

**Land
Transport
Activity
Management
Plan
2024-27**

**Appendices
Book 1**

Strategic Case

Like any national investment going forward, our transport network must begin to contribute, not just to physical assets, but also to environmental, social, human and cultural wellbeing aspects.

Increasing frequency and intensity of adverse natural events are significantly damaging the network. Emergency responses result in staff re-allocation, affecting delivery of planned business-as-usual activity, let alone any pro-active work.

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**Appendices
Book 1**

Strategic Case

**Strategic
Context**



Legislation and National Policies

By-Laws and Policies

The following legislation is applicable here:

- Local Government Act 2002 & Amendments
- Land Transport Act 1998
- Land Transport Management Act 2013 & Amendments
- Civil Defence Emergency Management Act 2002
- Health & Safety Act 2015
- Resource Management Act 1991 & Amendments
- Public Work Act 1981
- Utilities Access Act 2010 & Amendments

Transport Outcome Framework

In 2018 the Ministry of Transport (MoT) worked with other government agencies to develop a Transport Outcomes Framework (TOF) which makes it clear what government wants the transport system to achieve.

The purpose of the transport system is to improve people’s wellbeing, and the liveability of places. It does this by contributing to five key outcomes, represented in the right-hand diagram.

All these outcomes are inter-related and need to be met together to improve intergenerational wellbeing and the quality of life in New Zealand’s cities, towns, and provinces.

To make a positive contribution across the five outcomes, the transport system also needs to be integrated with land use planning, urban development, and regional development strategies.

Government may sometimes prioritise some outcomes over others, depending on social/economic/environmental circumstances and the Government of the day.

Government Policy Statement 2021

The Ministry of Transport has released the draft Government Policy Statement on Land Transport 2021/22–2030/31 (the draft GPSLT 2021) for public feedback.

Each GPSLT sets out the government’s priorities for expenditure from the National Land Transport Fund (NLTF) over the next 10 years. It sets out how funding is

shared between activities such as road safety policing, state highway improvements, local and regional roads and public transport.

The GPSLT 2018 prioritised:

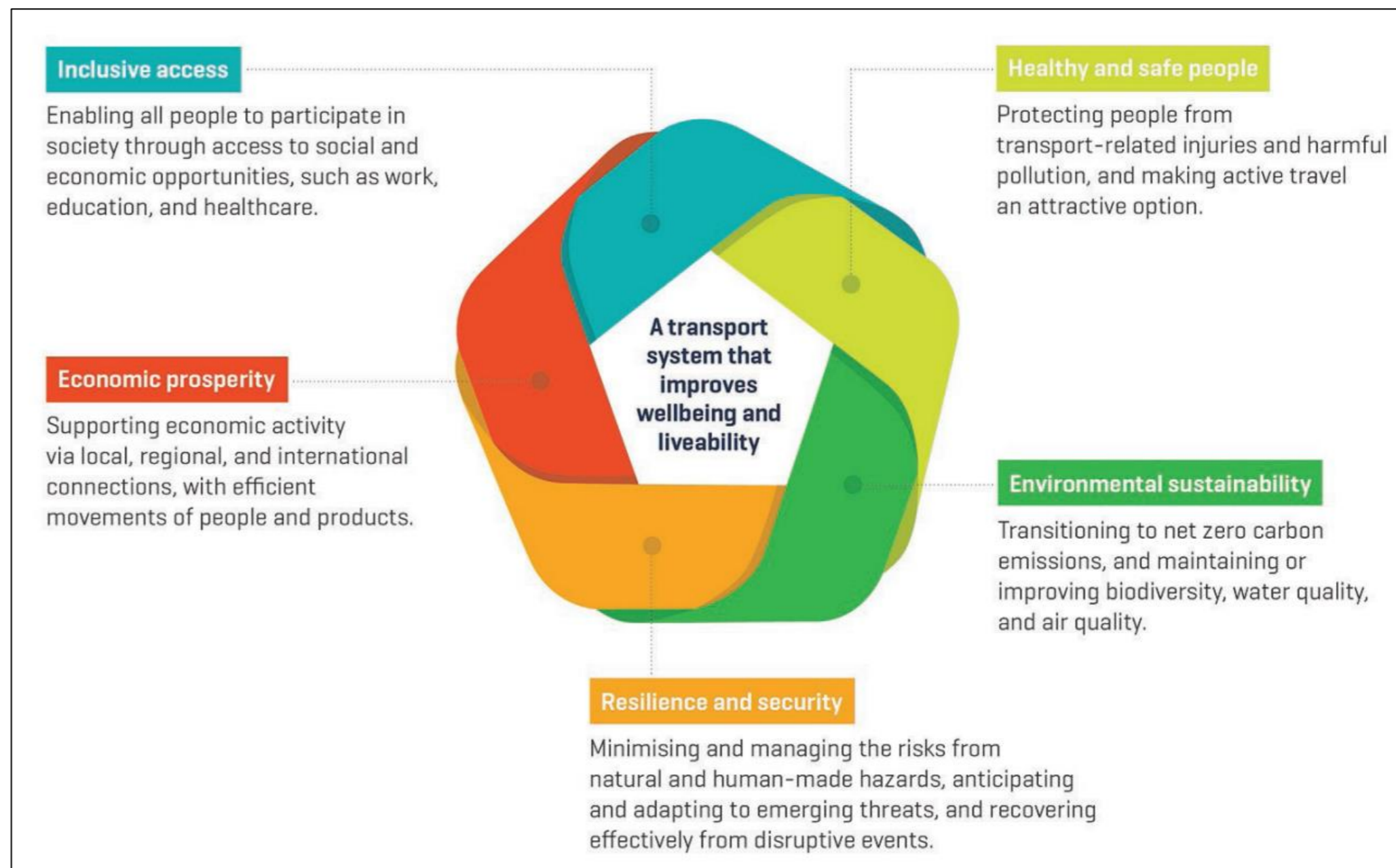
- a safer transport system free of death and injury,
- accessible and affordable transport,
- reduced emissions, and
- value for money.

The draft GPSLT 2021 builds on the strategic direction of GPSLT 2018 by maintaining the priorities but updating them to align with recent policy work and simplifying them.

The Government is proposing to prioritise:

- safety,
- better transport options,
- improving freight connections, and
- climate change.

‘Value for money’ is no longer considered a separate goal, but should underpin all investment



National Strategies

Emissions Reduction Plan

The Emission Reduction Plan (ERP) demonstrates New Zealand's action for transitioning to net zero emissions. The plan developed is first of its kind and includes strategies, policies and actions for achieving the first emission budget, as required by Climate Change Response Act 2002.

Reduce reliance on cars and support people to walk, cycle and use public transport by:

- Improving the reach, frequency and quality of public transport and making it more affordable for low-income New Zealanders
- Increasing support for walking and cycling, including initiatives to increase the use of e-bikes
- Ensuring safer streets and well-planned urban areas.

Rapidly adopt low-emissions vehicles by:

- continuing to incentivise the uptake of low- and zero-emissions vehicles through the Clean Vehicle Discount scheme and consider the future of the road user charge exemption for light electric vehicles beyond 2024
- Increasing access to low- and zero-emissions vehicles for low-income households by supporting social leasing schemes and trialling an equity-oriented vehicle scrap-and-replace scheme
- Improving EV-charging infrastructure across Aotearoa to ensure that all New Zealanders can charge when they need to.

Begin work now to decarbonize heavy transport and freight including by:

- Providing funding to support the freight sector in purchasing zero- and low-emissions trucks
- Requiring only zero-emissions public transport buses to be purchased by 2025
- Supporting the uptake of low-carbon liquid fuels by implementing a sustainable aviation fuel mandate and a sustainable biofuels obligation. ■

Waka Kotahi Arataki (2021 – 2031)

Waka Kotahi (NZ Transport Agency) has developed Arataki as a 10-year view of what is needed to deliver on the government's current priorities and long-term outcomes for the land transport system. It shares the evidence-base that informs Waka Kotahi's view and helps organisations to better understand how joint decisions and choices will shape the future land transport system.

Arataki v2 is an update to reflect initial research and analysis regarding the regional impacts of COVID-19 on the land transport system and identify post-COVID-19 challenges and opportunities.

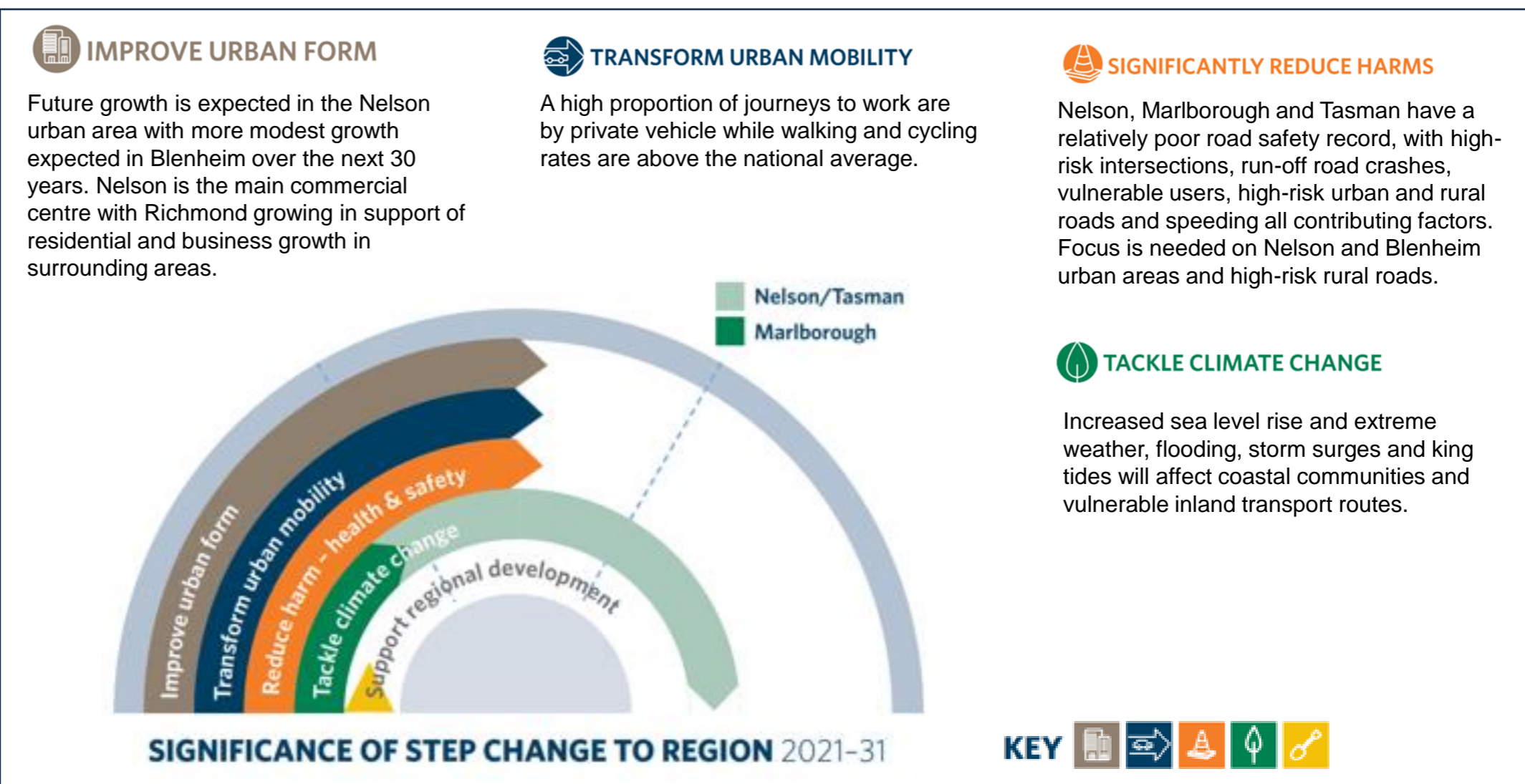
Arataki summarises six key drivers that will shape the future land transport system as demographic change, climate change, technology and data, customer desire, changing economic structure, and funding and financing challenges.

Arataki has been divided into different regional directions. Together, Marlborough, Nelson, and Tasman Districts make up the Te Taihū Top of the South (TS) region.

The key TS insights in Arataki v2 are as follows:

- A significant growth in viticulture is expected, which will increase employment opportunities and the movement of workers and heavy vehicles during the harvest period

- The population is ageing faster than the national average across all three regions
- The region has an above average proportion of private vehicle journeys to work due to limited bus services
- Road and rail links down the East Coast are critical for the movement of freight and tourism between Picton and Christchurch, while the Nelson and Picton ports play an important role in getting goods to market
- Coastal communities and transport networks will be impacted by more severe weather patterns, particularly in coastal and hill areas. This is expected to be increasingly impacted by climate change, storms and sea level rise
- The safety record for the TS is particularly poor in the urban areas, at intersections and involving cyclists. ■



National Strategies

National Land Transport Programme

This three-year programme sets how Waka Kotahi works with its partners to invest in the National Land Transport Fund (NLTF), to create a safer, more accessible, better connected and resilient transport system that keeps New Zealand moving.

Through the NLTP, Waka Kotahi works with councils to ensure that the land transport system meets current and future needs of people.

Road to Zero strategy

The vision of the Road to Zero (RTZ) strategy is that no one in New Zealand is killed or seriously injured in road crashes. It also aims to achieve zero deaths and serious injuries on New Zealand roads.

MDC aligns with the national RTZ vision and seeks to impact of the behaviour of anyone who uses any roads, be they state highways, urban roads or footpaths, to ensure Marlborough can have a safe and sustainable transport network.

Sustainability Action Plan

Waka Kotahi NZ Transport Agency has a vision for a sustainable, multi-modal land transport system where public transport, active or shared modes are the first choice for most daily transport needs.

Four The sustainability action plan responds to four major challenges

- Reducing gas emission
- Improving public health
- Reducing environmental harm
- Reducing corporate emission

MDC are committed to implementing a safe multi modal transport system and is integral to future strategic planning activities.

Te Ara Kotahi

Te Ara Kotahi outlines five strategic pou (pillars) that support te whakakitenga (the vision). Each pou has captures the intentions for how Waka Koathi develop in the area of working with Māori. Priorities have been identified under each pou to focus our efforts. The Action Plan underpinning Te Ara Kotahi provides clear actions to operationalise and drive Te Ara Kotahi throughout the transport network.

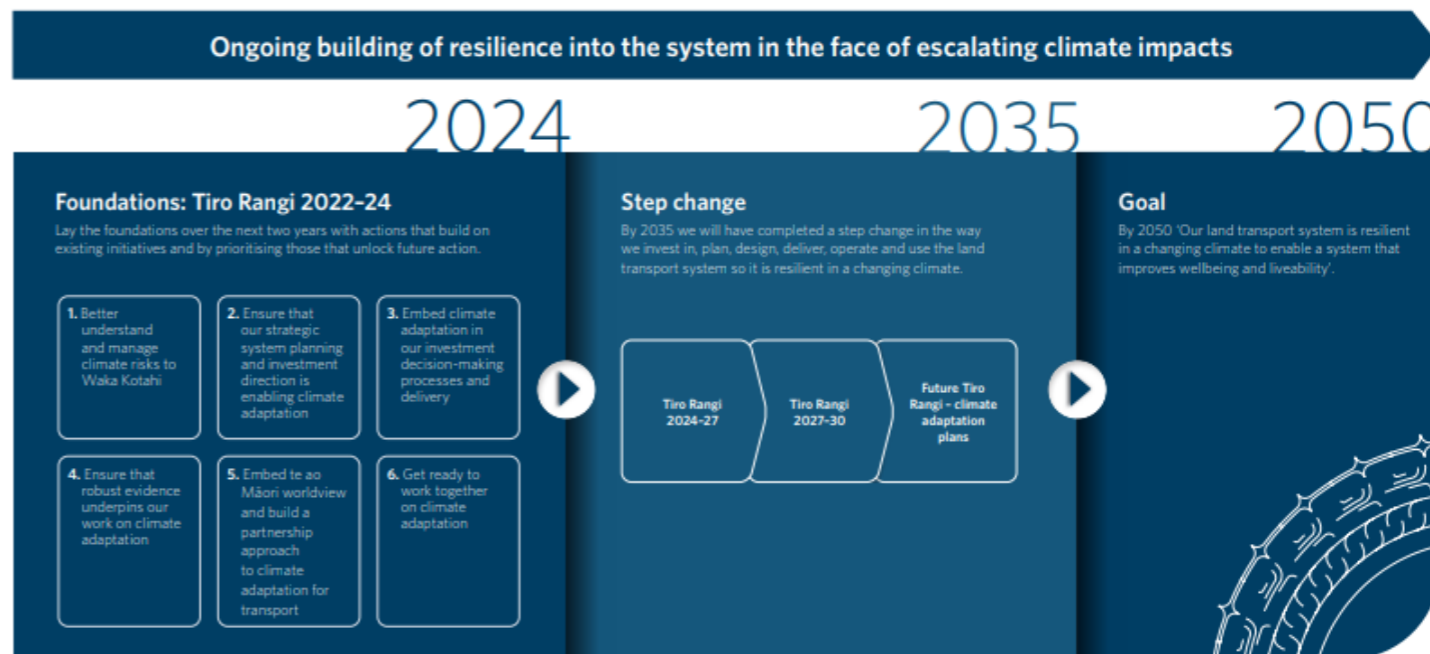
The MDC Regional Transport Plan details nine Iwi of Marlborough, with Te Ara Kotahi, providing working practices to enable Māori communities.

Tiro Rangi – Climate Adaption Plan

Climate change is one of the biggest challenges that the land transport system faces right now. It creates significant challenges for our road, rail, and public transport networks and weather-related hazards like landslips and flooding cause damage and disruption to our communities. There are also new risks like sea-level rise.

Tiro Rangi is Waka Kotahi NZ Transport Agency long-term plan for adapting the land transport system to our changing climate.

The Marlborough region has experienced climate related events, and the plan has enabled the National Emergency Response Team to be mobilised to assist.



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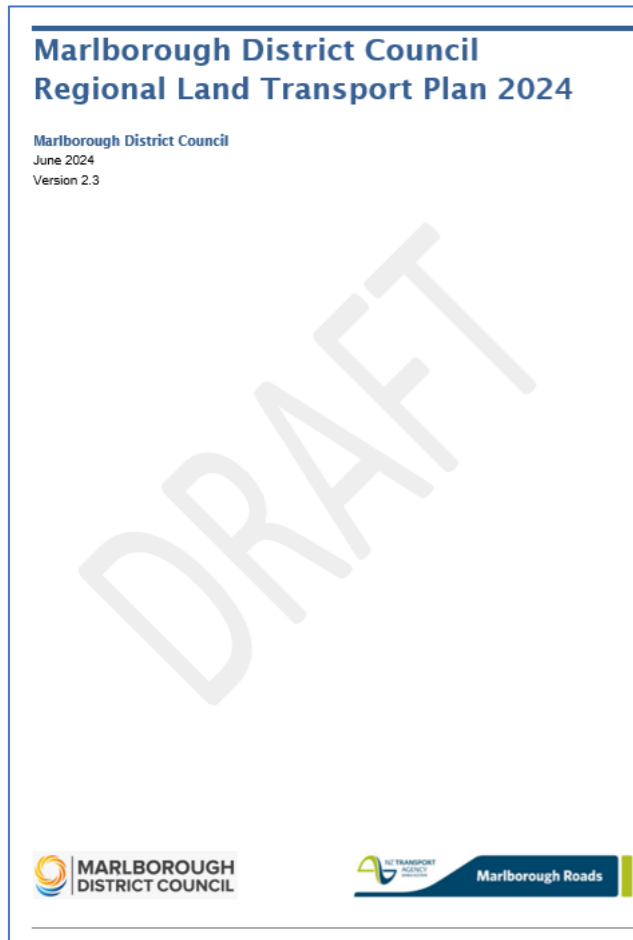
Strategic Case

**Strategic
Alignment**



Aligning National Strategy to Regional Strategy

Regional Land Transport Plan



The MDC Regional Land Transport plan has just come into effect. The Executive Summary is provided opposite.

Marlborough has seen significant change over the last five years. Population increase and development of the primary sector is resulting in a greater number of vehicles on our roads. The environmental and social effects from more vehicles on the roads is becoming unacceptable. This conflict is realised most acutely in the urban areas of Blenheim and Picton, where the values of place and movement on our road networks coincide.

In December 2020, the New Zealand Government declared a climate change emergency. The Carbon Emissions Reduction Plan outlines targets, and ways to achieve reduced emissions. As transport is responsible for 20 percent of the country's emissions, New Zealanders are encouraged to reduce travel by motorised combustion engine vehicles. This is reflected in the Government Policy Statement for Transport. While Marlborough is not a major contributor to climate change pollution, we are directly affected by it, for example the devastating storms that damaged our roading network in 2021 and 2022.

Marlborough produces high quality agricultural products which are sought after nationally and around the world. In addition, secondary processing of many of these products has enabled value to be added. Most of our freight movement is local or to Port Marlborough and Port Nelson making these transport networks are vitally important to our region. This means we have significant proportions of heavy vehicles using the road network, all the way from rural roads in the hinterland to the national roads within the urban areas.

This RLTP recognises that the transport network we have traditionally relied on may not be appropriate for the future. The key transport issues in Marlborough in the next 10 years are:

- vehicle usage growth and its effects on access
- safety on our roads
- the design of our transport system is constraining access for those wanting to use more sustainable modes
- our communities are susceptible to losing access in more frequent weather events
- vehicle usage is affecting our natural environment.

In recent years, this growth in vehicles on our roads has been recognised by central government agencies, with a number of key planning projects being initiated to help determine how the transport network will cater for this in future. Most of the significant projects are still underway, but core outcomes and key projects have been reflected in this RLTP programme.

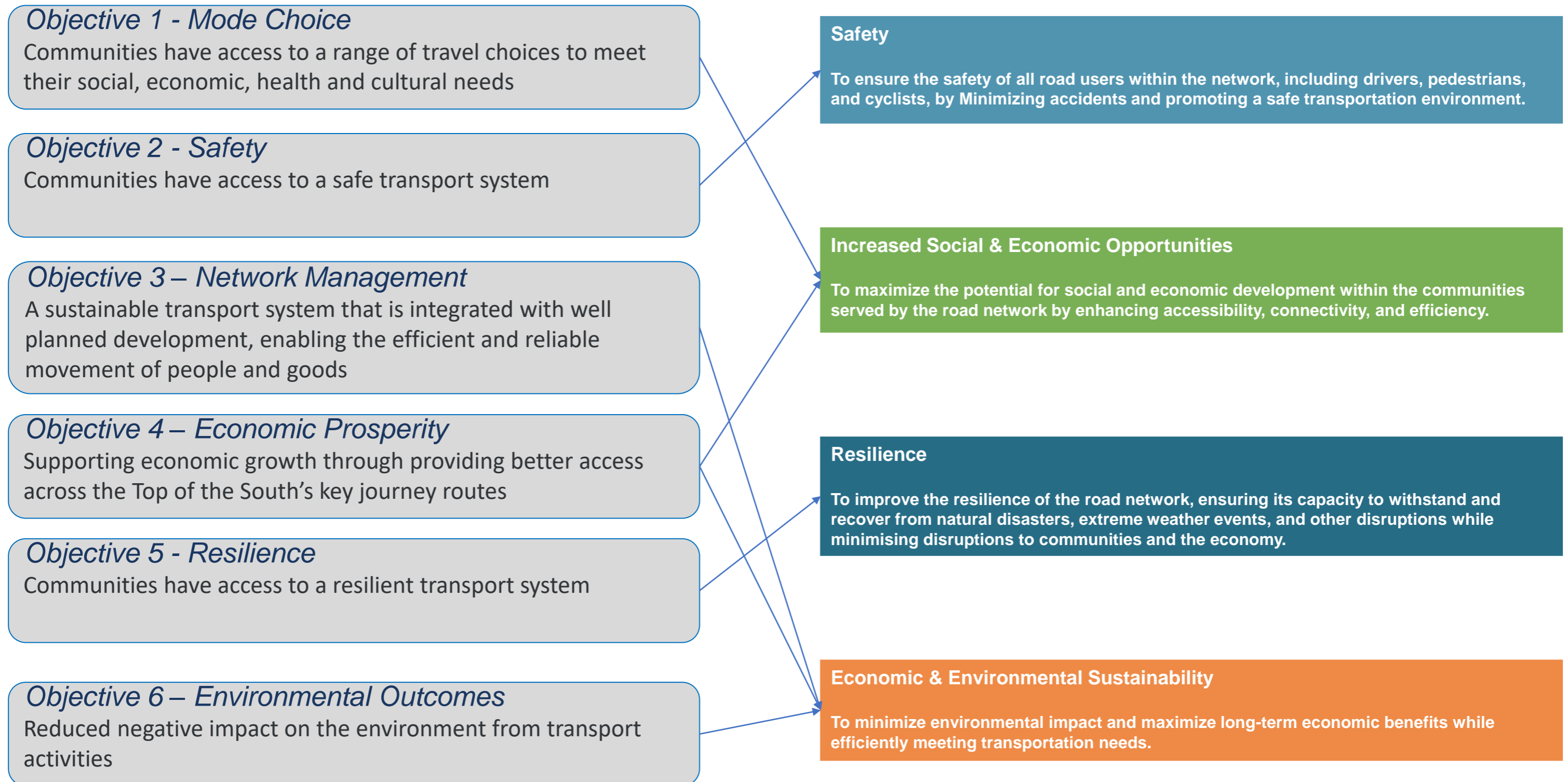
The programme over the next 10 years envisages we will start by completing the planning projects already underway with Waka Kotahi and KiwiRail, while also carrying out local work to make sure these large projects are integrated into the local networks and that key access outcomes are met. These planning projects include the Inter-Island Resilient Connection Project in Picton (iRex), state highway traffic through Blenheim, road safety and the implementation of the Speed Management Plan. Both central and local government are under financial strain due in part to Covid-19 and weather

events around the country. This may have an impact on the delivery timing of some of the projects may be delayed.

The focus of this RLTP will be on supporting economic and population growth; improving safety; improving travel choice and resilience. Examples of this work include:

- Both Waka Kotahi and Council will work alongside KiwiRail to complete the iRex project
- Both Waka Kotahi and Council will implement their speed management plans
- Council will reinstate the storm damaged network and continue to work on improving network resilience for communities at risk of losing access in storm events.
- Council will continue to construct the cycling network with funding support from Waka Kotahi.
- Waka Kotahi will work on making improvements to the state highway network on specific projects.

Aligning National Strategy to Regional Strategy



Local Marlborough District Council Community Outcomes

Council Community Outcomes

Community Outcomes are statements that describe the sort of community Marlborough could be in the future, as a result of actions that get taken now and in years to come. The current group of Community Outcomes were written to take into account the Marlborough Smart and Connected vision and strategic framework. Council's contribution to achieving the community outcomes and the vision is summarised in the table below.

A more detailed assessment is included in each activity statement. In 2019 Government reinstated the "four Well Beings", i.e. social, economic environmental and cultural. Each of Council's Activities contributes to one or more of these well beings. The following table identifies for each Activity the "well beings" that it makes a positive contribution towards. It is not believed that any Activity makes a negative contribution to any of the well beings.

Governance

Marlborough has a strong community that is passionate about participating, connecting with and helping shape our future. Our Council listens to its communities and strives for best practice governance to support their aspirations. We value our strong partnership with tangata whenua iwi.

Environment

Marlborough's communities are the guardians of our unique place. Our landscape, water, air, natural features and biodiversity are managed, protected, enhanced and valued as the cornerstone to our quality of life.

People

Marlborough's communities value our special way of life. We are diverse, inclusive, welcoming and enjoy opportunities to connect, live, learn, work and play in this vibrant place.

Economy

Marlborough's economy supports the aspirations of our community. It is underpinned by strategic, thoughtful and sustainable use of resources which provides opportunities for business innovation and quality employment.

Connectivity

Marlborough's central location and transport network, enhanced by our digital resources, enables our communities and visitors to access a wide range of recreational, cultural and economic activities locally, nationally and globally.

Living

Marlborough's enviable community facilities, infrastructure, landscapes and climate enables our community to thrive. Life in Marlborough is safe and healthy.

Outcome	Actions
Roads	
Economy Connectivity Living	Providing the roads and the structures, components and services which support them. These are essential transport links which have both economic and social benefits.
Cycle facilities and footpaths	
Environment Connectivity Living	Providing healthy and sustainable alternative transport modes. Providing access and mobility for non-drivers.
Paved cobbled areas, street furniture	
People Living	Providing attractive public areas that enable people to mingle, enjoy the environment and participate in commercial or other town activities.
Street lighting	
Connectivity Living	Providing street lights which enable safer use of roads, footpaths, public facilities
Wharves	
People Economy Connectivity Living	Providing wharves and jetties to create important transport links to isolated areas, with consequent social and economic benefits. They also provide recreational boating opportunities

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Strategic Case

**Demand
Driver 1:
Natural
Environment**



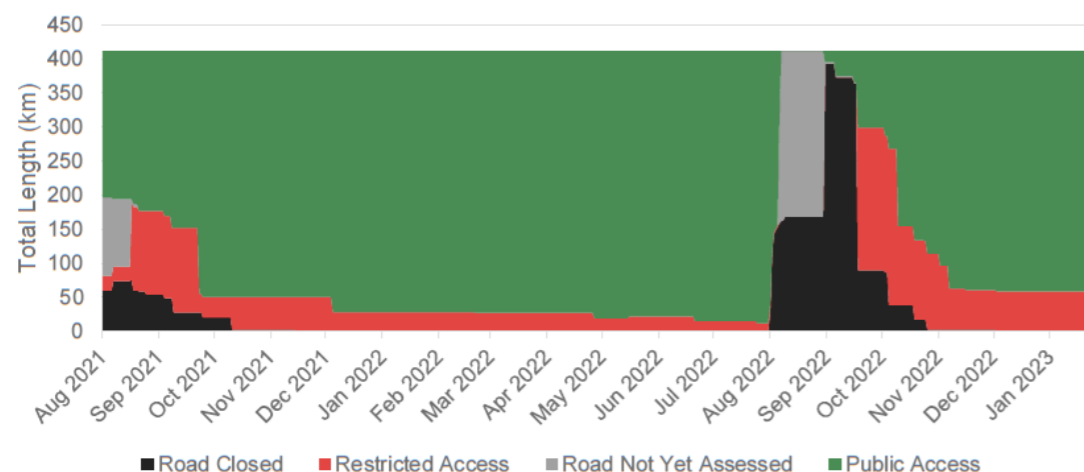
Storm Response Business Case

Executive Summary

Context

Marlborough Sounds (the Sounds) suffered four high intensity rainfall events over the past two years which have caused significant damage to the transport network. The July 2021 event caused approximately 900 faults across the Sounds and \$85M funding (Phase 1) was received to repair damage to roads across the Marlborough District including the damage to roads in the Marlborough Sounds.

Following the August 2022 event, approximately 500 km of roads in the Sounds experienced slips and dropouts, with 2,750 faults identified¹. Approximately 2,000 permanent residents and 150 business owners in the Sounds were affected. Communities were cut off from service centres and markets in Marlborough and Nelson with both State Highway 6 (SH6) and State Highway 63 (SH63) closed. The graph below shows the length of key roads across the Sounds that were closed or have had restricted access since August 2021. Following the August 2022 event, the road network was closed for six weeks, and Kenepuru Road is still under restricted access.

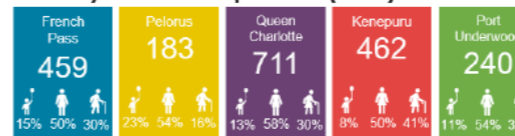


Some of the initial funding for repairs was diverted to emergency response works following the high intensity rainfall in July and August 2022. A funding application for an additional \$53M (Phase 2) has been approved by Waka Kotahi, to complete repair works outside the Sounds and essential repairs within the Sounds. Phase 1 and 2 funding address 2,105 of identified faults in the Sounds, but there are **1,535 faults outstanding**, pending the outcome of this Programme Business Case. This includes sites under permanent traffic management, requiring ongoing maintenance and regular safety checks. The road is down to one lane at these sites and traffic is managed by signals, which require a manual battery change every two days. These outstanding faults present a risk to road users and maintenance crews and continue to affect access for businesses and communities. The standard to which the repair works completed to, will be confirmed as an outcome of the PBC. No minimum level of investment has been agreed to by MDC or Waka Kotahi for repairing the roads damaged by storm events.

¹ Over 670 km of roads were affected, and over 4,000 faults were identified across the Marlborough district following the August 2022 event.



Usually Resident Population (2018)



Business

Top 3 industries in the Sounds (2023)

1. Agriculture, Forestry & Fishing: 31%
2. Accommodation and Food Services: 29%
3. Construction: 9%

2018 median personal income
87%
of national average

Visitors to the Marlborough Region



Transport (2023)

Zone	Total dwellings	Dwellings that have never had road access
FP	733	14%
P	111	50%
QC	562	0%
K	1,250	46%
PU	410	49%
Total	3,066	30%

Land

- 525 km road
- 49% sealed
- 51% unsealed

Water

- 2 ports
- 6 barge sites
- 17 boat ramps
- 32 public jetties

The current situation where access to services and markets is severely affected for long periods following a storm event is considered unsustainable economically and socially. A residents and business survey indicates that the effect of the storm events has created ongoing stress and uncertainty for residents and businesses. Transport has become an onerous problem, and alternatives are either not available, or have added time and cost to what were straightforward journeys prior to the storms. Authorities and the local community are concerned about the effect that subsequent storms and rainfall events could have on an already fragile road network.

MDC committed to this Programme Business Case (PBC) to establish a "sustainable long-term solution for safe and resilient transport access to the Sounds²" and provide certainty about future access. This is the first PBC of this nature in New Zealand. Guidelines and policies that assist in the process of accommodating climate forced adaptation are still being developed. This lack of established guidance means that the business case must rely on a balance of best practice, local knowledge, engineering judgement and 'what feels right'. There are no previous studies to lean on or learn from. In addition, the business case has been proceeding at pace to provide certainty to the community. By necessity investigations have been high level with more detailed work required to finalise design and provide greater cost certainty.

During the course of the PBC it became apparent that a long-term hazard adaptation option would also need to be identified. The Hazard Adaptation Pathway (HAP) recognises that future events such as earthquakes, storms and sea level rise are likely in the future and will cause damage to the transport network. The HAP represents the journey Council could take in providing continued access into the future with the end point representing the lowest level of service Council is willing to provide, while still delivering safe transport solutions and access.

Adaptation is a journey – a series of steps. The Preferred Programme is the starting point of that journey, and the HAP the end point. Any significant event that causes substantial damage to the transport network will start the adaptation process. The event would be a trigger for Council to assess the Road Management Strategy for that road segment and decide whether it is realistic to continue with the agreed strategy, or transition to a different strategy for that segment.

² Confirmed Outcome Statement for the PBC.



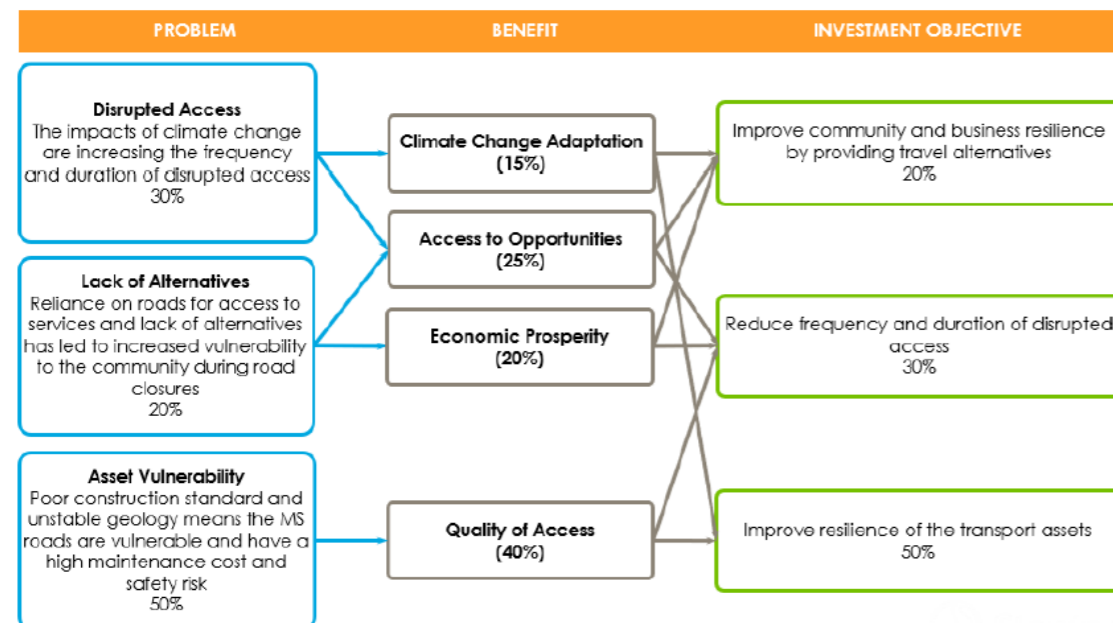


Problems and Benefits

The three problems this PBC aims to solve are:

- **Disrupted Access:** The impacts of climate change are increasing the frequency and duration of disrupted access.
- **Lack of Alternatives:** Reliance on roads for access to services and lack of alternatives has led to increased vulnerability to the community during road closures.
- **Asset Vulnerability:** Poor construction standard and unstable geology means the Marlborough Sounds roads have a high maintenance cost and safety risk.

There are four benefits this PBC aims to realise, as shown in the Investment Logic Map:



Investigation of the problems found:

- Sea level is expected to rise by 30 cm by 2050 at Portage and could rise by up to 1 m by 2100. Areas under 3 m elevation are at a high risk of inundation and erosion.
- Damaging storm events are expected to occur approximately twice as often as they have historically, and rainfall intensities are expected to increase with climate change.
- After both the 2021 and 2022 storm there were months of road closures. The maximum duration roads were closed varies between the areas as follows:
 - Te Aumiti/French Pass: 64 days
 - Te Hoiere/Pelorus: 28 days
 - Queen Charlotte: 63 days
 - Kenepuru: 63 days
 - Te Whanganui/Port Underwood: 122 days.
- Kenepuru Road between Linkwater and the Heads is still under restricted access, over a year following the August 2022 event.
- 83% of roads have no alternative route. If one part of the road fails, everyone beyond that point loses access.
- Marine access is expensive and difficult to access for many, and there are tidal restraints and issues with silting as much of the Sounds is shallow.
- 2,145 permanent residents and at least 150 businesses have been affected, including farming, aquaculture, forestry and many tourism offerings. It has been challenging for residents to access health care, education, supermarkets, and for businesses to get product to market. A survey showed people's mental health has been strongly affected, with scores declining 30%. Around 18% of residents operating businesses reported a loss of income because of the storms, and business confidence has dropped 20-30%. Business owners in Kenepuru, Queen Charlotte and Te Aumiti/French Pass have been disproportionately affected.
- Queen Charlotte Drive is strategically important for state highway network resilience, providing an alternative in the event of a closure of SH6 or SH1. This road is also important for access to the Queen Charlotte Track, which is popular with national and international tourists.
- Port Underwood Road and Tumbledown Bay Road are strategically important providing access to lifeline infrastructure - the Cook Strait electricity cable, which supplies electricity to the North Island.
- 73% of roads are highly susceptible to slope instability following man-made adaptations, such as building roads, and 13% are highly susceptible to natural slope instability. Many sections of road are built on unstable land to a standard that would not be acceptable today. Slips account for 63% of total recorded faults, and most slips occurred on roads built on unstable land, with the highest concentration on Kenepuru Road, Queen Charlotte Drive and Port Underwood Road.
- Emergency works spending in the Sounds is ten times higher than the rest of Marlborough District.

Programme Development

As the study area was large, the Sounds were divided into five zones, and within each zone, roads (or combinations of roads) were split into separate segments, to reflect different road functions and hazard susceptibility. A total of 28 segments were identified across the five zones.

A range of Road Network Management strategic responses were identified, using the Resilience Response Framework and the Protect Accommodate Retreat Avoid (PARA) framework from the National Adaptation Plan. The strategic responses represent different approaches to the hazard risk, from a build back stronger approach (protect) to a marine access approach (retreat) where roads are not fixed unless required for access to a marine hub (hub and spoke model). Each strategic response provides a different level of service in terms of number of lanes and surface type, and different levels of investment in stormwater and geotechnical improvements, as shown in the table below.

Road Management Strategic Response		Capital Works				
Approach	Vehicle restrictions	Lane width	Surface	Stormwater	Geotechnical	
Ai	Build back stronger (protect)	No additional restrictions	As existing	As existing	Whole route upgrades	Targeted: existing failures and improvements
Aii	Build back stronger (protect)	Additional restrictions	More one lane sections	More unsealed sections	Whole route upgrades	Targeted: existing failures and improvements

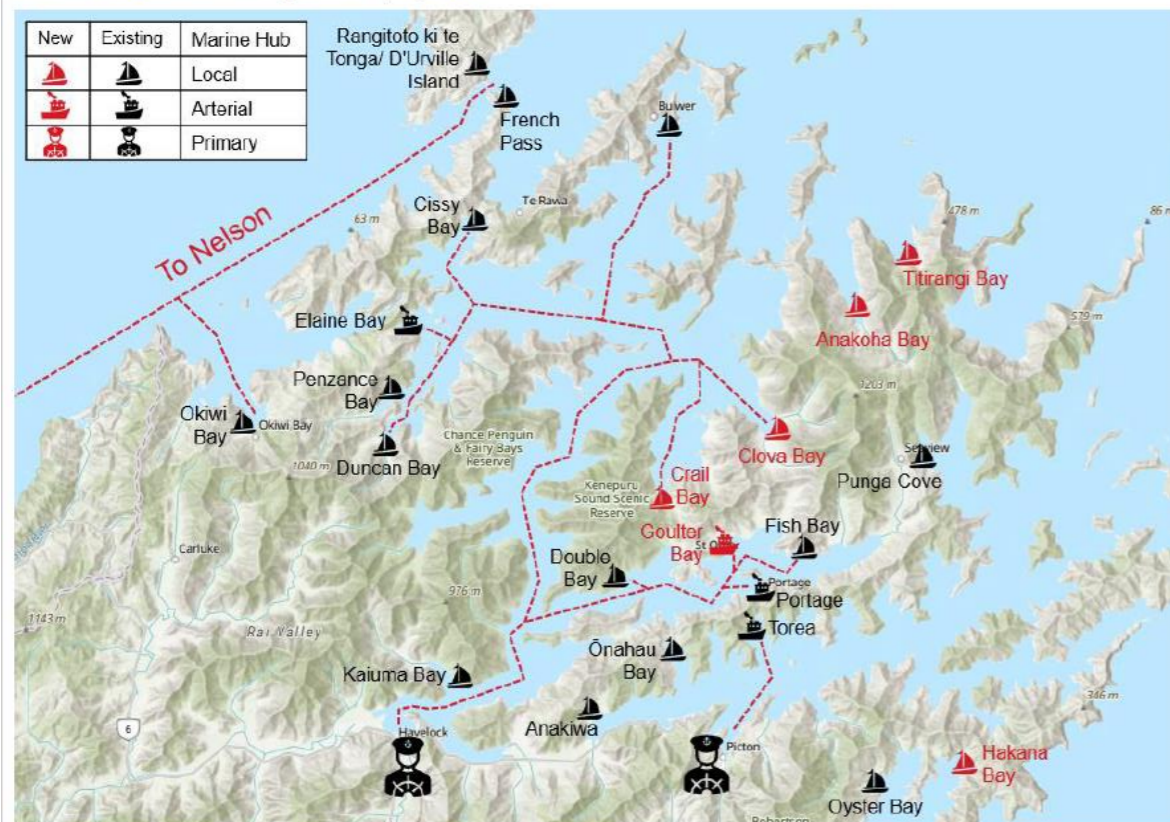


Road Management Strategic Response		Capital Works				
Approach	Vehicle restrictions	Lane width	Surface	Stormwater	Geotechnical	
Bi	Targeted improvements (accommodate)	No additional restrictions	As existing	As existing	Targeted: existing failures and improvements	Essential: address existing failures
Bii	Targeted improvements (accommodate)	Additional restrictions	More one lane sections	More unsealed sections	Targeted: existing failures and improvements	Essential: address existing failures
C	Essential repairs (accommodate/retreat)	Additional restrictions	More one lane sections	More unsealed sections	Essential: address existing failures	Essential: address existing failures
D	Marine access (retreat)	Additional restrictions	More one lane sections	More unsealed sections	Essential: address existing failures	None

Each road segment was considered separately, and the range of suitable Road Management Strategies identified, with some excluded. For example, if there was no coastline, approach D was excluded. This left a range of approaches for each segment. These approaches were then put together into different programmes for each zone. This allocation of approaches by segment and then into programmes was underpinned by local knowledge, susceptibility to geohazards, road function and use, and scope for marine access.

In tandem, a draft marine network was developed based on existing marine infrastructure and services, which could both be further developed if required. Marine hub locations were based on likely demand for marine services, and consideration of resilience risk for the roads and the extent to which this could be addressed through engineering works. Most marine hub sites which have potential to be used (or used more) for this purpose already have some marine infrastructure, such as a jetty or ramp. Siltation is an issue and this limits the feasibility of some potential marine sites, and/or requires very long jetties to enable deeper water to be accessed. Additional dredging is likely to be required to maintain the proposed marine network. Primary, arterial, and local marine hubs were identified, and indicative concepts developed. Marine interventions were then added to each zone, to complement the Road Management Strategy.

The figure below shows the existing marine infrastructure in the Sounds, and the location of possible new hub sites. Not all new sites shown in the figure were progressed.



Five potential programmes were identified:

- **Programme 1: Road Focus:** Many road segments in the zone strengthened where this is justified, to provide a resilient road network where roads can withstand events and unplanned closures are minimised. Marine access is primarily for emergency response
- **Programme 2: Road Access:** The most important road segments in the zone are strengthened. Where marine access is available, this provides an alternative if roads are closed during or following an event.
- **Programme 3: Balanced:** Essential road segments are strengthened where this is possible. Other road segments are repaired to a basic level. Marine alternatives start to represent a real choice, particularly where road segments have a high exposure to geohazard risk.
- **Programme 4: Marine Access:** Essential road segments are repaired to a basic level. Marine alternatives are a significant part of the network within the zone and are more available and resilient.
- **Programme 5: Marine Focus:** Roads are repaired where affordable, by roads primarily providing access to the marine hub, where this exists, and marine transport is the primary mode for access into and out of the zone.

A total of 26 Programmes were identified across the five zones. Finally, land use and planning interventions were added to all programmes. These are primarily part of MDC's BAU and will be progressed outside the business case process.

Programme Assessment

The programmes were assessed using multi-criteria analysis (MCA), economic impact (likelihood of option enabling full restoration of previous economic activity) assessment, and indicative, high level engineering cost estimates. The assessment was used to identify an Emerging Preferred Programme. A summary of the performance of each programme is provided below.

Considerations	Do Minimum	Road Focus	Road Access	Balanced	Marine Access	Marine Focus	
Te Aumiti/French Pass	Weighted MCA Score	-0.36	0.40	0.70	0.88	0.87	-0.16
	BCR	0.30	0.57	0.76	0.83	0.61	0.49
	WEI Factor	2.33	4.06	5.46	5.35	4.1	3.44
	Initial Cost Estimate	\$4.1M	\$75.4M	\$43.1M	\$27.0M	\$22.0M	\$20.2M
	Economic Impact	Unlikely	Almost Certain	Almost Certain	Likely	Likely	Possible
	Emerging Preferred			Road Access			
Te Hoiere/Pelorus	Weighted MCA Score	0.435	1.095	0.94		0.52	-0.025
	BCR	0.39	0.51	0.63		1.14	0.82
	WEI Factor	7.43	9.01	10.91		22.91	17.94
	Initial Cost Estimate	\$0.8M	\$6.1M	\$4.2M		\$2.2M	\$1.8M
	Economic Impact	Unlikely	Almost Certain	Almost Certain	Almost Certain		Likely
	Emerging Preferred		Road Focus				
Queen Charlotte	Weighted MCA Score	-0.155		0.39	0.16	-0.245	-0.94
	BCR	0.68		1.68	3.01	1.97	0.68
	WEI Factor	6.57		16.36	27.47	16.27	16.29
	Initial Cost Estimate	\$1.9M		\$32.2M	\$12.2M	\$9.2M	\$7.9M
	Economic Impact	Unlikely		Almost Certain	Likely	Possible	Possible
	Emerging Preferred			Road Focus/Road Access			
Kenepuru	Weighted MCA Score	-0.52	-1.06	-0.67	0.07	-0.24	-0.38
	BCR	0.57	0.86	1.07	1.12	0.59	0.53
	WEI Factor	5.57	7.72	9.56	10.2	5.81	5.56
	Initial Cost Estimate	\$8.6M	\$145.2M	\$81.9M	\$57.6M	\$46.5M	\$41.6M
	Economic Impact	Unlikely	Almost Certain	Likely	Likely	Possible	Possible
	Emerging Preferred				Balanced		



Considerations		Do Minimum	Road Focus	Road Access	Balanced	Marine Access	Marine Focus
Te Whanganui/Port Underwood	Weighted MCA Score	0.06	1.27	1.12	1.01	0.14	-0.09
	BCR	0.22	0.37	0.49	0.51	0.73	0.72
	WEI Factor	1.54	2.6	3.34	3.41	4.95	4.95
	Initial Cost Estimate	\$3.2M	\$41.4M	\$21.4M	\$17.0M	\$7.2M	\$6.7M
	Economic Impact	Unlikely	Almost Certain	Likely	Likely	Likely	Possible
	Emerging Preferred			Road Access			

For Te Hoiere/Pelorus, Queen Charlotte and Kenepuru, the top ranked MCA programme was selected, as decision makers were comfortable with the initial cost estimates and likely economic impact. However, for Te Whanganui/Port Underwood the second ranked programme was chosen. This was because the MCA scores were very close, yet the second ranked programme was around half the cost, so was better value for money. For Te Aumiti/French Pass the third ranked programme was selected. This was because the MCA scores were very close between the top three scoring programmes, but the emerging preferred programme preferred a better balance between level of disruption and provision of alternatives, and the marine programmes too big a step change for the community, with too much uncertainty around feasibility of implementation. Marine Access was therefore presented as the HAP.

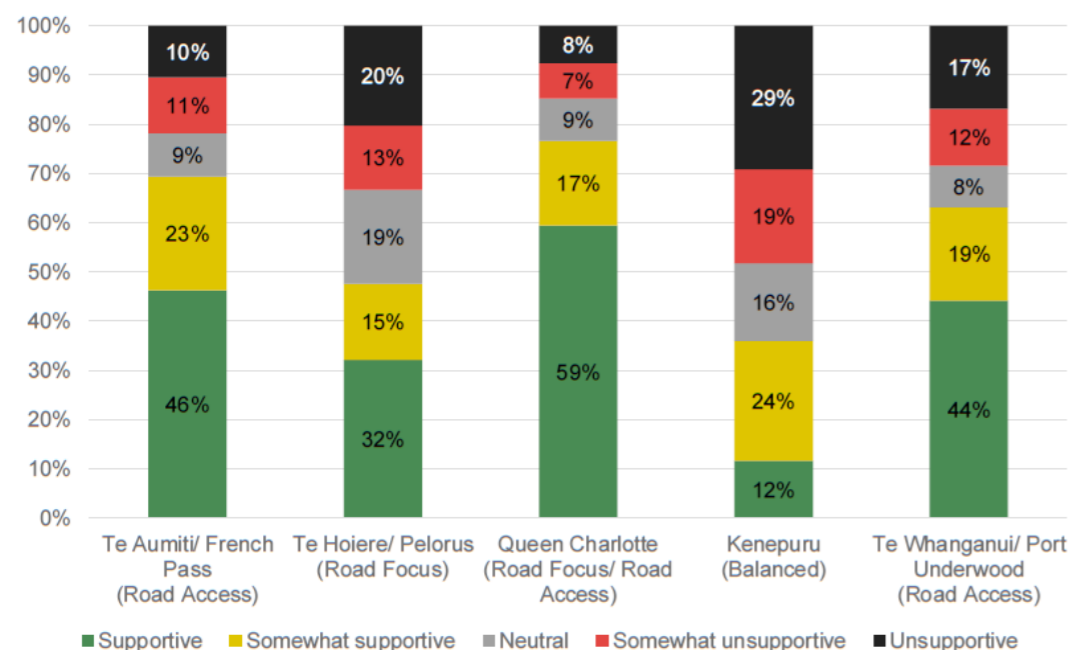
Consultation

Consultation commenced on 16 June with the opening of the online survey, to which 1,700 responses were received. This was followed by a stakeholder workshop and seven drop-in sessions across the Sounds, attended by around 500 people, and an online session attended by 50 people. An additional 43 written submissions were provided.

Consultation focussed on the Emerging Preferred Option, but the HAP was also presented to initiate a conversation and indicate that further engagement would follow post-PBC. Marine Focus was identified as the HAP for Kenepuru, and Marine Access for all other zones.

The graph shows levels of support for the Emerging Preferred Option. People were supportive of Te Aumiti/French Pass, Queen Charlotte and Te Whanganui/Port Underwood, with 69%, 76% and 63% ticking 'supportive' or 'somewhat supportive', respectively.

Support was lower for Te Hoiere/Pelorus (47% supportive or somewhat supportive) and Kenepuru (36%). Minor changes were made to these programmes to reflect the issues that people raised through consultation. For example, the approach for Kenepuru Road (Portage to the Heads) remained as 'essential repairs', but with some low-cost targeted improvements added to improve resilience.



Preferred Programme

Consultation feedback, PV analysis and MCA scores were considered, and the Preferred Programme was finalised. The Preferred Programme includes the following components:

- **Roading Maintenance and Operations:** Changes to maintenance and operations, that can improve resilience of the roading asset. These will be completed within existing budgets.
- **Road Repairs:** Confirmed outcome for the 1,535 outstanding faults on the road network that have not yet been repaired and are still affecting access.
- **Road Improvements:** To improve resilience of the road network, where this is justified. If above the low-cost, low-risk³ (LCLR) improvements threshold, these may require a separate business case.
- **Marine Improvements:** To improve resilience of the marine network, where this is justified. In this way the marine network can be used to improve access to the Sounds in the long term.
- **Marine Maintenance:** Maintenance of marine infrastructure.
- **Sounds wide studies:** a Marine Study and a Resilience (drainage) Study, to determine further investigate options, priorities, feasibility and detailed costs, and determine a clear way forward for Marine Improvements and Road Improvements, plus a Plan Change to incorporate land use/development changes.
- **Other Activities:** Non-infrastructure solutions, such as land use controls and community preparedness/response planning. These will be completed within existing budgets.

The peer reviewed P50 cost estimate for the overall programme is \$234M. The cost breakdown is shown below.

Zone	Road Repairs	Road Improvements	Marine Improvements	Total
Sounds wide studies	-	\$3M	\$7M	\$10M
Te Aumiti/French Pass	\$26M	\$15M	\$9M	\$50M
Te Hoiere/Pelorus	\$2M	\$4M	-	\$6M
Queen Charlotte	\$14M	\$6M	\$6M	\$26M
Kenepuru	\$94M	\$12M	\$18M	\$124M
Te Whanganui/Port Underwood	\$11M	\$8M	-	\$19M
Total	\$146M	\$48M	\$40M	\$234M

The Preferred Programme has been assessed to have a base BCR of 1.8 based on the expected cost estimate and the consideration of a range of costs and benefits relating to conventional travel time and vehicle operating costs through to resilience-based disruption costs. Under the base scenario, the Preferred Programmes for Queen Charlotte, Kenepuru and Te Whanganui/Port Underwood areas all result in BCRs above 1 or present value cost savings. The Te Aumiti/French Pass and Te Hoiere/Pelorus areas have area level BCRs less than 1.0; however, these areas are balanced by considering the Preferred Programme as a package of investment across the Sounds.

Zone	Preferred Programme	Do Minimum Factor: 150%/150% (Base)		
		NPV Cost	NPV Benefit	BCR
Te Aumiti/French Pass	Road Access	\$24	\$18	0.7
Te Hoiere/Pelorus	Road Focus	\$3	\$0	0.1
Queen Charlotte	Road Focus/Road Access	-\$5	\$17	-PV
Kenepuru	Balanced	\$30	\$55	1.8
Te Whanganui/Port Underwood	Road Access	\$2	\$4	2.7
Total		\$53	\$94	1.8

Sensitivity analysis plays an important role in understanding the impact of key assumptions on the overall case for investment, particularly during the development of a PBC. A suite of sensitivity testing shows that the BCR is robust in the 'Low BCR 1-2.9' range. The exceptions include the 95th percentile cost (BCR 0.7), assuming events under the Do minimum would only be 25% worse than the baseline (BCR 0.8) and a higher 6% discount rate (BCR 0.8). Sensitivity

³ The construction/implementation of local road low-cost, low-risk improvements is approved up to a total cost of \$2 million per project. The \$2 million implementation approved cost limit is inclusive of all costs such as professional services, administration and related overheads, property and construction / implementation costs.





tests that would result in the programme BCR having a "Medium BCR 3-5.9" or higher rating involve excluding marine investment (BCR 12.8), including higher climate change growth, further speed restrictions in the Do-Minimum or higher strategy effectiveness values.

The Preferred Programme will provide:

Benefit / Outcome	Contribution of Preferred Programme
Climate Change Adaptation	<p>Addresses a known climate change issue by</p> <ul style="list-style-type: none"> Improving marine alternatives to road by: <ul style="list-style-type: none"> completing resilience works on two primary hubs (Havelock and Picton) upgrading three arterial hubs (Elaine Bay, Portage and Torea Bay) constructing one new arterial hub (Goulter Bay) improving nine local marine hubs Improving road network resilience on 77% of roads to reduce susceptibility to human induced instability by 30% and 50% Reducing carbon emissions from freight transport by progressively transitioning freight within Kenepuru from road to marine.
Access to Opportunities and Economic Prosperity	<p>Support economic prosperity and access to opportunities by reducing average duration of road closures across the Sounds by</p> <ul style="list-style-type: none"> 6% by 2027 through repair work at priority sites 26% by 2034 through road improvement work 32% by 2044 through road improvement work <p>Support economic prosperity across the Sounds by</p> <ul style="list-style-type: none"> Decreasing travel times by 15% through the removal of 30km/hr restrictions in parts of Kenepuru Reducing vehicle operating costs through the removal of temporary speed restrictions (including signals) Providing an alternative Kenepuru Road, which will continue to be vulnerable due to underlying geology, by providing enhanced marine access Protecting primary marine hubs at Picton and Havelock for emergency response and for future marine networks.
Quality of Access	<p>Improve quality of access across the Sounds by:</p> <ul style="list-style-type: none"> Addressing 232 simple, 1,128 minor, 175 complex site repairs to provide a safe and fit for purpose road network. Adding resilience to the road network by completing a programme of drainage improvements across the Sounds, which will result in approximately 31% less drainage related faults⁴ Addressing 232 simple, 1,128 minor, 175 complex site repairs to provide a safe and fit for purpose road network. Providing more consistent and reliable access Providing more viable and resilient marine alternatives Providing more consistent, reliable access Providing better marine alternatives and completing emergency response planning

Assessment Profile

The Preferred Programme has an overall priority of Priority 2 of 12. The highest expected contribution to each investment factor is detailed below.

⁴ Culvert issues, scour, and under slips



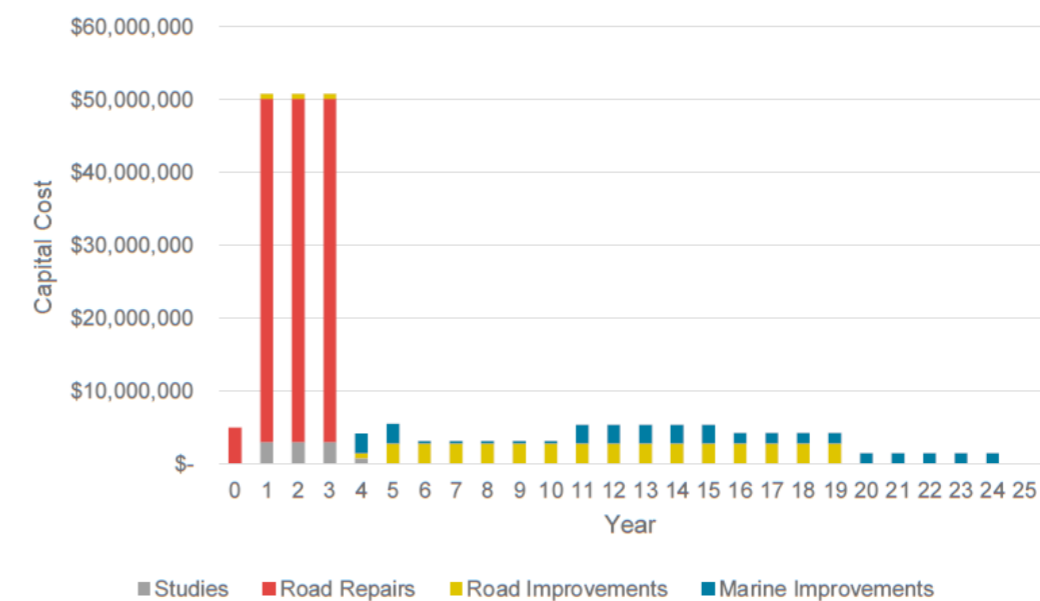
Factor	Comment	Rating
GPS Alignment	<p>Strategic Priority: Improving Freight Connections</p> <p>Benefit: Economic Prosperity</p> <p>Criterion: >31% reduction in duration of unplanned road closures/service disruptions of >2hrs</p>	Very High
Scheduling	<p>Scheduling Factor: Criticality</p> <p>Criterion: Delivery of the programme is urgent and needs to begin in 2021-24. Unplanned loss of service (more than 2 hours) results in most users needing to use alternative routes or modes which take more than 2 hours extra travel time.</p>	High
BCR	1.8	Low

Implementation Plan

The implementation timeline is shown below. Road Repairs are the immediate priority and will be completed in years one to three. In parallel, area wide studies will be completed as these will need to guide implementation of road improvements over years four to 10, and marine improvements over years four to 30.

Activity	Years one to four	Years five to 10	Years 10 to 30
Road Repairs	Complete road repairs	-	-
Road Improvements	Resilience (drainage) study and pre-implementation	Pre-implementation and implementation	Pre-implementation and implementation
Marine Improvements	Marine study Plan changes	Pre-implementation Implementation of essential items	Implementation of Long-Term Plan
Maintenance	Maintenance planning Implementation	Implementation	Implementation
Area wide studies	Plan Change Marine Study Resilience (drainage) Study		

Cash flow by year and type of activity is shown below. Costs are around \$50M in years one to three as repairs are completed. Expenditure then drops significantly, with Road Improvements costing between \$1-3M per annum from Year four to 20. The highest priority marine improvements are completed in Years 4 and 5.



Storm Response Business Case

Funding

At this stage, the assumption is that the Preferred Programme will be funded through rates and National Land Transport Fund (NLTF) allocation. The funding categories and assumed Waka Kotahi Funding Assistance Rates (FARs) are shown below. Supplementary funding sources have been identified to assist offset the costs to residents and to the NLTF.

The funding immediately sought from the PBC is not the full \$234M, rather \$146M for immediate road repairs and \$10M for further investigations into roading improvements (\$3M) and marine improvements (\$7M).

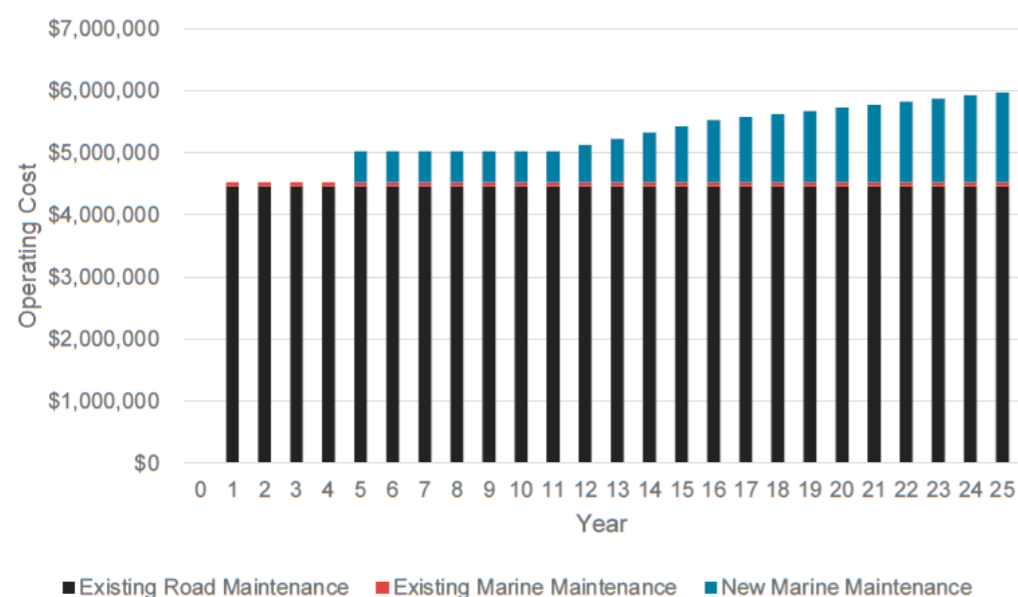
P50 capital cost estimates are shown in the table below.

Activity	Funding Category	Assumed FAR	P50 Cost Est
Road Repairs	Emergency Works	71%	\$146M
Road Improvements	Low-Cost Low Risk (<\$2M), Resilience (>\$2M)	51%	\$45M
Marine Improvements	NA	0%	\$33M
Area wide studies: Resilience Study	Network and Asset Management	51%	\$3M
Area wide studies: Marine Study, Plan Change	NA	0%	\$7M

Potential investment partners including the community have finite funding availability. MDC will urgently seek to pursue funding through a Direct Budget Bid and through the Transport Resilience Fund for roading resilience improvements.

MDC will also seek supplementary funding from the International Visitor Conservation and Tourism Levy Fund for works on Queen Charlotte Drive.

Maintenance costs are shown in the figure below. The additional marine costs do not start until year five as marine infrastructure is built or upgraded. It is assumed this will be fully rates funded unless supplementary funding can be sourced.



Risks

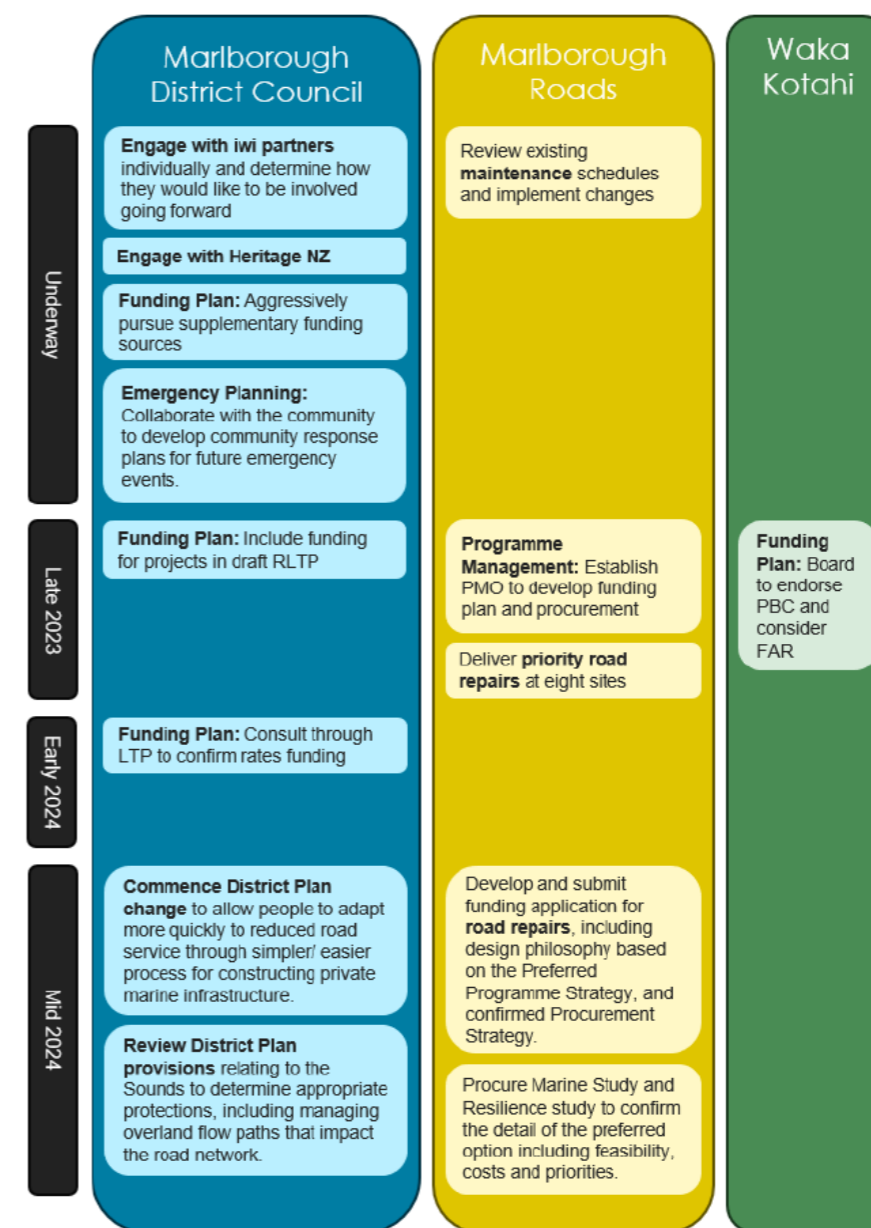
Six critical risks were identified at a Risk Workshop:

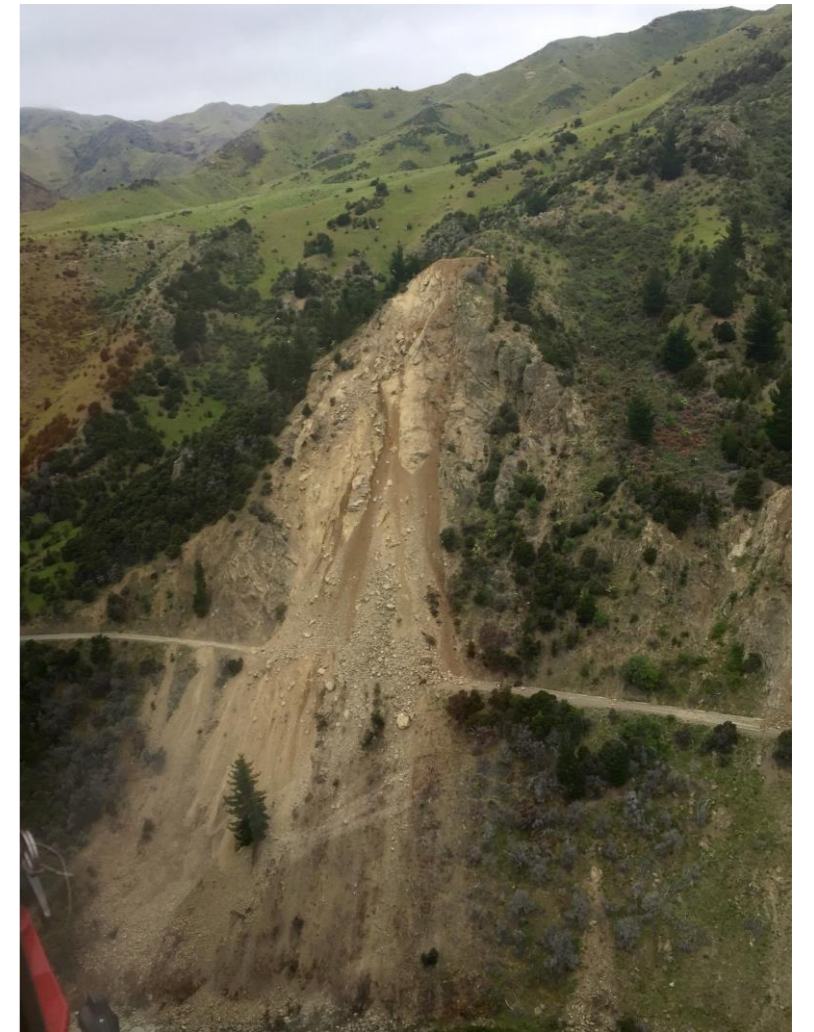
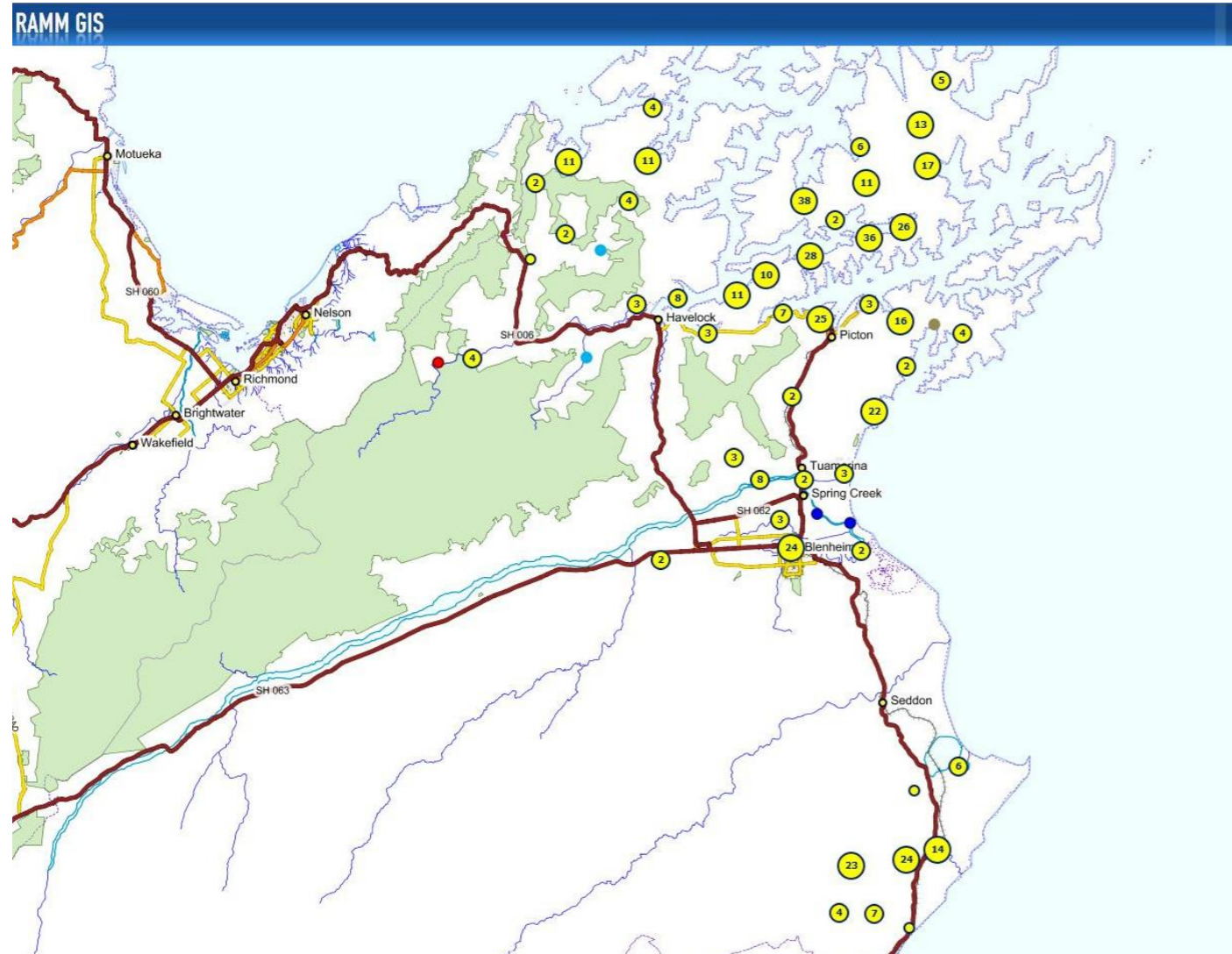
- There is a risk that iwi rights and interests are not adequately addressed due to time constraints. Ongoing collaboration post-PBC is required with iwi to continue input on the business case and programme of works as it emerges.
- There is a risk that Heritage NZ interests are not adequately addressed due to time constraints. Ongoing collaboration post-PBC is required with Heritage NZ to continue input on the business case and programme of works as it emerges.

- MDC has a small ratepayer base, and the programme is \$234M. The preferred programme needs to compete against other MDC priorities for limited funding. Nationally there is uncertainty about access to other funding streams, as well as uncertainty about availability of national funding through the NLTF. The principal government funding stream is via Waka Kotahi, who do not have the remit to fund some of the proposed works e.g., marine. In this constrained funding environment, there is a risk that MDC may not be able to afford to deliver the preferred programme. Pursuit of the full range of potential supplementary revenue streams post-PBC is required.
- There is a known lack of capacity within the contractor/consultant market as many are responding to damage from Cyclone Gabrielle. MDC may be unable to secure a contractor, and/or costs may increase leading to poorer outcomes. Early engagement with potential contractors is needed.
- The resource consent process may be challenging for marine infrastructure, which could add delay or make the marine programme unaffordable. Ongoing dialogue with iwi, stakeholders and community is essential to manage this risk and community expectations. Marine services viability and consenting will be investigated further as part of the Marine Study.
- Marine based infrastructure may require additional dredging, increasing pollution and environmental degradation. This should be part of the Marine Study scope.

Next Steps

The next steps, timing and responsible party are shown below:





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Strategic Case

**Demand
Driver 2:
Financial
& Physical
Capital**

How the Transport Network Operates - Assets and Means of Travel

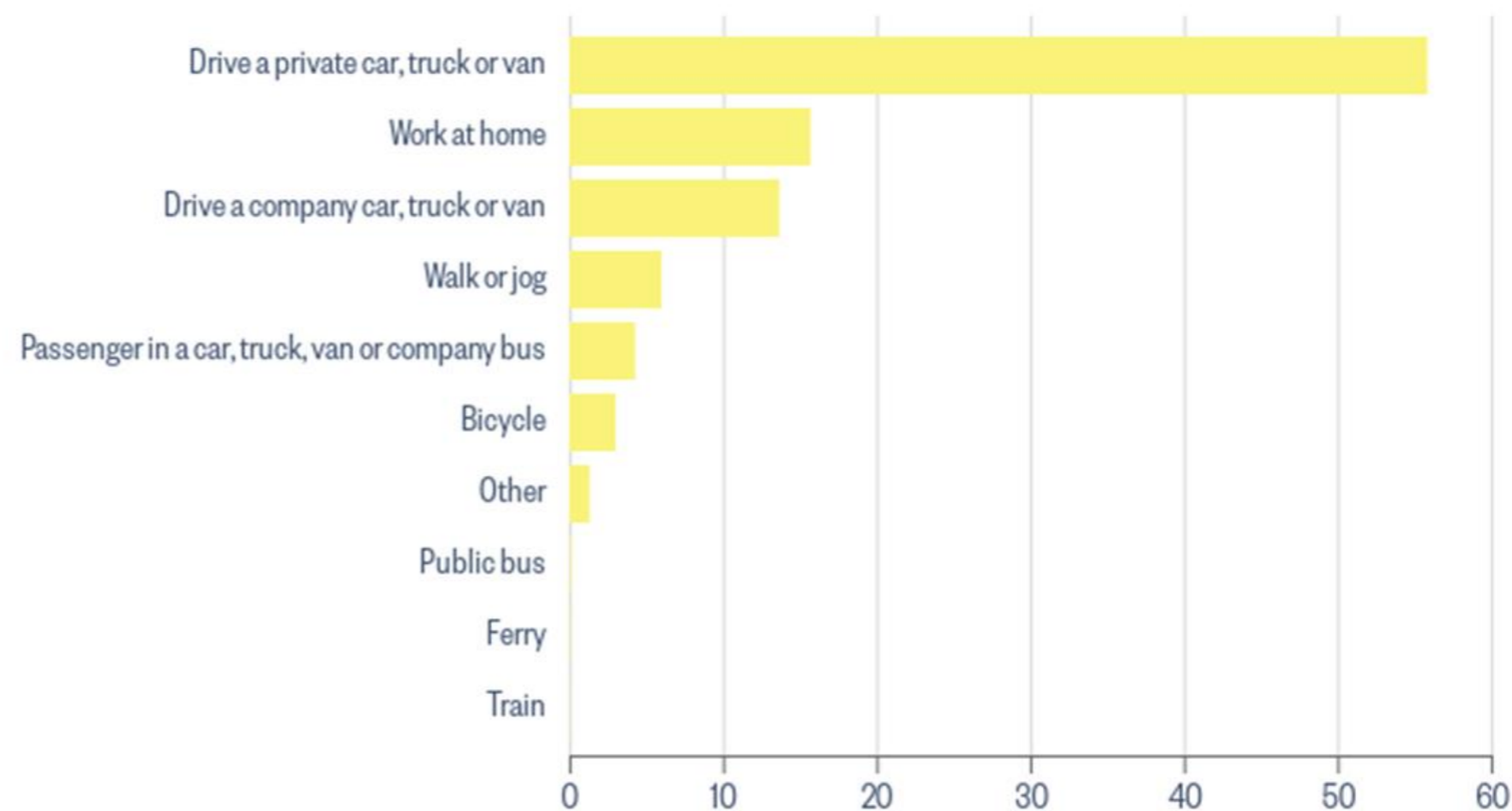
figure.nz

Asset	Quantity	Value
Sealed Road	916km	\$390.3M
Unsealed Road	616km	\$11.97M
Footpaths	244km	\$36.1M
Cycleways		\$2.64M
Bridges/Structures	383	\$263.9M
Streetlights	3063	\$17.3M
Signs, Markings etc		\$18.99M
Total		\$741.2M

Main means of travel to work for people living in the Marlborough Region, New Zealand

2018 Census, % of employed people aged 15+

Provider: Stats NZ



- 1,549k m of formed road
- 909 km sealed / 640 km unsealed
- 1,345km – rural / 184 km – urban
- 242 km of footpaths
- 332 km of kerb/channel
- 367 bridges, 13 wharves
- 7kms+ of retaining walls
- 6,000+ culverts
- 4,759+ street lights
- Also street furniture, traffic signs and barriers

Total replacement value in 2019 \$ of

\$827,000,000

Multi Model Transport Network

Public Transport

The Blenheim Bus Service is the only publicly funded 'public transport service' operating in the district. Currently, there are two existing Blenheim Bus routes (North and South). A few additional bus routes on trial, with an intent of making these permanent.

- Blenheim West Commuter
- Blenheim East Commuter (Cancelled due to low patronage)
- Blenheim to Renwick return
- Picton to Blenheim return

This service is operated by the Council and subsidised by the Waka Kotahi.

Walking and Cycling

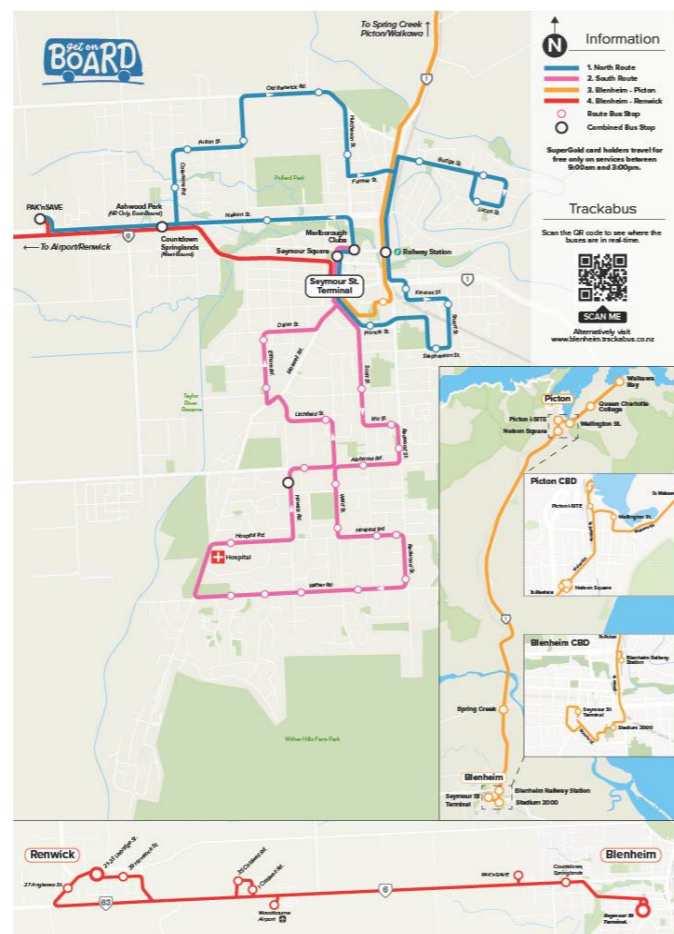
The vision of the Marlborough District Council Walking and Cycling Strategy is that Marlborough people and visitors walk and cycle safely for travel, health and enjoyment. The objectives of the Strategy are to encourage and support people in Marlborough to choose walking and cycling for an active and healthy lifestyle, and to develop a safe, convenient and attractive travel network for walking and cycling.

Mobility

The ageing population require better mobility in and around the area. Designated mobility routes need to be carefully planned in the context of impact on other road users

Due to the growth of the different modes of transport, modifications will be required to accommodate the requirements of mobility scooters.

Blenheim town centre has good parking capacity, however improvements in disabled parking placement and facilities may be required.



Freight

All rail freight between the two islands goes through Picton. Most of the freight moved around Marlborough is by road. SH1 from Picton south is a nationally significant freight route. SH6, SH62 and SH63 have regional significance as the connection for most major townships in the top of the south. Local roads support the state highways as feeders. Freight volumes in the top of the south are expected to grow from 11.8 million tonnes in 2022 to 14.0 million tonnes in 2042, a 19 percent increase.

Campervans

The tourism industry brings a significant number of campervans to our region, and they are a key mode of transport for our visitors. Scenic lookouts, beaches and other naturally beautiful places are often off the 'beaten track'.

Air travel

Blenheim Airport is the main regional airport in the Marlborough District, co-located with the RNZAF Base in Woodbourne. It is situated 5 kilometres west of Blenheim. This regional airport operates regular domestic flights to Auckland, Wellington, Christchurch, and Paraparaumu flying with either Air New Zealand or Sounds Air1.

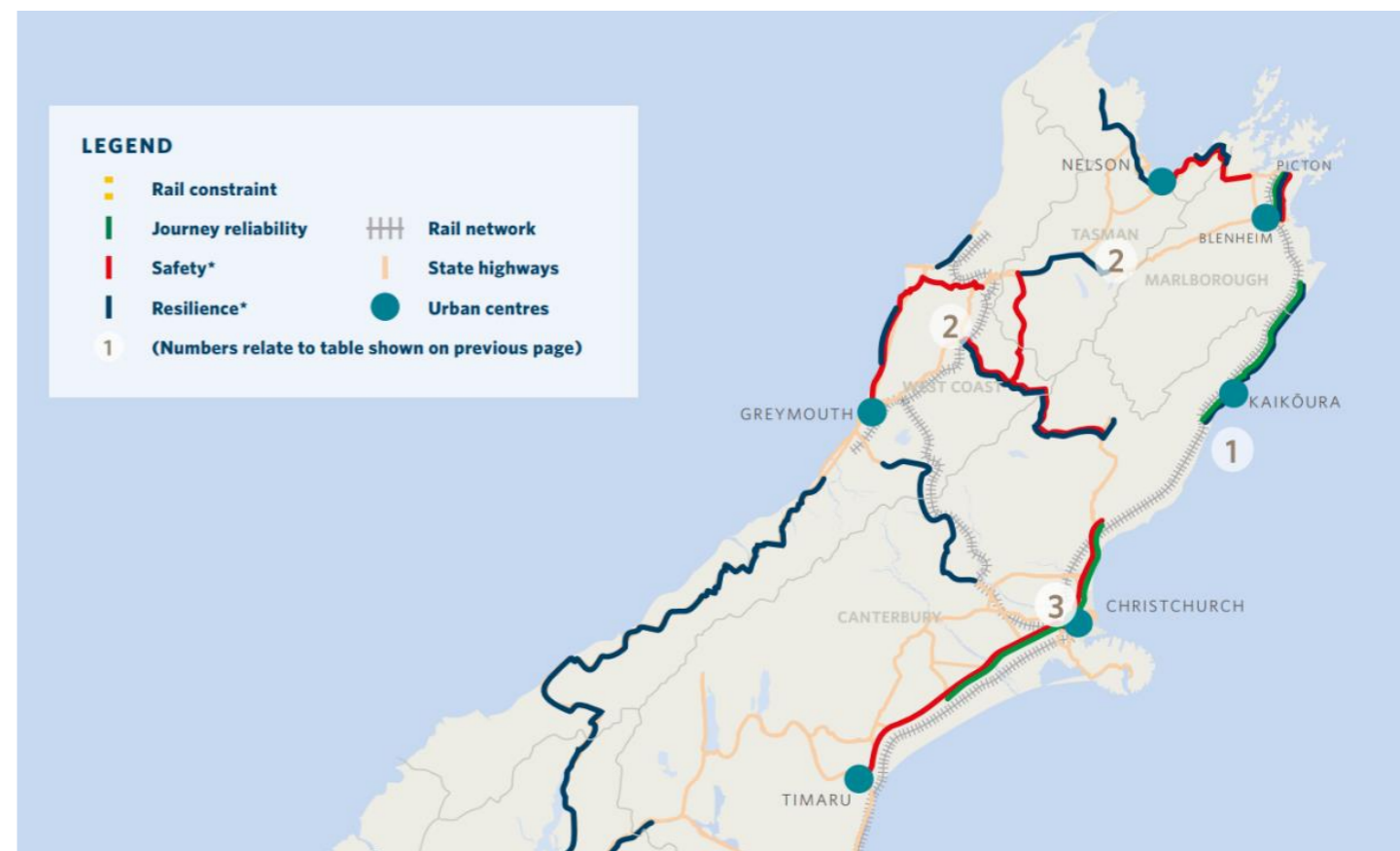
Omaka Aerodrome is the second airport in Blenheim situated south-west of the town centre. It is a private airfield utilised exclusively by recreational pilots and commercial operators offering pilot training2.

The Picton Aerodrome is located 5 kilometres south of Picton township in Koromiko. Sounds Air operates regular return flights from this airport to Wellington.

Railway Network

The Main North Line runs between Picton and Christchurch. This carries freight services between the Interislander terminal and Christchurch and the Coastal Pacific passenger train. KiwiRail operate a freight hub at Spring Creek where rail freight is transferred from trains to trucks for destinations in Nelson, Tasman, and the West Coast. Spring Creek is also used to connect shorter trains together for more efficient travel to southern destinations

In 2019, 560,000 lane metres of freight equating to around \$14b was transported on the Main North Line. The passenger train operates daily between the last Friday of September and the last Sunday of April. The train is timetabled to connect with Interislander ferry sailings. Passenger stations are in Picton and Blenheim. The Marlborough Flyer, a heritage steam train, operates tourist trips when cruise ships are in port between Picton and Blenheim.



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Strategic Case

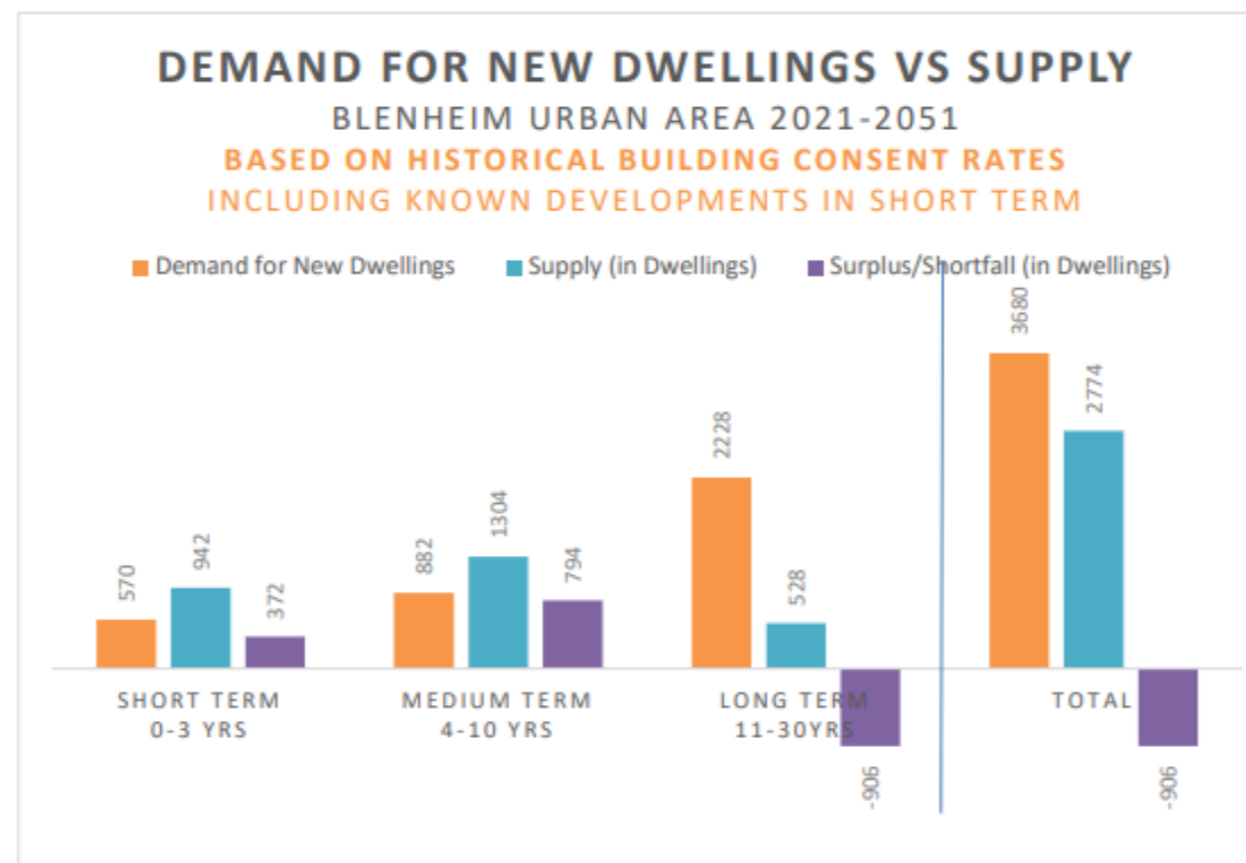
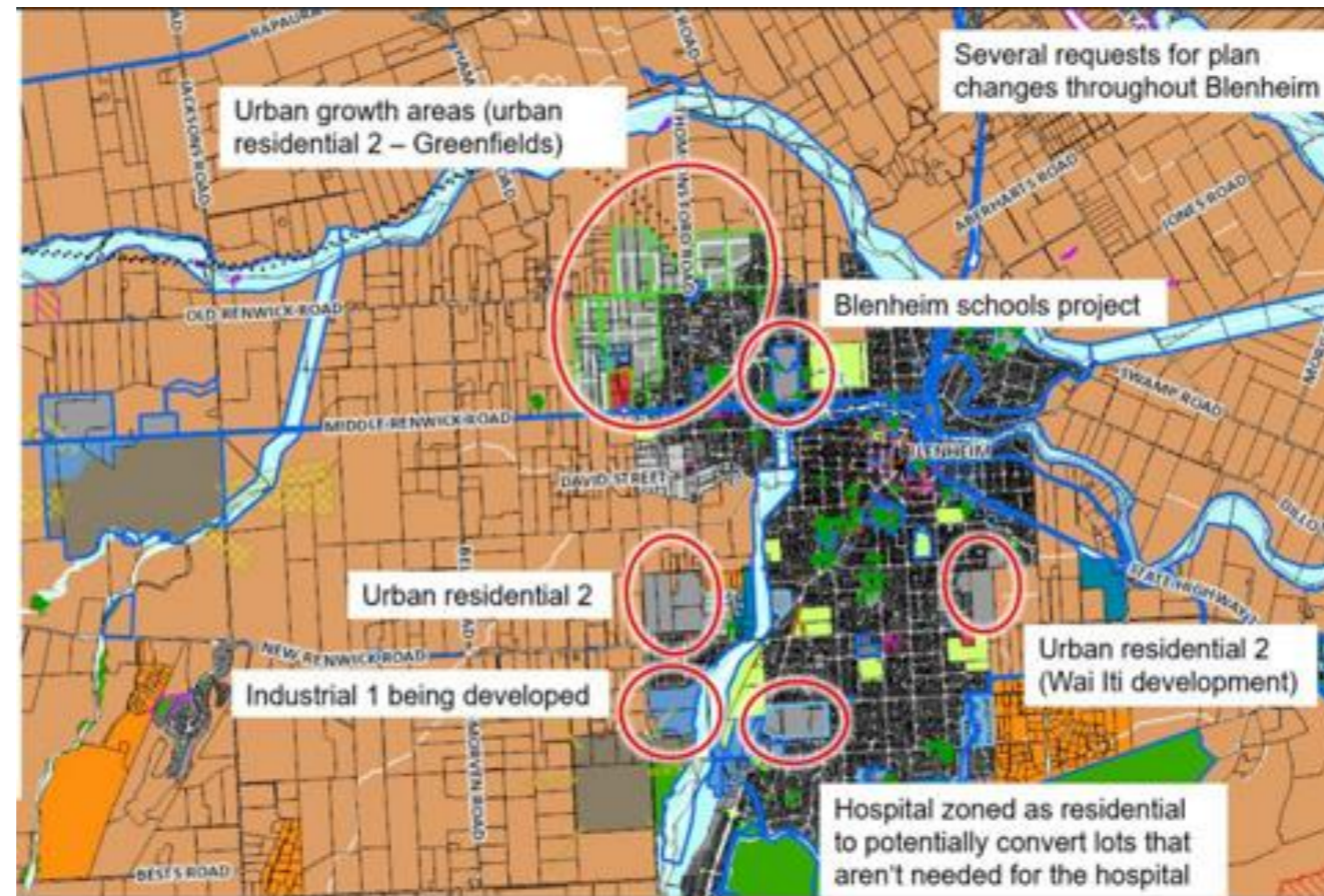
**Demand
Drivers 3-5:
Social Cohesion,
Human
Capability,
Culture**

Network Operating Framework

Network Operating Framework (NOF) serves as a guide for planning and managing our network assets for future planning. Developed in collaboration with Marlborough District Council, Marlborough Roads, Waka Kotahi NZ Transport Agency, and stakeholders, the NOF is geared towards forward-thinking, multi-modal network planning, specifically targeting Blenheim and Picton's urban areas. This framework aims to guide comprehensive network planning, considering all road users and the intricate relationship between land use, transport networks, and infrastructure. Embracing a unified 'one network' approach, the NOF encourages collaboration and integration for effective transport system management. Our future activities in the asset plan resonate with the principles laid out in this strategic framework, ensuring a cohesive and inclusive approach to developing our transport infrastructure.

Through this network operating framework we aim to benefit

- To support our decisions as a part of our wider decision-making framework
- To enable a collaborative approach in planning outcomes
- Consider the entire network comprehensively
- Ensure transparency in decision-making
- Support and guide I developing master plans and business cases.
- Guide us in understanding the network intervention requirement.
- iterative process to transform into an integrated transport network



Blenheim

In Blenheim, urban land is fully developed (both commercial and residential), but there are areas where there might be more building in the future. There are several greenfield areas already zoned to allow additional urban growth. Council receives requests for private plan changes to allow for urban expansion onto rural zoned land.

Residential Urban Growth Areas

Five residential areas in the northwest of Blenheim, accessible primarily via Old Renwick Road, Middle Renwick Road, and Westwood Avenue, are designated as Residential 2 zones. These areas allow development with a minimum lot size of 450 m². Some of these zones are already seeing development, particularly in the eastern section.

New Renwick Road

A private plan change during the MEP update in 2018, rural land was rezoned to Residential 2. Despite the zoning change allowing for up to 370 lots, no development has occurred yet. Access to this area will be primarily through Battys Road and New Renwick Road.

Alabama Road Residential Zone

The initial stages of the Wai-iti Block development have started, with primary access via Alabama Road and secondary access through Nikau Drive to Redwood Street. There's also ongoing work on the Blenheim schools' rebuild, known as Te Tātoru o Wairau.

Industrial Zone – Aerodrome Road

Two undeveloped properties are designated for future industrial use, situated on Aerodrome Road near Omaka Landing and Omaka Aerodrome.

Residential Zone – Hospital

Wairau Hospital's land falls under the Residential 2 zone.

Future Urban Growth - Picton

Picton

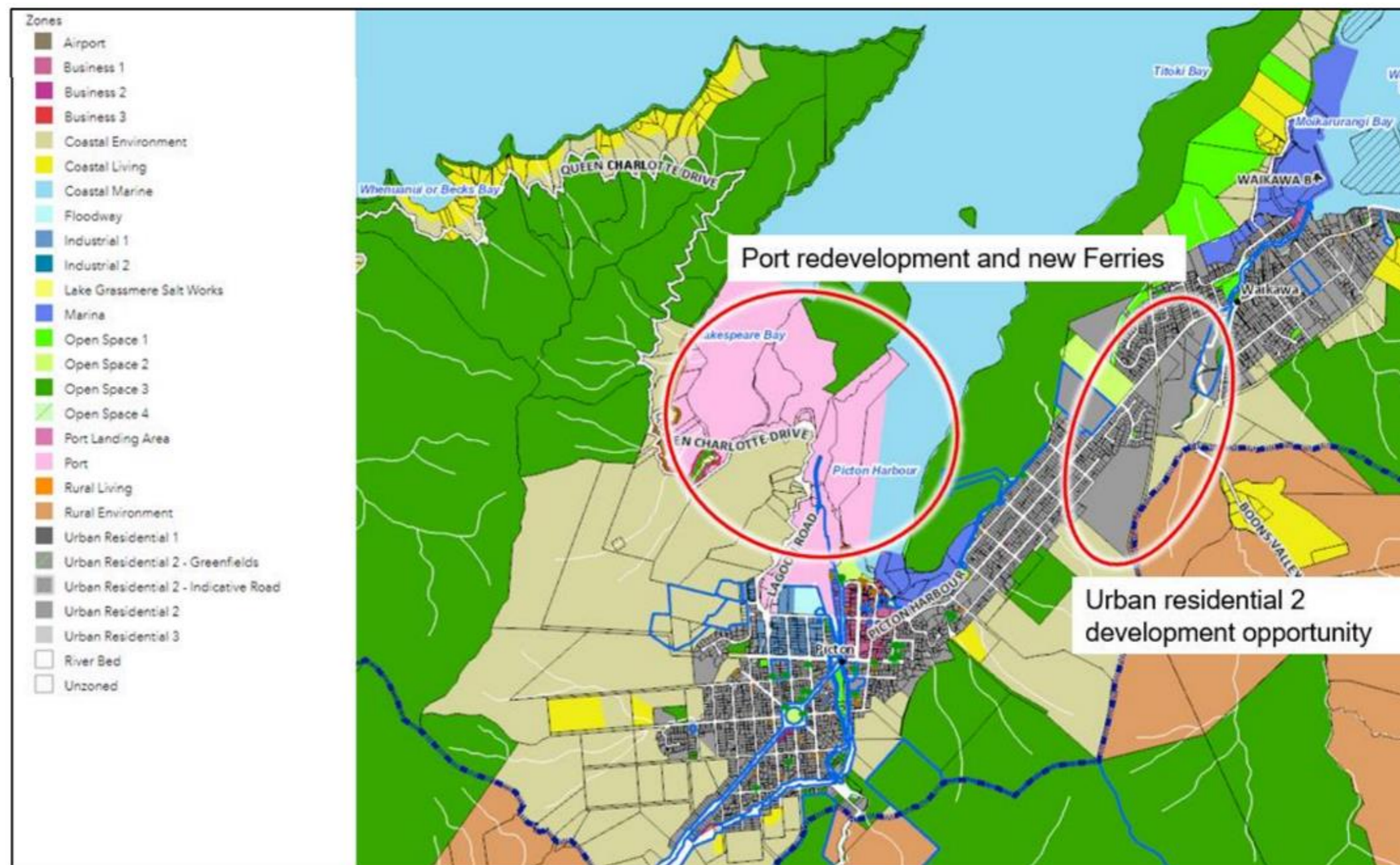
In Picton growth opportunities are relatively limited given geographic constraints and availability of developable area. The figure below highlights two key areas for future growth potential and development in Picton.






Port development

Ongoing advancements are happening within Port Marlborough and the Marina zones around Picton Harbour. KiwiRail's initiative to replace the ferry fleet with larger vessels requires significant redevelopment at the Port. The Waitohi Picton Ferry Precinct Redevelopment project, a collaboration between KiwiRail, Port Marlborough, Marlborough District Council, and Waka Kotahi, aims to substantially upgrade the existing ferry precinct. This enhancement will ensure a safer, more reliable service and accommodate the arrival of two new KiwiRail ferries in 2025 and 2026. The project includes plans for a new ferry terminal and wharf, improvements to marshalling areas, better transport connections, and beautification of the ferry precinct. Road alterations accompanying the project involve relocating SH1 and making various road safety enhancements and intersection improvements.

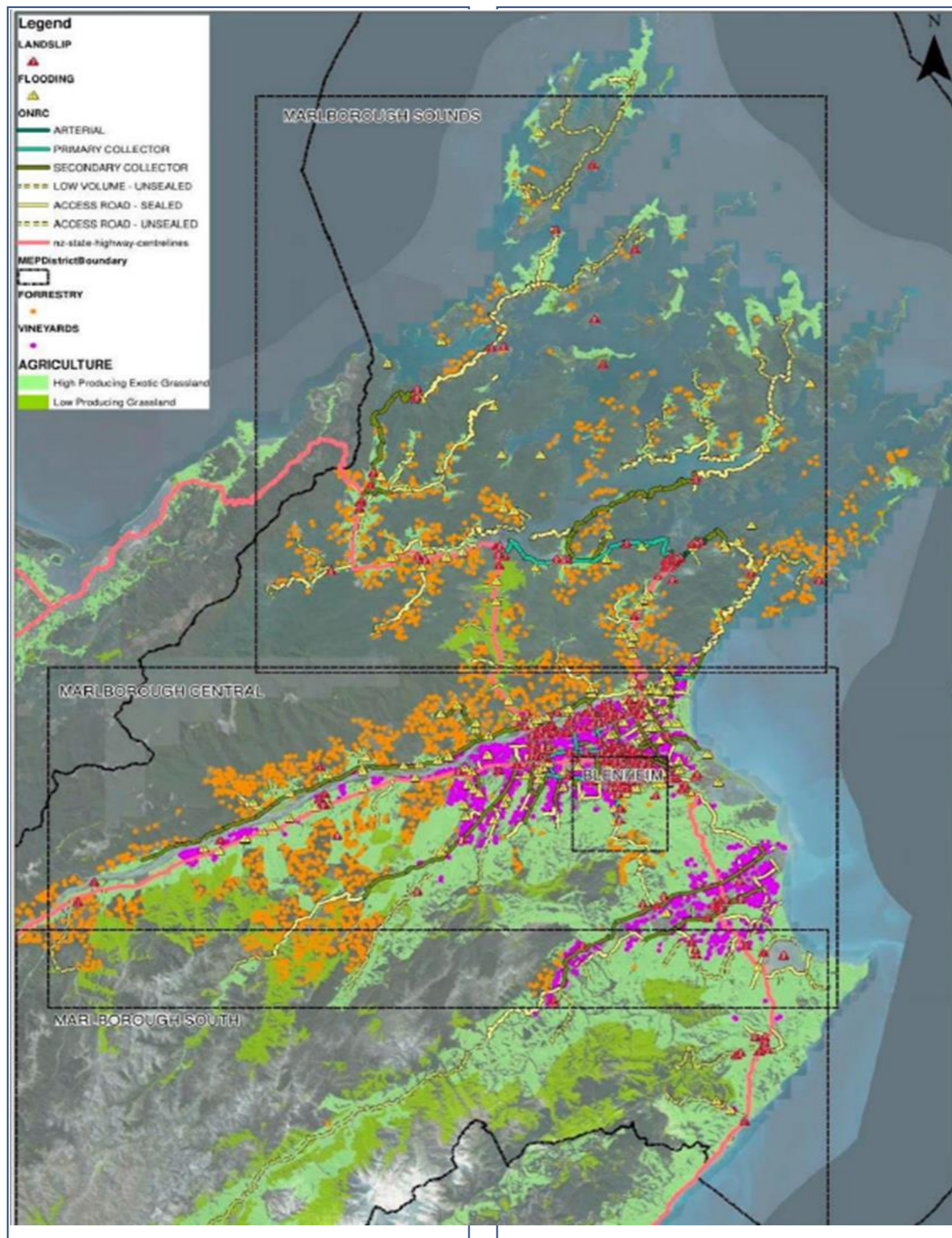
Urban Residential 2

Picton's residential growth opportunities are located in the hills east of the town center, behind Waikawa Road. While there are undeveloped residential zones, some of this land holds significant importance for the Iwi community and may not contribute to Picton's future growth plans.



Mode	Strategic Objectives	Network Principles
	<p>Pedestrian A safe, convenient, and attractive network that embraces access to places of cultural significance encouraging walking as a viable mode of transport.</p>	<p><u>Primary pedestrian routes:</u> Direct and convenient connections that provide access to retail, education, and employment areas within the town centre.</p> <p><u>Secondary pedestrian routes:</u> Connections to primary pedestrian routes, to and from residential areas and places of education, employment, and recreation.</p>
	<p>Cycling A safe, convenient, attractive, and connected network that embraces access to places of cultural significance, inspiring people of all ages and abilities to cycle in Marlborough for everyday journeys.</p>	<p><u>Primary cycling routes:</u> Direct and convenient connections that provide access to retail, education, and employment to enable a network of local on-road and off-road connections.</p> <p><u>Secondary cycling routes:</u> Connections to primary cycling routes, to and from residential areas and places of education and employment. Routes that provide access to off-road networks.</p>
	<p>Public Transport A reliable, convenient local service that enables a connected community, better supporting transport disadvantaged and considering an aging resident population.</p>	<p><u>Primary public transport routes:</u> Routes that enable connections between local residential catchments, shopping, healthcare providers, and town centres.</p>
	<p>General Traffic A general traffic network that provides safe, efficient, and accessible connections considering the needs of all modes to encourage a balanced and integrated transport system.</p>	<p><u>Preferred traffic routes:</u> Key routes that enable regional and inter-regional connections providing a preferred alternative to other routes with land use conflicts.</p> <p><u>Traffic routes:</u> Provides wider network connectivity between local catchments to and from preferred traffic routes and local primary access routes.</p> <p><u>Local primary access routes:</u> Provides access between traffic routes and local destinations including education, employment, and recreation, and within commercial and residential areas.</p> <p><u>Local secondary access routes:</u> Collects and distributes between local primary access routes.</p>
	<p>Freight Promote freight on corridors that provide reliable and resilient interregional connectivity and access supporting local businesses to operate safely and efficiently, minimising conflict with other transport modes and areas of higher place amenity.</p>	<p><u>Primary routes:</u> Direct routes that enable freight safe and efficient access to freight hubs avoiding routes with higher place function.</p> <p><u>Secondary routes:</u> Routes that provide local freight connectivity.</p>

Managing the Impacts of Demand

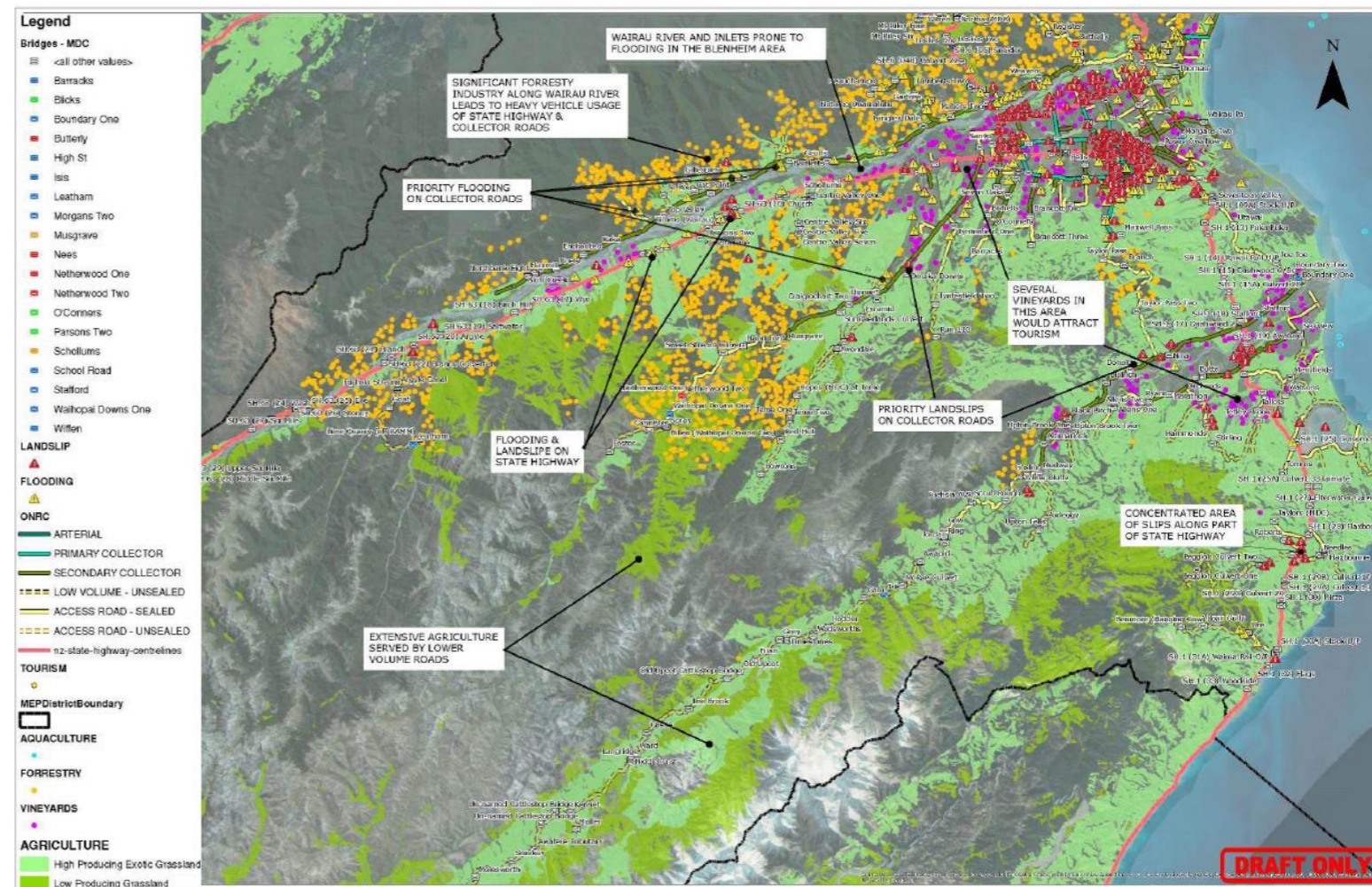
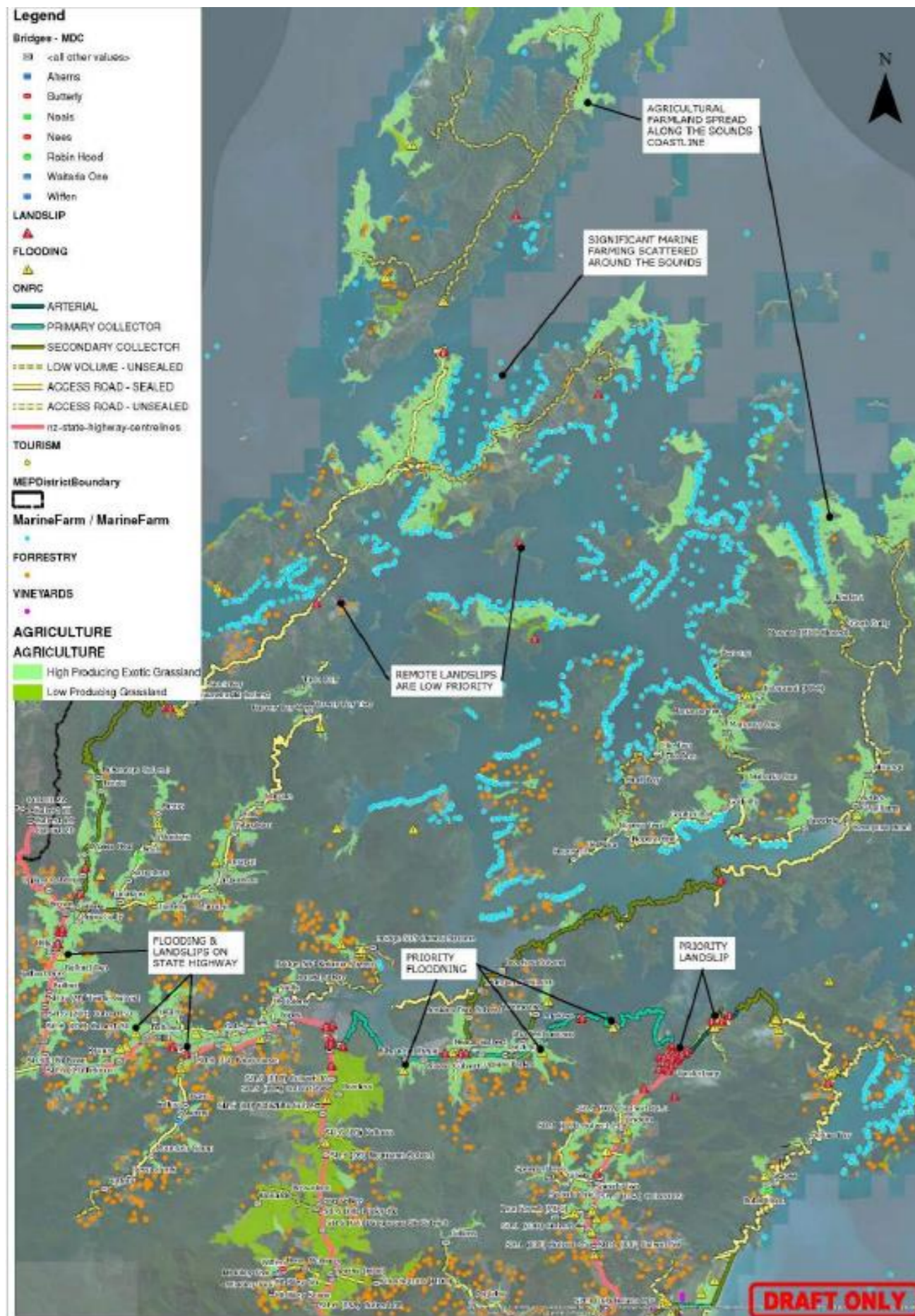


Asset Management Planning

The Council seeks to achieve a solid core standard of asset management. Intermediate and advanced asset management tools and techniques are deployed in certain areas but only where they add demonstrable value to the decision-making process. The maturity of asset management within Marlborough District Council is dependent upon a number of factors — skills available, size and criticality of the assets, complexity and value of the infrastructure, experience and culture of staff, and the approach to risk management.



Managing the Impacts of Demand



**Appendices
Book 1**

Strategic Case

**Current State
of the
Network**



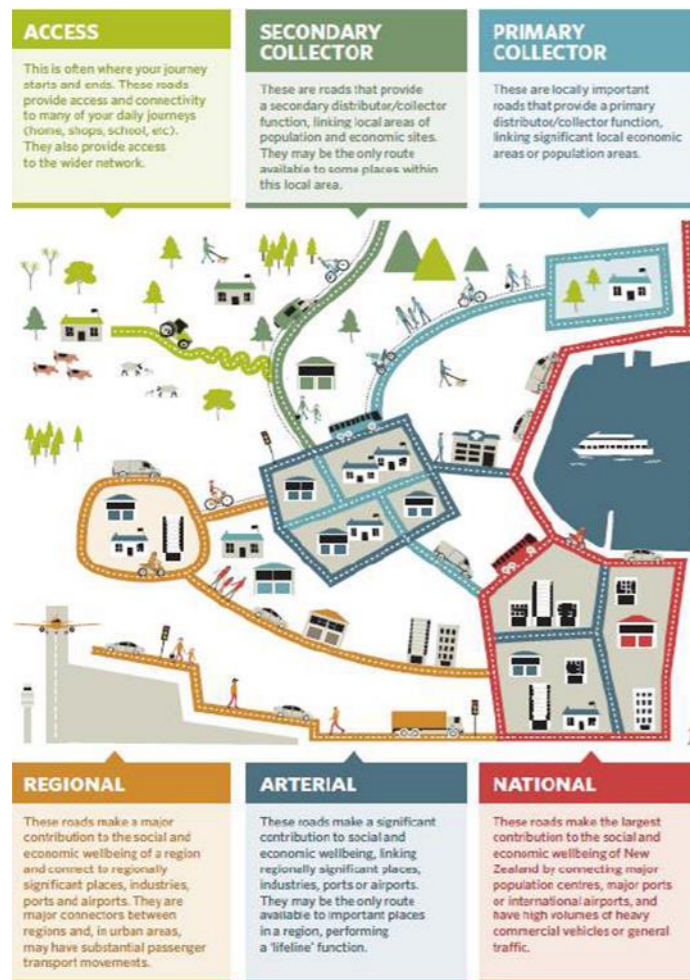
Levels of Service: Transitioning from the One Network Road Classification to the One Network Framework



One Network Road Classification

The One Network Road Classification (ONRC) was a major shift in the road management framework at national and regional levels. It divided New Zealand's roads into six categories based on how busy they are, whether they connect to important destinations, or are the only route available. These categories are identified in the graphic above.

The most important concept behind the ONRC was that it placed the customer at the heart of every investment decision. Consequentially, once a road has been classified under the ONRC, it should be maintained to the Customer Level of Service (CLOS) for roads of its type.



Marlborough District Roads Levels of Service are currently measured using the ONRC framework as above:

The ONRC is being replaced by the One Network Framework (ONF) which takes more consideration of the adjacent land use around our roads. ONF assists in more complex urban environments, where there are several competing demands on limited road and street space, and a range of modes to be accommodated. ONF was introduced in April 2021. Road classification has been established but there is still work to do to transition to the new framework.

One Network Framework

The ONF is a shift in how we think about, plan and invest in our roads and streets by putting people, and the diverse ways we use our roads and streets, at the heart of how we plan. The ONF recognises that roads and streets are places for people as well as transport corridors, and they contribute to vibrant and liveable towns and cities. It provides an easy-to-understand common language that everyone in the transport system can use, from planning through to delivery.

To date the network operating frameworks have been developed with an aim of supporting Marlborough district council, Marlborough roads and Waka Kotahi NZ transport agency and stakeholders to planning multi-modal transport networks focused in the urban areas of Blenheim and Picton. Rural is yet to be started.

Levels of service using the framework are a priority.

The Differential Levels of Service (DLoS) project is a Te Ringa Maimoa foundation initiative that responds to one of the original Road Maintenance Task Force outcomes. The DLoS Framework builds on work done by early adopters of the One Network Framework (ONF) at Waikato District Council, and consultation and optioneering done by Wairoa District Council.

The DLoS Framework aims to provide:

- better evidence for transport investment decision makers
- a consistent way of describing transport levels of service across the sector
- alignment of community outcomes through to performance measures
- streamlined optioneering and consistent differentiation using ONF
- a robust connection between service, cost and risk.

Marlborough District Council is committed to adopting the DLoS principles and are actively working with Te Ringa Maimoa.



Current ONRC Levels of Service Objectives and Measurement

Objectives

The Marlborough District Council AMP priority objectives relate to how the land transport network provides benefit to the region. These benefits are as follows:

- Communities have access to a safe transport system.
- Increased social and economic opportunities for people to travel around the region through different transport choices
- Improved network resilience ensures communities can undertake their daily activities in unpredictable natural events.
- Improved economic growth and environmental sustainability is achieved for both primary and secondary industry users.

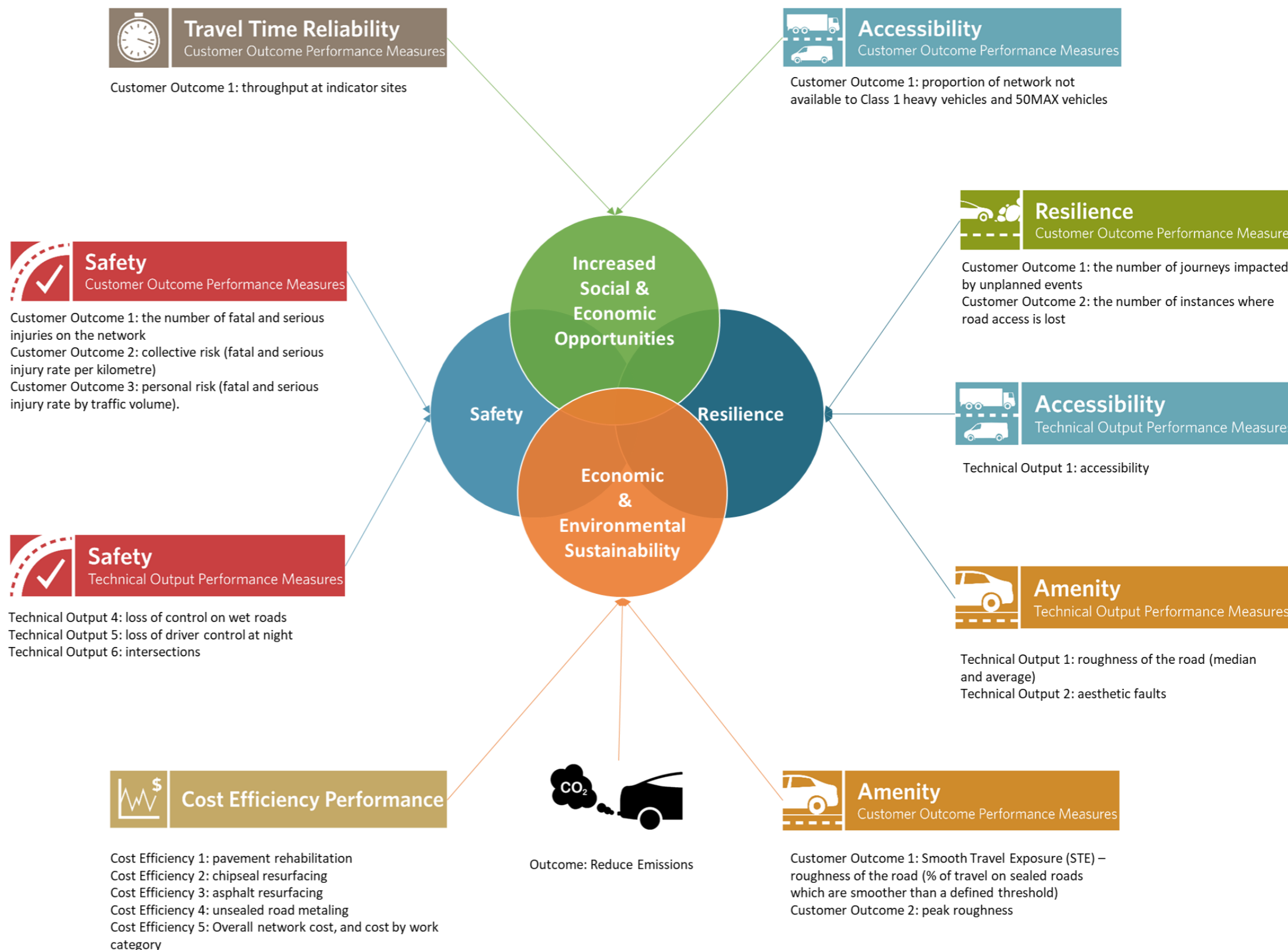
Measuring Levels of Service

Levels of service are measured twice a year and reported on annually against the targets that are set in the Long Term Plan. These measures are based on the condition of the road and footpaths, the volume of renewals undertaken, the number of serious injury crashes and fatalities, response times for customer requests and the residents satisfaction with the network.

Continual Improvement

Over the following pages the current and desired levels of service for each priority objective are explained and the insights and gaps to be addressed as part of the next AMP Period.

These are included in the Continual improvement plan provided in the Programme Case.





Level of Service Objective

To ensure the safety of all road users within the network, including drivers, pedestrians, and cyclists, by Minimizing accidents and promoting a safe transportation environment.

Safety Customer Outcome Performance Measures

- Customer Outcome 1: the number of fatal and serious injuries on the network
- Customer Outcome 2: collective risk (fatal and serious injury rate per kilometer)
- Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume).

Safety Technical Output Performance Measures

- Technical Output 4: loss of control on wet roads
- Technical Output 5: loss of driver control at night
- Technical Output 6: intersections

Current Performance

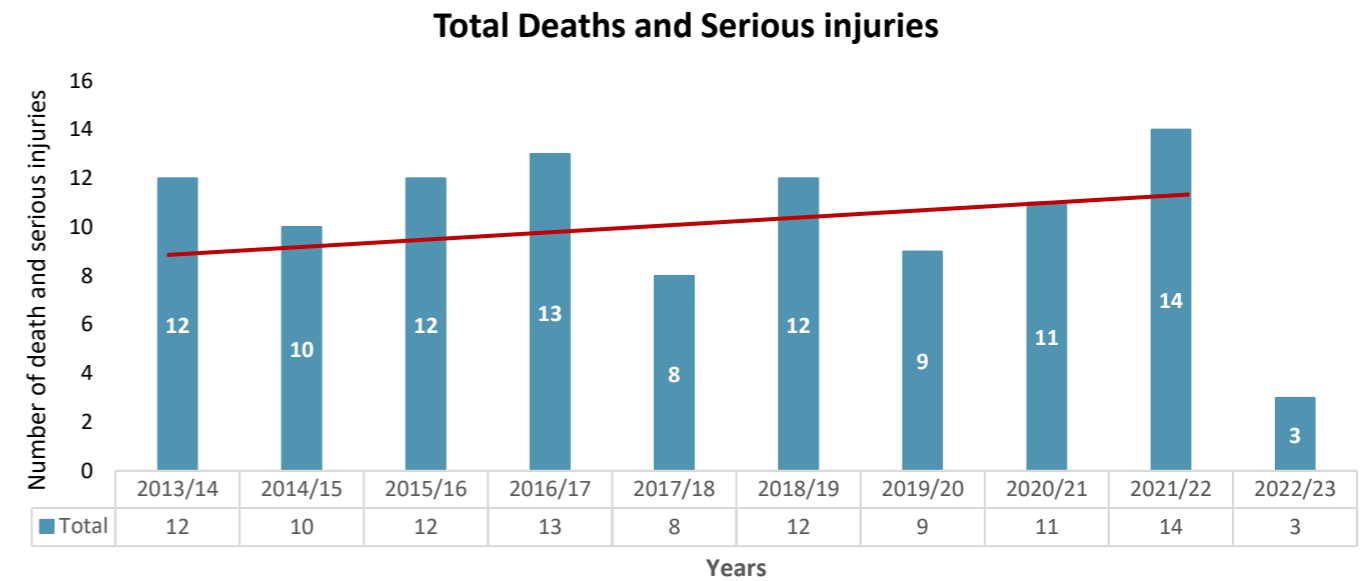
- DSI incident has shown an increasing trend, with a peak of 14 cases in 2021/22.
- Except for arterial roads, the collective risk of MDC is in line or below the National and provincial peers.
- The personal risk is significantly lower for primary collector, secondary collector, access and low-volume roads. Arterial Roads are also lower compared to National and provincial peers.
- Spike in the DSI count due to loss of driver control on the access and low volume during 2021/22 and 2020/21.
- Spike in the DSI count due to loss of driver's control on access roads in the year 2021/22.
- An increasing trend of DSI count on access and low-volume roads.
- A spike in the DSI count associated with vulnerable users on primary collector, access and low-volume during the year 2020/21.

Gap

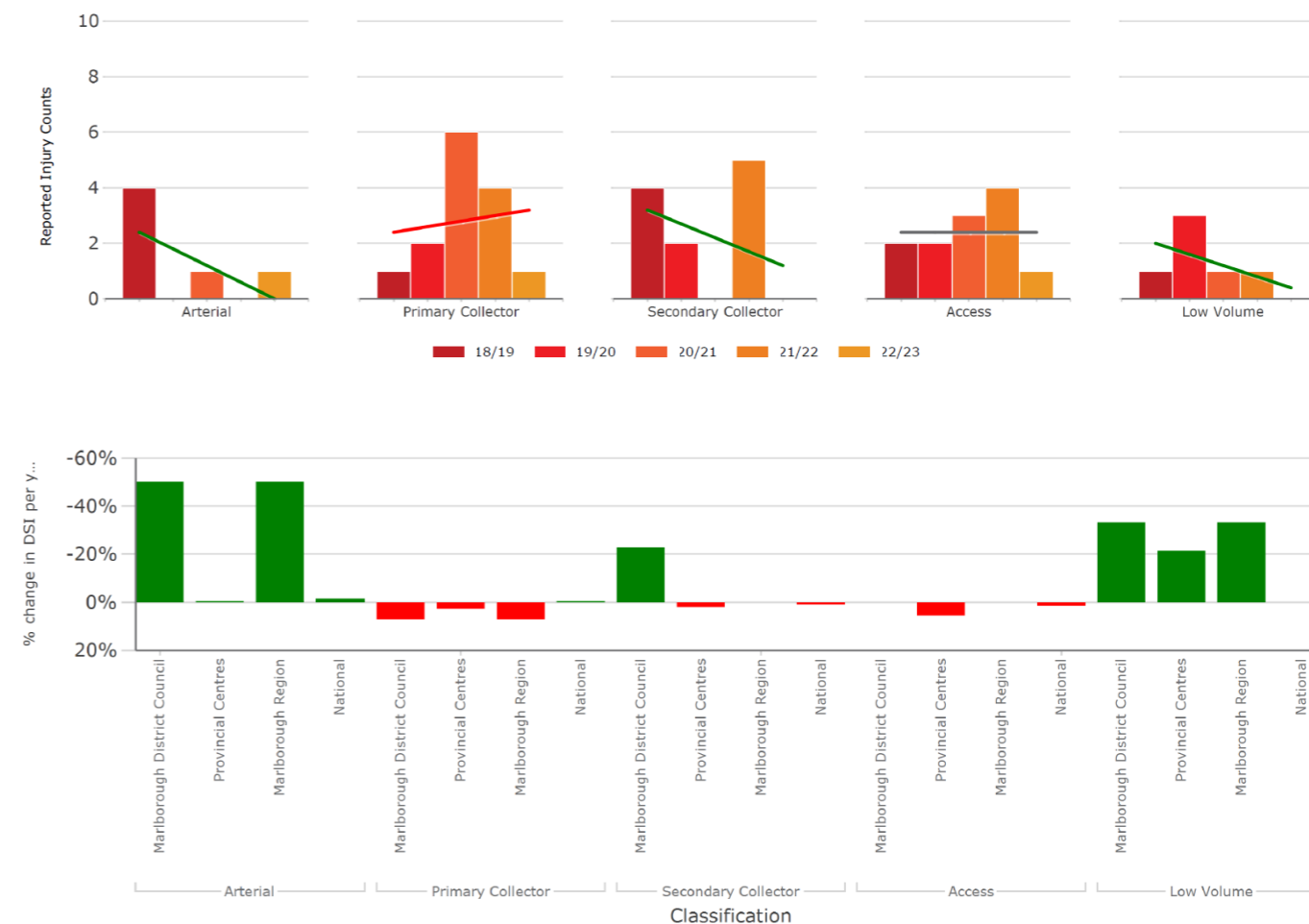
- 2021/22 is the year we got hit with two major storms, and we have seen a spike in DSI.
- Data indicates a focus on safety issues on primary collector and access roads.
- Rural intersection (access and low volume) needs more attention.

Target

- Aim to reduce the road deaths to zero by 2030 and meet the road-to-zero target.
- Regular programme to promote road safety across the network.
- Identify and monitor road safety issues.



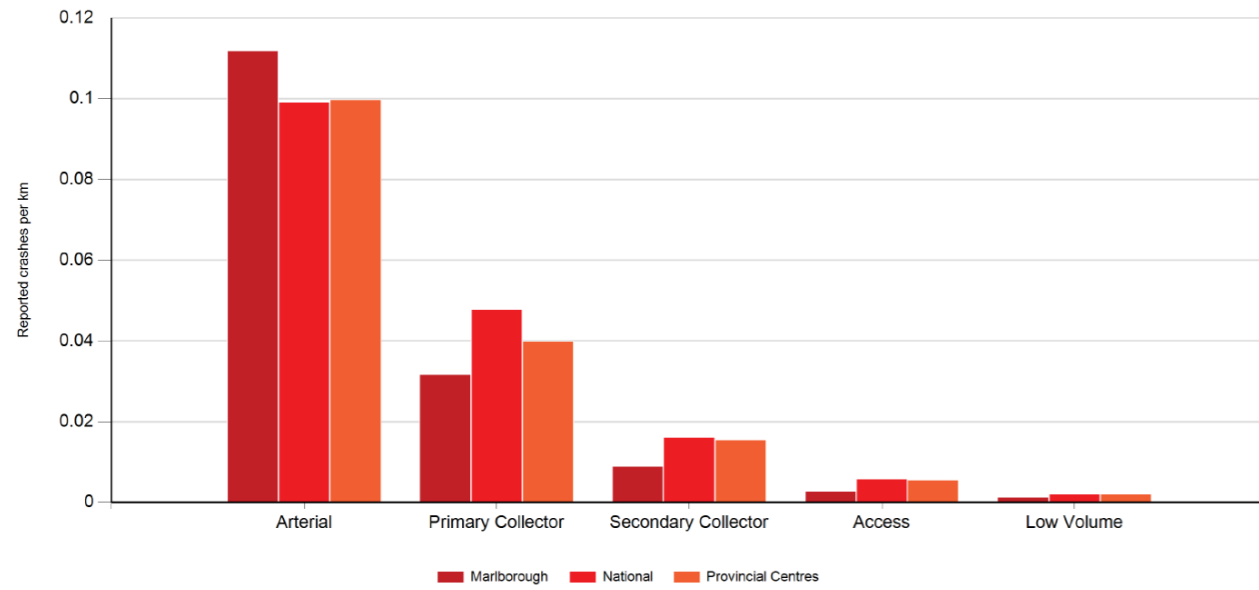
The total number of reported serious injuries and fatalities (DSI) each year on the network



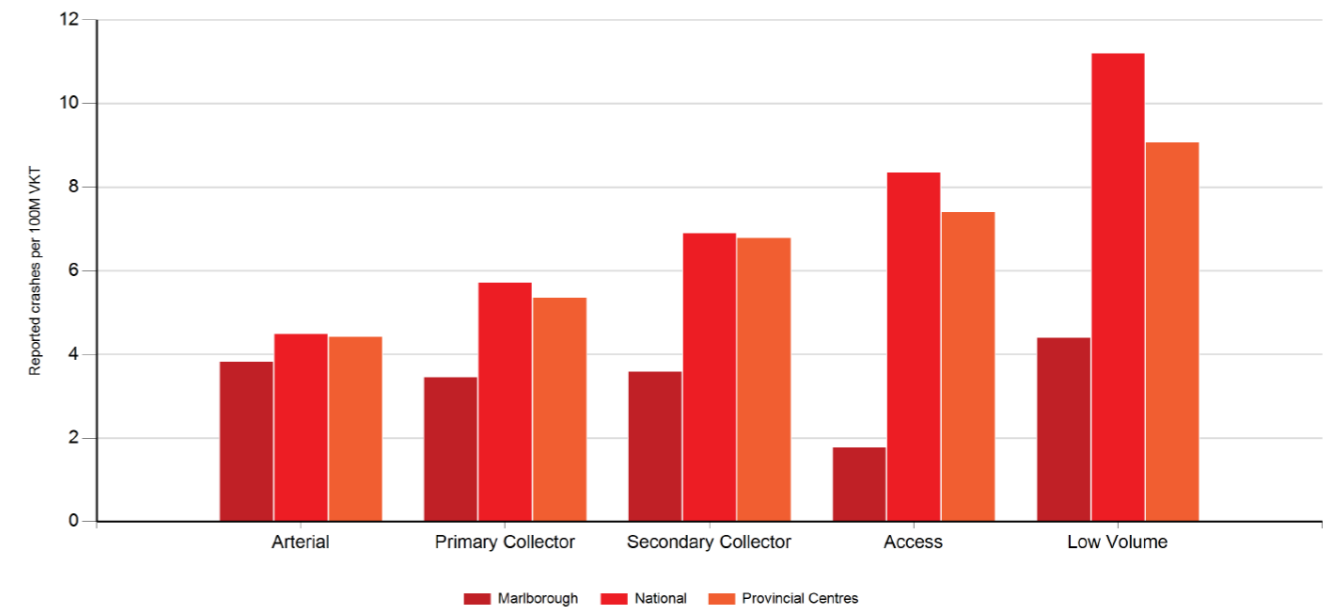
Current & Desired ONRC Levels of Service - Safety



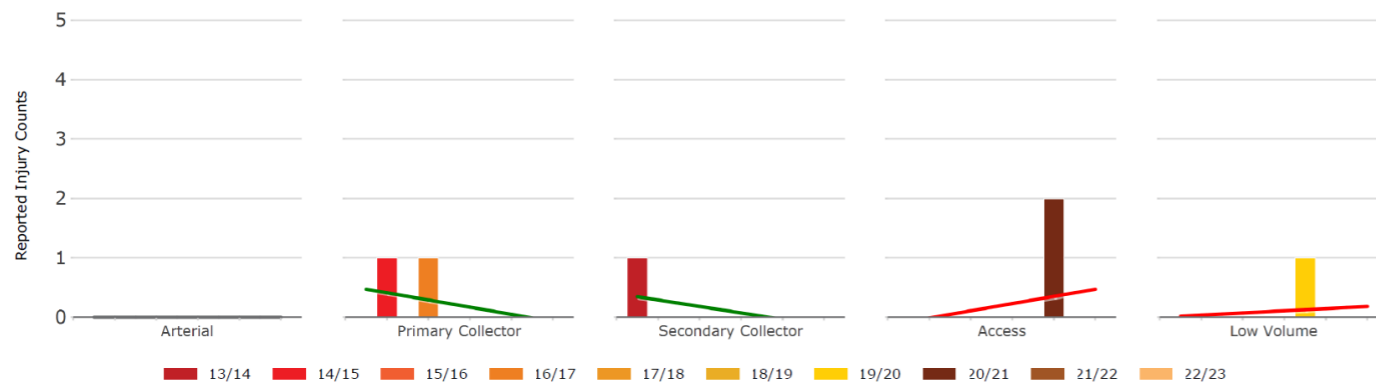
The total number of reported crashes per kilometre over the past 10 years on the network



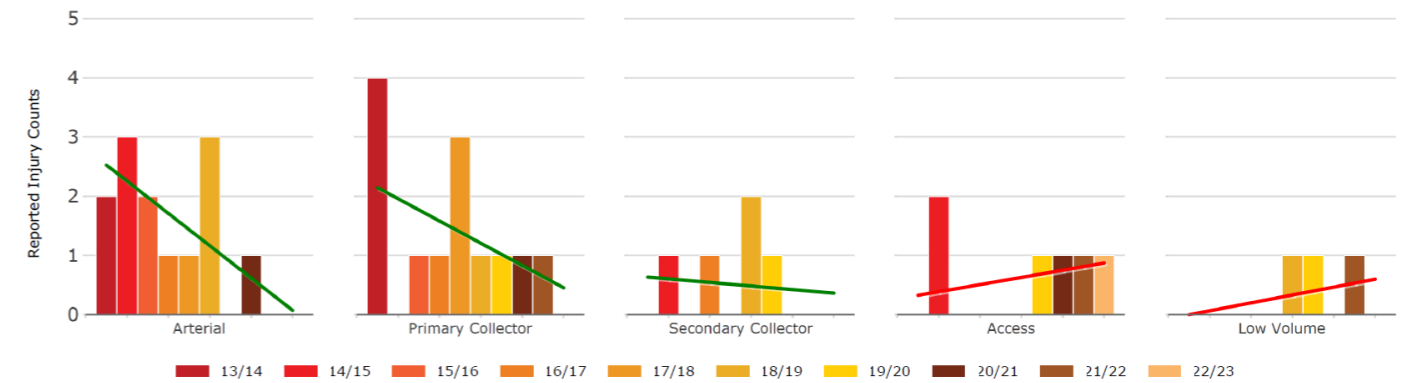
The total number of reported crashes by traffic volume over the past 10 years on the network



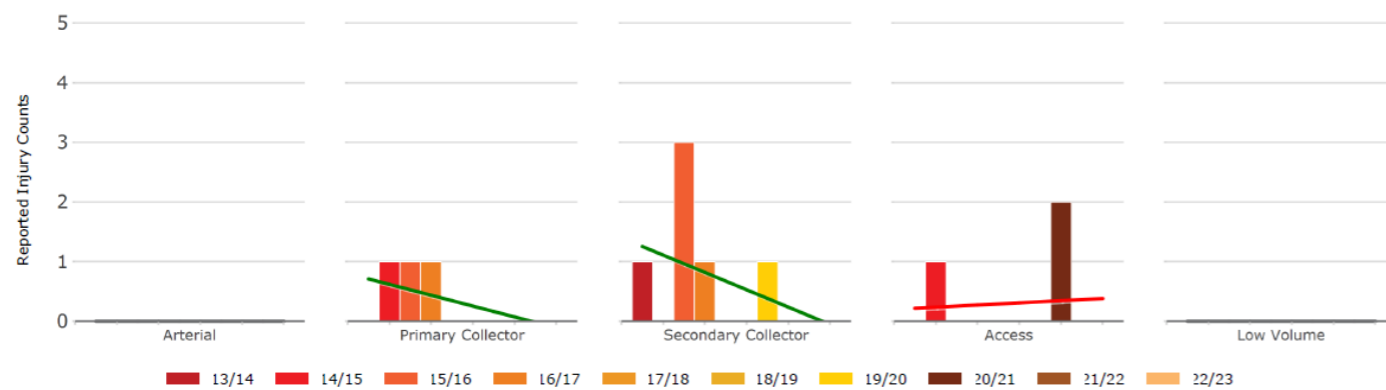
The number of reported serious injuries and fatalities (DSI) attributable to loss of driver control on wet roads



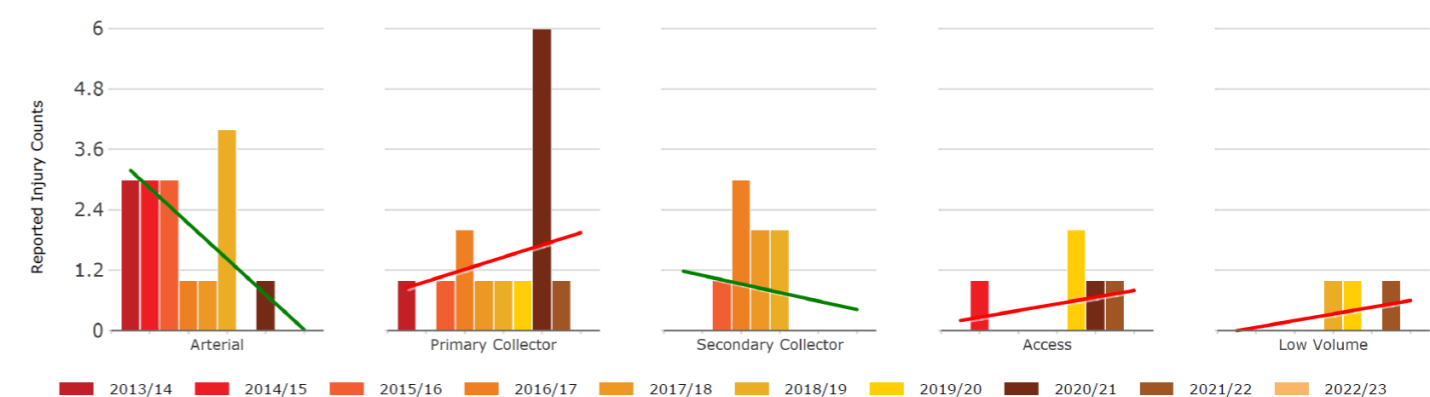
The number of reported serious injuries and fatalities (DSI) at intersections each year on the network



The number of reported serious injuries and fatalities (DSI) attributable to loss of driver control at night



The number of reported serious injuries and fatalities (DSI) involving vulnerable users on the network





Level of Service Objective

Minimizing environmental impact and maximizing the potential for social development within the communities by enhancing accessibility and connectivity,

Travel Time Reliability Customer Outcome Performance Measures

Customer Outcome 1: throughput at indicator sites



Outcome: Reduce Emissions

Accessibility Customer Outcome Performance Measures

Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles

Current Performance

Increasing traffic volumes on State Highway 1 through Blenheim are causing access issues for local residents. These issues led to Marlborough District Council commissioning this review of State Highway 1 in 2020, with a view to identifying key issues and potential short-term improvements.

Traffic growth on state highways in Marlborough since 2000 has averaged 1.3 percent per annum, however in the past 6 years it has averaged 3.1 percent per annum. The growth has not been uniform throughout the district with growth on locations with the highest traffic volumes (SH1 urban) having 1.9 percent per annum growth and locations with the lowest traffic volumes (SH62 and SH63) having around 6 percent per annum growth. The development of inter-island resilience connection project (iReX) will increase the demand on roads around the timing of ferries.

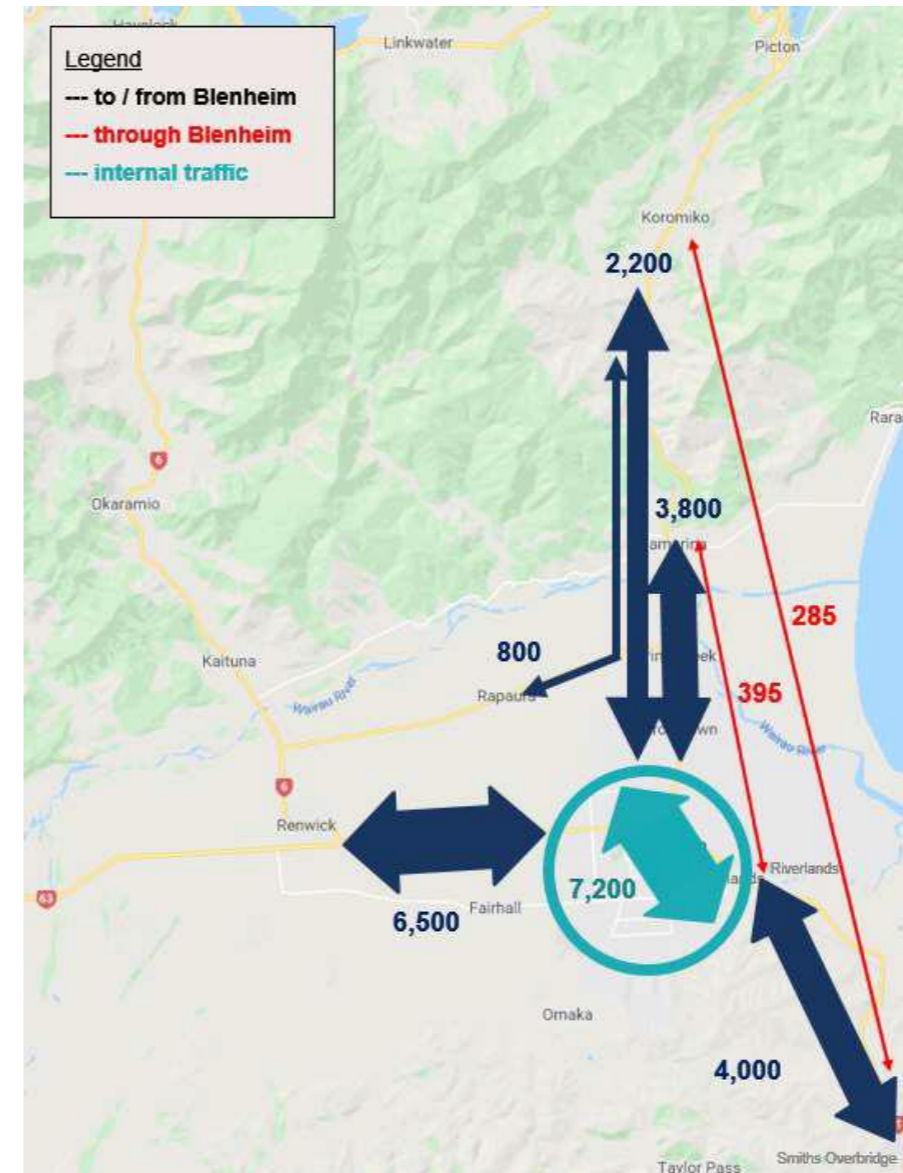
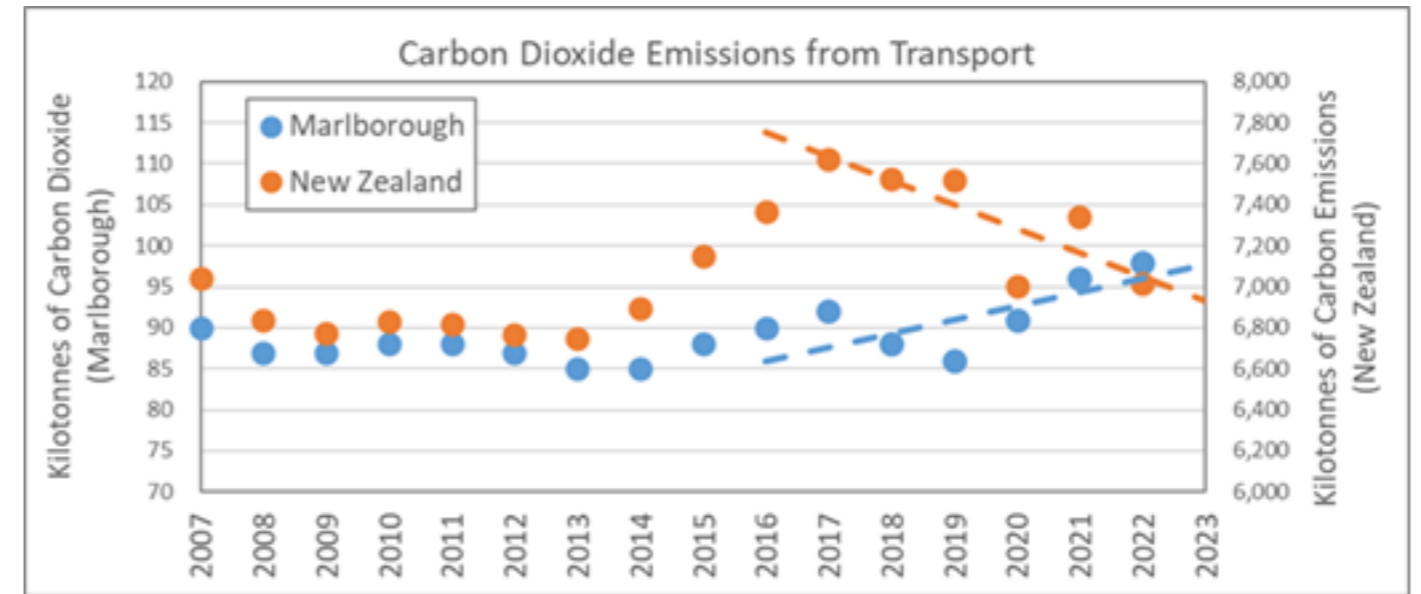
How local roads connect with state highways, alternative routes and resilience of these networks is being considered.

Gap

- Data is not currently being collected.
- Initiative planned and included in the improvement plan.
- Transport Emission
 - Data is not currently being collected.
 - **Initiative planned and included in the improvement plan.**

Target

- Lower traffic wait time and congestion on arterial routes, especially in the key urban areas of Marlborough District.
- 80% of the network is made accessible to accessible to Class 1 Heavy Vehicles and 50MAX Vehicles.
- Minimize transport emissions and promote the use of active and public transport.



Daily local and through traffic volumes around Blenheim – SH1, Blenheim Investigation Report, 2020

Current & Desired ONRC Levels of Service - Resilience



Level of Service Objective

To improve the resilience of the road network, ensuring its capacity to withstand and recover from natural disasters, extreme weather events, and other disruptions while minimizing disruptions to communities and the economy.

Resilience
Customer Outcome Performance Measures

Customer Outcome 1: the number of journeys impacted by unplanned events
Customer Outcome 2: the number of instances where road access is lost

Accessibility
Technical Output Performance Measures

Technical Output 1: accessibility

Amenity
Technical Output Performance Measures

Technical Output 1: roughness of the road (median and average)
Technical Output 2: aesthetic faults

Current Performance

- The 85th percentile chart indicates the peak roughness of Low-volume, access and secondary collectors are below or inline. While arterial and primary collectors are slightly above National and provincial peers.
- However, purely looking into our last five network trends, we can observe a deteriorating asset condition. That is and increasing roughness trend across all our road classifications, except access roads.

Gap

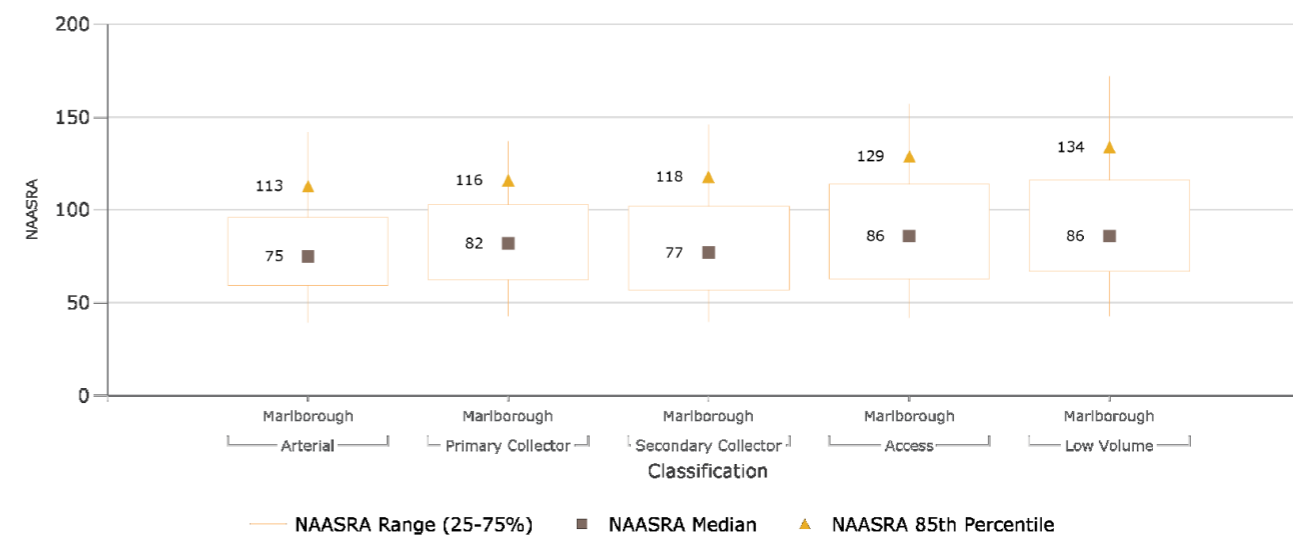
- ONRC – Resilience & Accessibility
 - Data is not currently being collected.
 - Initiative planned and included in the improvement plan.

Target

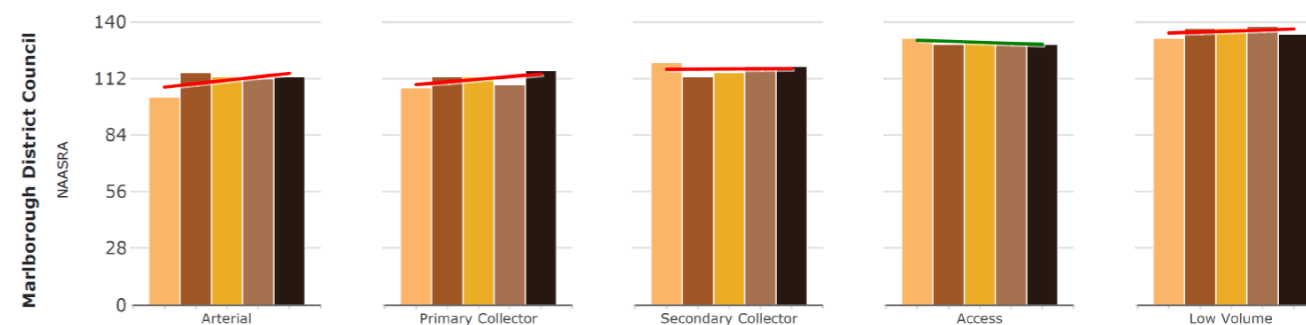
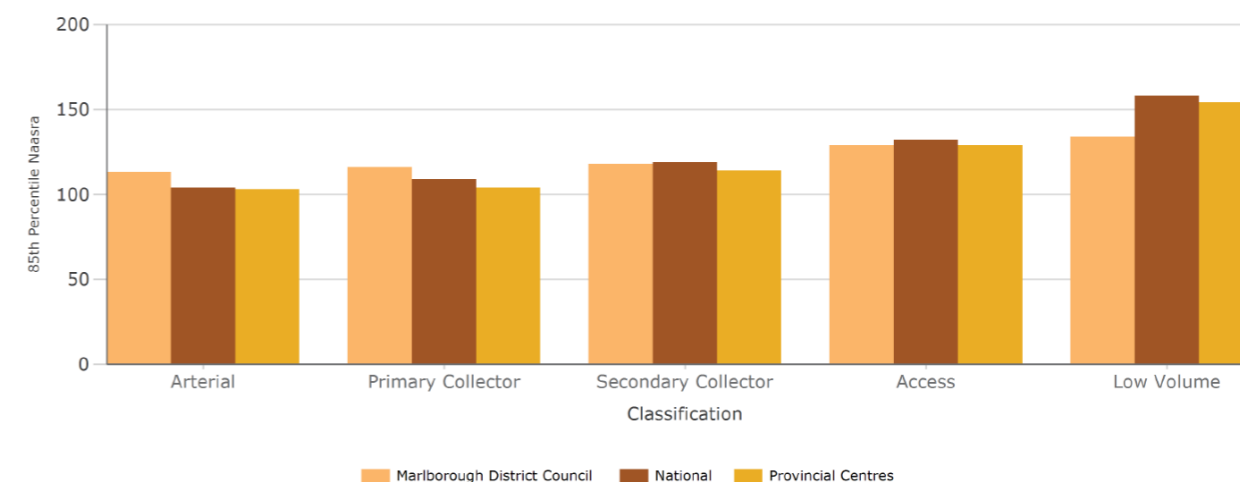
- Minimise the number of annual unplanned road closures. Ensure Customer Informed at least ten days in advance of any closure event.
- Ensure people can safely reach home during natural events.
- Road signs are fit for purpose at all times.
- Monitor the deterioration of pavements and maintain roughness.

NO Data visuals are available in the Te Ringa Maimoa portal for ONRC – resilience and accessibility measure.

The 85th percentile roughness of your roads



85th percentile comparison



Current & Desired ONRC Levels of Service – Economic Sustainability



Level of Service Objective

To maximize long-term economic benefits while efficiently meeting transportation needs.

Amenity
Customer Outcome Performance Measures

Cost Efficiency Performance

Customer Outcome 1: Smooth Travel Exposure (STE) – roughness of the road (% of travel on sealed roads which are smoother than a defined threshold)
Customer Outcome 2: peak roughness

Cost Efficiency 1: pavement rehabilitation
Cost Efficiency 2: chipseal resurfacing
Cost Efficiency 3: asphalt resurfacing
Cost Efficiency 4: unsealed road metaling
Cost Efficiency 5: Overall network cost, and cost by work category

Current Performance

- There has been a significant roughness increase across all road classifications in the last five years.
- The percentage smooth travel exposure trend across all our road classification show a decreasing trend.
- While we are falling behind the AC and chipseal renewals rate due to increasing construction costs.

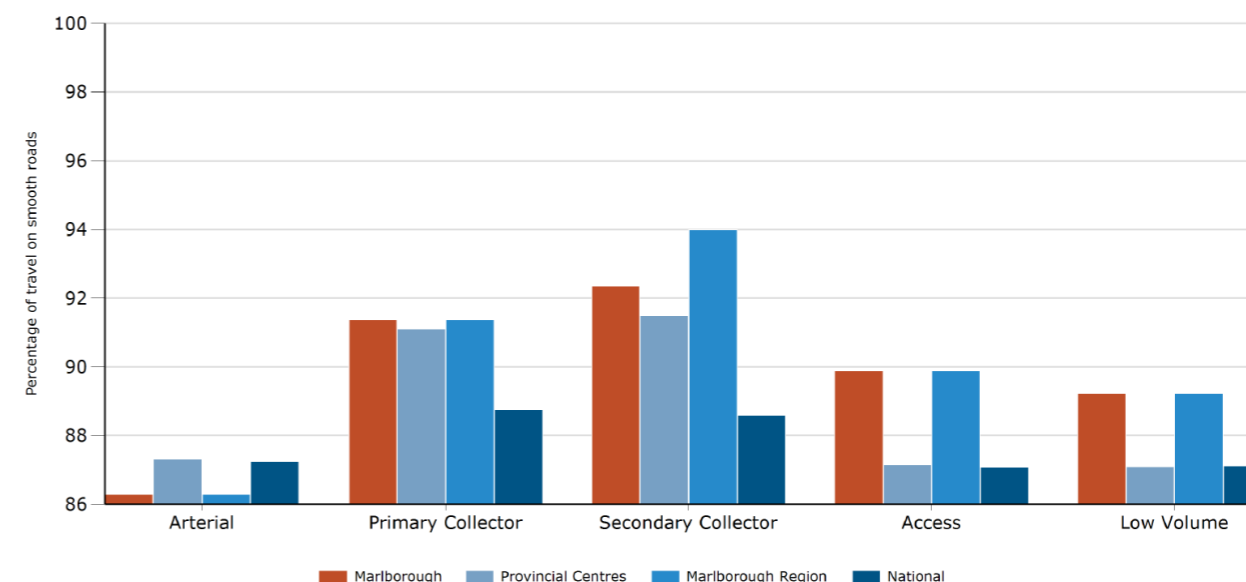
Gap

- Funding to be able to achieve 8% annual renewal rate in order to meet best practice in life cycle planning
- Accurate asset condition data to ensure the right decisions are being made for assets

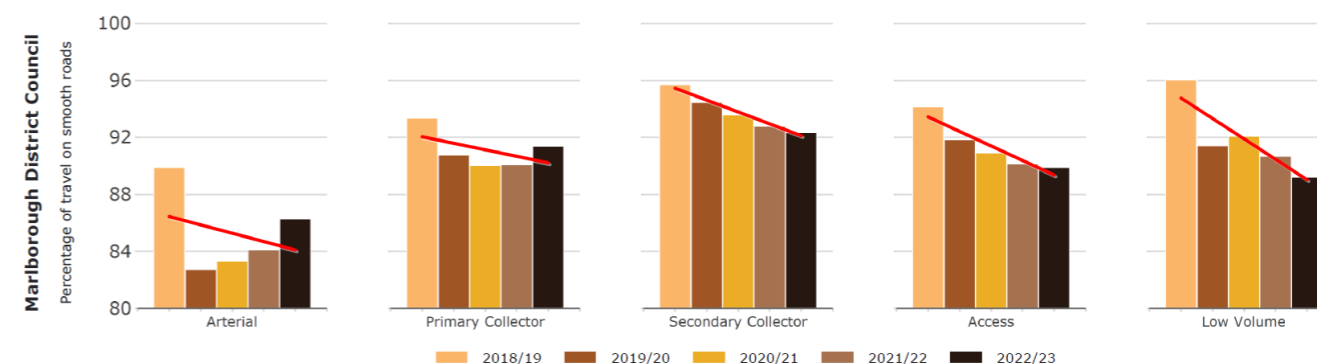
Target

- Prioritise works to bring the STE of the roads to >95% smoother on all classifications.
- Plan to prioritise the renewal rate and meet the DIA performance target of >5.25% of the network.
- Monitor and control the investment to make it more sustainable and affordable.

The trend of percentage of travel on roads smoother than the threshold



The percentage of travel on roads smoother than the threshold for each traffic grouping



**Appendices
Book 1**

Strategic Case

**Engagement
& Process
Outcomes**



Summary of Stakeholder Engagement Outcomes

A summary of stakeholder comments include,

for sealed roads:

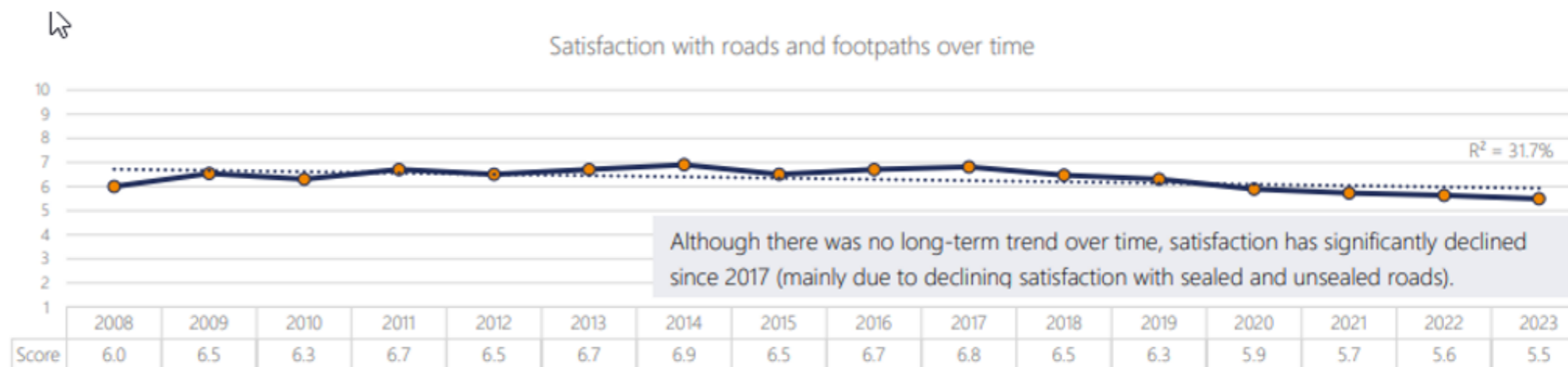
- Good/okay condition (15)
- well maintained (4)
- Uneven/bumpy roads (20)
- Potholes (34)
- Poor quality repairs/surfaces/Doesn't last long (30).

For unsealed roads

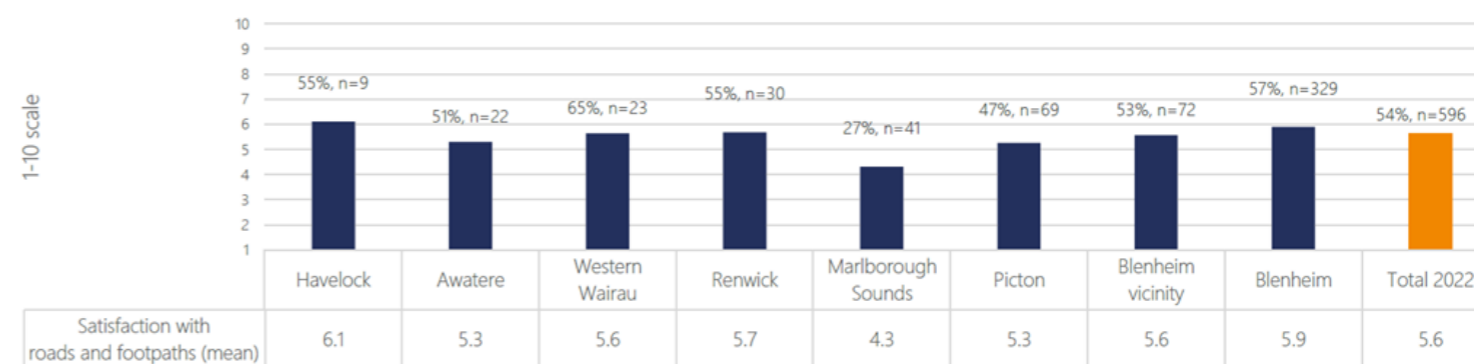
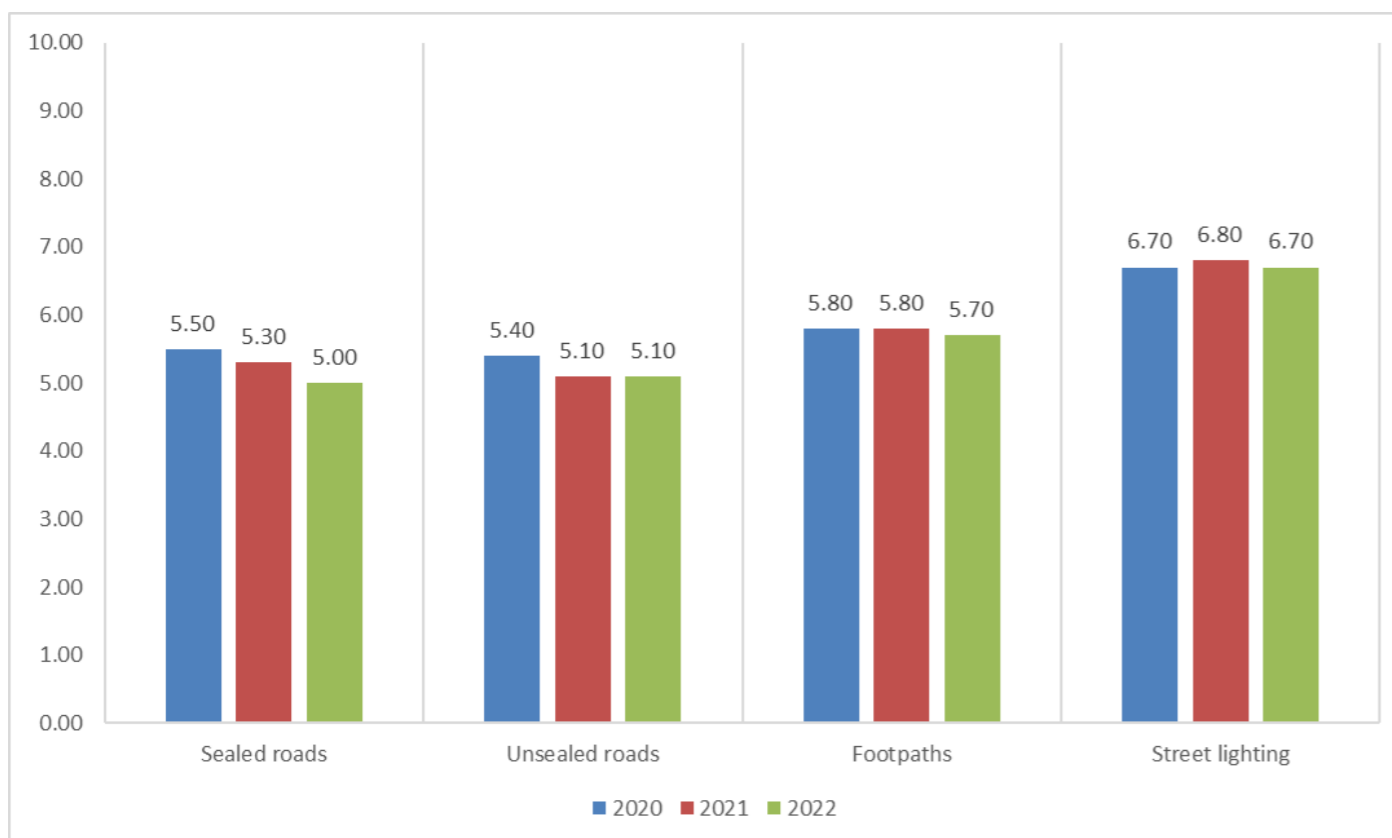
- Roads are fine (15)
- well maintained/improved maintenance (6)
- Uneven/ungraded roads. Insufficient gravel/poor quality repairs (23)
- Lack of maintenance (14)

When it came to **footpaths**, comments were:

- Good condition/no problems (22)
- Well maintained/improved (6)
- Uneven/cracked/tree roots uplifting (22)
- Dangerous/trip hazard/slippery (19)



Unprompted comments received:	
Potholes	Uneven / cracked / tree roots (footpaths)
Poor quality repairs / doesn't last long	Lack of footpaths
Slow to fix / roads deteriorating / poor conditions	No lighting / more lighting needed
Lack of maintenance	Too bright / light pollution / new LED poor

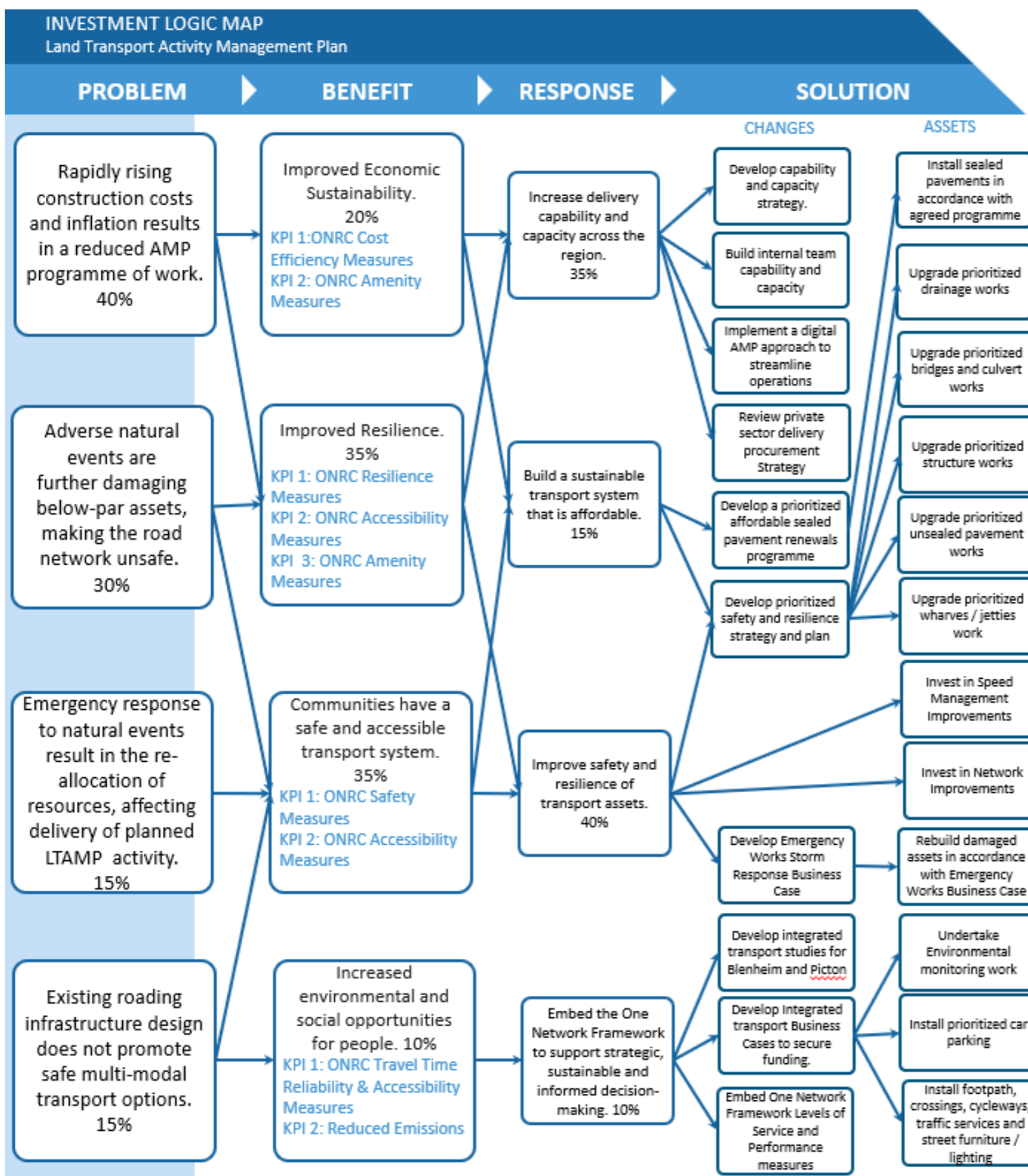


Investment Logic Map

Marlborough District Council

2024 – 2027: Recovering and operating a transport system that is affordable.

The four problem statements are individually detailed with evidence over the following pages



Understanding our Strategic Problems #1

Rapidly raising construction costs and inflation results in a reduced AMP programme of work.

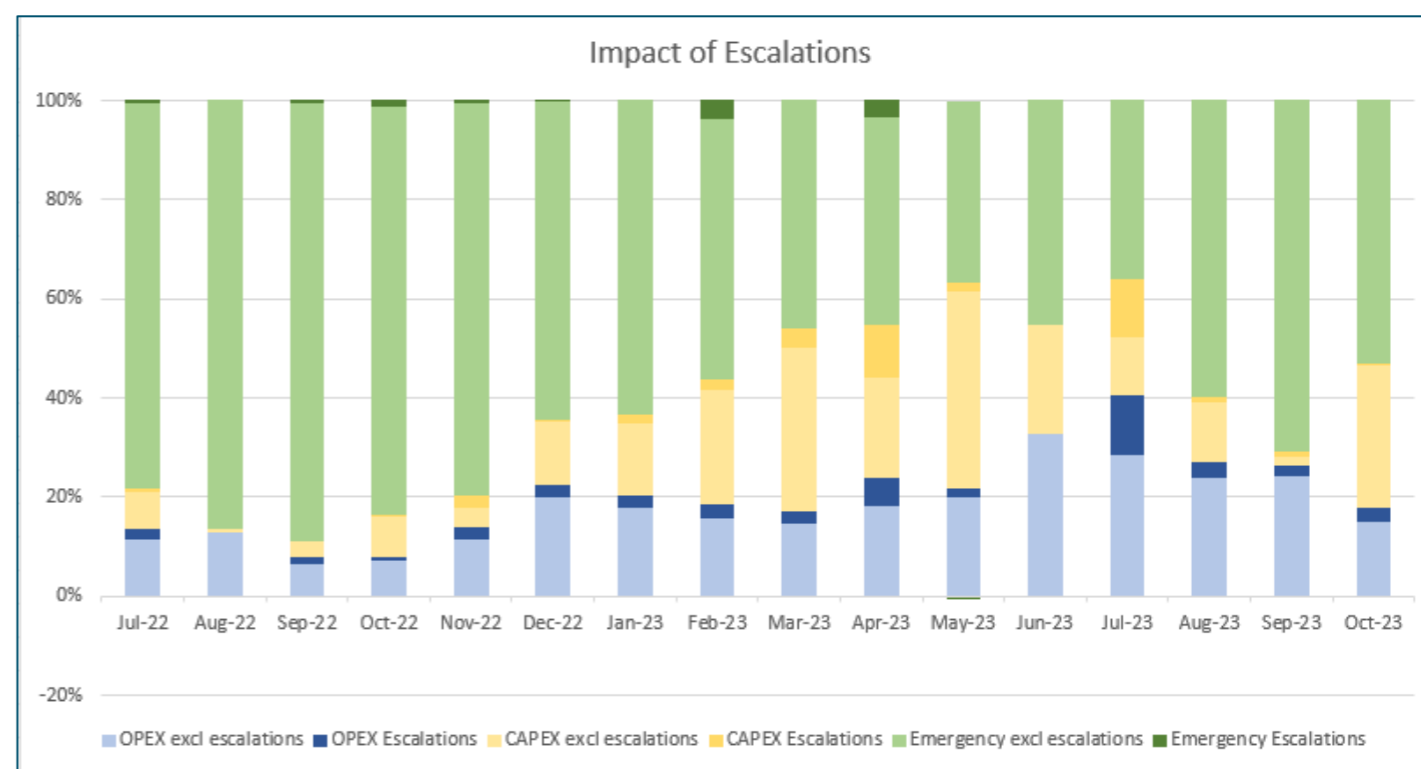
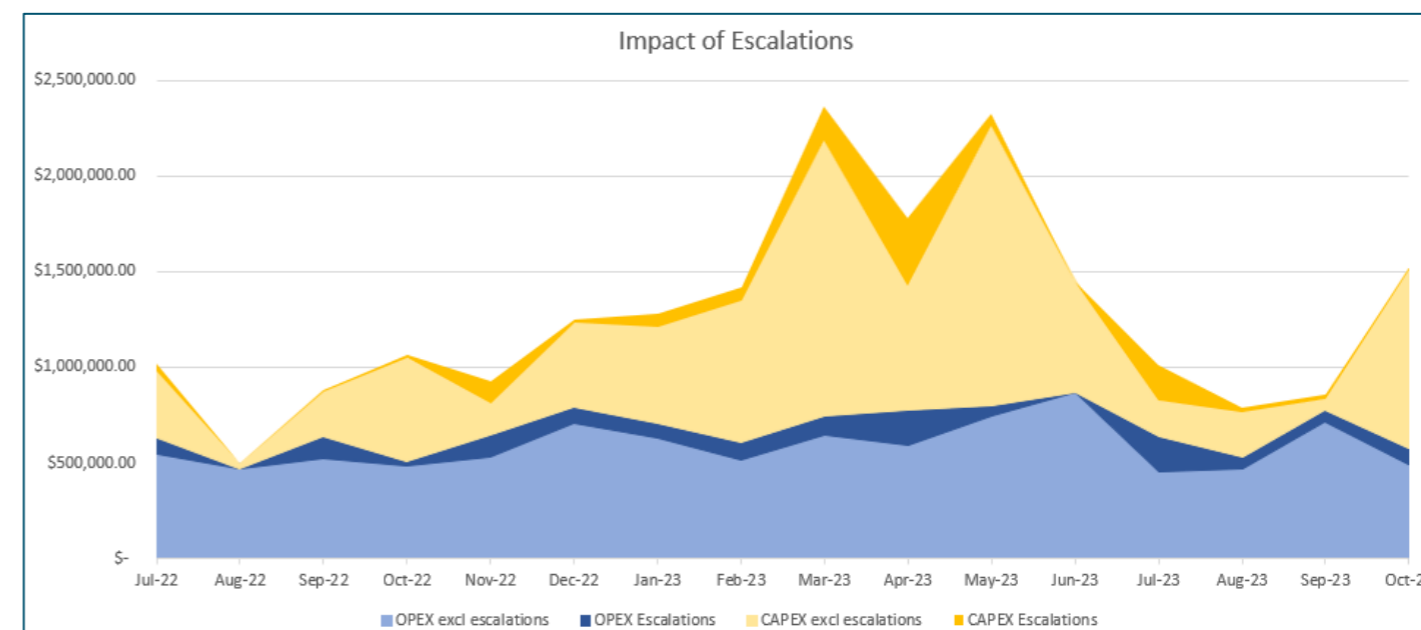
GPS	Economic Prosperity	Outcome	5.1 Impact on system reliability 5.2 Impact on network productivity and utilisation	KPI's	5.1.2 Travel time reliability – motor vehicles 5.1.3 Travel time delay 5.2.2 Freight – mode share value 5.2.3 Freight – mode share weight
	Resilience and security	Outcome	4.1 Impact on system vulnerabilities and redundancies	KPI's	4.1.1 Availability of a viable alternative to high-risk and high impact route
RLTP					
Network Management			Resilience		
Wellbeing					
Economy		People		Connectivity	
AMP Benefits					
Improved Economic Sustainability.			Improved Resilience		
	KPI	Cost Efficiency 5: Overall network cost, and cost by work category a. \$/lane b. \$/VKT	Measure	The overall cost per km and vkt of routine maintenance activities, and cost by work category on each road network for the financial year.	
	KPI	Customer Outcome 1: Smooth Travel Exposure (STE) – roughness of the road (% of travel on sealed roads which are smoother than a defined threshold)	Measure	The percentage of travel on roads smoother than the specified threshold for each classification.	
	KPI	Customer Outcome 1: the number of journeys impacted by unplanned events	Measure	The number of unplanned road closures and the number of vehicles affected by closures annually.	
	KPI	Customer Outcome 2: peak roughness	Measure	The 85th and 95th percentile roughness of your roads	
	KPI	Customer Outcome 1: proportion of network not available to: Class 1 heavy vehicles 50MAX vehicles	Measure	The proportion of each road classification that is not accessible to Class 1 Heavy Vehicles and 50MAX vehicles	

Monitoring

The 2 graphs below show the extent of the problem the region is experiencing. Both CAPEX and OPEX budgets regularly experience escalations each month.

The first graph provides a summary of the CAPEX and OPEX escalations in monetary terms. Escalations are a common theme and are experienced nearly every month.

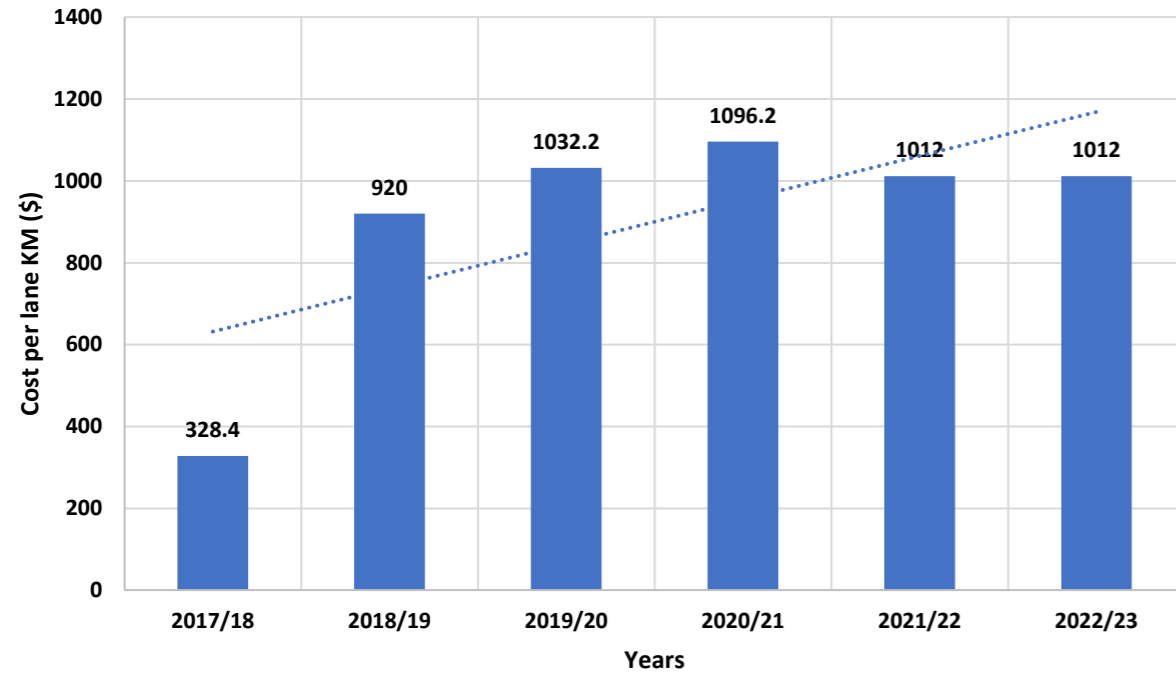
The second graph shows the percentage split across normal activities and emergency response activities.



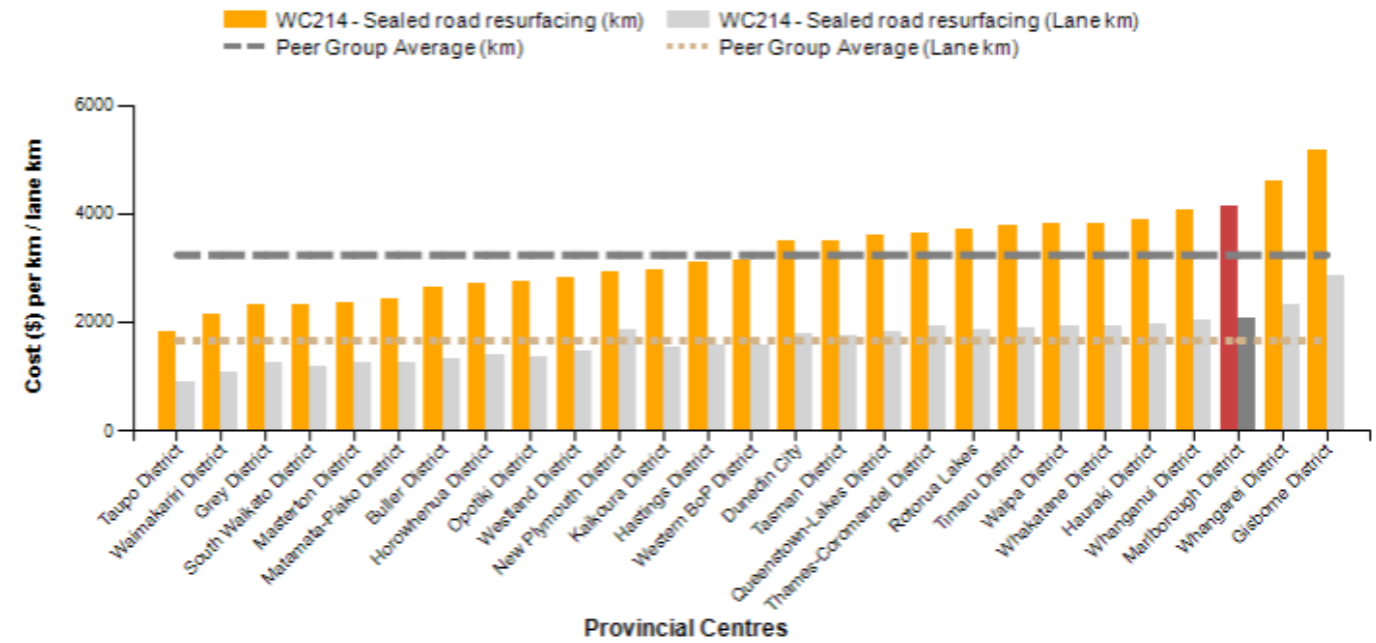


Understanding our Strategic Problem #1

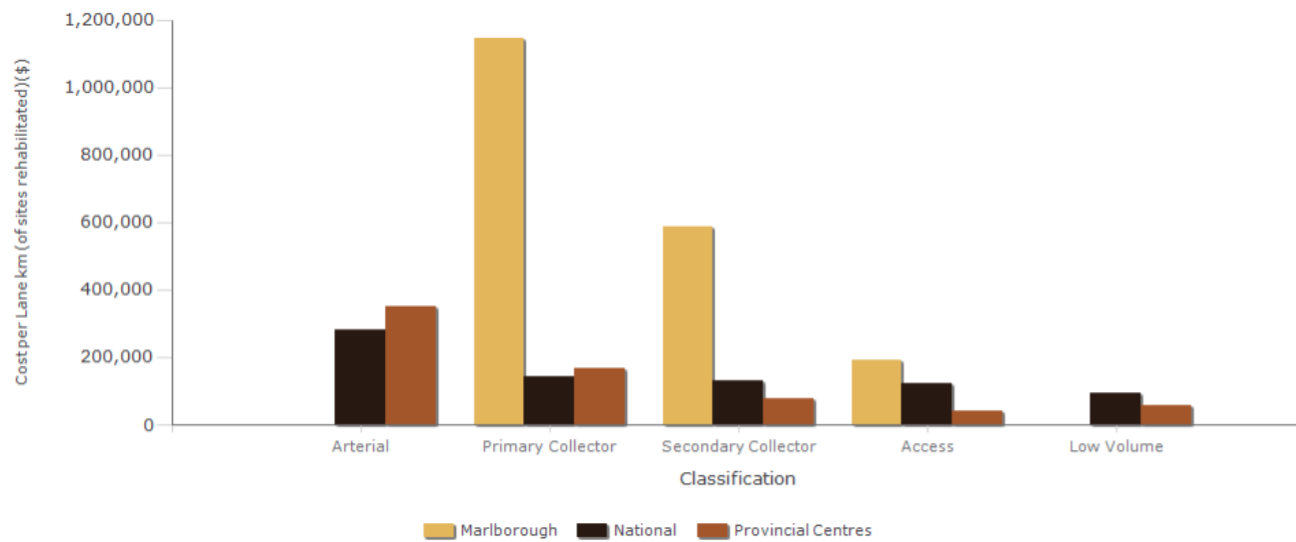
Maintainance Cost Pavement



WC212 - Sealed road resurfacing
Cost per Sealed km/lane km by Peer Group
3 Year Average 2021-2023



The total cost of sealed pavement rehabilitation undertaken over the selected Financial Year



Understanding our Strategic Problem #2

Adverse natural events are further damaging below-par assets, making the road network unsafe.

GPS	Health and safe People	Outcome	1.1 Impact on social cost of deaths and serious injuries 1.2 Impact on a safe system	KPI's	1.1.1 Collective risk (crash density) 1.1.3 Deaths and serious injuries 1.1.4 Personal risk (crash rate) 1.2.1 Road assessment rating – roads
	Resilience and security	Outcome	4.1 Impact on system vulnerabilities and redundancies	KPI's	4.1.1 Availability of a viable alternative to high-risk and high impact route
RLTP					
Resilience			Safety		
Wellbeing					
Economy		People		Connectivity	
AMP Benefits					
Improved Resilience			Communities have a safe and accessible transport system.		
	KPI	Customer Outcome 2: the number of instances where road access is lost	Measure	The number of unplanned road closures and the number of vehicles affected by closures where there was no viable detour.	
	KPI	Customer Outcome 1: Smooth Travel Exposure (STE) – roughness of the road	Measure	The percentage of travel on roads smoother than the specified threshold for each classification.	
	KPI	Customer Outcome 1: proportion of network not available to: Class 1 heavy vehicles 50MAX vehicles	Measure	The proportion of each road classification that is not accessible to Class 1 Heavy Vehicles and 50MAX vehicles	
	KPI	Customer Outcome 1: the number of fatal and serious injuries on the network	Measure	The total number of fatal and serious injuries each year on your network.	
	KPI	Technical Output 4: loss of control on wet roads	Measure	The number of fatal and serious injuries attributable to loss of driver control (including on wet roads), each year on your network.	
	KPI	Technical Output 6: Reduce the number of fatal and serious injuries at intersections.	Measure	The number of fatal and serious injuries at intersections each year on your network.	

Storm Events in Marlborough

Marlborough region has faced recurring challenges due to severe weather events, highlighting vulnerabilities in infrastructure and community resilience. These events underscore the pressing need for robust infrastructure and adaptive strategies to mitigate risks associated with extreme weather.

March 2010 Wellington and Marlborough Storm

The March 2010 storm wreaked havoc as high winds battered the region, causing extensive damage to power lines and obstructing transportation by felling trees across roads and railways. Adding to the chaos, a tornado struck Wellington, compounding the already significant impact on infrastructure and transportation networks.

May 2013 New Zealand Storm

May 2013 witnessed a nationwide storm event characterized by heavy downpours that triggered power outages, building floods, and flight disruptions. Blenheim faced the brunt of the storm, enduring flooding and road narrowing due to slips, further straining the area's infrastructure.

June 2013 New Zealand Storm

In June 2013, severe weather brought by cold southerly winds resulted in heavy snow, rain, and gales that led to the closure of State Highway 1 between Kaikoura and Blenheim, creating substantial disruptions to transportation.

April 2014 New Zealand Storm

Ex-tropical cyclone Ita in April 2014 left a trail of destruction along the West Coast, causing power outages, floods, and road damage. The Awatere Valley bore the brunt of the storm, experiencing significant road damage and requiring extensive repair efforts.

June 2014 New Zealand Storm

June 2014 witnessed severe gales affecting northern North Island areas and heavy rainfall causing surface flooding and minor slips along State Highway 1 in North Canterbury and the Kaikoura Coast, posing challenges to transportation and infrastructure.

2016 Kaikoura Earthquake

The 2016 Kaikoura earthquake, measuring 7.8 magnitude, brought widespread damage across the district, evident in pavement cracking, bridge settlement, and structural issues, necessitating a substantial recovery program to address the aftermath.

July 2021 South Island Flooding

In July 2021, prolonged heavy rains triggered severe flooding in the South Island, particularly impacting Westport, prompting evacuations and a State of Emergency declaration in Marlborough. Substantial road closures disrupted travel, accentuating the strain on the region's infrastructure and communities.

Source : <https://hwe.niwa.co.nz/>

Understanding our Strategic Problem #2

Marlborough roads recovery – 2021 Storm Event

The 17 July 2021 storm caused widespread flooding and damage across the Marlborough region, the scale and complexity of which caused more than 1,600 faults on Marlborough roads.

The storm saw parts of Queen Charlotte Drive, Kenepuru Road and side roads, Northbank, Waihopai Valley and Awatere Valley become impassable and unsafe for road users. Communities were cut-off, causing major disruptions to the lives and safety of many residents, bach owners and businesses.

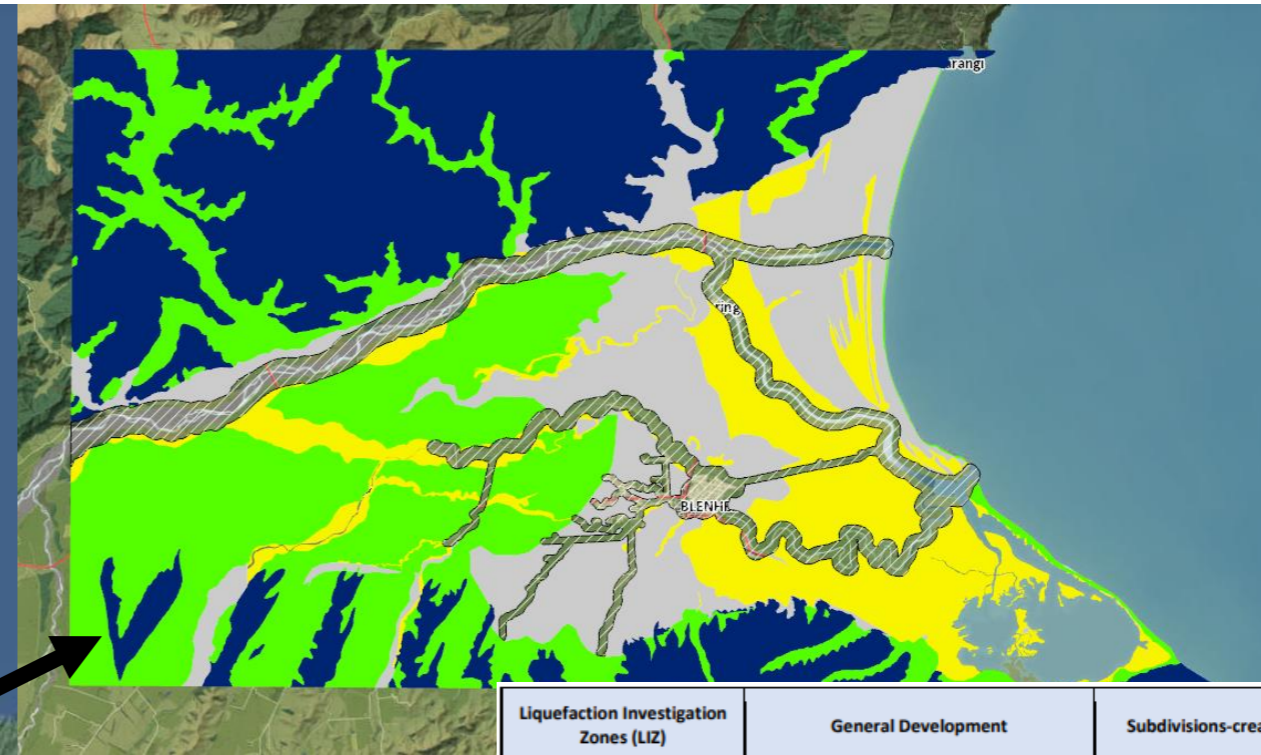
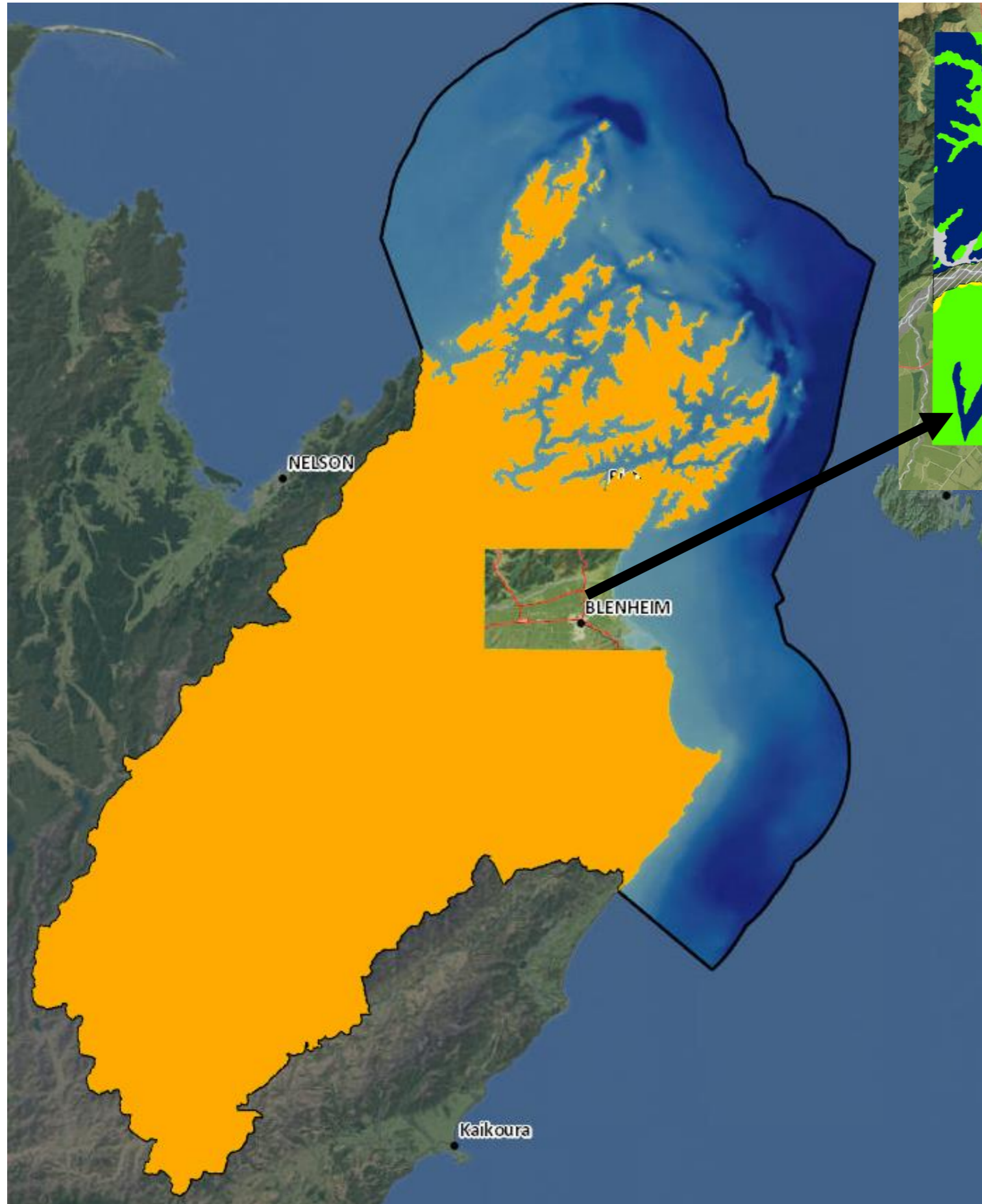
The immediate emergency response focussed on building lifelines and supporting community welfare. As the recovery work progressed, the focus was on meeting the needs of local residents, property owners and businesses to restore road access – with controls and restrictions in place to ensure the safety of everyone.

Works had seen the completion of most minor repairs, while design was completed on complex faults.

In August 2022, the further weather event was again unprecedented for the region, with over twice the scale of damage than the previous year. Over 670km of Marlborough's roads received damage in the storm, with over 4,000 faults identified as of 24 November 2022. The team continue to work hard to repair and restore the roading network.

Rai River experienced its biggest flood on record, estimated as a 60-year event.

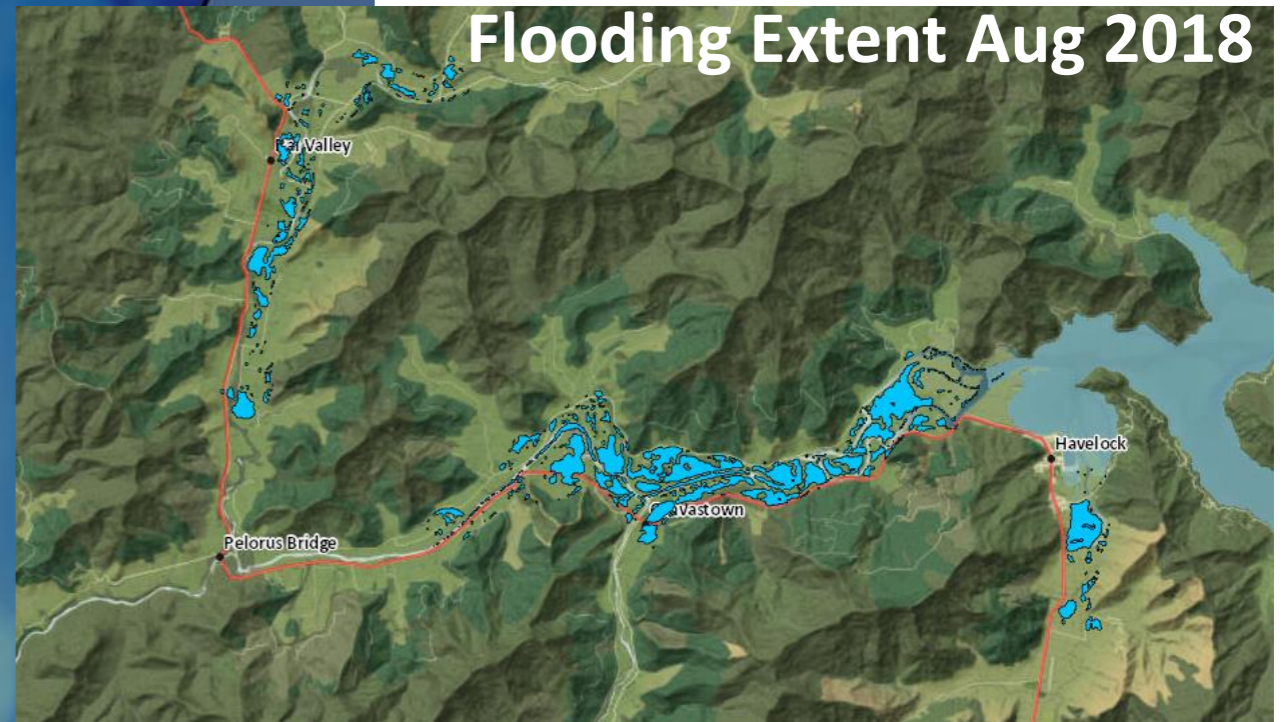
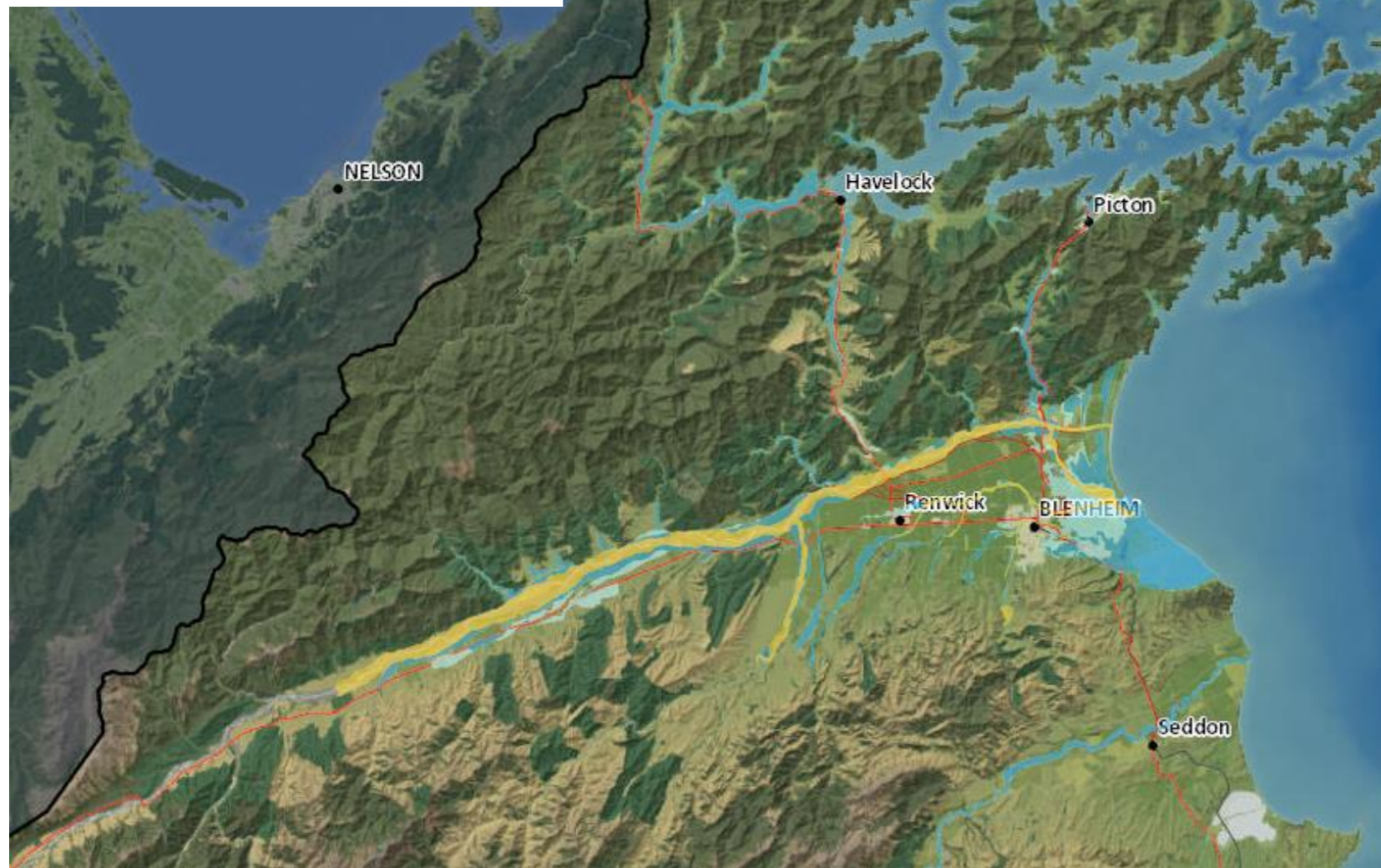




Liquefaction Investigation Zones (LIZ)	General Development	Subdivisions-creating 3 or more lots
LIZ A	Requires detailed liquefaction triggering analyses using deep investigation data (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils	Requires detailed liquefaction triggering analyses using deep investigation data (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils
LIZ B	Requires detailed liquefaction triggering analyses using deep investigation data (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils, and a lateral ground spread assessment	Requires detailed liquefaction triggering analyses using deep investigation data (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils, and a lateral ground spread assessment
LIZ C	Requires a desktop study and shallow investigation (as a minimum comprising hand augered boreholes and/or machine excavated test pits). May require detailed liquefaction triggering analyses, if potentially liquefiable soils are encountered, such as saturated silty sands, sandy silts and sands (depends on results of desktop study and shallow investigation works).	Requires detailed liquefaction triggering analyses using deep investigation data* (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils
LIZ D	Requires desktop study and shallow investigation (as a minimum comprising hand augered boreholes and/or machine excavated test pits)	Requires detailed liquefaction triggering analyses using deep investigation data* (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils
LIZ E	Requires desktop study	Requires desktop study
LIZ F	Area located outside the scope of the MDC Liquefaction Vulnerability Study: Lower Wairau Plains (dated May 2021). Requires, as a minimum, a desktop study and shallow investigation (as a minimum comprising hand augered boreholes and/or machine excavated test pits). May require detailed liquefaction triggering analyses, (depends on results of desktop study and shallow investigation works).**	May require detailed liquefaction triggering analyses using deep investigation data* (such as CPT sounding data), in order to determine the theoretical liquefaction potential of the soils. It is likely, however, that proposed large subdivisions may not require deep ground investigation (due to the geological conditions).**

Flood Hazard Areas

- Level 1
- Level 2
- Level 3
- Level R



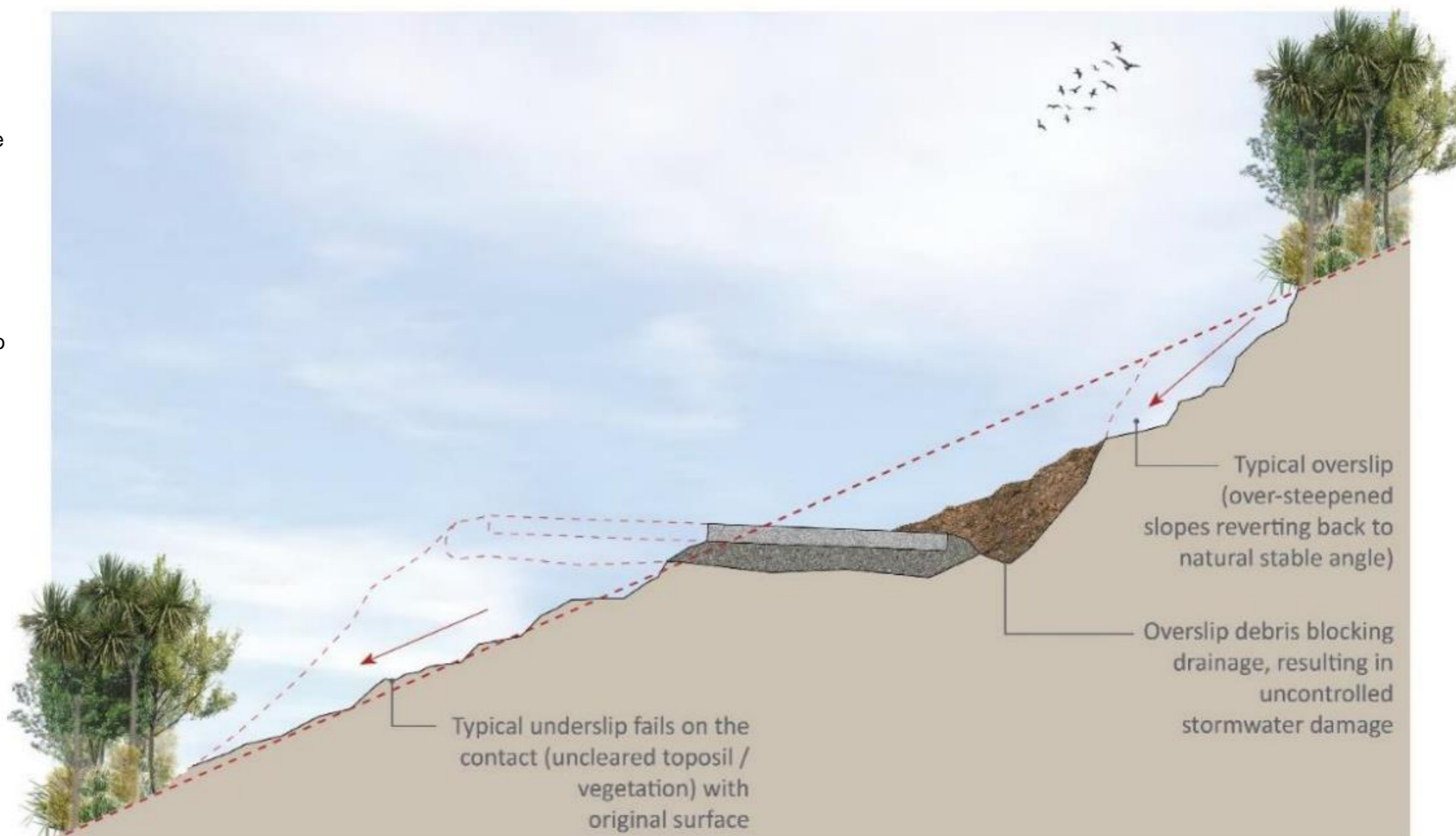
Understanding our Strategic Problem #2

Poor design and construction

In the Sounds region, the way roads were built caused some big problems. Slopes along these roads tend to get wobbly because of how they were made. You see, they used older methods, like bulldozers, to build these roads. These methods weren't as good as what we use now.

The roads have steep sides and loose material on the edges, making them unstable. Taking away plants and changing how water flows also made things worse. When they widened these roads a while back, they made the slopes steeper and used more unstable stuff to fill them in.

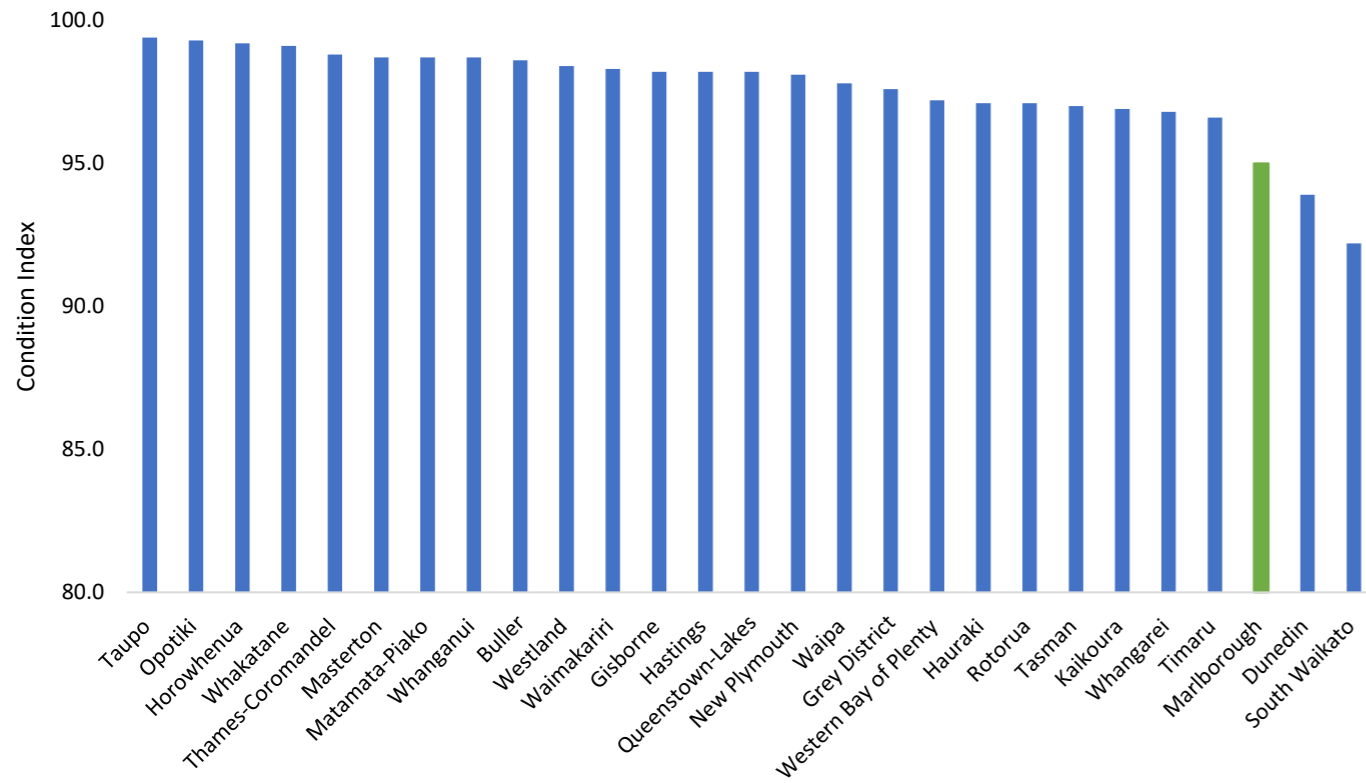
Later on, they covered these roads to make them look nicer. But that didn't fix the instability underneath. This old way of building roads caused some real trouble that we're dealing with now.



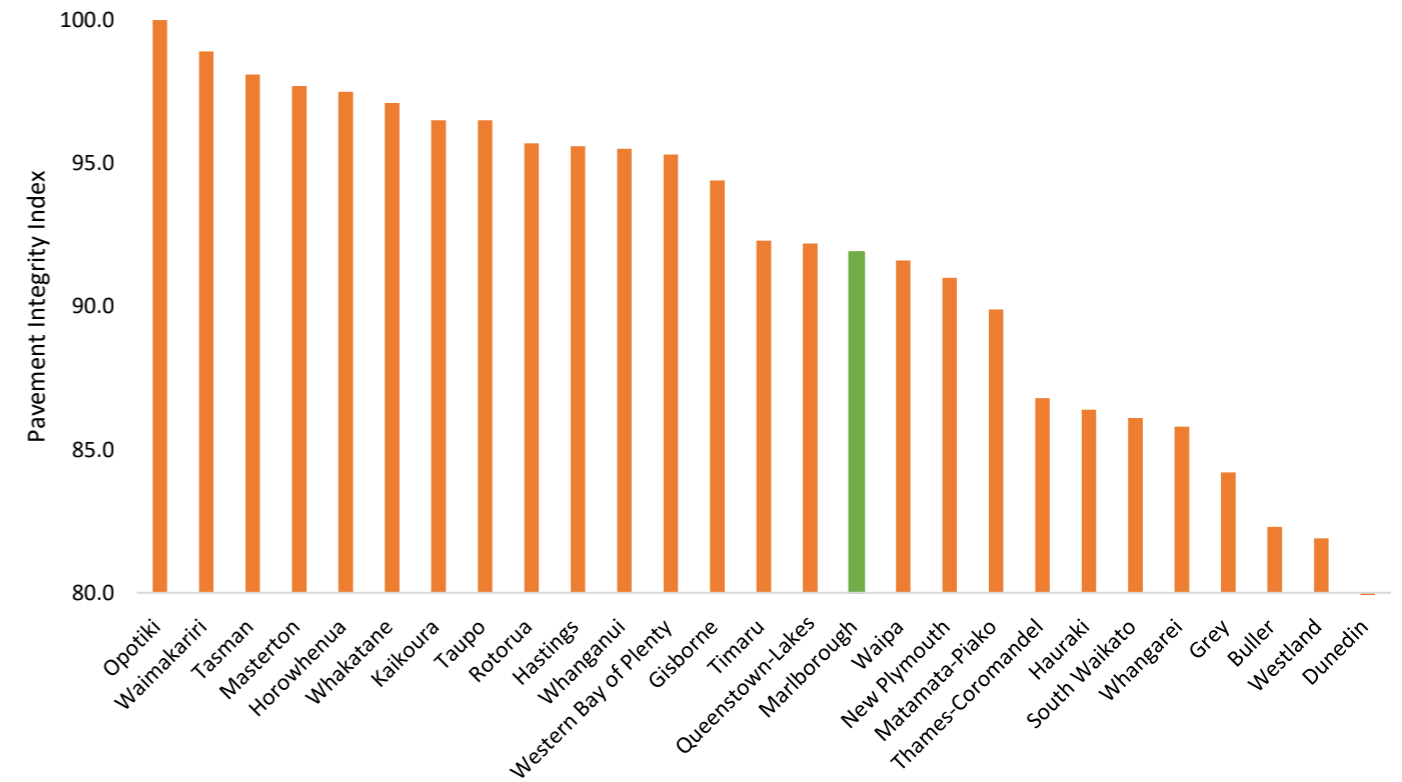
Understanding our Strategic Problem #2



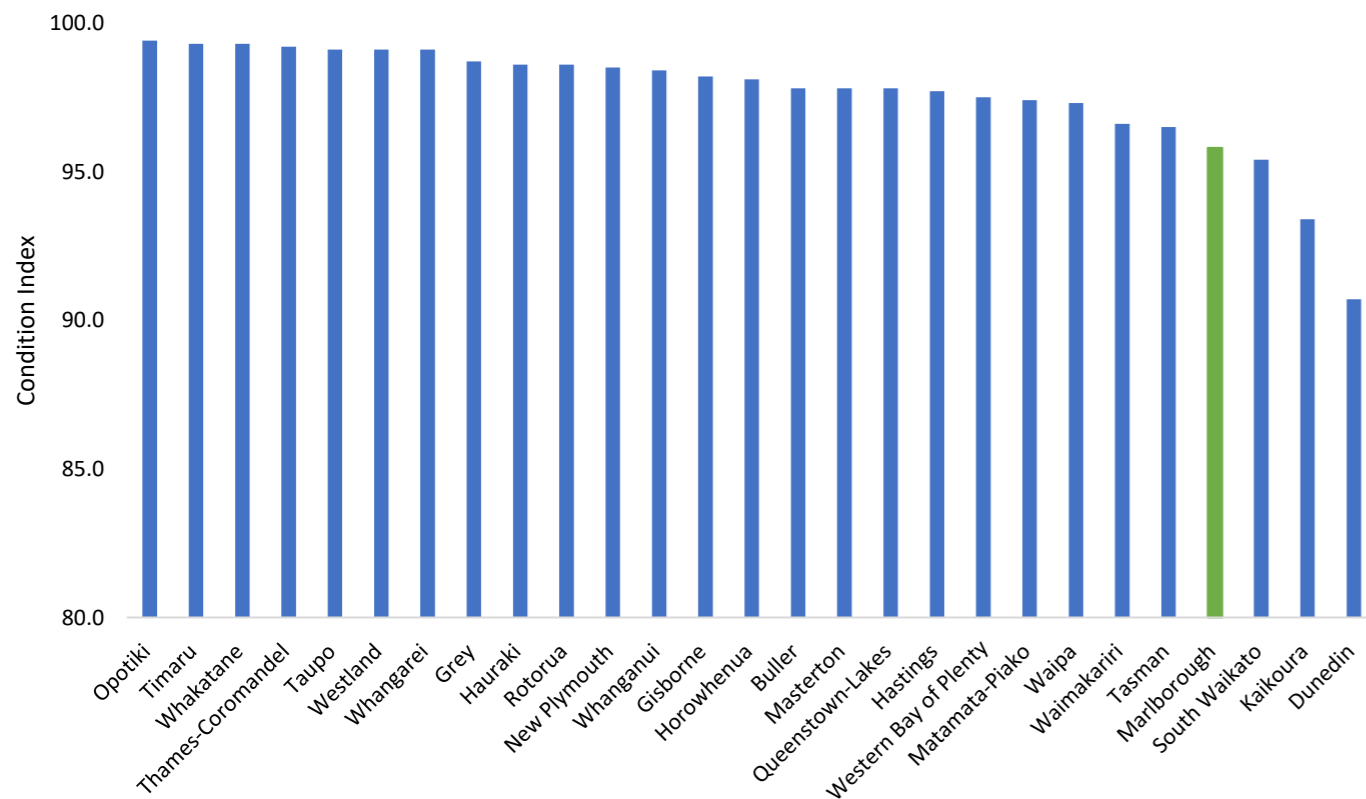
Condition Index - Urban Roads - 2021/22



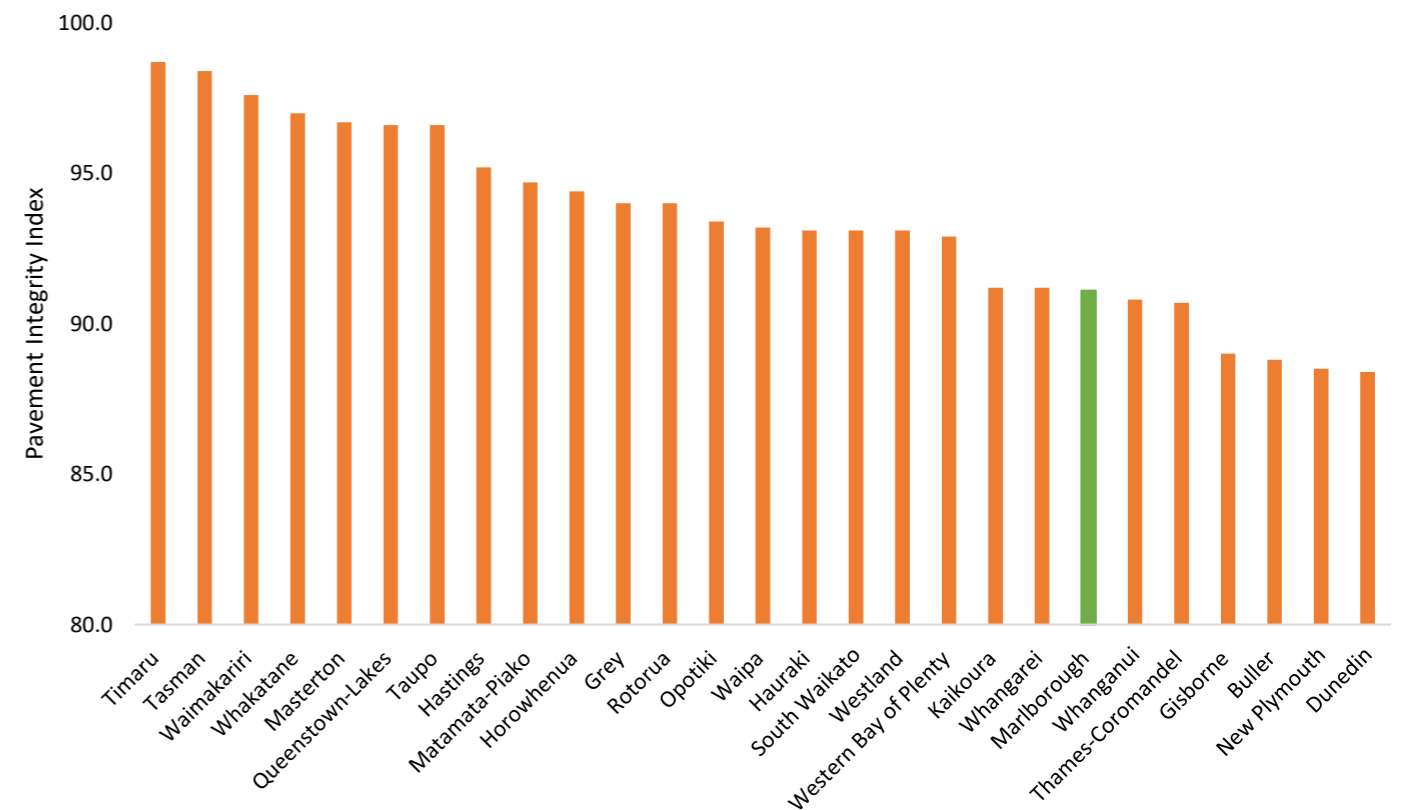
PII - Urban Roads 2021/22



Condition Index - Rural Roads - 2021/22



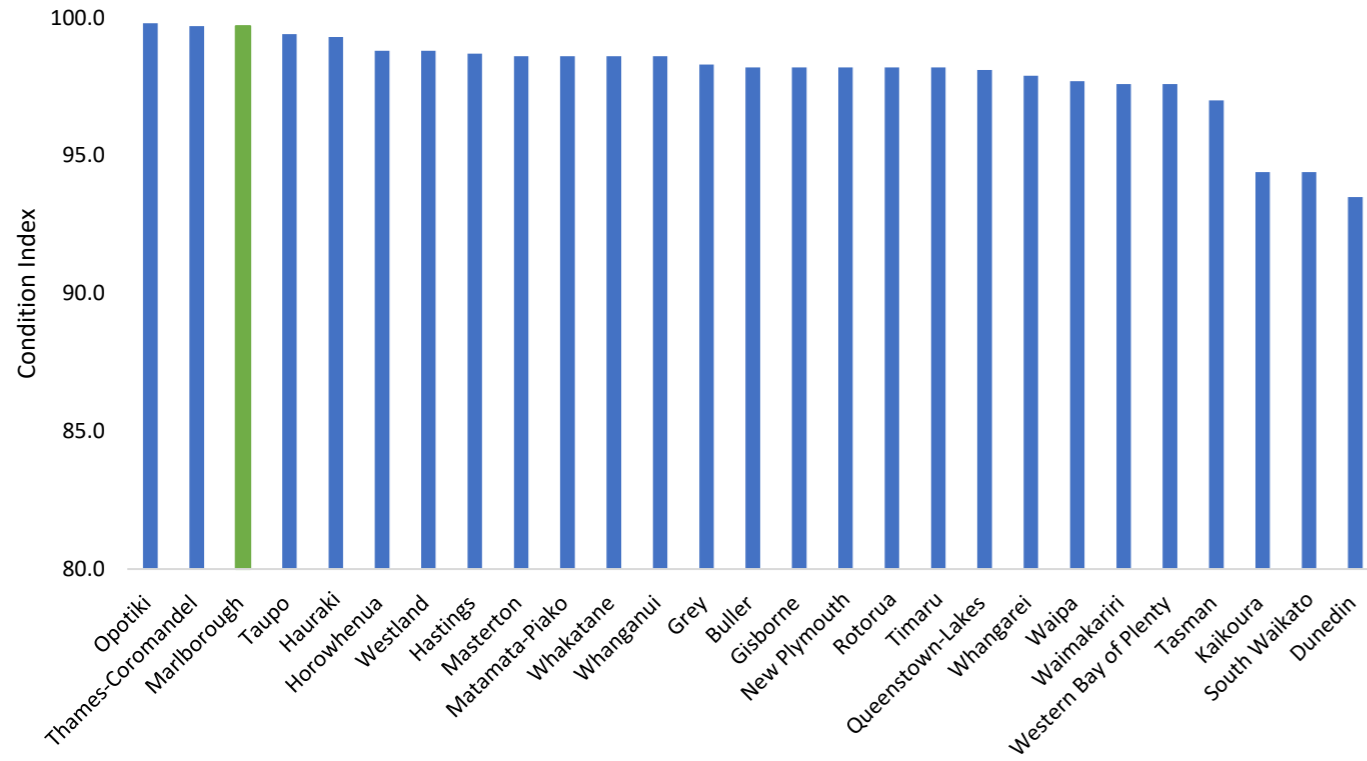
PII - Rural Roads - 2021/22



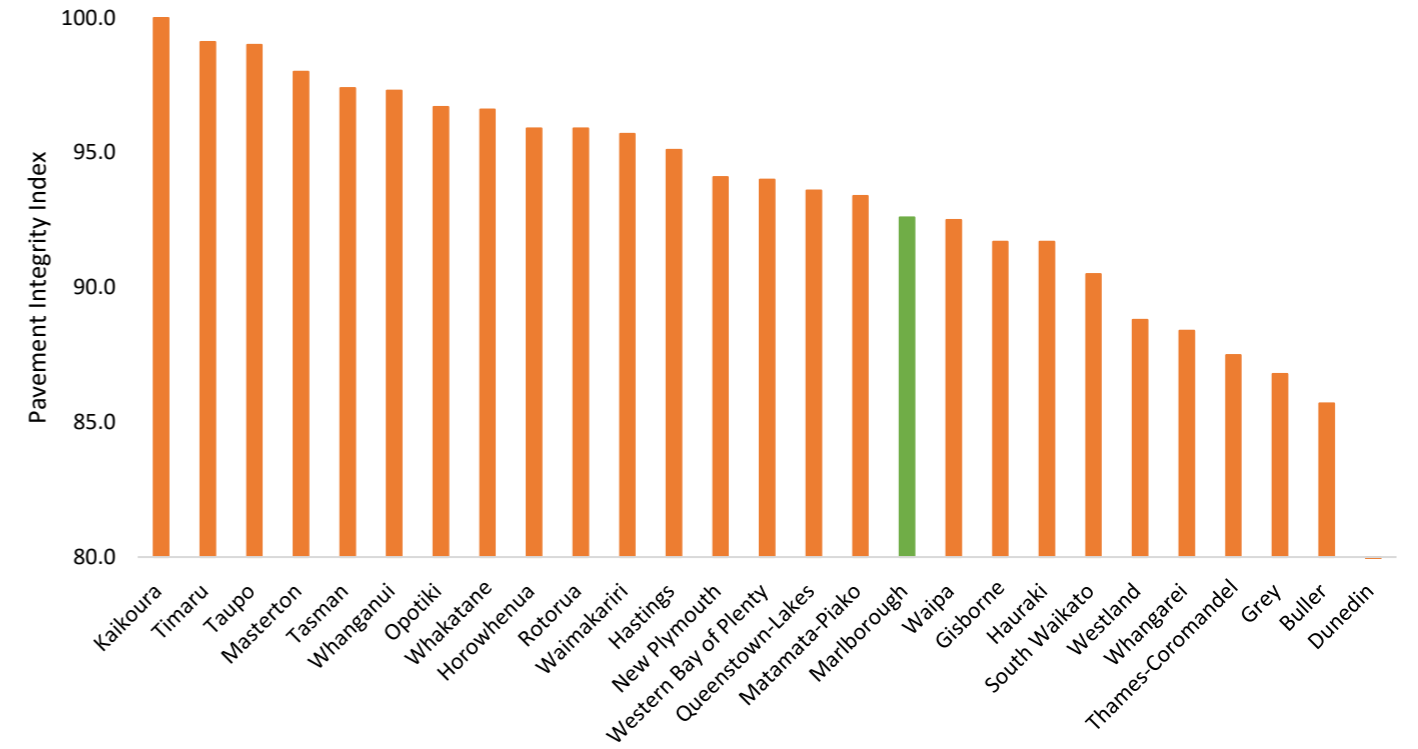
Understanding our Strategic Problem #2



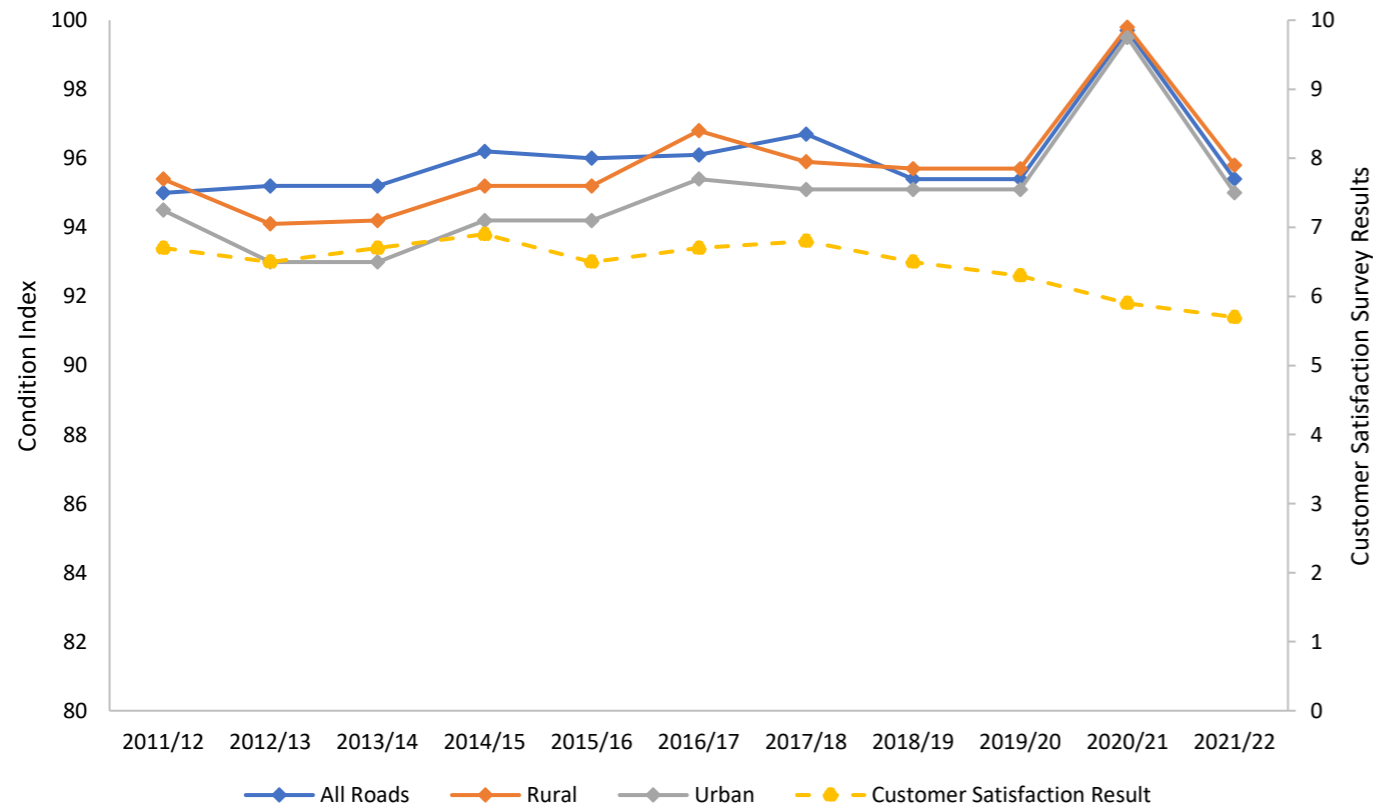
Condition Index 2018-21



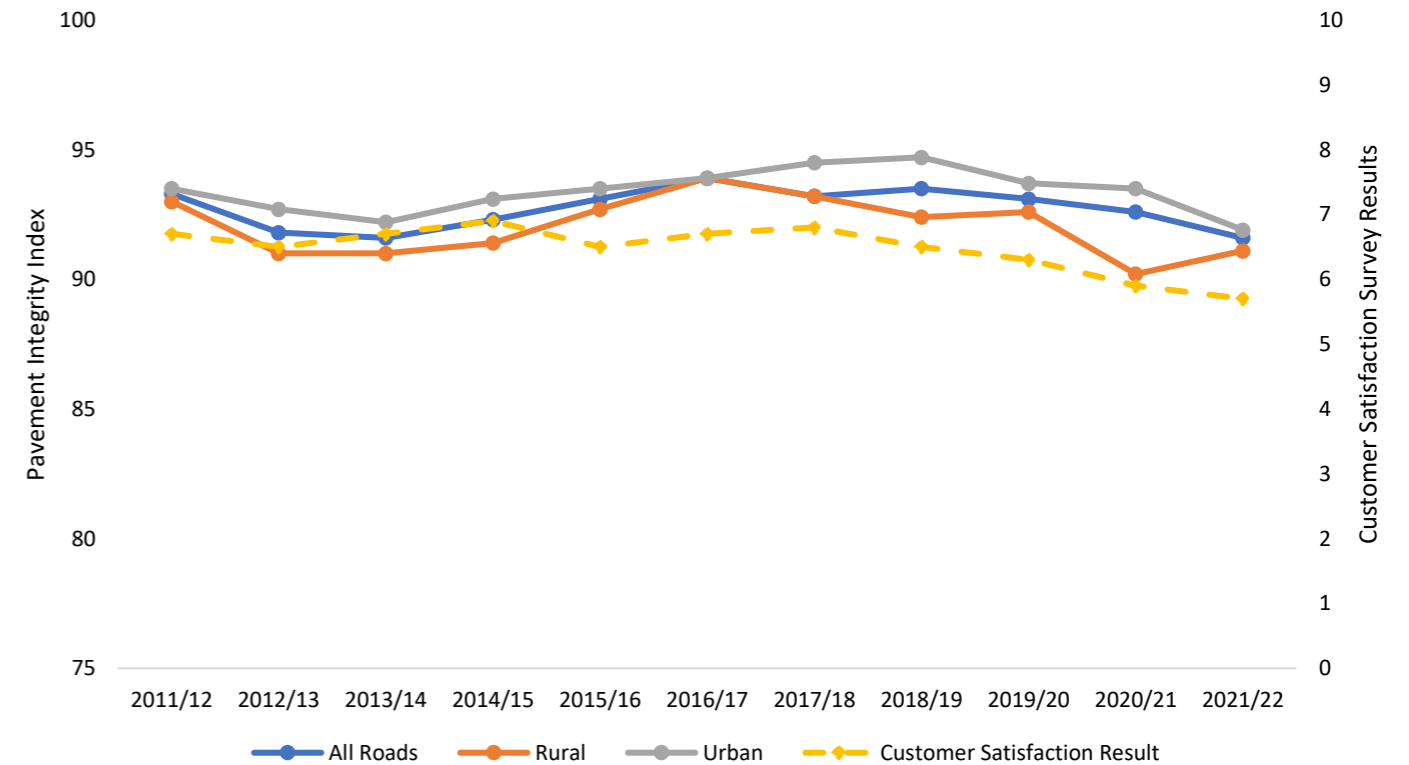
Pavement Integrity Index 2018-21



Condition Index 2011 -2022



Pavement Integrity Index 2011-2022



Understanding our Strategic Problems #3

Emergency response to natural events result in the re-allocation of resources, affecting delivery of planned LTAMP activity.

GPS	Health and safe People	Outcome	1.1 Impact on social cost of deaths and serious injuries 1.2 Impact on a safe system	KPI's	1.1.1 Collective risk (crash density) 1.1.3 Deaths and serious injuries 1.1.4 Personal risk (crash rate) 1.2.1 Road assessment rating – roads
RLTP					
Safety					
Wellbeing					
Economy		People		Connectivity	
AMP Benefits					
Communities have access to a safe transport system.					
	KPI	Customer Outcome 1: proportion of network not available to: Class 1 heavy vehicles 50MAX vehicles	Measure	The proportion of each road classification that is not accessible to Class 1 Heavy Vehicles and 50MAX vehicles	
	KPI	Customer Outcome 1: the number of fatal and serious injuries on the network	Measure	The total number of fatal and serious injuries each year on your network.	
	KPI	Customer Outcome 2: collective risk	Measure	The total number of fatal and serious injuries per kilometer each year on the network.	
	KPI	Customer Outcome 3: personal risk.	Measure	The total number of fatal and serious injuries by traffic volume each year on the network.	
	KPI	Technical Output 6: Reduce the number of fatal and serious injuries at intersections.	Measure	The number of fatal and serious injuries at intersections each year on your network.	

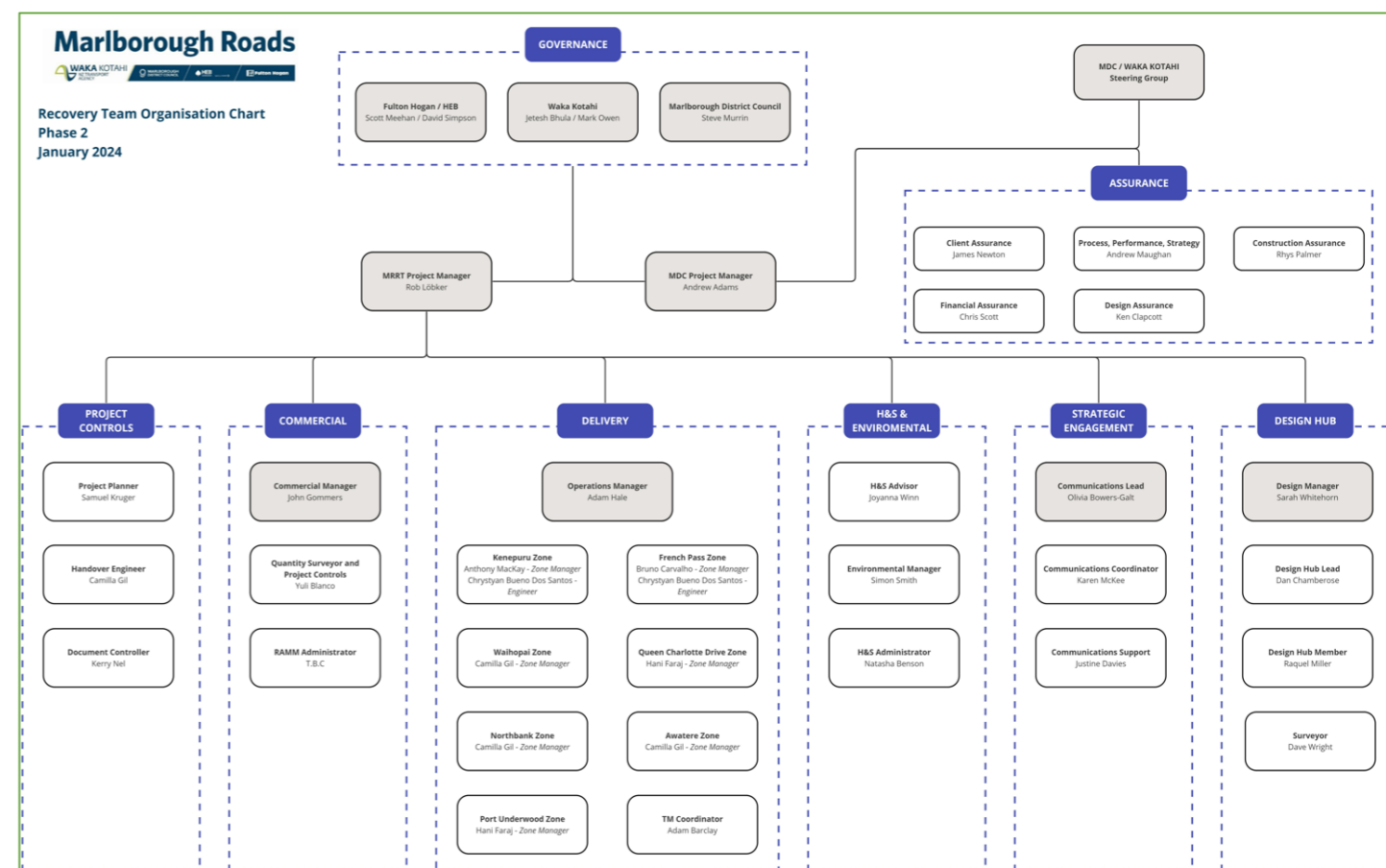
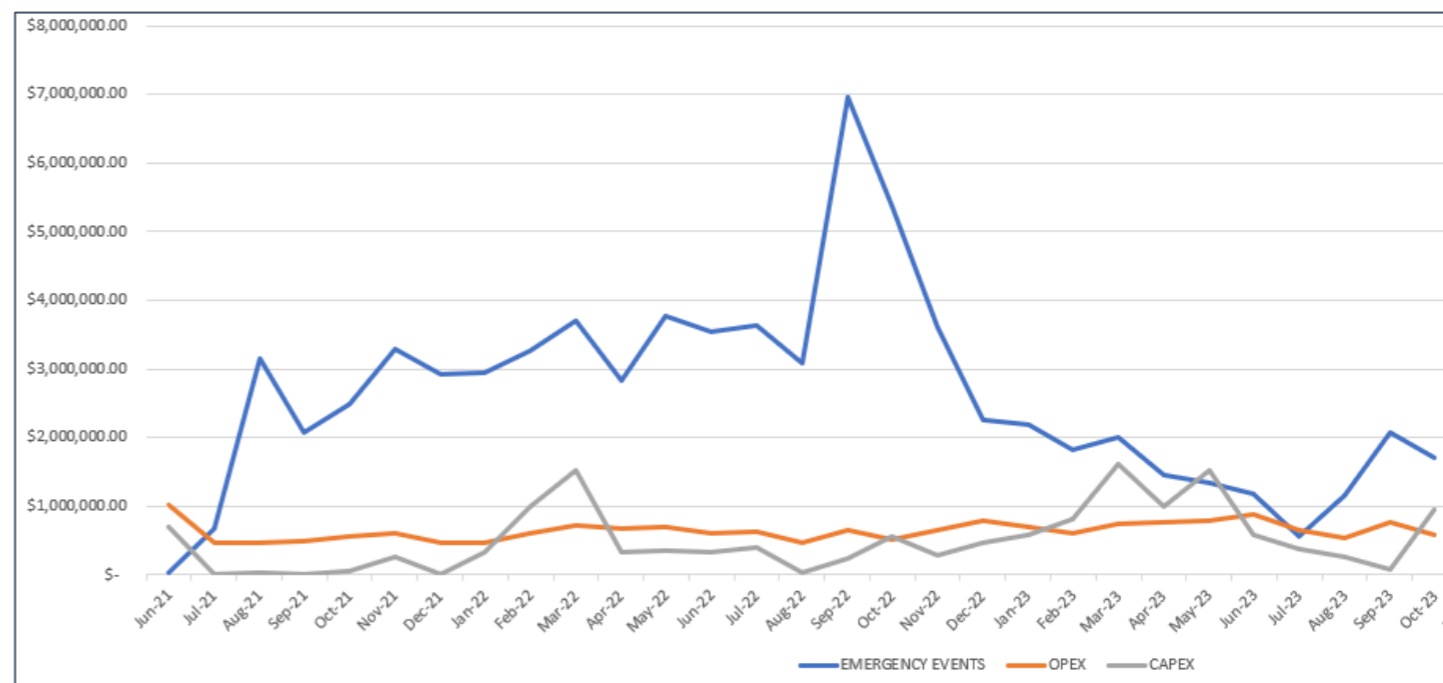
Recovery Team Set Up

By the 20 July the NOC had swung into Emergency response. Initially the response was managed by the NOCs own crews, but within a week, a number of local contractors had joined in the response. It soon became apparent that the scale of the event was too large to be undertaken with current NOC resources. The Marlborough Roads Recovery Team(MRRT) was established on the 10 August 2021, with Stantec providing additional resource for Marlborough roads. A number of existing NOC personnel were brought in to provide local knowledge to the PMO. This was good for the PMO but depleted staff resource within the NOC.

As well as a depleted staff resource a high percentage of the local contracting resource was also directed towards the response and recovery. This again constrained the ability to complete Business as Usual works.

Impact of Emergency Events on Business As Usual

The graph below confirms the impact of emergency events on CAPEX and OPEX expenditure. Budgets for emergency works was set at \$2 million per annum for reinstatement works and \$500,00 for minor events per annum. September 2022 experienced \$7 million in a single month.



Understanding our Strategic Problems #3



Chart 1: Local Road Maintenance 2018 - 2021 (Including WC 140 & WC141)

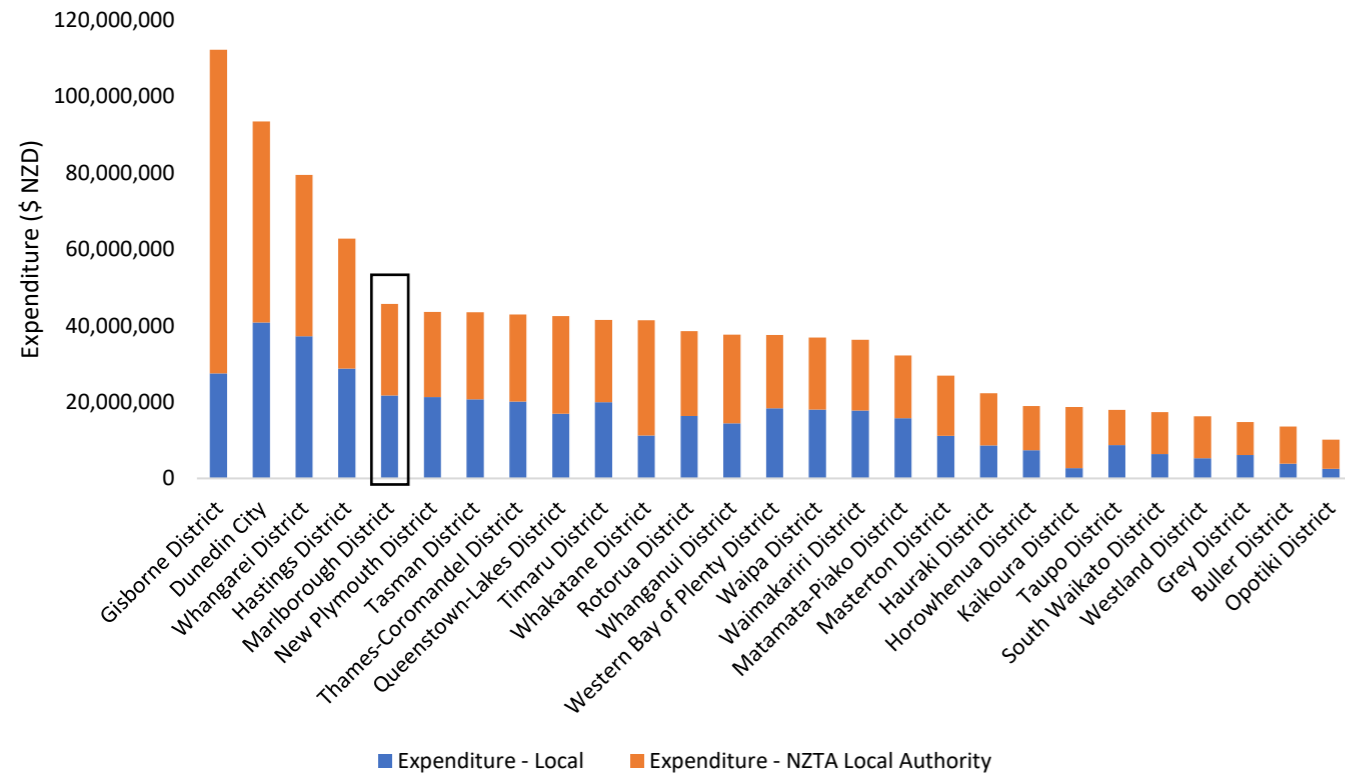


Chart 3: Local Road Maintenance 2021/22 - (Including WC 140 & WC 141)

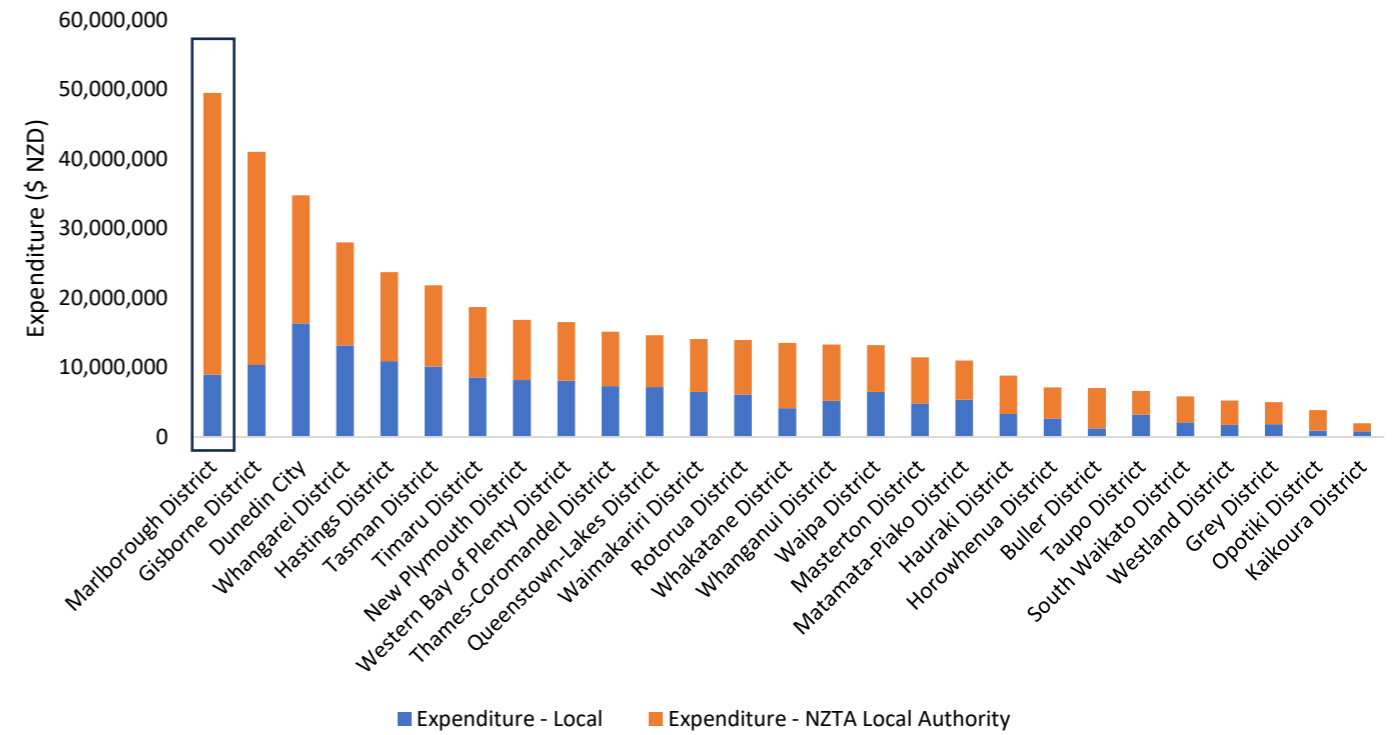


Chart 2 : Local Road Maintenance 2018 - 2021 (Excluding WC 141 & WC 140)

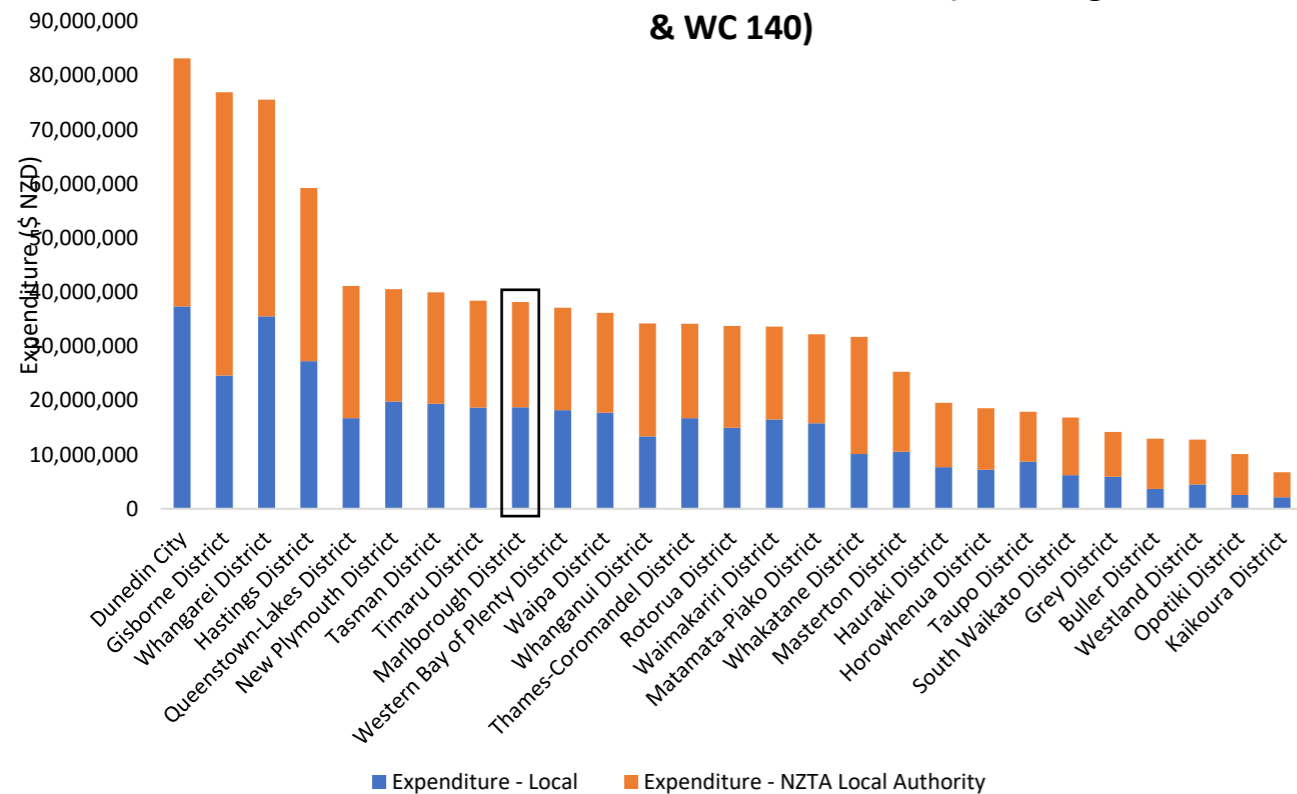
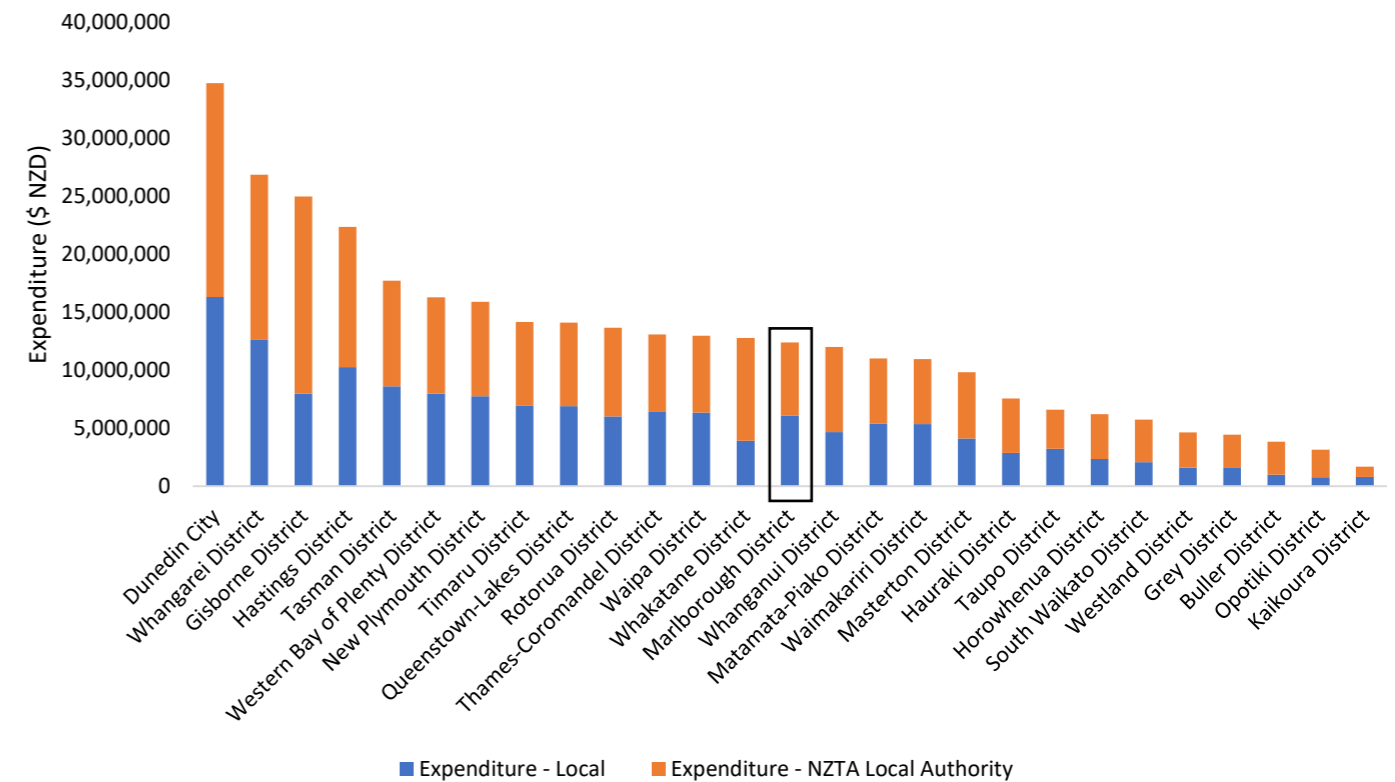
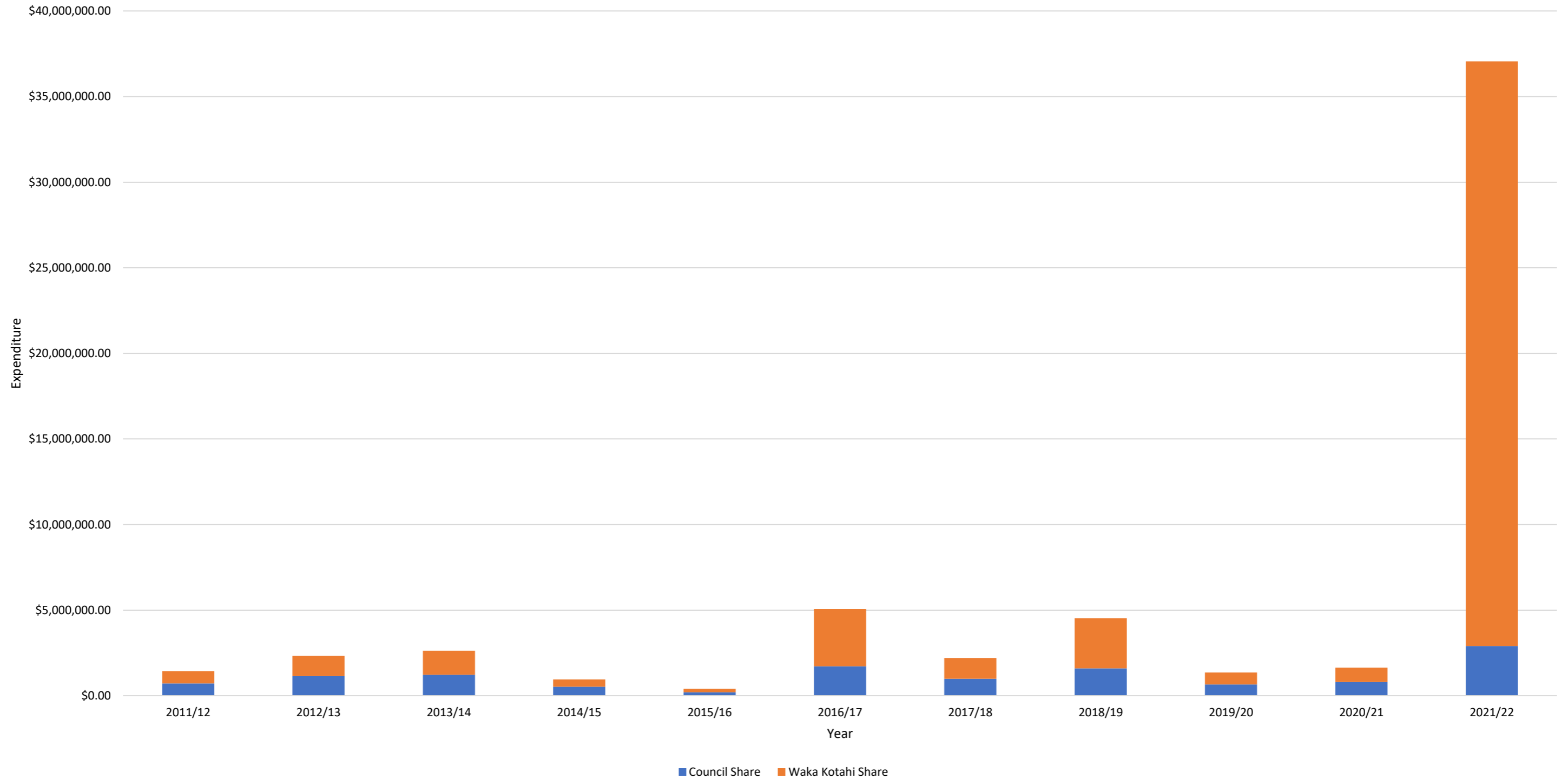


Chart 4: Local Road Maintenance 2021/22 - (Excluding WC 140 & WC141)





Emergency Reinstatement



Understanding our Strategic Problems #4

Existing roading infrastructure design does not promote safe multi modal transport options

GPS	Health and safe People	Outcome	1.1 Impact on social cost of deaths and serious injuries 1.2 Impact on a safe system	KPI's	1.1.1 Collective risk (crash density) 1.1.3 Deaths and serious injuries 1.1.4 Personal risk (crash rate) 1.2.1 Road assessment rating – roads
	Inclusive Access	Outcome	10.1 Impact on user experience of the transport system 10.2 Impact on mode choice	KPI's	10.2.1 People – mode share 10.3.1 Access to key social destinations (all modes)
	Environmental Sustainability	Outcome	8.1 Impact on greenhouse gas emissions	KPI's	8.1.1 CO2 emissions 8.1.2 Mode shift from single occupancy private vehicle
RLTP					
Safety		Mode Choice		Environmental outcome	
Wellbeing					
Economy		Environment		Living	
AMP Benefits					
Increased environmental and social opportunities for people			Communities have a safe and accessible transport system		
	KPI	Technical Output 4: loss of control on wet roads	Measure	The number of fatal and serious injuries attributable to loss of driver control (including on wet roads), each year on your network.	
	KPI	Technical Output 6: Reduce the number of fatal and serious injuries at intersections.	Measure	The number of fatal and serious injuries at intersections each year on your network.	
	KPI	Technical Output 9: vulnerable users.	Measure	The number of fatal and serious injuries involving vulnerable users on your network.	
	KPI	Outcome: Reduce Emissions	Measure		
	KPI	Customer Outcome 1: proportion of network not available to: Class 1 heavy vehicles 50MAX vehicles	Measure	The proportion of each road classification that is not accessible to Class 1 Heavy Vehicles and 50MAX vehicles	
	KPI	Customer Outcome 1: throughput at indicator sites	Measure	The hourly traffic volume during the peak morning hour and peak afternoon/evening hour.	

Blenheim Integrated Transport Study

The Blenheim Integrated Transport Study, Strategic Business Case was completed July 2021.

The purpose of the Blenheim Integrated Transport Strategic Case is to demonstrate the case for change and the need for planning investment in the Blenheim transport network. The focus is around achieving an integrated long term transport system solution for Blenheim.

Problem Statements developed as part of the work included:

- Increasing congestion on main traffic routes results in longer journey times, constrained freight movements and increased frustration (50%).
- Existing roading infrastructure and public attitudes favour private vehicle use reducing alternative mode acceptance and take-up rates (30%)
- The town centre boundaries are poorly defined resulting in difficult access, poor circulation and sprawling land use (20%).

The indicative benefits of investing to solve the problems are:

- Better accessibility and predictable journey times
- Improved road user behavior and improved welfare
- Increased choice of transport modes
- Increased contribution to emissions reduction CBD prospers as a residential and cultural centre
- Easier access to CBD social and economic opportunities
- Reduced reliance on private vehicles

The problems and associated benefits align well with the key priorities in the Government Policy Statement on land transport, namely, safety, access and the environment. Investment will reduce crashes, particularly for active mode users, improve access to the town centre and residential areas which in turn will support economic growth, and will encourage a mode shift from private vehicles to active modes which will reduce carbon emissions.

The work highlighted that crash rates for cycling is high and this may be contributing towards a reduced mode acceptance for cycling. The number of crashes involving non-motorised vehicles (cycles, scooters and skateboards) is increasing. The crashes involving venerable road users (motorcycles and mopeds) is also increasing. Of the 55 local authorities in New Zealand that are districts, Marlborough has the highest crash rate for cyclists and eight highest crash rate for pedestrians.

The expenditure is very low (see over page) and roading improvements associated with speed management and cycling / walking improvements are required to be budgeted as part of this LTAMP to ensure people are safe when using alternative modes of transport.

Understanding our Strategic Problems #4

