes of the option evaluation process and the resulting recommended programme, these NZTA / NRC owned options have not been included in the scoring graphs or ranking tables below.
Weightings	As shown in Table 43, weightings have been given to each investment objective. These weightings were established during the ILM workshop, which was held in the early stages of the PBC. For the purpose of this assessment, the options were scored against the MCA criteria considering equal weighting. It was envisaged that weightings will be considered in later stages of the PBC (i.e. sensitivity testing of the programmes developed).
Comparison between Implementability criteria and Investment Objective 6	These two criteria may appear similar with regards to the financial feasibility / affordability component, however there is a clear distinction with the intention of each criteria. The implementability criteria focuses on the rational and practicality of the option (with respect to existing FNDC projects / BAU activities/ consenting requirements etc) and the feasibility of the option to be executed within the 10-year implementation period (by comparing options costs and existing FNDC spend). On the other hand, the essence of Investment Objective 6 lies in the implementation of an effective prioritisation process, thereby increasing the ability for high-priority options

to be funded successfully. In essence, the very production of this PBC will help the transparency and prioritisation of the FNDC programme and allow the strongest projects to be put into the funding allocation systems. Note that the majority of options have a negligible score against Investment Objective 6 given that a prioritisation process is not applicable at this stage and is rather the outcome of the PBC. A positive score was given for those programmes that had potential for a wider range of funding streams e.g. included activities that were potentially PGF or TIF eligible rather than just under the NLTP.

OPTION EVALUATION

The option evaluation results were analysed for each of the long list of options using three different categories, which are as follows:

- Comparison of total scores (comprising of investment objective, implementability and wellbeing scores) within each of the 7 Action Plan areas
- Comparison of investment objective scores only within each of the 6 Investment Objective criteria
- Comparison of total scores (comprising of investment objective, implementability and wellbeing scores) over all 7 Action Plan areas

The following sections summarise the MCA results for the above categories.

ROAD NETWORK

The Road Network Action Plan considered projects involving new roading infrastructure, upgrades or mitigations to existing infrastructure belonging to the broad categories below:

- Infrastructure upgrades
- Technology
- Investigations / future planning
- Improvements to detour routes
- Heavy commercial vehicle routes
- Kerikeri-Waipapa road network projects
- New roads
- Road sealing
- Resilience mitigation
- Flood mitigation
- Upgrades to existing roads
- Intersection upgrades
- Town centre upgrades
- Access improvements
- Gateway treatments
- Rest areas
- Stock effluent disposal facilities

The assumptions made in the process of scoring the long list of projects for the Road Network action plan are summarised in Table 46.

Table 46: Road Network scoring summary / assumptions

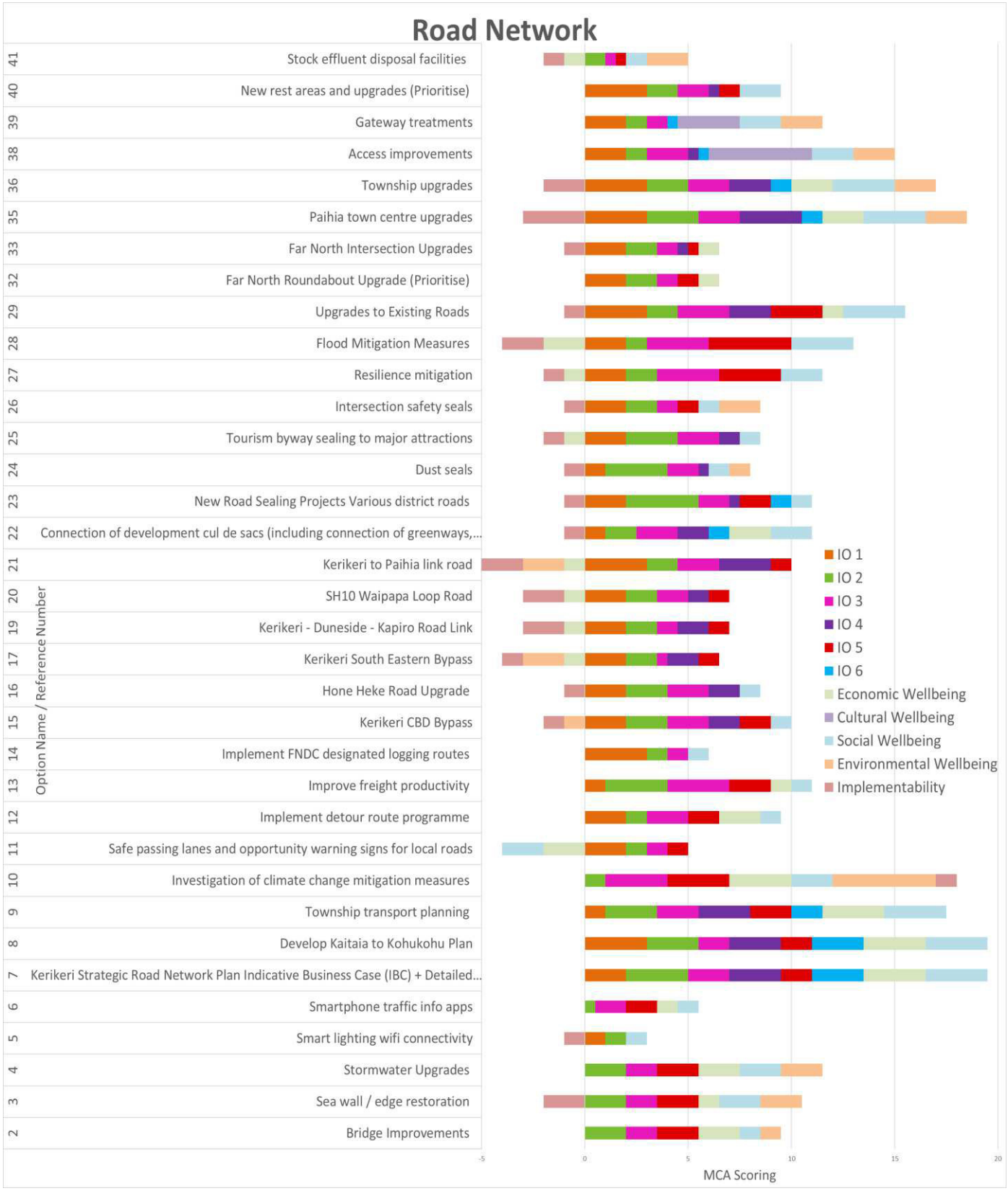
Subject	Summary / Assumption

Investment Objective 1	• Data was extracted from the Crash Analysis System (CAS) database to identify areas of safety concern, therefore determining the options score against Objective 1. The types, location, severity and number of crashes were analysed to approximate the level of positive safety impact for each applicable option. • Options that were expected to reduce traffic on roads were considered to have benefits to driver, cyclist and pedestrian safety. • Programmes or new roads that diverted or better managed heavy commercial vehicles resulted in a positive safety outcome. Reduced congestion, less conflict between HCV's and cars and less damage to road surfaces create a safer driving environment. • Options contributing minimising the severity of crashes such as slower speed environments and intersection upgrades were given a positive score
Investment Objective 2	• Business as usual (BAU) road network options were considered to have a district wide impact in meeting REG groups standards • New road projects were assumed to have high customer satisfaction, however the impacts would generally be localised. • Options were given a positive score against the measure "Customer satisfaction with the operation of network" when the option addressed the roads quality, functionality / operation, connectivity and safety • Any options involving road sealing or improvement to HCV operation scored positively against reducing roading dust • New road projects or future planning documents addressing long term improvements or development of the road network were likely to provide increased opportunity for multi-modal outcomes (such as pedestrian footpaths and cycle paths), therefore considered to increase customer satisfaction in walking and cycling facilities
Investment Objective 3	• Any options that involve improvements (such as physical upgrades, increased efficiency, increased longevity and keeping routes open) to existing infrastructure and network were given a positive score against this objective. • A new road does not use the existing infrastructure, however if it relieves congestion on a nearby existing road it may improve the existing network. In this regard, a few options that constructed new infrastructure were given a neutral score rather than a negative score. • Options improving access in the way of new routes, better connectivity, improved road conditions, keeping roads open and increased efficiency were scored highly against this objective.
Investment Objective 4	• Planning documents addressing long term road network improvements or new road projects were assumed to encourage and provide increased opportunity for multi-modal outcomes (such as pedestrian footpaths and cycle paths). Therefore, the applicable options had a positive score when assessing against Objective 4. • Projects with a positive score generally had localised / ward impacts therefore did not score higher than a 3.
Investment Objective 5	• BAU road network projects, resilience mitigation and road upgrades / sealing contribute to maintaining roads and improving road quality, therefore have a positive outcome on reducing unplanned closures. These types of projects can also result in certain routes to become viable detour routes. • New road projects were considered to provide viable alternative routes • Detour route programmes / HCV programmes scored highly against this objective
Investment Objective 6	• BAU projects are funded from NLTF, therefore were given a 0 score against this objective. • Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • Several options were assumed to have possible opportunities for developer contribution to new road infrastructure • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 103 shows a graph representing the MCA scoring of each Road Network option. The total scores include the individual investment objective and wellbeing scores for each option.

Overall, in the Road Network action plan, the better scoring options are those that deliver against a number of the investment objectives, for example township planning and upgrades deliver benefits by providing transport choices within communities, make good use of existing infrastructure and proactively manage infrastructure to support growth. Options that address network resilience also score well as they keep lifelines open and available and make best use of existing infrastructure. Options that score less well are typically quite localised, not delivering ward or district-wide benefits and likely only deliver benefits against one or two investment objectives. These options may be grouped with other similar projects in subsequent stages to form programmes of investment with broader benefits across the district.

Figure 103: Road Network MCA scoring



Option 7 'Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)' and Option 8 'Develop Kaitaia to Kohukohu Plan' scored the highest against both investment objectives and wellbeing effects. Both strategies score well across all objectives

delivering ward-wide benefit by "facilitating the safe and efficient operation of the network in the long term", which is necessary to support the high projected population growth in the region. The strategies target multi-modal improvements and access management.

Option 10 'Investigation of climate change mitigation measures' achieved the second highest combined score of investment objectives and wellbeing effects. Within the 'Road Network' action plan, this option scored the highest against objective 3. The protection of existing infrastructure will reduce the extent of road closures, thus, maintaining access to economic and social activity in the township. This option also scored well against objective 5 as it improves network resilience and reliability. The option wellbeing effects contribute the most to its overall high score, particularly the environmental benefits given this option would protect communities from flooding and storm events. This option also has high potential for protecting future land use and accommodating long term urban design outcomes.

The option that contributes the least to the identified investment objectives involve passing lanes. While passing lanes may provide a perceived safety benefit by reducing driver frustration and risky behaviour, they are also considered likely to encourage drivers to travel at unsafe speeds and are not currently a high priority. They also do not achieve the multi-modal benefits sought for this programme.

The second lowest option 'Smart lighting Wi-Fi connectivity' achieved a low score as this option does not provide many wide reaching and high impact benefits in comparison to other options. Crash data did not relay any crashes attributed to insufficient lighting. This option could be reconsidered in the future if benefits at specific locations are identified.

While scoring a median score against the investment objectives only, the 'Kerikeri South Eastern Bypass' option scored negatively against implementability, economic wellbeing and environmental wellbeing, therefore achieving a lower contribution overall. Given the size and nature of this option, high costs, construction risks and negative environment impacts (reduced vegetation) are expected and in addition development is unlikely to occur in the next 10-year period.

The highest and lowest scoring Road Network options are summarised in Table 47 below, based on their ranking against investment objective scores only.

Table 47: Ranking of investment objective scores for Road Network options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 7: Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	35	Option 5: Smart lighting Wi-Fi connectivity
1	Option 8: Develop Kaitaia to Kohukohu Plan	35	Option 45: Stock effluent disposal facilities
3	Option 33: Upgrades to Existing Roads	34	Option 6: Smartphone traffic info apps
3	Option 35: Paihia Town Centre upgrades		
3	Option 9: Township transport planning		

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 48:

Table 48: Ranking of total scores for Road Network options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 7: Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	36	Option 11: Safe passing lanes and opportunity warning signs for local roads
1	Option 8: Develop Kaitaia to Kohukohu Plan	35	Option 5: Smart lighting Wi-Fi connectivity
3	Option 10: Investigation of climate change mitigation measures	34	Option 17: Kerikeri South Eastern Bypass

SAFETY

The Safety Action Plan considered projects involving safety improvements or initiatives belonging to the broad categories below:

- Road safety promotion
- Crash analysis investigation
- Minor safety projects
- General safety projects
- Implementation of speed management measures
- Investigations / future planning
- School safety

The assumptions made in the process of scoring the long list of projects within the Safety action plan are summarised in Table 49.

Table 49: Safety scoring summary / assumptions

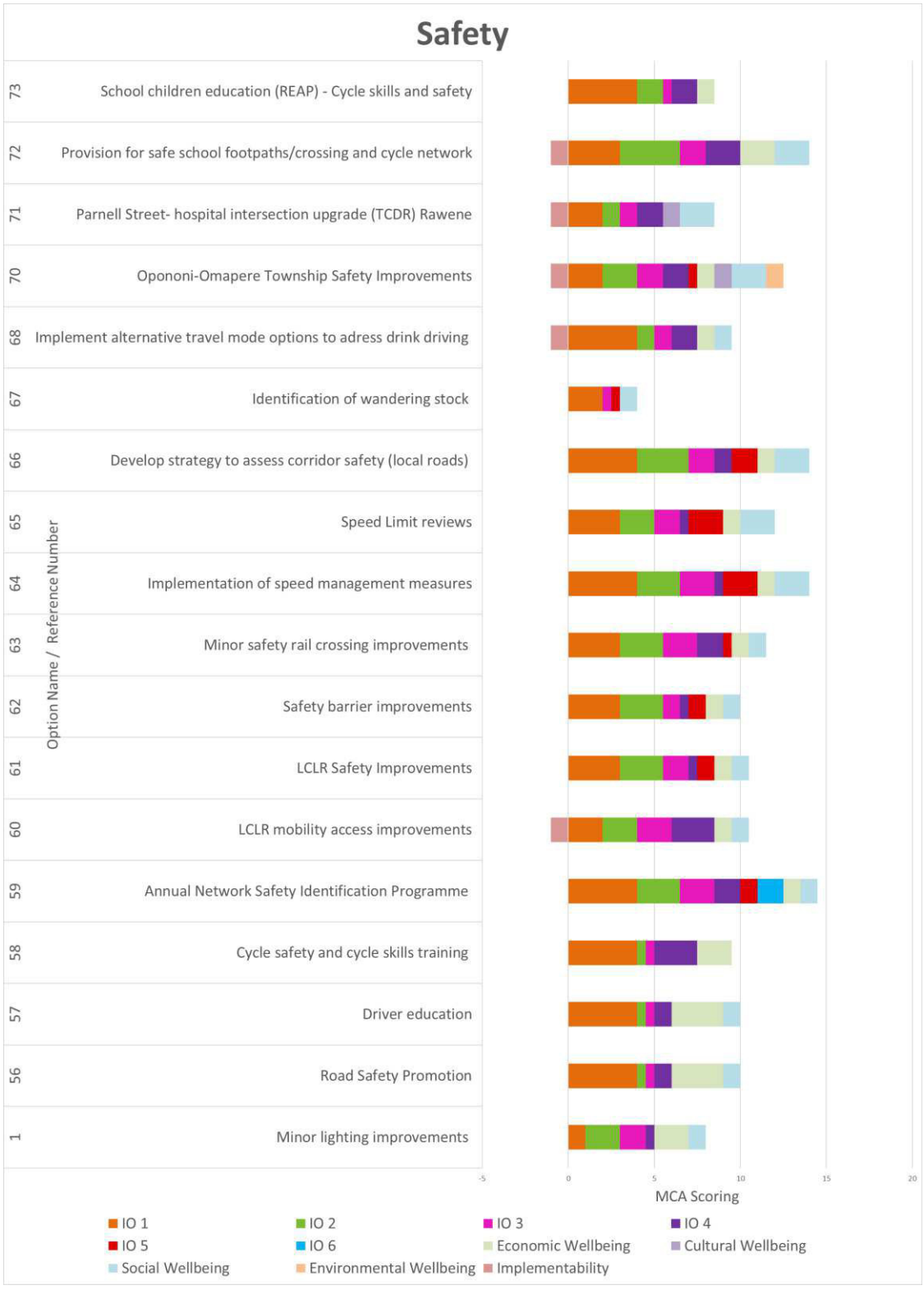
Subject	Summary / Assumption
Investment Objective 1	• Options involving safety promotion, education and training are expected to have district wide positive impact, therefore generally scored high against this objective. • Strategic documents / future planning programmes are wide reaching and allows for short term and long term fixes to high risk locations, therefore were given a higher score. • Options improving the safety of school students, pedestrians, cyclists and mobility impaired users were intentionally scored higher especially against Objective 1 given that it targets the vulnerable users in the network. • Given all options within the Safety Action Plan have an element of improving safety, all options scored a positive score against this objective
Investment Objective 2	• Options involving physical safety improvements on the road network allows for roads to meet REG peer group standard and consequently results in increased customer satisfaction of the network • Options improving footpath / cycle facilities or creating a safer road environment for vulnerable users are likely to increase customer satisfaction in walking / cycling facilities and the positive perception leads to healthier communities, therefore these options scored highly against this objective
Investment Objective 3	• Any options that involve safety improvements (such as physical upgrades) to existing infrastructure and network were given a positive score against this objective. • Options improving access in the way of safer roads, better pedestrian and cyclist connectivity, improved network efficiency and improved accessibility for mobility impaired users were scored highly against this objective.

Investment Objective 4	• Options involving safety promotion, education / training and slower speeds lead to safer driver behaviour which increases safety of vulnerable users. As a result, active modes become more appealing which could encourage increased numbers of people walking and cycling. • Physical safety improvements to roads and walking / cycling facilities, increased pedestrian connectivity and safer walking environments increase attractiveness of walking and cycling, therefore positively contributing to modal shift. These general safety projects scored high against this objective.
Investment Objective 5	• A few options specifically involving improvements to road corridor safety were considered to decrease occurrences of unplanned road closures due to road crashes, therefore scored positively against this objective. • Speed management measures and speed limit reviews may result in certain routes to be allocated as viable alternatives
Investment Objective 6	• Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 104 shows a graph representing the MCA scoring of each Safety option. The total scores include the individual investment objective scores and wellbeing scores for each option.

Overall, most Safety options achieved a high positive score against investment objective 1, which focuses on improving the safety of users in the transport system.

Figure 104: Safety MCA scoring



Option 59: 'Annual network safety identification programme' scored the highest overall as it contributes positively across all six investment objectives as well as several wellbeing effects. This option scored particularly well across all investment objectives for the following reasons:

- The programme allows for both short term and long-term fixes to high risk locations,

- It improves the condition, perceived safety and connectivity of the road network as well as providing a reliable basis for long term planning of the road network.
- It will also deliver crash saving outcomes and improved connectivity, resulting in positive economic and social wellbeing effects, whilst implementability is feasible.

Option 64: 'Implementation of speed management measures' and Option 66: 'Develop strategy to assess corridor safety (local roads)' achieved the second highest combined score of investment objectives and wellbeing effects. This is due to the following reasons:

- Positive scores across investment objectives 1-5
- Ward wide effect
- Potential for improved transport integration and positive urban design outcomes

The lowest scoring options, identification of wandering stock and Parnell Street – hospital intersection upgrade, while still beneficial, were considered to deliver only localised benefits and therefore scored lower than options that delivered a safer and better road network over a broader area.

The highest and lowest scoring Safety options are summarised in Table 50 below, based on their ranking against investment objective scores only.

Table 50: Ranking of investment objective scores for Safety options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 59: Annual network safety identification programme	17	Option 67: Identification of wandering stock
2	Option 64: Implementation of speed management measures	16	Option 71: Parnell Street- hospital intersection upgrade, Rawene
2	Option 66: Develop strategy to assess corridor safety (local roads)		

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 51:

Table 51: Ranking of total scores for Safety options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 59: Annual network safety identification programme	17	Option 67: Identification of wandering stock
2	Option 64: Implementation of speed management measures	16	Option 71: Parnell Street- hospital intersection upgrade, Rawene
2	Option 66: Develop strategy to assess corridor safety (local roads)		

TRAVEL DEMAND MANAGEMENT

The Travel Demand Management (TDM) Action Plan considered projects belonging to the broad categories below:

- Investigations / future planning
- Parking
- Facilities
- Education initiatives
- General projects

The assumptions made in the process of scoring the long list of projects within the TDM action plan are summarised in Table 52.

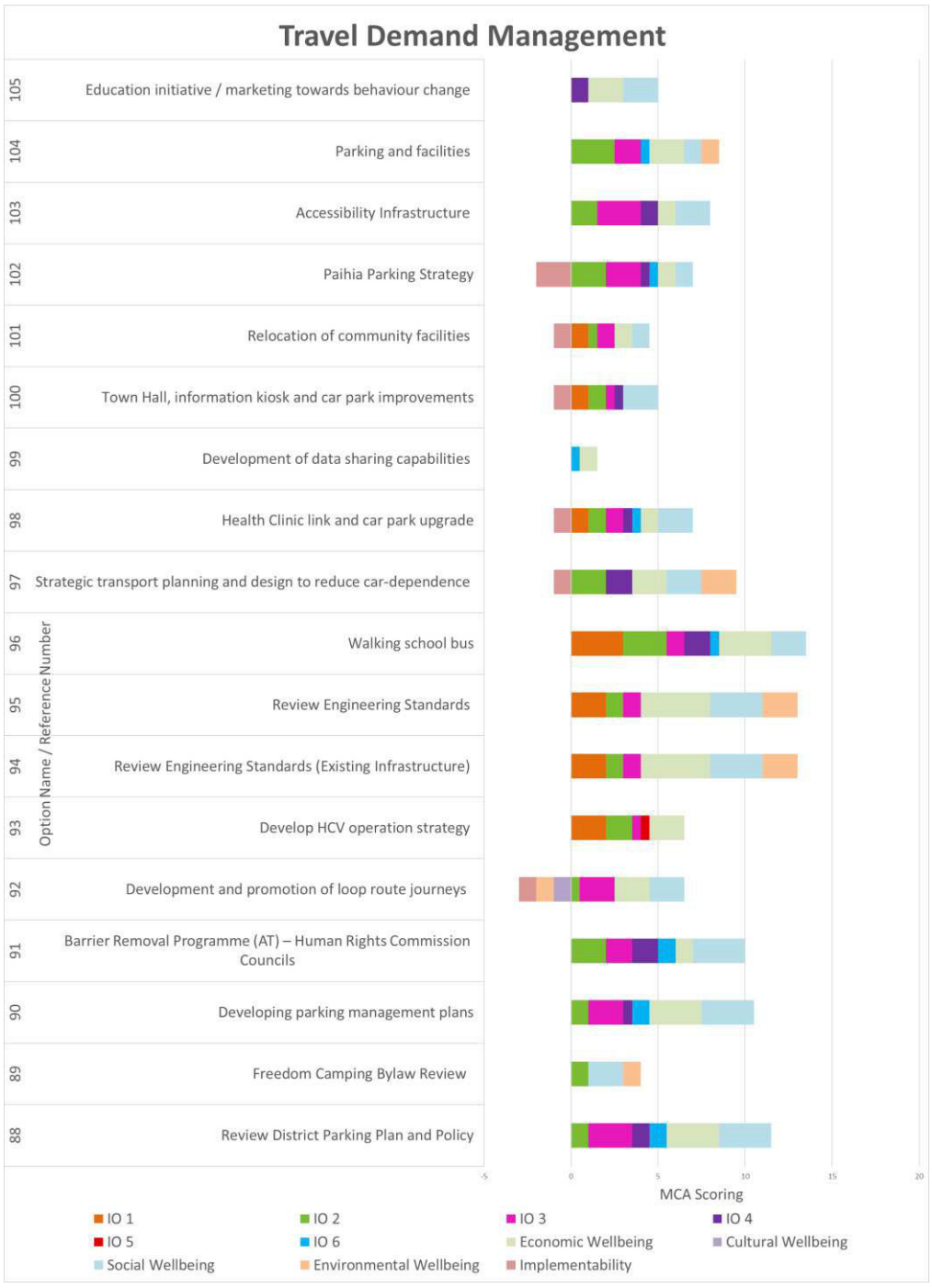
Table 52: Travel Demand Management scoring summary / assumptions

Subject	Summary / Assumptions
Investment Objective 1	• Future planning or reviewing engineering standards were considered to have district wide positive impacts, however given these are not specifically focused on delivering safety outcomes, the scores were adjusted to be lower. • Options involving the management of operation around or of vulnerable users (eg. school children) such as development of an HCV operation strategy and walking school bus were intentionally scored higher. • A few options that better managed traffic operation / congestion were assumed to have a low positive safety outcomes at a localised level • The majority of TDM options did not directly influence safety, therefore had negligible effects against this objective
Investment Objective 2	• TDM options do not specifically focus on delivering physical infrastructure / maintaining roads therefore had negligible effects on meeting REG peer group standards. • Options that involved improving congestion or providing / better managing parking facilities were considered to reduce driver frustration for both residents and tourists, therefore would lead to increased customer satisfaction.
Investment Objective 3	• Future planning / strategies will consider making the best use of existing infrastructure, while upgrades parking / community facilities essentially enhance existing infrastructure, therefore these options achieved a positive score against this objective. • It was assumed that implementation of balanced car parking will optimise network efficiency and allow more people to get to where they need to go, therefore improving accessibility at a localised level.
Investment Objective 4	• Several options involving strategic planning have the ability to influence modal shift by allowing more space for active modes, therefore may contribute positively to modal shift. These options were assumed to have a district wide impact however at a smaller scale. • It was assumed that any improvements / upgrades to parking facilities would ensure improved accessibility for mobility impaired users therefore benefiting these users at a localised level.
Investment Objective 5	• Given the nature of TDM projects, these options generally do not influence or have immediate effects on network resilience or reliability, therefore were considered to have negligible effects against this objective.
Investment Objective 6	• Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • Several options were assumed to have possible opportunities for developer contribution to provide appropriate level of parking for new developments. • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 105 shows a graph representing the MCA scoring of each TDM option relative to each other. The total scores include the individual investment objective scores and wellbeing scores for each option.

Overall, TDM action plan options scored well against investment objectives 2 and 3, as they are designed to provide a better transport network, proactively managing infrastructure to support growth, optimise network efficiency and affordability. This action plan delivers well again social and economic wellbeing by supporting healthier communities and enhancing existing infrastructure.

Figure 105: Travel Demand Management MCA scoring



Option 96 "Walking school bus" achieved the highest score. This option provides high safety benefit to vulnerable road users and increases satisfaction with community services. This option focuses on objective 3 and 4. In providing a pedestrian service there is expected to be an increase in modal shift to walking, consequentially creating healthier communities and reducing the number of cars around schools which in turn creates a safer, more pedestrian friendly environment. This programme is easy to implement and has a potential for external funding sources.

The second and third highest scoring option is to 'Review Engineering Standards'. This activity is intended to deliver wider transport system benefits across all transport services and related projects. This option is expected to have district-wide benefits over a long time period, as it will influence all future projects that require consent within the district.

The lowest scoring option 'Development of data sharing capabilities' does not address the investment objectives and only scores positively in against economic wellbeing benefits. This option does not deliver specifically against the investment objectives and thus is not a priority for funding.

'Relocation of community facilities' and 'Development and promotion of loop route journeys' provide general economic and social wellbeing benefits however they do not provide a net positive outcome due to the expected disruption and scores less well in implementability due to costs. These options however may still be considered as a part of a larger programme.

The highest and lowest scoring TDM options are summarised in Table 53 below, based on their ranking against investment objective scores only.

Table 53: Ranking of investment objective scores for TDM options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 96: Walking school bus	18	Option 99: Development of data sharing capabilities
2	Option 91: Barrier Removal Programme (AT) – Human Rights Commission Councils	16	Option 89: Freedom Camping Bylaw Review
3	Option 88: Review District Parking Plan and Policy	16	Option 105: Education initiative / marketing towards behaviour change

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 54.

Table 54: Ranking of total scores for Traffic Demand Management options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 96: Walking school bus	18	Option 99: Development of data sharing capabilities
3	Option 94: Review Engineering Standards (Existing Infrastructure)	16	Option 101: Relocation of community facilities
3	Option 95: Review Engineering Standards (Future Provision)	16	Option 92: Development and promotion of loop route journeys

ACTIVE MODES

The Active Modes Action Plan considered new walking and cycling projects / initiatives or upgrades to existing facilities belonging to the broad categories below:

- Investigations / future planning
- Walking and cycling connectivity in urban areas
- Township cycle plans
- Existing cycle routes
- New cycle routes
- Cycle facilities
- Streetscape improvements
- Improved pedestrian access
- Footpath / shared use projects

The assumptions made in the process of scoring the long list of projects within the Active Modes action plan are summarised in Table 55.

Table 55: Active Modes scoring summary / assumptions

Subject	Summary / Assumptions
Investment Objective 1	• Implementation options improving the safety of pedestrians and cyclists in the way of provision of separated or improved paths (reducing conflict with vehicles), upgrades to facilities and new routes (diverted off main roads), achieved a high positive score against this objective especially as vulnerable users are targeted. • Policy updates / future planning programmes are wide reaching and allows for long term improvements to the safety of vulnerable users. Therefore, these options were scored based on their long-term safety outcomes rather than their immediate effects.
Investment Objective 2	• Options improving footpath / cycle facilities or creating a safer road environment for vulnerable users are likely to increase customer satisfaction in the network especially walking / cycling facilities and the positive perception leads to healthier communities, therefore these options scored highly against this objective • As with Objective 1, policy updates / future planning programmes were scored based on their long-term outcomes rather than their immediate effects. The long-term outcomes include increased opportunity for multi-modal outcomes (such as new / improved pedestrian footpaths and cycle paths), therefore considered to increase customer satisfaction in walking and cycling facilities • Options involving specific pedestrian or cycle routes were scored on the basis of expected demand and user type. It was assumed that routes that catered for higher demand would score higher as this leads to increased customer satisfaction for a higher number and wider range of users.
Investment Objective 3	• Policy updates / future planning programmes will consider and promote the use of existing infrastructure, of these, options that are wider reaching or have district wide impacts were scored higher. • Any options that involve physical upgrades to existing walking and cycling facilities, extends existing routes or utilises existing infrastructure were given a positive score against this objective. • Options improving access in the way of new or improved pedestrian / cyclist paths, better connectivity within and between townships (especially for commuters), improved destination facilities, and optimised network efficiency (by reducing traffic on roads) were scored highly against this objective.
Investment Objective 4	• Physical upgrades to walking / cycling facilities, increased pedestrian / cyclist connectivity and safer road environments increase attractiveness of walking and cycling, therefore positively contributing to modal shift. Both the physical improvements and perception of safer and more convenient facilities encourage modal shift.

	• All new or extended pedestrian or cyclist routes would increase the number of active mode users and increase the # km of walking and cycling facilities, therefore achieved a positive score. The scoring was based on the extent or size of the project and level of expected demand.
Investment Objective 5	• Given the nature of Active Mode projects, these options generally do not influence or have immediate effects on network resilience or reliability, therefore were considered to have negligible effects against this objective.
Investment Objective 6	• Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • Several options were assumed to have possible opportunities for overseas investment and PGF or TIF funding. • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 106 shows a graph representing the MCA scoring of Active Modes options relative to each other. The total scores include the individual investment objective scores and wellbeing scores for each option.

Overall, Active Mode options scored relatively well against investment objectives 1, 2 and 4, as they are specifically designed to enhance and promote transport choices within and between communities, to increase the number of people walking and cycling. They are also intended to make good use of the existing network by encouraging better use of existing facilities. These options typically have a negligible impact on investment objective 5. This is an expected outcome given active modes in general have very limited impact on network resilience, reliability and road closures.

Figure 106: Active Modes MCA scoring

Option 112: Develop plan for pedestrian access in urban areas recorded the highest score. This option scored the highest against investment objective 4 as it specifically aims to increase urban pedestrian use and destinations accessible via walking. It is anticipated that pedestrianisation to public transport services or transport hubs will encourage public transport use, while also having a

positive impact on urban design and social cohesion. This strategy caters for all urban areas in the Far North, therefore has a ward wide effect in the long term.

Option 134: Opua to Paihia (Northland Integrated Cycling Implementation Plan) is a strategic route which impacts a high number of cyclists. This route has the potential for increased cyclist demand especially from commuters following the implementation of this option. Given the scale and range of positive impacts such as increased safety, modal shift and healthier communities, this option has scored well against investment objective 1, 2 and 4. With regards to wellbeing effects, this option improves connectivity, system integration and cycling tourism therefore achieves a high score against economic and social wellbeing.

Option 114: Develop plan to improve local cycle connections between towns ranks high for similar reasons. Providing or upgrading on road cycle facilities contributes to improving cyclist safety as well as perceived safety, therefore encouraging modal shift. This option scores well against Objective 3 as it enhances the existing road network, with minimal costs and construction disruption.

Option 121: Identify and develop bridleways and Option 139: SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop, while still beneficial, were considered to deliver only localised benefits and do not deliver as well against a number of investment objectives and wellbeings. Option 128: Potential BMX trail on parkway edge was not considered to significantly encourage modal shift in comparison with options such as improvements to destination facilities, which would incur a daily benefit for a wider range of users including commuters and school students.

The highest and lowest scoring Active Modes options are summarised in Table 56 below, based on their ranking against investment objective scores only.

Table 56: Ranking of investment objective scores for Active options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 134: Opua to Paihia (Northland Integrated Cycling Implementation Plan)	41	Option 111: Access to Beaches - Reserve Planning Policy
2	Option 114: Develop plan to improve local cycle connections between towns	40	Option 121: Identify and develop bridleways
2	Option 136: Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	39	Option 139: SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop
2	Option 145: Opononi-Omapere Shared User Path		

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 57.

Table 57: Ranking of total scores for Active options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 112: Develop plan for pedestrian access in urban areas	41	Option 121: Identify and develop bridleways

2	Option 134: Opua to Paihia (Northland Integrated Cycling Implementation Plan)	40	Option 128: Potential BMX trail on parkway edge
3	Option 114: Develop plan to improve local cycle connections between towns	39	Option 139: SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop

PUBLIC TRANSPORT / RIDE SHARE

The Public Transport / Ride Share Action Plan considered projects involving new or improved public transport services, ride share initiatives and public transport facilities belonging to the broad categories below:

- Ride share / public transport promotion
- Technology
- Subsidy
- Investigations / future planning
- Existing and new public transport projects
- Supporting facilities

The assumptions made in the process of scoring the long list of projects within the Public Transport / Ride Share action plan are summarised in Table 58.

Table 58: Public Transport / Ride Share scoring summary / assumptions

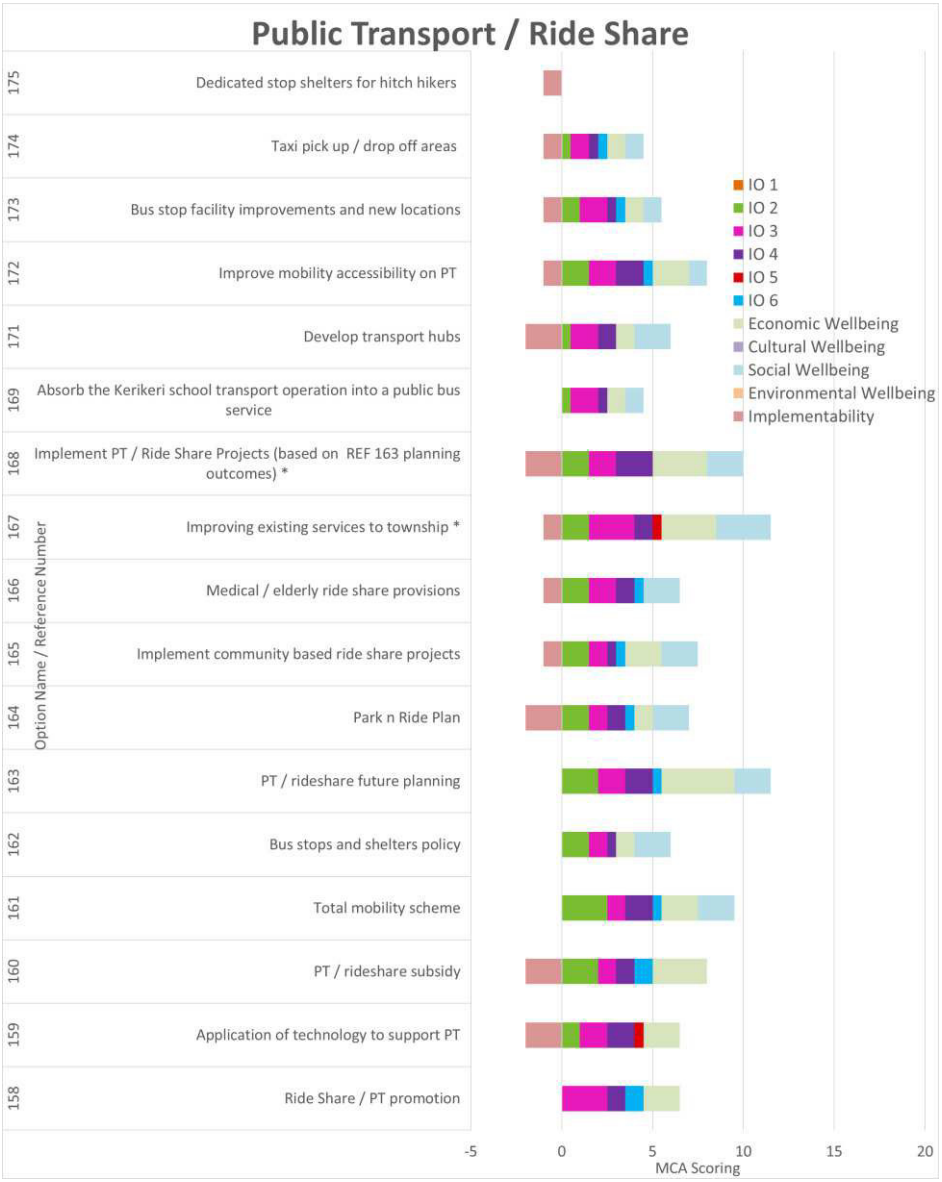
Subject	Summary / Assumptions
Investment Objective 1	• All options within this Action Plan did not directly influence safety, therefore were considered to have negligible effects against this objective
Investment Objective 2	• The majority of Public transport / Ride share options increased customer satisfaction with the operation of network in the way of improved convenience and affordability of services, better public transport facilities and improved connectivity via public transport services. These were generally localised positive impacts • A number of options that encourage the use of public transport were assumed to have positive wellbeing effects and therefore healthier communities.
Investment Objective 3	• Any options involving improvement to existing facilities or services scored positively against this objective. • Implementation of new services or new plans will complement existing PT services by increasing accessibility to PT services therefore also achieved a positive score. • Several options involving additional or new public transport routes would improve accessibility for locals to key social and economic activities within and between townships.
Investment Objective 4	• A number of options involving new services are expected to benefit and specifically cater for mobility impaired users by improving accessibility. • Improved or additional services and new locations increase the attractiveness of public transport, therefore likely to increase the number of people by means other than car.
Investment Objective 5	• Given the nature of public transport / ride share projects, these options generally do not influence or have immediate effects on network resilience or reliability, therefore were considered to have negligible effects against this objective. • Improved public services would provide an alternative mode of travel or alternative routes, however it is assumed that they will use existing roads therefore can be affected by the same road closure.

Investment Objective 6	• Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • Several options were assumed to have possible opportunities for co-funding with community groups. • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 107 shows a graph representing the MCA scoring of each Public Transport / Ride Share option relative to each other. The total scores include the individual investment objective scores and wellbeing scores for each option.

PT/ Ride Share action plan options typically scored well against social wellbeing and investment objectives 2, 3 and 4, by creating more equitable access for the community and enhancing transport choices within and between communities so that there are sustainable transport choices for all.

Figure 107: Public Transport / Ride share MCA scoring



Option 163 'PT / rideshare future planning' achieved the highest score in the PT/Ride share action plan. The planning outcome will improve existing services, access to services, modal shift and benefits mobility impaired users. Planning provides context for project implementation funding. It also delivers social cohesion and wellbeing effects and allows for future transport system integration.

Option 167 'Improving existing PT services to townships' scored high as it covers a wide range of services including services between townships and improves social and economic activities. Total Mobility Scheme aims to delivery district-wide benefits for mobility impaired users by improving connectivity between and within townships and to essential services such as healthcare.

Option 175 'Dedicated stop shelters for hitch hikers' delivers minimal positive benefits when measured against the investment objectives. Its benefits are very localised and serve relatively few people in comparison with other options.

Option 174: 'Taxi pick up / drop off areas" would improve accessibility in urban areas but are quite localised in their benefit and are considered to deliver less well when measured against the investment objectives than other options.

Whilst Option 171: Develop Transport Hubs, aims to make better use of the existing system, via car-share and has some benefit with respect to climate change via the E charging stations, the infrastructure is considered to typically benefit a relatively small demographic and locality. These hubs could be considered for funding via alternative funding sources such as TIF / PGF or via private investment. The addition of car share hub and EV fast chargers are not a priority due to the low demand for a high investment but could be reconsidered in future planning.

The highest and lowest scoring Public Transport / Ride Share options are summarised in Table 59 below, based on their ranking against investment objective scores only.

Table 59: Ranking of investment objective scores for Public Transport / Ride Share options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 161: Total mobility scheme	17	Option 175: Dedicated stop shelters for hitch hikers
1	Option 163: PT / rideshare future planning	15	Option 174: Taxi pick up / drop off areas
1	Option 167: Improving existing services to township	15	Option 169: Absorb the Kerikeri school transport operation into a public bus service

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 60.

Table 60: Ranking of total scores for Public Transport / Ride Share options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 163: PT / rideshare future planning	17	Option 175: Dedicated stop shelters for hitch hikers
2	Option 167: Improving existing PT services to township	16	Option 174: Taxi pick up / drop off areas
3	Option 161: Total Mobility Scheme	15	Option 171: Develop transport hubs

HARBOUR

The Harbour Action Plan considered projects involving new ferry services, infrastructure upgrades and harbour related initiatives belonging to the broad categories below:

- Subsidy
- Investigations / future planning
- Speed management at wharves
- Existing and new ferry services
- Car parks
- Supporting infrastructure

The assumptions made in the process of scoring the long list of projects within the Harbour action plan are summarised in Table 61.

Table 61: Harbour scoring summary / assumptions

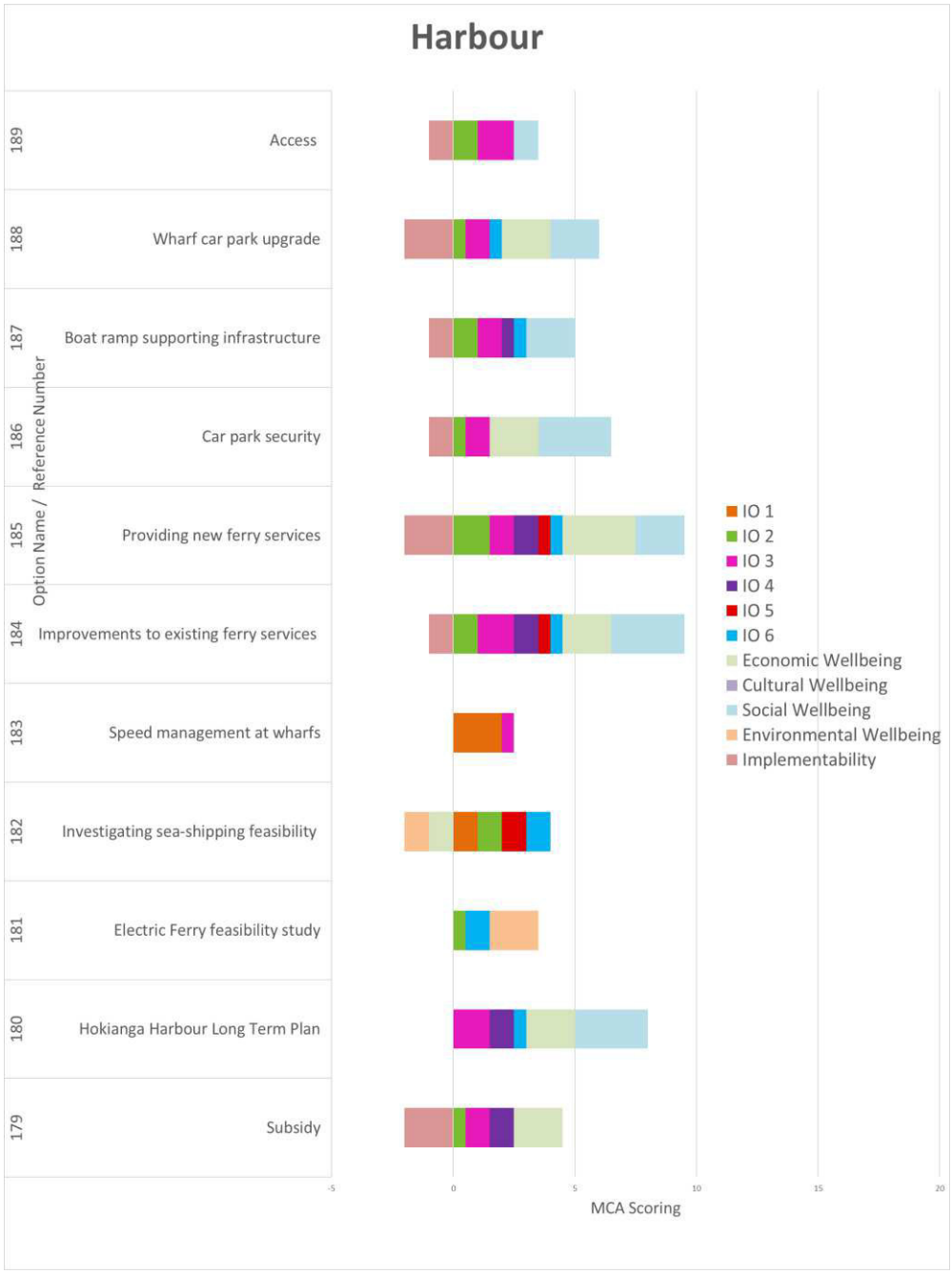
Subject	Summary / Assumption
Investment Objective 1	• All options within this Action Plan did not directly influence safety, therefore were considered to have either minimal or negligible effects against this objective.
Investment Objective 2	• A number of options increased customer satisfaction with the operation of network in the way of improved convenience and affordability of services, less congestion on roads (traffic diverted) and improved connectivity via new or improved ferry services. These were generally localised positive impacts.
Investment Objective 3	• Any options involving immediate or long-term improvement to existing facilities or services (including studies / investigations) scored positively against this objective. • Several options involving additional or new ferry routes and more affordable services would improve accessibility for locals to key social and economic activities within and between townships.
Investment Objective 4	• Improved or additional services, new locations and affordable services increase the attractiveness of transport via ferries, therefore likely to increase the number of people by means other than car.
Investment Objective 5	• Given the nature of Harbour projects, these options generally do not influence or have immediate effects on network resilience or reliability, therefore were considered to have negligible effects against this objective. • However, for options involving improved or new ferry services for passengers or freight, it was assumed that they would provide a viable alternative mode of travel (other than via roads), therefore achieved a positive score.
Investment Objective 6	• Future planning / investigations provide strategic context to support funding applications, therefore assumed to increase the number of projects funded and delivered. • Several options were assumed to have possible opportunities for private funding (i.e. privately owned ferry companies). • As the funding aspect is generally unknown at this stage, the majority of projects were assumed to have negligible effects against this objective

Figure 108 shows a graph representing the MCA scoring of each Harbour option relative to each other. The total scores include the individual investment objective scores, wellbeing and implementability scores for each option.

A high proportion of Harbour options score well against investment objective 2, 3 and 6, indicating that these options improve multi-modal accessibility and customer satisfaction. Most options also deliver well against economic and social wellbeing benefits. Some options achieved a negative score

against implementability, on the basis that they are generally large-scale projects that are likely difficult to deliver within the 2018-28 period or are financially infeasible for the Far North within that 10-year period. In this regard, the perceived positive impact of these options may be high, but they are restricted by challenges with implementability.

Figure 108: Harbour MCA scoring



Option 185: 'Providing new ferry services' scored the highest, achieving a positive score across a number of investment objectives and wellbeing effects. This option scored well against investment objective 2 and 3 as it improves pedestrian access between key townships via ferry services and improves customer satisfaction, therefore has the potential to increase the number of people travelling by ferry instead of private vehicles. Regarding wellbeing effects, this option scored the highest for economic benefit given that it improves connectivity between key townships and improves integration with public transport or active modes.

Option 180: 'Hokianga Harbour Long Term Plan' scored the second highest for similar reasons as Option 185, however has negligible effect against investment objective 2.

While scoring relatively high against the investment objectives, Option 182: 'Investigation sea-shipping feasibility' scored the lowest overall relative to other Harbour options due to negative impacts on economic and environmental impacts.

Option 179: 'Subsidy' scored well against investment objective 3 and 4 given public transport becomes affordable and therefore encouraging modal shift and improves access for users. However, overall, this option scored the second lowest specifically due to financial infeasibility. It is expected that subsidies are difficult to source funding, therefore achieved a negative score against implementability.

Option 183: 'Speed management at wharves' scored the third lowest overall, however scored the highest against investment objective 1, suggesting high safety benefits. However, it does not deliver against the other objectives measured. Option 189: 'Access onto water' scored similarly to Option 183, however achieved a positive score in multiple investment objectives. In general, options with lower scores result in more localised effects and score positively against a limited number of investment objectives.

The highest and lowest scoring Harbour options are summarised in Table 62 below, based on their ranking against investment objective scores only.

Table 62: Ranking of investment objective scores for Harbour options

Rank	Highest contribution to investment objectives	Rank	Lowest contribution to investment objectives
1	Option 185: Providing new ferry services	10	Option 186: Car park security
1	Option 184: Improvements to existing ferry services	10	Option 181: Electric ferry feasibility study
3	Option 182: Investigating sea-shipping feasibility	9	Option 188: Boat Ramp Parking

Ranking of total scores (including investment objectives, wellbeing and implementability scores) is summarised in Table 63:

Table 63: Ranking of total scores for Harbour options

Rank	Highest contribution overall	Rank	Lowest contribution overall
1	Option 184: Improvements to existing ferry services	11	Option 182: Investigating sea-shipping feasibility
2	Option 180: Hokianga Harbour Long Term Plan	8	Option 179: Subsidy
3	Option 185: Providing new ferry services	8	Option 183: Speed management at wharves
		8	Option 189: Access onto water

MAINTENANCE, OPERATIONS AND RENEWALS (MO&R)[67]

This action plan considers projects from existing maintenance, operations and renewal (MO&R) programmes covered under the Far North District Activity Management Plan (AMP), which belong to the broad categories below:

- Renewals
- Sealed pavement maintenance
- Unsealed pavement maintenance
- Routine drainage maintenance
- Structures maintenance
- Environmental maintenance
- Traffic services maintenance
- Operational traffic management
- Footpath maintenance
- Cycle path maintenance
- Level crossing warning devices
- Minor events
- Network and asset management
- Bridges and large culvert replacements
- Structures component replacements
- Sealed road rehabilitation
- Existing sealed road resurfacing
- Unsealed road metalling
- Activity Management Improvement Plan

The assumptions made in the process of scoring the long list of projects within the MO&R action plan are summarised in Table 46.

Table 64: MO&R scoring summary / assumptions

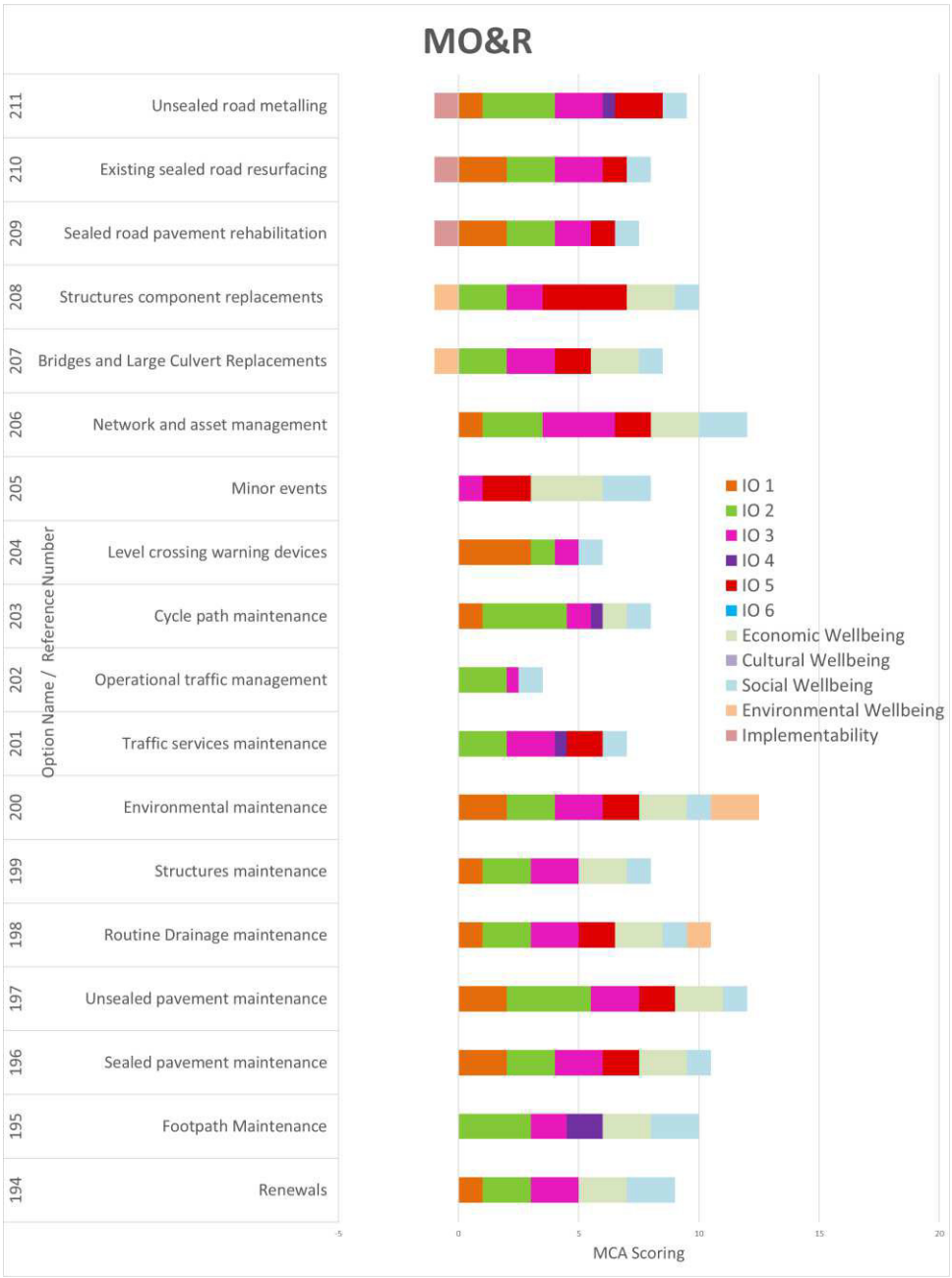
Subject	Summary / Assumption
Investment Objective 1	• MO&R options do not directly focus on improving safety, however it is assumed that a well maintained network will still have a low level of safety benefit as it is expected to reduce / prevent crashes occurring from poor network conditions.
Investment Objective 2	• The majority of options within this action plan seeks to improve / maintain network standards. These options are business as usual operations and have a district wide positive outcome on meeting REG peer group standards and customer satisfaction with operation of network and walking / cycling facilities. • Options involving sealing, resurfacing, metalling and pavement maintenance were considered to reduce roading dust, therefore scored well against this objective.
Investment Objective 3	• All MO&R options enhances / maintains existing infrastructure to ensure the network functions adequately and routes are in service.
Investment Objective 4	• MO&R generally do not directly impact modal shift or walking and cycling facilities, therefore the majority of options within this action plan have negligible effects against this objective.

[67] The options assessment of the MOR action plan was completed prior to the removal of the MOR programme from the PBC. This section has been kept in the appendices for transparency, however is not referenced in the PBC report.

Investment Objective 5	• Options that involve regular maintenance on the road network are likely to prevent or reduce the likelihood of unplanned road closures as well as reduce the duration of these closures. • It was assumed that options involving the maintenance / sealing of road surfaces and structure renewals can increase road / bridge standards district wide and therefore potentially achieving viable detour routes.
Investment Objective 6	• All MO&R projects are BAU, therefore funded from NLTF. In this regard, all options were given a neutral score for this objective.

Figure 109 shows a graph representing the MCA scoring of each MO&R option relative to each other. The total scores include the individual investment objective scores and wellbeing scores for each option.

Figure 109: MO&R MCA scoring



High level analysis shows that generally all options in the 'MO&R' action plan perform well against the investment objectives and collectively these activities will promote a strong response to maintaining the existing assets. The scores of the options did not vary significantly as they are all necessary for the resilience of different components of the transport network and are necessary for the transport network to work as a whole.

The MO&R options will be prioritised by the Northland Transport Alliance (NTA) under the Northland Activity Management Plan. However, to provide guidance, the outcomes of the high-level MCA analysis have been summarised below.

The highest scoring options scored well overall as they target additional criteria measured in the investment objectives (other than resilience) and generally have district wide positive impacts.

'Option 200: Environmental maintenance' resulted in the highest overall score, achieving a positive score against investment objectives 1-3 and 5 and additionally scoring well for all economic, social and environmental wellbeing, which is an important focus. Similarly, 'Unsealed pavement maintenance' also scored highly against the same objectives, however, does not influence environmental wellbeing.

'Network and asset management' involves future planning and strategic documentation of MO&R projects. This option does not have immediately visible positive benefits; however, the scoring has been based on the expected outcomes of the studies / investigations which generally align well with investment objectives 1-3 and 5 and are considered to improve economic and social wellbeing.

The highest scoring MO&R options are summarised in Table 65 below, based on their ranking against both investment objective scores only and total scores (including investment objectives, wellbeing and implementability scores).

Table 65: Ranking of investment objective scores for MO&R options

Rank	Highest contribution to investment objectives	Rank	Highest contribution overall
1	Option 197: Unsealed pavement maintenance	1	Option 200: Environmental maintenance
2	Option 211: Unsealed road metalling	2	Option 197: Unsealed pavement maintenance
3	Option 206: Network and asset management	2	Option 206: Network and asset management

RANKING SUMMARY

Table 66 below shows the top 30 ranked options over all six action plan areas based on their score against investment objective only.

Table 66: Top 30 options over all action plan areas based on investment objective scoring

Rank	Ref #	Option Name	Action Plan
1	7	Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	Road Network
1	8	Develop Kaitaia to Kohukohu Plan	Road Network
3	59	Annual Network Safety Identification Programme	Safety
4	9	Township transport planning	Road Network
4	29	Upgrades to Existing Roads	Road Network
4	35	Paihia town centre upgrades	Road Network

7	64	Implementation of speed management measures	Safety
7	66	Develop strategy to assess corridor safety (local roads)	Safety
9	134	Opua to Paihia Walkway + via Aucks Road (Northland Integrated Cycling Implementation Plan)	Active Modes
10	21	Kerikeri to Paihia link road	Road Network
10	23	New Road Sealing Projects Various district roads	Road Network
10	28	Flood Mitigation Measures	Road Network
10	72	Provision for safe school footpaths/crossing and cycle network	Safety
14	27	Resilience mitigation	Road Network
14	63	Minor safety rail crossing improvements	Safety
14	114	Develop plan to improve local cycle connections between towns	Active Modes
14	136	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	Active Modes
14	145	Opononi-Omapere Shared User Path	Active Modes
19	13	Improve freight productivity	Road Network
19	15	Kerikeri CBD Bypass	Road Network
19	65	Speed Limit reviews	Safety
19	112	Develop plan to improve pedestrian access in urban areas	Active Modes
19	125	Implement Paihia cycling plan	Active Modes
19	126	Implement Kaikohe cycling plan	Active Modes
19	135	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	Active Modes
19	152	Implementation of prioritised TCDR footpath / shared use path projects	Active Modes
19	197	Unsealed pavement maintenance	MO&R
28	60	LCLR mobility access improvements	Safety
28	61	LCLR Safety Improvements	Safety
28	96	Walking school bus	TDM
28	118	Implementation of pedestrian improvements in urban areas	Active Modes
28	142	Cycle Link Hundertwasser Park	Active Modes
28	151	New or Improved footpath / shared use Projects	Active Modes
28	211	Unsealed road metalling	MO&R

Table 67 below shows the top ranked options (1st rank) within each investment objective over all the action plan areas.

Table 67: Top ranked options within each investment objective over all action plan areas

Investment Objective	Ref #	Option Name	Action Plan
Investment Objective 1	56	Road Safety Promotion	Safety
	57	Driver education	Safety
	58	Cycle safety and cycle skills training	Safety
	59	Annual Network Safety Identification Programme	Safety
	64	Implementation of speed management measures	Safety
	66	Develop strategy to assess corridor safety (local roads)	Safety
	68	Implement alternative travel mode options to address drink driving	Safety
	73	School children education (REAP) - Cycle skills and safety	Safety

Investment Objective 2	23	New Road Sealing Projects Various district roads	Road Network
	72	Provision for safe school footpaths/crossing and cycle network	Safety
	197	Unsealed pavement maintenance	MO&R
	203	Cycle path maintenance	MO&R
Investment Objective 3	10	Investigation of climate change mitigation measures	Road Network
	13	Improve freight productivity	Road Network
	27	Resilience mitigation	Road Network
	28	Flood Mitigation Measures	Road Network
	206	Network and asset management	MO&R
Investment Objective 4	35	Paihia town centre upgrades	Road Network
	112	Develop plan to improve pedestrian access in urban areas	Active Modes
	118	Implementation of pedestrian improvements in urban areas	Active Modes
Investment Objective 5	28	Flood Mitigation Measures	Road Network
Investment Objective 6	115	Overseas Investment Office policy	Active Modes

Table 68 shows the top 30 ranked options over the six action plan areas based on their overall scores (including investment objectives, wellbeing and implementability scores).

Table 68: Top 30 ranked options over all action plan areas based on overall score

Rank	Ref #	Option Name	Action Plan
1	7	Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	Road Network
1	8	Develop Kaitaia to Kohukohu Plan	Road Network
3	10	Investigation of climate change mitigation measures	Road Network
4	9	Township transport planning	Road Network
5	35	Paihia town centre upgrades	Road Network
6	38	Access improvements	Road Network
6	112	Develop plan to improve pedestrian access in urban areas	Active Modes
8	29	Upgrades to Existing Roads	Road Network
8	59	Annual Network Safety Identification Programme	Safety
8	134	Opua to Paihia Walkway + via Aucks Road (Northland Integrated Cycling Implementation Plan)	Active Modes
11	64	Implementation of speed management measures	Safety
11	66	Develop strategy to assess corridor safety (local roads)	Safety
13	96	Walking school bus	TDM
13	114	Develop plan to improve local cycle connections between towns	Active Modes
15	72	Provision for safe school footpaths/crossing and cycle network	Safety
15	94	Review Engineering Standards (Existing Infrastructure)	TDM
15	95	Review Engineering Standards	TDM
18	36	Township upgrades	Road Network
18	118	Implementation of pedestrian improvements in urban areas	Active Modes
18	136	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	Active Modes
18	200	Environmental maintenance	MO&R
22	65	Speed Limit reviews	Safety

22	113	Develop plan to prioritise recreational walking and cycling tracks	Active Modes
22	135	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	Active Modes
22	197	Unsealed pavement maintenance	MO&R
22	206	Network and asset management	MO&R
27	4	Stormwater Upgrades	Road Network
27	39	Gateway treatments	Road Network
27	63	Minor safety rail crossing improvements	Safety
27	70	Opononi-Omapere Township Safety Improvements	Safety
27	88	Review District Parking Plan and Policy	TDM
27	145	Opononi-Omapere Shared User Path	Active Modes
27	151	New or Improved footpath / shared use Projects	Active Modes
27	163	PT / rideshare future planning	PT / Ride Share

Options excluded from MCA assessment

The long list was sorted into categories and options to be assessed using the defined MCA criteria. Some options were excluded from the long list for the following reasons:

- Principles and concepts are not considered specific projects for assessment and are instead reflected in the Integrated Transport Strategy and covered under existing programmes and strategies.
- Some options do not belong within the scope of FNDC funding i.e. are undertaken by other districts or NZTA. These options are noted and will be passed on for consideration to the relevant organisation.
- Duplicated options were included in the long list under broader overarching options or included as more detailed options.
- Infeasibility (however, it should be noted that other options in the long list provide an alternative solution to the problems that these excluded options intended to resolve).

The table below summarises the options excluded from the MCA assessment per action plan.

Table 69: Excluded options from the MCA assessment

Action Plan	Option	Source	Reason
Road Network	Mangakahia Road alternative route - limit to only SH15 for trucks	Longlisting workshop	Infeasible – SH15 is an alternative route for all vehicles and therefore cannot be restricted. Improvement of associated heavy vehicle infrastructure on SH15 such as truck stops would improve the attractiveness of the SH15 route.
	Bypasses - Integrated land use and transport, control ad hoc development, greater planning for future network	Longlisting workshop	Concept - captured within ITS as part of long-term planning and strategies.
	Any works that can be prioritised from the 7 Twin Coast Business Cases with a multi modal focus.	Northland Inc	Individual projects have been considered within MCA
	Paihia + Kerikeri complete cycle route (long term vision)	Longlisting workshop	Duplicate to individual cycle projects that are assessed within MCA
	Roundabout cyclist safety	Longlisting workshop	Duplicate
	Kerikeri CBD bypass - Grid road system	Vision Kerikeri	Duplicate with specific projects in the Road Network Action Plan. Note there might be nuances to the actual design but that level of detail would be assessed at DBC stage. We are testing the CBD bypass at this level of assessment.
	Junction - improve Kerikeri Countdown junction (repeated in Waipapa Strategy (1) KKRP)	Longlisting workshop	Duplicate with specific projects in the Road Network Action Plan
	New loop road for Kerikeri Rd - connection from King St or Clark Rd to Butler Rd or Aranga Rd	Our Kerikeri	Duplicate with specific projects in the Road Network Action Plan
	Town bypass for long haul as a fast route and HCV dedicated	Longlisting workshop	Bypass is being tested as part of specific projects. Restriction of vehicle types would be considered at the DBC level, but HCV-only corridor is unlikely to be feasible.
Safety	Separation between active modes and vehicles	Longlisting workshop	Concept – Covered in ITS
	Roundabouts in place of T-intersections	Longlisting workshop	Non feasible concept – intersection form to be reviewed on case by case basis at specific locations. If there is

			an ongoing intersection safety problem this would be flagged up under annual crash identification strategy and appropriate solution investigated at this point.
	Updated Signage - SH signage into Paihia CBD	PDRRA/KKRRA	Undertaken by NZTA. Note there is a comprehensive wayfinding and signage strategy as part of the TCDR Business Case which would likely cover this aspect.
	Route signage & marking (SH12 Rawene to Katui Road SSBC)	TCDR Business Case Programme	Undertaken by NZTA. This is covered under the TCDR SH12 Rawene to Katui Road SSBC.
Safety	Provision for foreign drivers on key routes - Arrows, Signage	Longlisting workshop	Undertaken by NZTA. Likely to be included as part of the TCDR Wayfinding and Signage Business Case.
	Provision for foreign drivers on key routes - National Training	Longlisting workshop	Owned by NZTA.
	Cycle / shoulder for route treatments	Vision Kerikeri	Duplicate – Covered in Active action plan
	Lobby government for subsidy	Longlisting workshop	Duplicate – Covered by specific subsidies in PT/Ride Share and Harbour action plans
	Safety wire rope barriers	Our Kerikeri	Concept - High risk locations would be reviewed based on crash type and their suitability for wire rope barrier would be considered. Some projects may be delivered by the Safe Network Programme.
	Paihia waterfront speed reduction study	Longlisting workshop	Duplicate - Covered under TCDR activities including Paihia Town Centre upgrade and Te Karuwha parade upgrade
	SCRIM	Longlisting workshop	Concept - A tool to be used as part of the asset management data collection process.
Travel Demand Management	Parking bylaw review (esp Russell) and Parking management plan	Longlisting workshop	Duplicate – Covered in 'District Parking Strategy and Policy'
Active Modes	Kaipara Missing Link Enhancement (Northland Integrated Cycling Implementation Plan)	TCDR Business Case Programme	Not FNDC – project owned by KDC.
	Pedestrianise Kerikeri Road	Longlisting workshop	Duplicate – Covered in 'Kerikeri-Waipapa Road Network' Projects
	Town entrance adjustments (slow speeds)	Longlisting workshop	Duplicate – Covered in 'Speed Management' in 'Safety' action plan
	Shared use footpaths in Omapere/Opononi	Hokianga Tourism Association	Duplicate - Covered by the 'Shared Path Omapere to Opononi in the TCDR business case programme (SH12 Rawene to Katui Road SSBC)'
	Cycle path maintenance	Bike Northland	Duplicate – Covered in 'Cycle Route Treatments' and existing asset management programme.
Public Transport / Ride Share	Regular interim bus stops between CBD's	Longlisting workshop	Duplicate – 'Covered in improving existing services to township'
Harbour	Developing a night-time economy to bring people rather than cars and increase demand for PT	Longlisting workshop	Concept - Note that this concept has been considered as part of the TCDR Northland Township Plans. Particularly for the development of Hokianga towns.

Harbour	Council marketing	Longlisting workshop	Concept – Not a specific project for this PBC.
	Distribution centres	Longlisting workshop	Concept – Noted and best considered as part of the District Plan review.
	Increase subsidy for locals using Ferries (ie. Hokianga)	Longlisting workshop	Duplicate – Covered in 'Ferry Local Subsidy Scheme'
Maintenance, operations and renewals	Responding to growth in the District	LTP 2018-28	Concept – Specific growth projects are being tested in MCA rather than a general growth response.
	FNDC / Regional Council Plans to be tied into each other	Longlisting workshop	Principle – Being managed internally by FNDC.
	Separation within urban areas between vulnerable mobility and vehicles	Longlisting workshop	Principle – Covered in ITS
	Fit for purpose roads with appropriate shoulders with separation for cycleways / footpaths -	Longlisting workshop	Principle – Specific projects covered in Active Action Plan
	Analyse insurance risk to map out where future investment should be (e.g. health care)	Longlisting workshop	Principle – Covered in ITS (project)
	Transparency of ONRC framework - REG initiative and ONRC framework to be embedded into strategy and communicated to stakeholders (could show by spend per ONRC classifications)	Longlisting workshop	Principle – This is an approach to stakeholder engagement for NTA to consider
	Communicate to public the ONRC plan and visual guide	Longlisting workshop	Principle – Covered in ITS
	Review of the total cost model - Spending more on the quality of the construction up front will be more cost effective over time. the cost of mobilisation, procurement and scheduling issues have changed notably over the last few years.	Northern Edge (Tourism Infrastructure Funding)	Principle ITS – about fit for purpose infrastructure. To be considered as part of NTA delivery approach.
	Poor ground conditions of roads reduce design life	Longlisting workshop	Concept – Problem is addressed by options in the long list and within the ITS, to be delivered by NTA.
	Chip loss on new reseals	Longlisting workshop	Concept – To be considered as part of NTA delivery programme.
	Aggregate loss on steep grades (due to run off)	Longlisting workshop	Concept – To be considered as part of NTA delivery programme.
	Plan and adapt transport network for climate change and sea level rise	Longlisting workshop	Duplicate – Covered in Road Network Action Plan
	Improve freight productivity	LTP 2018-28	Concept – Covered in Road Network through specific examples such as HPMV network.
	Development of engineering standards for council & developers	NEW	Duplicate – Covered in 'Review Engineering Standards' in Traffic Demand Management
	Stormwater treatment (both urban and rural)	Longlisting workshop	Duplicate – Covered in 'Asset Management'

APPENDIX F: PROGRAMMES

The following points are to note in the tables below:

- Options with * - these are owned by Waka Kotahi, therefore will not be further considered for programme development
- Options with ✓ - these have been added following post workshop feedback (after the Programme Development workshop)
- All proposed programmes include the Maintenance, Operations and Renewals package by default
- Options included in P11 and P12 are identical
- Some options that are ticked under P11 / P12 have been packaged for investment therefore presented as broader 'bucket' in the Recommended Programme (P11)

Road Network Action Plan

		Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
Ref #	Option Name:	PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11 & P12
1	Lighting improvements (relocated to Safety Action Plan)												✓
2	Bridge Improvements	✓					✓				✓		✓
3	Sea wall / edge restoration												
4	Stormwater Upgrades	✓			✓		✓	✓					✓
5	Smart lighting wifi connectivity												
6	Smartphone traffic info apps												
7	Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)		✓		✓			✓		✓		✓	✓
8	Develop Kaitaia to Kohukohu Plan		✓		✓			✓	✓				✓
9	Township transport planning		✓		✓			✓	✓	✓			✓
10	Investigation of climate change mitigation measures				✓			✓	✓	✓		✓	✓
11	Safe passing lanes and opportunity warning signs for local roads												
12	Implement detour route programme								✓		✓		✓
13	Improve freight productivity	✓		✓	✓		✓						✓
14	Implement FNDC designated logging routes									✓			✓
15	Kerikeri CBD Bypass				✓					✓	✓	✓	✓
16	Hone Heke Road Upgrade				✓					✓		✓	✓
17	Kerikeri South Eastern Bypass									✓		✓	✓
18	Shepards - SH10 (this option has been combined with REF 17)									✓		✓	
19	Kerikeri - Duneside - Kapiro Road Link												✓
20	SH10 Waipapa Loop Road												✓
21	Kerikeri to Paihia link road												
22	Connection of development cul de sacs (including connection of greenways, laneways and cycleways)					✓			✓	✓		✓	✓
23	New Road Sealing Projects Various district roads	✓	✓	✓			✓		✓				✓
24	Dust seals								✓		✓		✓
25	Tourism byway sealing to major attractions								✓				✓
26	Intersection safety seals									✓			
27	Resilience mitigation	✓					✓		✓		✓		✓
28	Flood Mitigation Measures											✓	✓
29	Upgrades to Existing Roads		✓	✓	✓	✓		✓	✓		✓		✓
30	SH11/10 – Puketona Roundabout *									✓	✓		
31	SH1/SH11 - Kawakawa Roundabout *									✓	✓		
32	Far North Roundabout Upgrade (Prioritise)									✓			✓
33	Far North Intersection Upgrades												✓
34	SH Intersection Upgrade (Prioritise) *									✓			
35	Paihia town centre upgrades		✓		✓	✓		✓	✓	✓	✓		✓
36	Township upgrades				✓	✓		✓	✓			✓	✓
37	New / extending passing lanes (Prioritise) *									✓			
38	Access improvements				✓	✓		✓	✓				✓
39	Gateway treatments			✓	✓			✓					✓
40	New rest areas and upgrades												✓
41	Stock effluent disposal facilities												
42	Wayfinding												✓

Safety Action Plan

Ref #	Option Name:	Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
		PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11 & P12
56	Road Safety Promotion	✓		✓					✓	✓			✓
57	Driver education			✓					✓	✓			✓
58	Cycle safety and cycle skills training					✓			✓	✓	✓	✓	✓
59	Annual Network Safety Identification Programme	✓	✓	✓				✓	✓	✓			✓
60	LCLR mobility access improvements								✓			✓	✓
61	LCLR Safety Improvements	✓	✓	✓	✓		✓		✓	✓	✓		✓
62	Safety barrier improvements	✓	✓	✓			✓		✓				✓
63	Minor safety rail crossing improvements												✓
64	Implementation of speed management measures		✓	✓				✓	✓	✓		✓	✓
65	Speed Limit reviews		✓	✓				✓	✓	✓			✓
66	Develop strategy to assess corridor safety (local roads)		✓	✓	✓			✓	✓	✓	✓		✓
67	Identification of wandering stock												
68	Implement alternative travel mode options to adress drink driving									✓			
69	Corridor wide Safety Improvements (SH11 Puketona to Kawakawa SSBC) *		✓	✓	✓	✓		✓	✓	✓	✓		
70	Opononi-Omapere Township Improvements			✓	✓	✓		✓	✓				✓
71	Parnell Street- hospital intersection upgrade (TCDR) Rawene												✓
72	Provision for safe school footpaths/crossing and cycle network		✓	✓	✓	✓		✓	✓	✓	✓		✓
73	School children education (REAP) - Cycle skills and safety									✓	✓		✓
74	Mobile driver license and WOF *									✓			

Travel Demand Action Plan

Ref #	Option Name:	Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
		PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11 & P12
87	Activity Management Improvement Plan (relocated to MOR Action Plan)		✓			✓		✓	✓				
88	Review District Parking Plan and Policy		✓		✓	✓		✓	✓	✓	✓		✓
89	Freedom Camping Bylaw Review								✓			✓	✓
90	Developing parking management plans		✓			✓			✓	✓			✓
91	Barrier Removal Programme (AT) – Human Rights Commission Councils		✓			✓			✓	✓			✓
92	Development and promotion of loop route journeys								✓	✓			
93	Develop HCV operation strategy									✓			✓
94	Review Engineering Standards (Existing Infrastructure)					✓		✓	✓	✓			✓
95	Review Engineering Standards (Future Infrastructure)					✓		✓	✓	✓			✓
96	Walking school bus		✓	✓		✓		✓	✓	✓	✓		✓
97	Strategic transport planning and design to reduce car-dependence									✓			
98	Health Clinic link and car park upgrade												✓
99	Development of data sharing capabilities												
100	Town Hall, information kiosk and car park improvements									✓			✓
101	Relocation of community facilities												
102	Paihia Parking Strategy									✓			✓
103	Accessibility Infrastructure									✓			✓
104	Parking and facilities								✓				✓
105	Education initiative / marketing towards behaviour change									✓			✓

Active Modes Action Plan

Ref #	Option Name:	Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
		PB	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11 & P12
111	Access to Beaches - Reserve Planning Policy					✓			✓	✓			
112	Develop plan to improve pedestrian access in urban areas		✓	✓		✓		✓	✓	✓	✓	✓	✓
113	Develop plan to prioritise recreational walking and cycling tracks			✓		✓		✓	✓	✓	✓		✓
114	Develop plan to improve local cycle connections between towns		✓	✓		✓		✓	✓				✓
115	Overseas Investment Office policy					✓			✓				
116	Footpath policy	✓		✓		✓	✓		✓				✓
117	Develop township cycling plans					✓			✓	✓	✓	✓	✓
118	Implementation of pedestrian improvements in urban areas		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
119	Urban planned W & C environments					✓			✓	✓			✓
120	Reinstatement of unused vehicle crossings (pram connectivity)									✓			
122	Greater use of unformed roads for off-road greenway walk / cycle					✓			✓	✓	✓		
123	Implementation of urban cycling								✓	✓	✓		✓
124	Barriers - Removal of barriers to uptake active modes								✓	✓	✓		
125	Implement Paihia cycling plan		✓	✓	✓	✓			✓	✓	✓	✓	✓
126	Implement Kaikohe cycling plan		✓	✓		✓			✓	✓	✓		✓
127	Develop the Twin Coast Cycle Trail (TCCT) to support tourism growth									✓		✓	✓
128	Potential BMX trail on parkway edge (owned by other Kaikohe and districts sportsville)												
129	Ngawha Springs cycle trail (covered under TCCT)									✓			
130	Kawakawa cycle trail alternative route (covered under TCCT)									✓			
131	Okiato to Russell on road cycle route (covered under TCCT)			✓		✓			✓	✓	✓		
132	Horeke to Wairere Boulders cycle link (covered under TCCT)									✓			
133	Horeke to Rawene cycle route (removed from TCCT scope)									✓	✓		
134	Opua to Paihia Walkway + via Aucks Road (Northland Integrated Cycling Implementation Plan)		✓	✓	✓	✓		✓	✓	✓	✓		✓
135	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)		✓	✓	✓	✓		✓	✓	✓	✓		✓
136	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)		✓	✓	✓	✓		✓	✓	✓	✓		✓
137	Horeke to Mangungu Mission House (Northland Integrated Cycling Implementation Plan, covered under TCCT)			✓		✓			✓	✓	✓		
138	Tokoreireia (Monument Hill): cycle to summit									✓			✓
139	SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop									✓			✓
140	Clendon Esplanade shared zone- one way vehicle movement, 2 way cyclists									✓			✓
141	Pembroke Cycle Connection improving access to the township					✓			✓	✓	✓		✓
142	Cycle Link Hundertwasser Park (owned by other KHPCT)		✓	✓	✓	✓			✓	✓	✓		
143	Cycleway Rail Crossing, Boswell St and Gillies St to SH1 walkway establishment and upgrade.					✓			✓	✓	✓		✓
144	Kohukohu township to ferry landing mangrove boardwalk									✓			
145	Opononi-Omapere Shared User Path		✓	✓	✓	✓		✓	✓	✓	✓		✓
146	Develop recreational cycle facilities									✓			✓
147	Destination facilities for cyclists and scooters (including for schools)									✓	✓		✓
148	Township streetscape improvements									✓			
149	Residential streetscape improvements									✓			✓
150	Improved pedestrian access in townships									✓			✓
151	New or Improved footpath / shared use Projects		✓	✓	✓	✓		✓	✓	✓	✓		✓
152	Implementation of prioritised TCDR footpath / shared use path projects		✓	✓	✓	✓			✓	✓	✓		✓

Public Transport / Ride Share Action Plan		Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
Ref #	**Option Name:**	**PB**	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11 & P12**
158	Public Transport / Rideshare promotion												
159	Application of technology to support public transport									✓			
160	Public Transport / Rideshare subsidy									✓			
161	Total mobility scheme					✓			✓				✓
162	Bus stops and shelters policy												✓
163	Public transport / rideshare future planning		✓			✓		✓	✓	✓	✓	✓	✓
164	Park and Ride Plan								✓				✓
165	Implement community based ride share projects									✓			✓
166	Medical / elderly ride share provisions												✓
167	Improving existing services to township (collaboration with NRC)		✓			✓			✓	✓		✓	
168	Implement public transport / rideshare projects (collaboration with NRC)												
169	Absorb the Kerikeri school transport operation into a public bus service									✓			✓
170	Improve Bus Connections in Northland (SH11 Puketona to Kawakawa SSBC) *									✓			
171	Develop transport hubs												✓
172	Improve mobility accessibility on public transport												✓
173	Bus stop facility improvements and new locations												✓
174	Taxi pick up / drop off areas												✓
175	Dedicated stop shelters for hitch hikers												

Harbour Action Plan		Do-minimum programme	Foundation programmes						Stakeholder programmes				Post-workshop programme
Ref #	**Option Name:**	**PB**	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11 & P12**
179	Subsidy												
180	Hokianga Harbour Long Term Plan												✓
181	Electric Ferry feasibility study												✓
182	Investigating sea-shipping feasibility												
183	Speed management at wharfs												
184	Improvements to existing ferry services											✓	✓
185	Investigate new ferry services												✓
186	Car park security												
187	Wharf supporting infrastructure								✓				✓
188	Boat ramp parking												✓
189	Access onto water								✓				✓

APPENDIX G: INTEGRATED TRANSPORT PLAN

ITP Recommended Programme and Staging

Recommended Programme - 10 year Implementation Period

							Short Term (1-3 yrs)			Medium Term (4-6 yrs)			Long Term (7-10 yrs)				Programme Outcomes						Alignment to Draft GPS 2021/22-2030/31				Funding			
Action Plan	Option Name	Potential Projects / Description to be considered as part of this improvement stream	Longlist Reference #	Planning / Implementation	Next Steps	10 YR Period Allocated ITP CapEx Cost (undiscounted)	Short Term total CapEx cost (10 YR period)	Medium Term total CapEx cost (10 YR period)	Long Term total CapEx cost (10 YR period)	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)	Safety	Better Travel Options	Climate Change	Improving Freight Connections	Primary Funding Authority	Secondary Funding Authority	PGF Funding %	NZTA Funding Activity Class
Road Network	Bridge Improvements	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* Kaipātiki Bridge Upgrades Omanaia Bridge future proofing Horeke TCDR Horeke bridge and stream access improvements	 2 2 2	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$3,287,800**		$1,143,900	$2,143,900					$500,000	$643,900	$1,643,900	500000			NO	YES	YES	NO	YES	NO			H	H	NLTF	PGF	0%	Local road, regional and State Highway improvements
Road Network	Stormwater Upgrades	Stormwater upgrades - Various Far North District locations	4	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$1,030,000**		$1,030,000					$30,000	$500,000	$500,000					NO	YES	YES	NO	YES	NO			M	L	NLTF		0%	Local road, regional and State Highway improvements
Road Network	New Road Sealing Projects Various district roads	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* New Road Sealing Projects - Various district roads (sealing of prioritised metal roads) Koutu Loop Rd seal improvements Waiotemarama Gorge seal and shape corrections	 23 23 23	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate existing prioritisation criteria for application beyond June 2021	**$27,765,028**	$3,757,500	$3,757,500	$20,250,028	$1,252,500	$1,252,500	$1,252,500	$1,252,500	$1,252,500	$1,252,500	$1,252,500	$1,252,500	$6,815,119	$10,929,909	YES	YES	YES	YES	YES	YES	L	L	M	L	NLTF	PGF	60%	Local road, regional and State Highway improvements
Road Network	Dust seals	Dust seals	24	I	Confirm in FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$11,000,000**	$3,300,000	$3,300,000	$4,400,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	YES	YES	YES	YES	NO	NO	L	L	M	M	NLTF		0%	Local road, regional and State Highway improvements
Road Network	Upgrades to Existing Roads	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.* Horeke TCDR - Tāheke / Hōreke Road upgrade improvements Horeke TCDR - Motukiore Road upgrade improvements Horeke TCDR - Hōreke Road, Utakura Valley upgrade improvements *off map Signal Station Rd improvements Te Ruapekapeka Road Improvements Rawhiti Road to support the planned Eastern Bay of islands Great Walk Wxperience (Rawhiti) Motuti Road Waimamaku Urban Treatments Other Far North District locations	 29 29 29 29 29 29 29 36 29	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. Depending on outcome of prioritisation, individual business cases may be required	**$10,000,000**		$2,000,000	$8,000,000					$1,000,000	$1,000,000	$1,500,000	$2,000,000	$2,000,000	$2,500,000	YES	YES	YES	YES	YES	NO	L	M	M	M	NLTF	PGF	50%	Local road, regional and State Highway improvements
Road Network	Far North Intersection Upgrades	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.* Kaikohe TCDR -Station Road/ Park Road Parkway and intersection uperade Fairlie Cres intersection + safe crossing place Kawakawa TCDR - Old Whangae Road SH1 intersection adjustment, Pedestrian and cycle crossing, south bound surface treatment. Pakia Hill Intersection & Rest Area Rawene TCDR - Parnell Street Hospital intersection Other Far North District locations	 33 33 33 33 33 33	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria identifying projects which should proceed to DBC	**$4,062,500**		$2,062,500	2000000				$1,000,000		1062500	1000000	1000000			YES	YES	YES	YES	YES	NO	M	L	L		NLTF	PGF	0%	Local road, regional and State Highway improvements
Road Network	New rest areas and upgrades	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* SH1 Kawakawa SH1 Okaihau SH1 Te Kau SH10 Kaeo SH10 Coopers Beach SH10 Cable Bay SH12 Taheke Tavern SH15 Twin Bridge Kohukohu Ferry Landing Broadwood Rest area signage Rawene TCDR - Russell Esplanade rest area	 40	I	Integrate local road option into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment. Note TCDR rest areas have been completed to SSBC stage	**$4,275,000**		$427,500	$3,847,500						$427,500	$855,000	$1,282,500	$855,000	$855,000	YES	YES	YES	YES	YES	NO	L	L			PGF		100%	
Road Network	Kerikeri Strategic Road Network Plan Indicative Business Case (IBC) + Detailed Business Case (DBC)	Review of the Kerikeri Strategic Road Network Plan and development of either an Indicative Business Case (IBC) and/or Detailed Business Case (DBC). Purpose is to confirm the top priority Kerikeri transport projects for the next 10 years and develop further detail to progress funding applications. Schemes to be considered include: Kerikeri CBD Bypass, Hone Heke Upgrade, Kerikeri South Eastern Bypass, Kerikeri - Ouneside - Kapiro Road Link, SH10 Waipapa Loop Road, Connection of development cul de sacs (including connection of greenways, laneways and cycleways), Puererua Road - SH10 link road and others. Results of traffic modelling work to be included in this assessment.	7	P	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Agree next stage Business case with Waka Kotahi. Procure services to undertake IBC/DBC or SSBC	**$1,200,000**	$1,200,000			$400,000	$400,000	$400,000								YES	YES	YES	YES	YES	YES	L	M			NLTF		0%	Local road, regional and State Highway improvements
Road Network	Develop Kaitaia to Kohukohu Plan	Kaitaia to Kohukohu needs plan	8	P	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Scope and procure services to develop a supplement to Whangarei - Kaitaia plan for resilience investment in local road	**$50,000**	$50,000				$50,000									YES	YES	YES	YES	YES	YES	L	M			NLTF	TIF	0%	Investment Management
Road Network	Township transport planning	*Scope and locations to be considered within this option (but not restricted to) include:* Urban transport network connectivity - Kaitaia / Kaikohe long term arterial planning Consider designations for new corridors in the district Peri Urban transport network connectivity - Network connections to industrial areas on the outskirts of townships eg. Russell, Paihia, Kaitaia / Northpark Network connections eg. Ngawha industrial area, Kerikeri, Russell, Paihia, Waipapa	 9 9 9 9	P	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria identifying projects which should proceed to DBC	**$175,000**	$175,000			$87,500	$87,500									YES	YES	YES	YES	YES	YES	L	M			NLTF		0%	Investment Management
Road Network	Implementation of Kerikeri Road Network Projects	*This line item is for the implementation of the outcomes of the Kerikeri IBC / DBC (REF 7). This is expected to be a staged implementation and therefore not all of the outcomes may be delivered in this 10 year programme and could be considered as part of future planning.* Kerikeri Road Network Projects	 15	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Procure services for detailed design and land purchase for projects staged in IBC. Procure construction for SSBC projects	**$10,000,000**		$3,000,000	$7,000,000				$500,000	$1,000,000	$1,500,000	$2,500,000	$2,000,000	$1,500,000	$1,000,000	YES	YES	YES	YES	YES	NO	M	H			NLTF		0%	Local road, regional and State Highway improvements
Road Network	Paihia town centre upgrades	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.* Paihia town centre upgrades - pedestrianisation, improved public amenities. Paihia to Waitangi shared use path. Te Karuwha Parade upgrade Taxi pick up / drop off areas	 35 35 35 174	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. Point of entry to be confirmed with Waka Kotahi IBC/DBC or SSBC. Cost to be part of total package allowance.	**$10,050,000**		$3,600,000	$6,450,000					$1,500,000.00	$2,100,000.00	$1,500,000.00	1950000	$2,000,000.00	1000000	YES	YES	YES	YES	NO	YES	L	H			PGF		100%	
Road Network	Township upgrades	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.* Opononi Township Improvements Town centre surface treatments SH1 and SH 10 street environment through town centre	 70 36 36	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$1,246,000**	$500,000	$71000	$175,000	$500,000					571000	$100,000	$75,000			YES	YES	YES	YES	NO	YES	L	L			NLTF	PGF	40%	Local road, regional and State Highway improvements
Road Network	Implement detour route programme	*Scope and locations to be considered within this option (but not restricted to) include:* Secondary routes will be used more and requires resilience planning and investment in detours (Mangakahia Road, around Kaeo)	 12	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$2,000,000**	$1,200,000	$800,000		$800,000	$400,000			$400,000	400000					YES	YES	YES	NO	YES	NO	H		L	M	NLTF		0%	Local road, regional and State Highway improvements

Recommended Programme - 10 year Implementation Period

										Short Term (1-3 yrs)			Medium Term (4-6 yrs)			Long Term (7-10 yrs)				Programme Outcomes						Alignment to Draft GPS 2021/22-2030/31				Funding			
Action Plan	Option Name	Potential Projects / Description to be considered as part of this improvement stream	Longlist Reference #	Planning / Implementation	Next Steps	10 YR Period Allocated ITP CapEx Cost (undiscounted)	Short Term total CapEx cost (10 YR period)	Medium Term total CapEx cost (10 YR period)	Long Term total CapEx cost (10 YR period)	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)	Safety	Better Travel Options	Climate Change	Improving Freight Connections	Primary Funding Authority	Secondary Funding Authority	PGF Funding %	NZTA Funding Activity Class
		Keeping important routes open during emergencies	12																													
		Kerikeri to Paihia, alternative route through Waitangi Forest	12																													
		Kaitaia to Cape Reinga – provide alternative route	12																													
Road Network	Tourism byway sealing to major attractions	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Obtain access to TIF list. Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate existing prioritisation criteria in Road matrix and TIF list for application beyond June 2021	**$2,700,000**		$1,200,000	$1,500,000					$700,000.00	$500,000.00	$500,000.00	$500,000.00		$500,000.00	YES	YES	YES	YES	NO	NO	L	L	L		TIF	PGF	0%	
		Tourism byway sealing to major attractions	25																													
		Seal Bayly Road for tourism access	25																													
Road Network	Access improvements	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$10,000,000**	$1,000,000	$4,000,000	$5,000,000	$500,000	$250,000	$250,000		$2,000,000	$2,000,000	1500000	$2,500,000	1000000		YES	YES	YES	YES	NO	YES	L	L			NLTF	PGF	100%	Local road, regional and State Highway improvements
		TCDR SH11 Improve Access to Waitangi Treaty Grounds	38																													
		TCDR SH12 Pakanae Marae and Cemetery access	38																													
		TCDR SH12 Waiwhatawhata Marae access and parking	38																													
		TCDR SH11 Haruru Falls Road Improvements	38																													
		Williams Rd Car Park - Paihia	38																													
		Kohukohu TCDR - Pioneer cemetery edge & entry	38																													
		Horeke TCDR - Mangungu reserve access improvement	38																													
		Other Far North District locations	38																													
Road Network	Gateway treatments	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Integrate local road option into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment. Note TCDR SSBC contains prioritisation guidance	**$1,340,000**		$540,000	$800,000						$540,000	$400,000	$400,000			YES	YES	YES	NO	NO	YES	L				NLTF	PGF	35%	Local road, regional and State Highway improvements
		Opononi Gateway	39																													
		Waipoua Forest Gateway	39																													
		Horeke TCDR - Gateway markers	39																													
		Kaikohe TCDR -Kowhai Park gateway threshold	39																													
		Kawakawa TCDR - North and South gateway signage	39																													
		Kaiwaha gateway threshold	39																													
		Other Far North District locations	38																													
Road Network	Wayfinding	TCDR Wayfinding signage	42	I	Integrate into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Implement as per TCDR SSBC staging plan	**$18,000**	$18,000			$18,000										YES	YES	YES	NO	NO	NO	L				NLTF		0%	Local road, regional and State Highway improvements
Road Network	Improve freight productivity	Strengthen and maintain key forestry routes and bridges to enable HPMV and SOMAX vehicles throughout the term of this strategy	13	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate existing prioritisation criteria and logging route designations for continued use beyond June 2021. Initiate discussion with Freight Operator Associations at regional level through NRC	**$10,000,000**	$600,000	$3,200,000	$6,200,000		$100,000	$500,000	$500,000	$1,000,000	$1,700,000	$1,700,000	$1,500,000	$1,700,000	$1,300,000	YES	YES	YES	NO	YES	NO	M		L	H	NLTF		0%	Local road, regional and State Highway improvements
		Implement FNDC designated logging routes (review already completed)	14																													
		Develop HCV operation strategy	93																													
Road Network	Investigation of climate change mitigation measures	Investigation of climate change mitigation measures including the protection of low lying coastal townships and road network	10	P	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate existing prioritisation criteria for continued use beyond June 2021. Initiate NTA Workstream to collate data and procure services to undertake SSBC	**$75,000**	$37,500	$37,500				$37,500	$37,500						NO	YES	YES	NO	YES	NO			H	L	NLTF		0%	Local road, regional and State Highway improvements
Road Network	Resilience mitigation	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate existing prioritisation criteria for alignment with climate change business case	**$5,567,334**	$1,000,000	$1,053,868	$3,513,467	$500,000.00	$400,000.00	$100,000.00	$200,000.00	$200,000.00	$653,868.00	$556,733.40	$1,000,000.00	$1,000,000.00	$956,733.40	YES	YES	YES	NO	YES	NO	M		H	H	NLTF		0%	Local road, regional and State Highway improvements
		LCLR Resilience slip mitigation	27																													
		Omapere Slope Stability Improvements	27																													
		Horeke TCDR Sea wall edge restoration	3																													
Road Network	Flood Mitigation Measures	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment with climate change business case	**$3,495,000**		$2,000,000	$1,495,000					2000000		1495000				YES	YES	YES	NO	YES	NO	L		H	H	NLTF		0%	Local road, regional and State Highway improvements
		Panguru Road Raising/ Flood Mitigation	28																													
		Flooding - Kawakawa / Moewera, SH11 spring tides, Taumere, Kaeo	28																													
Safety	Road Safety Promotion	*Projects to be considered within this option (but not restricted to) include:*		I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. NTA to review suggestions for new activities	**$15,000,000**	$4,500,000	$4,500,000	$6,000,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	YES	YES	YES	YES	NO	NO	H	L			NLTF		0%	Promotion of road safety and demand management
		Road Safety Promotion (10 YEAR PERIOD)	56																													
		Road code promotion - driver attitude adjustment promotion	56																													
		Promote and support REAP Safety initiatives	56																													
		Driver education and enforcement - Educate urban drivers on gravel road	57																													
		Cycle safety and cycle skills training	58																													
		School children education (REAP) - Cycle skills and safety	73																													
Safety	Annual Network Safety Identification Programme	Annual network crash analysis to identify new projects	59	P	Progress through FNDC section of Regional AMP	**$150,000**	$45,000	$45,000	$60,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	YES	YES	YES	YES	YES	YES	H	L			NLTF		0%	Investment Management
		Speed limit reviews	65																													
		Develop strategy to assess corridor safety (local roads)	66																													
Safety	Lighting improvements	Lighting improvements - Programme to fill in dark spot gaps to increase safety for existing and new non motorised road and footpath users	1	I	Integrate into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria and site list. NTA to review suggestions for new sites	**$6,666,667**	$1,000,000	$2,200,000	$3,466,667	$500,000.00	$250,000.00	$250,000.00	$900,000.00	$600,000.00	$700,000.00	$466,667.00	$1,000,000.00	$1,000,000.00	$1,000,000.00	YES	YES	YES	NO	NO	NO	H	L			NLTF		0%	Local road, regional and State Highway improvements
Safety	LCLR Safety Improvements	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Confirm integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. NTA to review suggestions for new projects. Consider adoption of TCDR SSBC's priortisation and staging	**$4,360,060**	$1,308,018	$1,308,018	$1,744,024	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	$436,006.04	YES	YES	YES	YES	YES	NO	H	L			NLTF		0%	Local road, regional and State Highway improvements
		LCLR Minor Safety Improvements	61																													
		Rawene TCDR - Parnell Street- slow zone and main street upgrade	61																													
		Rawene TCDR - Parnell Street- Mariner Street section- bus stop, speed management and pedestrian movement	61																													
		Kawakawa TCDR - Vogel St/SH1 turning to/from hospital - road markine/surface treatment.	61																													
		Rawene TCDR - Parnell Street and Marmon Street- school slow zone	61																													
		Other Far North District locations	61																													
Safety	Safety barrier improvements	LCLR Minor Safety Barrier Improvements	62	I	Confirm integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. NTA to review suggestions for new projects	**$628,571**	$188,571	$188,571	$251,428	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	$62,857.08	YES	YES	YES	YES	YES	NO	H	L			NLTF		0%	Local road, regional and State Highway improvements
Safety	Implementation of speed management measures	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Confirm integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. NTA to review suggestions for new projects. Consider adoption of TCDR SSBC's priortisation and staging	**$4,708,000**	$2,000,000	$2,708,000		$500,000	$1,000,000	$500,000	$1,604,000	$1,104,000						YES	YES	YES	YES	YES	NO	H	L			NLTF		0%	Local road, regional and State Highway improvements
		Minor Safety - Ahipara Speed Management	64																													
		Kaikohe TCDR -Side streets parking capacity and slow speed environment	64																													
		Kohukohu TCDR - Herald hub slow speed environment	64																													

Recommended Programme - 10 year Implementation Period

										Short Term (1-3 yrs)			Medium Term (4-6 yrs)			Long Term (7-10 yrs)				Programme Outcomes						Alignment to Draft GPS 2021/22-2030/31				Funding			
Action Plan	Option Name	Potential Projects / Description to be considered as part of this improvement stream	Longlist Reference #	Planning / Implementation	Next Steps	10 YR Period Allocated ITP CapEx Cost (undiscounted)	Short Term total CapEx cost (10 YR period)	Medium Term total CapEx cost (10 YR period)	Long Term total CapEx cost (10 YR period)	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)	Safety	Better Travel Options	Climate Change	Improving Freight Connections	Primary Funding Authority	Secondary Funding Authority	PGF Funding %	NZTA Funding Activity Class
		Kohukohu TCDR - Main street slow speed environment	64																													
		Kohukohu TCDR - Rakautapu Road and wharf intersection- slow speed environment	64																													
		Moerewa TCDR - Otiria Road- slowing and managing traffic speed	64																													
		Horeke TCDR - Horeke mainstreet, slowing speeds and connecting places	64																													
		Moerewa TCDR - Settlement Road- slowing and managing traffic speed	64																													
		Rawene TCDR - Ferry landing slow speed environment	64																													
		Other Far North District locations	64																													
Safety	Minor safety rail crossing improvements	Kawakawa - Otiria bypass, to respond to new investment in rail line. KiwiRail investment in line to Otiria - need to consider transport requirements around heavy vehicle access to rail head at Otiria	63	I	Work with Kiwirail assess road network implications of upgrade proposal and seek their funding support	**$100,000**		100000					50000	50000						YES	YES	YES	YES	YES	NO	H	L			NLTF		0%	Local road, regional and State Highway improvements
Safety	Provision for safe school footpaths/crossing and cycle network	*Projects to be considered within this option (but not restricted to) include:*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$1,053,000**	$1,053,000			$553,000	$500,000									YES	YES	YES	YES	NO	NO	H	H			NLTF		0%	Walking and cycling improvements
		Schools - Provision of safe footpath and cycle network	72																													
		Schools - Pedestrian crossings	72																													
		Schools - Provide consistent and fit for purpose shoulder widths and lane markings	72																													
		School patrol crossings	72																													
		Kea crossing - eg. Opononi School and others	72																													
		Walking school bus	96																													
TDM	Review District Parking Plan and Policy	*Scope and locations to be considered within this option (but not restricted to) include:*		P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Establish interdepartmental project team to Project Manage preparation of a district Strategy and Bylaw. Confirm and fill data gaps. Procure services to prepare strategy and prioritised implementation plan. Consultation	**$350,000**	$350,000			$200,000	$150,000									NO	YES	YES	YES	NO	YES		L			NLTF		0%	Local road, regional and State Highway improvements
		District wide parking survey update - Parking Inventory (incl Paihia)	88																													
		Parking at boat ramps (district wide)	88																													
		District Parking Strategy and Policy (Undertake Parking Strategy)	88																													
		Peripheral parking + info boards – 'distance + time' (active mode linkaees)	88																													
		Parking Bylaw review	88																													
		Incentivise collaboration and sharing and facilitate transport to Centre. Improve utilisation of existing parking areas such as Rugby Fields, Turner Centre, Baptist Church, Northtec, Packhouse Market, Kerikeri High School	88																													
		Paihia Parking Strategy	102																													
		No Freedom Parking Bylaw - Paihia	89																													
		Developing parking management plans	90																													
TDM	Review Engineering Standards	Review Engineering Standards (Existing Infrastructure) - Footpaths, Crossings, Existing roads for new developments (UNDERWAY)	94	P	Update transport section of Engineering Standards	**$75,000**	$75,000			$75,000										YES	YES	YES	NO	NO	NO	L				NLTF		0%	Investment Management
		Review Engineering Standards (Future Provision) - Pedestrian planning design guide, Future modes, Future focus on urban from with high quality W & C infrastructure, Sight lines/ visibility ie: Heritage Bypass	95																													
TDM	Accessibility Infrastructure	Installation of accessibility infrastructure i.e. mobility scooter facilities – ramps, wheelchairs, etc	103	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Compile project list and validate prioritisation criteria with Disability Access Group.	**$100,000**	$100,000				$50,000	$50,000								NO	YES	YES	YES	NO	NO		M			NLTF		0%	Local road, regional and State Highway improvements
		LCLR mobility access improvements	60																													
TDM	Parking and facilities	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Filter projects through completed district parking strategy prioritisation matrix. Reference TCDR SSBC's projects and staging	**$735,000**	$600,000	$135,000		$300,000	$300,000		$135,000							NO	YES	YES	NO	NO	YES					NLTF	TIF	0%	Local road, regional and State Highway improvements
		Parking and facilities at tourist destinations (eg. Shipwreck Bay, Ahipara foreshore, Kaka Street and others)	104																													
		Parking and facilities in urban centres (Kerikeri, Paihia)	104																													
		Kohukohu TCDR - Town Hall civic space	104																													
		Horeke TCDR - Town Hall Information Kiosk & car park	100																													
		Horeke TCDR -Health Clinic link & car park	98																													
TDM	Education initiative / marketing towards behaviour change	Education initiative / marketing - assume included with behaviour change strategy	105	I	Integration into FNDC section of Regional AMP ensuring alignment with community road safety programme. Ensure provision within FNDC 21/27 RLTP application for NLTF funds	**$75,000**	$75,000			$75,000										NO	NO	NO	YES	NO	NO		M	H		NLTF		0%	Promotion of road safety and demand management
		Barrier Removal Programme (AT) – Human Rights Commission Councils. Focuses on accessibility for disabled New Zealanders	91																													
Active Modes	Develop plan to improve pedestrian access in urban areas	Strategy to improve pedestrian access in urban areas	112	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Initiate gap analysis. Add, filter and undertake subcategory prioritisation within new footpath matrix	**$75,000**	$75,000			$75,000										YES	YES	YES	YES	NO	NO	L	H	L		NLTF		0%	Walking and cycling improvements
Active Modes	Develop plan to prioritise recreational walking and cycling tracks	Recreational walking tracks prioritised plan	113	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$75,000**	$75,000				$75,000									YES	YES	YES	YES	NO	NO	L	H	L		NLTF		0%	Walking and cycling improvements
		Recreational cycling track prioritised plan	113																													
Active Modes	Develop footpath policy	Footpaths policy update	116	P	Initiate policy update including review of local funding mechanism. Validate existing prioritisation criteria	**$75,000**	$75,000			$37,500	$37,500									YES	YES	YES	YES	NO	NO	L	H	L		NLTF		0%	Walking and cycling improvements
		Footpath prioritisation criteria update	116																													
		Accessible wide clear footpaths in urban areas	116																													
		Footpath policy – add shared use within distance of CBD + width / widen	116																													
Active Modes	Improved pedestrian access in townships	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria subcategory of new footpath matrix	**$200,000**	$100,000	$100,000				$100,000	$100,000							YES	YES	YES	YES	NO	NO	M	H	M		NLTF		0%	Walking and cycling improvements
		Minor Safety - Kea Crossing and Bus Bay	150																													
		Relocation of pedestrian crossing to opposite the Horotutu	150																													
		Moerewa TCDR - Residential streetscapes - improving footpath connectivity	149																													
		Implementation of pedestrian improvements in urban areas	118																													
		Walking and cycling path & seawall improvements	118																													
Active Modes	New or Improved footpath / shared use Projects	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Apply validated prioritisation criteria	**$13,500,000**	$4,050,000	$4,050,000	$5,400,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	$1,350,000	YES	YES	YES	YES	NO	NO	M	H	M		NLTF	PGF	10%	Walking and cycling improvements
		Footpath new works(new builds)	151																													
		Minor Safety - Mangonui SH10 Connection - Footpath	151																													
		Kohukohu TCDR - Rakautapu Road trail/ bush trails	151																													
		Kaikohe TCDR - Hōne Heke trail to Puriri Tree	151																													
		Kaikohe TCDR -Laneway trails- Broadway to Lindvart Park (Kaikohe)	151																													
		Footpath Improvements (Opononi-Omapere) (SH12 SSBC)	151																													
		Moerewa School and Kura Kaupapa Māori o Taumārere - trail edges connecting to the cycleway	151																													
		Awanui TCDR - Trail 2 - The River Loop Oxbow Trail, Awanui River edge restoration and esplanade priority areas	151																													
		Opua to Paihia walking track upgrade	151																													
		Kawakawa - Te Mirumiru to Station Road Fire Station rear yard walkway.	151																													
		Footpath improvements (SH12 Rawene to Katui Road SSBC)	151																													
		Pedestrian access across SH1 North Bridge (Awanui)	151																													
		Footpath improvements SH1 North - Awanui	151																													
		Footpath improvements SH 10 East - Awanui	151																													
		Moerewa TCDR - Tuna Town improve access and amenity	151																													
		Kaikohe TCDR - Station Road 'lower parkway' shared path and Cycle Trail entry	151																													
		Kaikohe TCDR -Kaikohe Lindvart Park - potential walk and cycle links to Twin Coast Cycle Trail- indicative and controlled by Management Plan	151																													
		Kawakawa TCDR - Domain Hīkoi / Street Walk wayfinding	151																													
		Kohukohu TCDR - Beach Road/ Old Beach Road trail and threshold treatment	151																													

Recommended Programme - 10 year Implementation Period

										Short Term (1-3 yrs)			Medium Term (4-6 yrs)			Long Term (7-10 yrs)				Programme Outcomes						Alignment to Draft GPS 2021/22-2030/31				Funding			
Action Plan	Option Name	Potential Projects / Description to be considered as part of this improvement stream	Longlist Reference #	Planning / Implementation	Next Steps	10 YR Period Allocated ITP CapEx Cost (undiscounted)	Short Term total CapEx cost (10 YR period)	Medium Term total CapEx cost (10 YR period)	Long Term total CapEx cost (10 YR period)	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)	Safety	Better Travel Options	Climate Change	Improving Freight Connections	Primary Funding Authority	Secondary Funding Authority	PGF Funding %	NZTA Funding Activity Class
Active Modes	Implementation of prioritised TCDR footpath / shared use path projects	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* Kohukohu TCDR - Reclaimed bay heritage trails and saltmarsh boardwalk Moerewa TCDR - Simson Park- improving connections and access through the park Awanui TCDR - Trail 1 - Nature and Sports Trail Loop and Awanui River edge restoration. Awanui TCDR - Trail 3 - River trail to Unahi, Awanui River edge restoration and esplanade priority areas. Awanui TCDR - Trails 4 - River Trail to Kaitaia, Awanui River edge restoration and esplanade priority areas. Rawene TCDR - Parnell Street and Manning Street footpath extensions Walking trail and limestone reef viewing platform (SH12 Rawene to Katui Road SSBC) TCDR SH11 Shared Use Path Extension and Slip Repair at Haruru Moerewa TCDR - Te Rere Tiria waterfall access Rawene TCDR - Rawene Green Links projects Kohukohu TCDR - Walking and cycling path extension stage one- to Tauteihihi Marae Kohukohu TCDR - Walking and cycling path extension stage two- to The Narrows (vehicle ferry) Horeke TCDR - Hōreke Road pedestrian and cycle link from the town to the School (and to Māngungu Mission) Rawene TCDR - Rawene Domain walk and cycle trails	152 152 152 152 152 152 152 152 152 152 152 152 152 152	I	Integrate local road projects into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment. Note TCDR SSBC's contain prioritisation guidance	**$10,000,000**	$1,000,000	$4,000,000	$5,000,000		$500,000.00	$500,000.00	$1,000,000.00	$1,000,000.00	$2,000,000.00	$2,000,000.00	$2,000,000.00	1000000		YES	YES	YES	YES	NO	NO	M	H	M		NLTF	PGF	20%	Walking and cycling improvements
Active Modes	Develop plan to improve local cycle connections between towns	Consider low volume roads, all types of facilities. Consideration to be given to a full loop recreational cycle route to link Okaihau to Kerikeri.	114	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$150,000**	$150,000			$75,000	$75,000									YES	YES	YES	YES	NO	NO	L	H	L		NLTF		0%	Walking and cycling improvements
Active Modes	Develop township cycling plans	Paihia and Kaikohe cycling plans complete. Consider other urban areas such as Kerikeri, Kaitaia, Kawakawa or others. Consider direct routes to CBD's.	117	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria. IBC/SSBC may be required to option programmes per township	**$75,000**	$75,000			$37,500	$37,500									YES	YES	YES	YES	NO	YES	L	H	L		NLTF		0%	Walking and cycling improvements
Active Modes	Implementation of urban cycling	*Projects are to be prioritised within this option. Specific projects raised to date include the following locations (no particular order). Other locations can be considered during the prioritisation process.* Cycle / shoulder for route treatments Implementation of prioritised local cycle projects Cycleways in Paihia. Suggests change direction of one way system on Williams Road (Maheatai)Taipa bridge footpath/cycleway connectivity Implement Paihia cycling plan Implement Kaikohe cycling plan Implementation of strategy to priortise recreational walking and cycling tracks Implementation of township cycling plans	123 123 123 123 125 126 114 117	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Apply validated prioritisation criteria to list	**$8,980,000**	$500,000	$4,500,000	$3,980,000			$500,000	$1,000,000	$2,000,000	$1,500,000	$1,000,000	$1,000,000	$1,000,000	$980,000	YES	YES	YES	YES	NO	NO	M	H	L		NLTF		0%	Walking and cycling improvements
Active Modes	Develop the Twin Coast Cycle Trail to support tourism growth	Develop the Twin Coast Cycle Trail to support tourism growth - Pou Herenga Tai Cycle trail connection with the town Option cost is based on four phases to complete, enhance, extend and link Twin Coast Cycle Trail. Note that REF 134 and REF 135 are part of the Twin Cost Cycle Trail however have been separated from this cost as these options have been developed to a detailed staging	127 127 127	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds	**$10,769,000**		$6,950,000	$3,819,000				$2,600,000	$2,000,000	$2,350,000	$1,560,000	$1,059,000	$600,000	$600,000	YES	YES	YES	YES	NO	NO	L	H	L		NLTF		0%	Walking and cycling improvements
Active Modes	Opua to Paihia Walkway + via Aucks Road (Northland Integrated Cycling Implementation Plan)	Opua to Paihia (Northland Integrated Cycling Implementation Plan) - Extension of the Twin Coast Cycle trail	134	I	Integrate into FNDC section of Regional AMP. Confirm also in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. TCDR SSBC confirmed	**$1,234,000**	$1,234,000					$1,234,000.00								YES	YES	YES	YES	NO	YES	L	H	M		NLTF		0%	Walking and cycling improvements
Active Modes	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	Waitangi to Kerikeri (Northland Integrated Cycling Implementation Plan)	135	I	Integrate into FNDC section of Regional AMP. Confirm also in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. TCDR SSBC confirmed	**$997,000**		997000					997000							YES	YES	YES	YES	NO	NO	L	H	M		NLTF		0%	Walking and cycling improvements
Active Modes	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	Waoku Coach Road (to SH12) (Northland Integrated Cycling Implementation Plan)	136	I	Integrate into FNDC section of Regional AMP. Confirm also in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. TCDR SSBC confirmed	**$1,600,000**		1600000					1600000							YES	YES	YES	YES	NO	YES	L	H	M		PGF		100%	
Active Modes	Develop recreational cycle facilities	Cycling Improvements (Develop and implement Urban Rural recreational facilities)	146	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Implement Recreational walking tracks plan prioritisation criteria and apply to list	**$800,000**	$400,000	$400,000				$400,000	$400,000							NO	YES	YES	YES	NO	NO		H	M		NLTF	TIF	0%	Walking and cycling improvements
Active Modes	Destination facilities for cyclists and scooters (including for schools)	Provision of secure facilities - Sufficient bike parks, electric vehicle / bike charging stations Improve Destination Facilities for Cyclists (SH11 Puketona to Kawakawa SSBC) School destination facilities for cyclists	147 147 147	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria	**$400,000**	$200,000	$200,000				$200,000	$200,000							NO	YES	YES	YES	NO	NO		H	M		PGF		100%	
Active Modes	Implementation of prioiritised Twin Coast Discovery Route (TCDR) cycle projects	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* Kaikohe TCDR -Tokoreireia (Monument Hill): cycle to summit Kaikohe TCDR -SH12 Taheke Road: gateway threshold, cycle trail junction and rest stop Rawene TCDR - Clendon Esplanade shared zone- one way vehicle movement, 2 way cyclists Moerewa TCDR -Pembroke Cycle Connection improving access to the township Kawakawa TCDR - Cycleway Rail Crossing, Boswell St and Gillies St to SH1 walkway establishment and upgrade. Opononi-Omapere Shared User Path	138 139 140 141 143 145	I	Integrate local road projects into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment with confirmed TCDR SSBC	**$9,858,000**		$1,858,000	$8,000,000				$358,000	$500,000	$1,000,000	$2,500,000	$2,500,000	2000000	1000000	YES	YES	YES	YES	NO	YES	L	H	M		NLTF	PGF	50%	Walking and cycling improvements
PT / Ride share	Total mobility scheme	Total Mobility Scheme - Community raised solutions to accessible transport, Provide routes in the Far North, Subsidise shuttle services (Assists eligible users for parts of the journey)	161	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Initiate strategic delivery plan with NRC	**$100,000**	$100,000				$100,000.00									NO	YES	YES	YES	NO	YES		H			NLTF		0%	Public Transport
PT / Ride share	Bus stops and shelters policy	Bus stops and shelters policy - Owner maintenance, locations	162	P	Initiate policy development plan in conjunction with NRC	**$40,000**	$40,000			$40,000.00										NO	YES	YES	YES	NO	NO		H			NLTF		0%	Investment Management
PT / Ride share	Public transport / rideshare future planning	*Scope to be considered within this option (but not restricted to) include:* PT / ride share planning to address changing land use Autonomous PT services / pick up services Trialling once a week type services on key routes Consider aesthetics when determining PT routes Planning for community based ride share projects Connections to facilitate employee movement between towns. Loop systems such as Kerikeri / Waipapa / Puketona or Paihia / Kawakawa / Puketona or Kaikohe / Okaihau / Puketona. Planning for medical / elderly ride share provisions Planning for mobility accessibility on PT Absorb the Kerikeri school transport operation into a public bus service	163 163 163 163 163 163 163 169	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Feed into RPTP development by NRC. Develop prioritisation criteria	**$50,000**	$50,000			$50,000										NO	YES	YES	YES	NO	YES		H			NLTF		0%	Investment Management
PT / Ride share	Park and Ride Plan	Park'n'ride facilities near PT services	164	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Feed into RPTP development by NRC. Develop prioritisation criteria	**$75,000**	$75,000				$75,000									NO	YES	YES	YES	NO	YES		H			NLTF		0%	Investment Management
PT / Ride share	Implement community based ride share projects	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:* Community based operations (ie. ride share, Borrow /leasing vans. Utilisine existing school bus operations)	165	I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Feed into RPTP development by NRC. Validate prioritisation criteria	**$500,000**		$500,000						$250,000	$250,000					NO	YES	YES	YES	NO	YES		H			NLTF		0%	Public Transport

Recommended Programme - 10 year Implementation Period

										Short Term (1-3 yrs)			Medium Term (4-6 yrs)			Long Term (7-10 yrs)				Programme Outcomes						Alignment to Draft GPS 2021/22-2030/31				Funding			
Action Plan	Option Name	Potential Projects / Description to be considered as part of this improvement stream	Longlist Reference #	Planning / Implementation	Next Steps	10 YR Period Allocated ITP CapEx Cost (undiscounted)	Short Term total CapEx cost (10 YR period)	Medium Term total CapEx cost (10 YR period)	Long Term total CapEx cost (10 YR period)	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 6 2026	Year 7 2027	Year 8 2028	Year 9 2029	Year 10 2030	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)	Safety	Better Travel Options	Climate Change	Improving Freight Connections	Primary Funding Authority	Secondary Funding Authority	PGF Funding %	NZTA Funding Activity Class
		Intracommunity carpooling services	165																													
		Formalise informal ride share facility at Puketona Junction	165																													
		Medical / elderly ride share provisions	166																													
		Improve mobility accessibility on PT	172																													
PT / Ride share	Bus stop facility improvements and new locations	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Feed into RPTP development by NRC. Validate prioritisation criteria	**$450,000**	$225,000	$225,000				$225,000	$225,000							NO	YES	YES	YES	NO	YES		H			NLTF		0%	Local road, regional and State Highway improvements
		Improving existing bus stop facilities (shelters, signs, timetables and lighting) and locations	173																													
		New bus stop locations e.g outside of Paihia mall	173																													
		Bus Stop Improvements (SH11 Puketona to Kawakawa SSBC)	173																													
		Existing Pedestrian Crossing dis-establishment, new crossing, bus parking area upgrade.	173																													
Harbour	Hokianga Harbour Long Term Plan	Hokianga Harbour Long Term Plan	180	P	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. SSBC or IBC/DBC To be confirmed with Waka Kotahi	**$175,000**	$175,000			$175,000.00										NO	NO	YES	YES	NO	YES		H			NLTF		0%	Investment Management
		Hydrodynamic survey interpretive report	180																													
		Electric Ferry feasibility study	181																													
Harbour	Improvements to existing ferry services	*Projects to be prioritised within this option (but not restricted to) include:*		I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validation of prioritisation criteria. Depending on outcome of prioritisation, individual business cases may be required	**$1,130,000**		$1,130,000					$300,000.00	$300,000.00	$530,000.00					NO	YES	YES	YES	YES	YES		H			NLTF		0%	Public Transport
		Hokianga Ferry (Kohu Ra Tuarua) - improving existing services (equipment renewals) - 7years	184																													
		Hokianga Ferry - Ferry services should be more frequent and go later at night, particularly during summer	184																													
Harbour	Investigate new ferry services	*Projects to be prioritised within this option (but not restricted to) include:*		P / I	Integration into FNDC section of Regional AMP. Ensure provision within FNDC 21/27 RLTP application for NLTF funds. Validation of prioritisation criteria. Depending on outcome of prioritisation, individual business cases may be required	**$1,734,000**			$1,734,000							$500,000	$1,000,000	$234,000	NO	YES	YES	YES	YES	YES		H			NLTF		0%	Public Transport
		Provide pedestrian / cyclist Hokianga ferry service (Horeke à Kohukohu à Rawene à Omapere)	185																													
		Kohukohu TCDR - Passenger ferry service (Rawene, Kohukohu)	185																													
Harbour	Wharf supporting infrastructure	*Projects to be prioritised within this option, locations to be considered (but not restricted to) include:*		I	Integrate local road projects into FNDC section of Regional AMP. Confirm related SH Projects in NZTA TAIP within FNDC 21/27 RLTP application for NLTF funds. Validate prioritisation criteria alignment with confirmed TCDR SSBC	**$2,000,000**	$1,000,000	$1,000,000			$500,000	$500,000		$500,000	$500,000					NO	YES	YES	YES	NO	YES		H			PGF		100%	
		Opononi / Opua / Whangarora / Clendon esplanade.	187																													
		Boat ramp parking	188																													
		Horeke TCDR - Mangungu Wharf & Mission House improvements	188																													
		Herald hub water access	189																													
		Kohukohu TCDR - Memorial arch rest stop and water access	189																													
		Kohukohu TCDR - Paheke waka landing upgrade	189																													
		Horeke TCDR - Improve access to the water	189																													
MOR	Maintenance , Operation and Renewal Programme	MOR projects prioritised as part of the FNDC Activity Management Plan		I		**$294,000,000**	$88,200,000	$88,200,000	$117,600,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000	YES	YES	YES	NO	YES	NO					NLTF		0%	Road Maintenance
					FNDC Recommended Programme Cost Totals (excluding MOR Programme)	**$218,379,960**	**$33,731,589**	**$72,418,357**	**$112,230,014**	**$11,214,863**	**$11,053,863**	**$11,462,863**	**$19,452,863**	**$24,820,363**	**$28,145,131**	**$28,493,664**	**$28,482,863**	**$27,933,982**	**$27,319,506**														
					FNDC Overall Transport Programme Cost Totals (including MOR Programme)	**$512,379,960**	**$121,931,589**	**$160,618,357**	**$229,830,014**	**$40,614,863**	**$40,453,863**	**$40,862,863**	**$48,852,863**	**$54,220,363**	**$57,545,131**	**$57,893,664**	**$57,882,863**	**$57,333,982**	**$56,719,506**														

Assessment of options excluded from ITP Recommended Programme

The options from the long list that were not included in the ITP recommended have been assessed at a high level against the investment objectives to determine their potential contribution to the FNDC ITS in the longer term(>10 years). Options resulting in a “Y” outcome are likely to contribute positively in achieving the relevant investment objective. It is noted that only standalone options that are or likely to be owned by FNDC have been assessed.

Assessment of options excluded from ITP Recommended Programme

			Programme Outcomes					
Option Name	Longlist Reference #	Action Plan	Improving Safety (IO 1)	Managing Growth (IO 2)	Making best use of our existing network (IO 3)	Improving Transport Choices (IO 4)	Securing our Transport System (IO 5)	Prioritising Investment (IO 6)
Sea wall / edge restoration	3	Road Network		Y	Y		Y	
Smart lighting wifi connectivity	5	Road Network	Y	Y				
Smartphone traffic info apps	6	Road Network		Y	Y		Y	
Safe passing lanes and opportunity warning signs for local roads	11	Road Network	Y	Y	Y		Y	
Kerikeri to Paihia link road	21	Road Network	Y	Y	Y	Y	Y	
Intersection safety seals	26	Road Network	Y	Y	Y		Y	
Stock effluent disposal facilities	41	Road Network		Y	Y		Y	
Identification of wandering stock	67	Safety	Y		Y		Y	
Implement alternative travel mode options to adress drink driving	68	Safety	Y	Y	Y	Y		
Development and promotion of loop route journeys	92	TDM		Y	Y			
Strategic transport planning and design to reduce car-dependence	97	TDM		Y		Y		
Development of data sharing capabilities	99	TDM						Y
Relocation of community facilities	101	TDM	Y	Y	Y			
Access to Beaches - Reserve Planning Policy	111	Active Modes		Y				
Overseas Investment Office policy	115	Active Modes		Y	Y	Y		Y
Reinstatement of unused vehicle crossings (pram connectivity)	120	Active Modes	Y	Y	Y	Y		
Greater use of unformed roads for off-road greenway walk / cycle	122	Active Modes	Y	Y	Y	Y		
Barriers - Removal of barriers to uptake active modes	124	Active Modes		Y	Y	Y		
Township streetscape improvements	148	Active Modes	Y	Y	Y	Y		
Public Transport / Rideshare promotion	158	PT / Rideshare			Y	Y		Y
Application of technology to support public transport	159	PT / Rideshare		Y	Y	Y	Y	
Public Transport / Rideshare subsidy	160	PT / Rideshare		Y	Y	Y		Y
Improving existing services to township (collaboration with NRC)	167	PT / Rideshare		Y	Y	Y	Y	
Implement public transport / rideshare projects (collaboration with NRC)	168	PT / Rideshare		Y	Y	Y		
Dedicated stop shelters for hitch hikers	175	PT / Rideshare						
Subsidy	179	Harbour		Y	Y	Y		
Investigating sea-shipping feasibility	182	Harbour	Y	Y			Y	Y
Speed management at wharfs	183	Harbour	Y		Y			
Car park security	186	Harbour		Y	Y			

APPENDIX H: FUNDING SOURCES

National Land Transport Fund

Revenue collected from Fuel Excise Duty (FED), Road User Charges (RUC), Vehicle and Driver Registration and Licensing, state highway property disposal and leasing and road tolling is credited to the National Land Transport Fund (NLTF). These funds are used to pay for investment in land transport activities under the National Land Transport Plan
(NLTP).

Waka Kotahi assesses investment proposals using its Investment Assessment Framework (IAF) to ascertain whether they have sufficient priority to include in the National Land Transport Programme (NLTP) and to inform decisions to approve their funding. This considers two ranking factors:

- Results alignment – alignment of the proposal's key transport issues with the Government Policy on Land Transport (GPS).
- Cost-benefit appraisal – how efficient resources are used to deliver benefits from the proposed solution.

The assessment considers how the problem/issue/opportunity is significant:

- In relation to the desired GPS result(s).
- In relation to the scale of the gap to the appropriate customer level of service or performance measure.
- As part of an end-to-end journey.
- From a national perspective (given local, regional, national perspectives).
- From a community perspective with respect to access to social and economic opportunities.
- In relation to GPS timeframes i.e. a significant issue/opportunity within 3/10/10+ years.

The standard two-stage process for prioritising improvement activities is inclusion in the NLTP followed by funding approval.

The assessment framework provides for a range of work categories that have alternative or streamlined assessment procedures under the IAF as shown in Table 70.

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Table 70 Activities that have streamlined assessment procedures

Programme	Commentary
Low Cost – Low Risk	This is for improvements up to $1million within the Local Road Improvements, State Highway Improvements, Regional Improvements or Public Transport Improvements activity classes. It is expected that these improvements are well linked to planning documents such as Activity management plans, Road Safety Action Plans and RLTP. Key principles include: • Activities are optimised to reflect governments priorities • Flexibility to adjust the programmed over the three-year NLTP period • BCR is not needed to be calculated but the principal benefit will need to be identified. • Generic results alignment for low cost, low risk programmes is high • Generic cost benefit rating is Medium provided activities represent reasonable value for money
Safe Network Programme	Is a balanced targeted $1.85 billion programme of road safety improvements through top down evidence-based infrastructure risk assessment across local roads and state highways, including consideration of the top 10% identified for speed management, with the potential to save 160 -190 DSI per annum. The Safe Network Programme will be implemented in partnership with local government. A streamlined investment pathway has been developed for projects and activities (value between $1 million and $50 million) that form part of the Safe Network Programme or other approved programme. This streamlined investment pathway can only be used for standard safety Interventions that meet the applicable cost ranges and investment assurance criteria. Section 4 of the *Waka Kotahi Standard safety interventions toolkit V1 Draft* provides details on specific types of qualifying treatments. Safe system interventions linked to crash type is shown in

Figure 110 Safe System Alignment intervention types related to key crash types.

PHILOSOPHY	KEY CRASH TYPE			
	HEAD-ON	RUNOFF ROAD	INTERSECTIONS	VULNERABLE ROAD USERS
Recommended safe system treatments	• Median barriers (solid/semi-rigid and flexible) • Safe and appropriate speeds	• Roadside barriers • Safe and appropriate speeds	• Grade-separated interchanges or overpasses • Roundabouts • Signalised roundabouts • Safe and appropriate speeds	• Separated off-road facilities • Safe and appropriate speeds
Recommended safer corridor and safer intersection treatments	• Wide central/ median treatments • Safe and appropriate speeds	• Wider shoulders • ATP markings • Safe and appropriate speeds • Skid resistance	• Wider shoulders • Separate turning facilities • Skid resistance • Improved delineation • Active signs • Safe and appropriate speeds	• Improved sight visibility through various treatment • Safe and appropriate speeds
Recommended safety management treatments	• ATP markings • Improved delineation (signs and markings) • Active signs • Separated off-road facilities • Safe and appropriate speeds	• Wider shoulders • Improve delineation • Active signs • Safe and appropriate speeds	• Skid resistance • Improved sight visibility through various treatment	• Improved sight visibility • Reduce pinch points • Maintain consistent shoulder width • Maintain surface quality

(Source: Table extracted from Section 2 of the Waka Kotahi Standard safety interventions toolkit V1 (Draft))

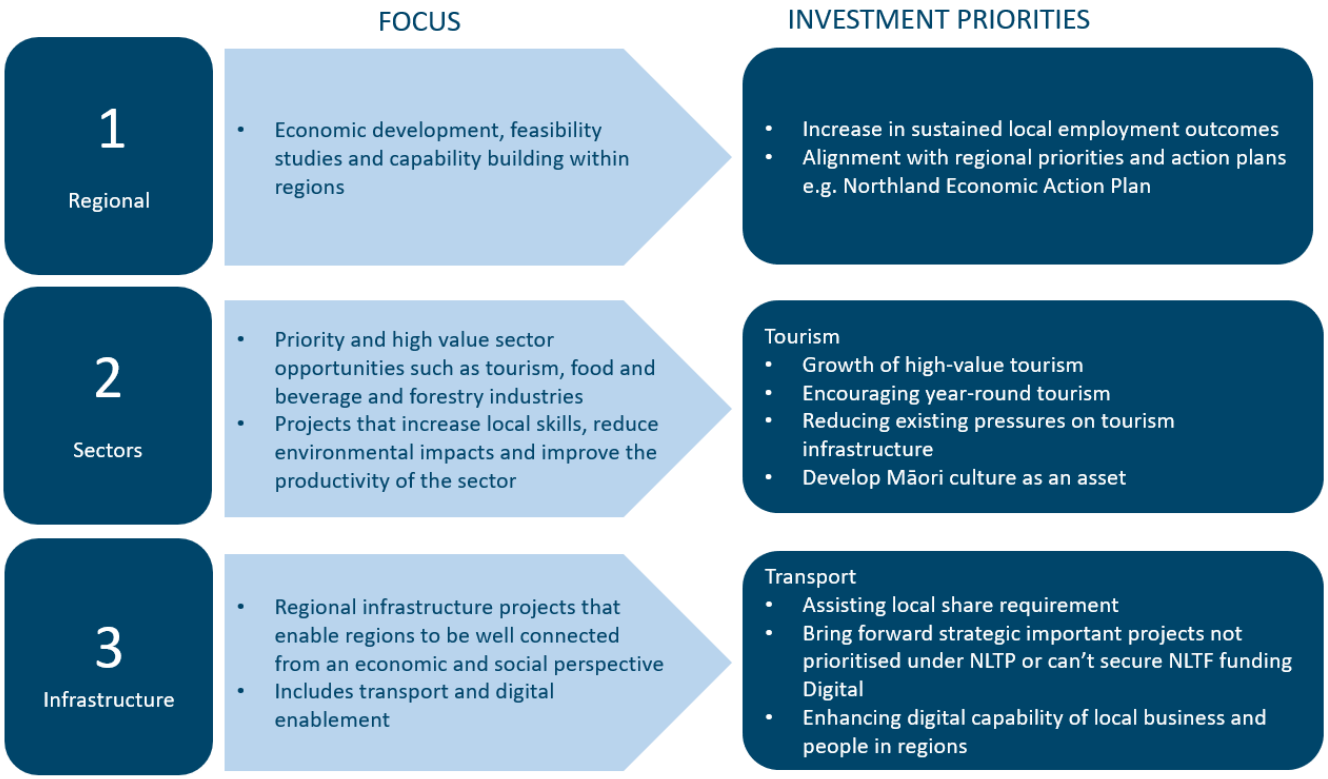
Provincial Growth Fund

The Provincial Growth Fund (PGF) has been implemented by the Government with the purpose to accelerate regional development, increase regional productivity, and contribute to more, better-paying jobs. This purpose is supported by the following objectives:

- Creating jobs, leading to sustainable economic growth.
- Increasing social inclusion and participation.
- Enabling Māori to realise aspirations in all aspects of the economy.
- Encouraging environmental sustainability and helping New Zealand meet climate change commitments alongside productive use of land, water and other resources.
- Improving resilience, particularly of critical infrastructure, and by diversifying our economy.

There are three funding tiers as shown in Figure 111.

Figure 111 PGF investment priorities



There are four key themes for PGF project criteria and funding assessment:

- **Link to Fund and government outcomes** – The project should lift the productivity potential of a region or regions and contribute to other Fund objectives. This includes jobs, community benefits, and improved use of Māori assets, sustainability of natural assets, and mitigating and adapting to climate change.
- **Additionality** – The project needs to add value by building on what is there already and not duplicating existing efforts. The project also needs to generate clear public benefit.
- **Connected to regional stakeholders and frameworks** – Projects should fit in with agreed regional priorities and need to be discussed with relevant local stakeholders.
- **Governance, risk management and project execution** – Projects will need to be supported by good project processes and those involved should have the capacity and capability to deliver the project. Projects need to be sustainable in the longer term beyond the Fund's life.

The PGF excludes the following from funding as they are funded through other monetary streams:

- Housing (unless it is a core part of a broader project and would not otherwise be required)
- Water and large-scale irrigation
- Social infrastructure (such as hospitals and schools)

Funding from the PGF is subject to the Provincial Development Unit's funding application assessment processes.

Tourism Infrastructure Fund

The purpose of the Tourism Infrastructure Fund is to provide financial support for local visitor-related public infrastructure where tourism growth (domestic and international) is placing pressure on, or potential growth is constrained by, existing infrastructure and where the local community is unable to respond in a timely way without assistance. Typically, these are areas with high visitor numbers but small ratepayer bases.

The fund aims to protect and enhance New Zealand's reputation both domestically and internationally. It seeks to support investment in robust infrastructure to contribute to quality experiences for visitors.

Round 4 of the TIF is due to open on 1 August 2019. The Government's priorities for this round are yet to be released, however Round 3 priorities included:

- A continued focus on prioritising projects that **demonstrate current need for additional visitor-related public infrastructure in order to meet current visitor demand.**
- Encouragement of projects that addressed potential capacity issues and **future proofs local infrastructure.**
- Inclusion of innovative approaches to the sustainability of the investment being sought.

The TIF project criteria can be summarised as:

- Projects address capacity constraints, and/or support regions to realise their tourism potential.
- Projects demonstrate value for money and have considered innovative approaches to delivery and funding.
- Projects over $25,000.
- Co-funding is required, and other funding options have been investigated.
- Applicants are financially constrained.

Examples of TIF that have been funded include carparks, toilets, freedom camping facilities, sewerage and water (tourism portion only) safety upgrades to public spaces and infrastructure for natural attractions. Signage, rest-stop facilities and feasibility studies may be considered on a case by case basis.

The TIF fund excludes projects under $25,000, infrastructure projects without a substantial visitor-volume driven component, projects with central government funding or cycle trails with Great Ride status.

District Council

FNDC may decide to fund activities from their operating budgets which are funded by mechanisms such as rates.

Third party contributions

There are number of origins for third party contributions, but examples include Iwi and private developers.

Minor Funding opportunities

In addition to the major funding streams identified above there are a number of minor funds that could be applicable to an individual project within the Twin Coast Business Case Programme as shown in Table 71.

Table 71 Minor funding opportunities

Organisation	Fund	Description
Northland Inc	Investment & Growth Reserve	The IGR provides loans, direct investments or equity investments that will deliver an appropriate rate of return considering the level of risk, revenue flows and anticipated economic development and well-being improvement. Must create jobs, increase household income and GDP.
Creative communities of New Zealand	Creative communities' scheme	Projects that encourage participation, support diversity and enable young people to engage with and participate in the arts
Far North District Council	Community Fund	Funds community projects or events consistent with council's long-term plan
Department of Conservation	DOC Community Fund	Projects that maintain and restore the diversity of our natural heritage and enable more people to participate in recreation, enjoy and learn from our historic places and engage with and value the benefits of conservation. Priorities for 2017 are predator control and war on weeds
Lotteries	Physical Heritage Projects, Plans and Reports	May fund projects to restore, conserve and/or protect places, structures and large built objects; projects to tell the stories of places or make them easier for people to visit, etc
Lotteries	Cultural heritage projects, plans and reports	Grants to protect collections that are at risk of being damaged or lost, projects that will make collections easier for people to access and enjoy, etc
Lotteries	Lottery Community Facility Fund	Project to improve or build new community facilities or for studies to work out if plans to improve or build community facilities can be achieved and will benefit the community
Lotteries	Lottery Significant Projects Fund	Grants to purchase, create or improve community assets that have regional or national significance
Foundation North	Community Support Grant	Things they fund: http://www.foundationnorth.org.nz/funding/what-we-fund/
Walking Access	Enhanced Access	Fund to support projects aimed at enhancing access to New Zealand's great outdoors.
Transpower	Community Care Fund	Fund makes one-off grants for community-based projects in communities along the National Grid route, as well as communities affected by new Transpower projects
Te Puni Kokiri	Moving the Māori Nation	The Moving the Māori Nation contestable fund is for initiatives that support individuals, whanau and community organisations delivering healthy lifestyles at a 'grassroots level'; and for successful community healthy lifestyle programmes that can be replicated in other communities and regions across the motu to benefit whanau.

Other

The recommended programme has been scheduled to be delivered over the next ten years (funding permitted). It is possible that new funding sources may emerge to respond to future Government priorities or other social or economic pressures. As such the funding for longer term options might be sourced from funds such as Crown Infrastructure and MBIE Innovating Streets or funds that are yet to be established.