Te Kaunihera-ā-Rohe Ruapehu
Ruapehu District Council

Land Transport
Asset Management Plan

2024-2034

Quality Information

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Note:-

Items in yellow are in Draft.

Table of Contents

A Executive Summary

A01 INTRODUCTION

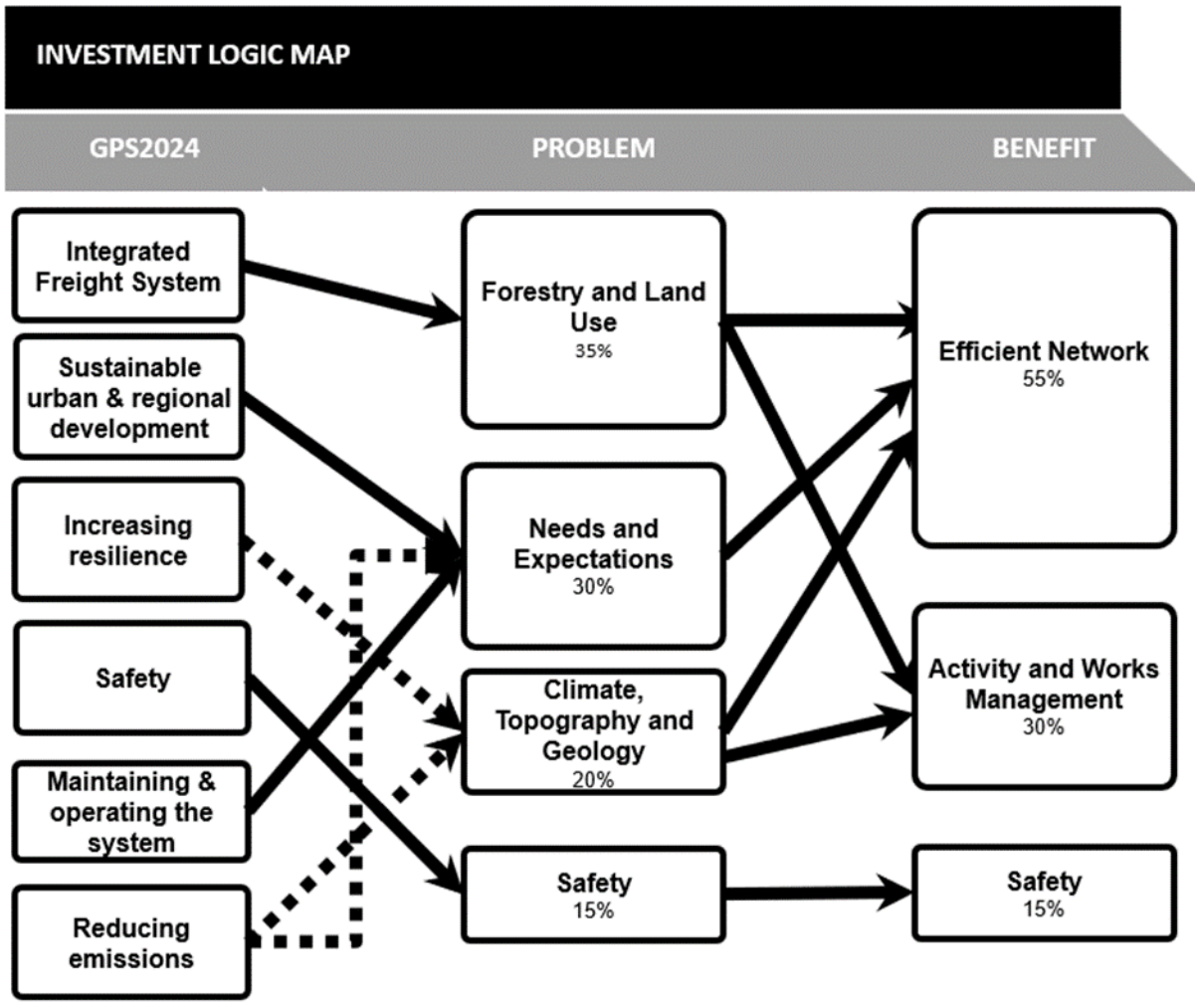
The contents of this Land Transport Asset Management Plan 2024-2027 are considered to meet the expectations of Waka Kotahi NZ Transport Agency (NZTA) Business Case Approach.

This Asset Management Plan (AMP) acts as the programme business case including the strategies, work programmes and long-term financial forecasts for Council's Land Transport Portfolio.

A02 STRATEGIC CASE (SECTION B02)

The AMP continues with the problems and benefits identified in the previous AMP as these align with the Draft GPS2024 strategic priorities as shown in the Investment Logic Map below.

FIGURE A.1: **INVESTMENT LOGIC MAP SUMMARY**



A02.1.1 Land Transport Assets

The purpose of the Land Transport activity is to provide a multi-modal network that allows for the safe, reliable, efficient and effective movement of vehicles, freight, cyclists and people.

The Land Transport activity is achieved through the following networks and assets:

- A vehicular network, comprising a network of sealed and unsealed roads, parking areas and facility roads, bridges and large culverts.
- A pedestrian network, comprising footpaths, bollards and chains. (Litter bins, monuments, seating and other street furniture are included in the Community Property AMP)
- Enabling infrastructure, comprising kerbs and channels, drainage sumps, culverts, road reserve including berms, and retaining walls.
- Safety infrastructure, comprising street and amenity lighting, road marking and raised pavement markers, street signs, traffic controls, including edge marker posts, pedestrian refuges, speed humps and traffic calming islands.

Council owns and is responsible for the management of the assets outlined in the table below.

TABLE A-1: **LAND TRANSPORT ASSET SUMMARY**

Source: Valuation 2023

Asset Type	Component	Replacement Cost	Quantity	Unit
Bridge	Bridge (Culvert)	$13,062,075.40	99	Each
Bridge	Bridge (Deck)	$129,243,757.23	258	Each
Crossing	Crossing	$4,575,009.21	450	Each
Drainage	Drainage	$41,071,667.54	1,475	Each
Footpath	Footpath	$13,852,432.80	68,900	m
Island	Island	$402,680.77	39	Each
Minor Structure	Minor Structure	$1,753,156.91	7	Each
Railing	Railing	$3,629,879.97	19,137	m
Retaining Wall	Retaining Wall	$9,196,653.77	5,619	m
SW Channel	SW Channel	$31,524,591.11	1,524,526	m
Sign	Sign	$1,489,367.51	5,666	Each
Street Light	Street Light (Bracket)	$2,025,416.11	1,545	Each
Street Light	Street Light (Light)	$613,423.73	1,545	Each
Street Light	Street Light (Pole)	$2,611,492.15	756	Each
Traffic Facility	Traffic Facility	$62,784.80	96	Each
Treatment Length	Formation	$121,504,725.71	1,456,828	m
Treatment Length	Surface	$33,473,821.70	606,480	m
Treatment Length	Subbase	$89,117,516.07	1,456,828	m
Treatment Length	Basecourse	$79,103,472.73	1,456,828	m
Totals		**$578,313,925.23**		

A03 PROGRAMME BUSINESS CASE (SECTION B03)

The following work programmes have been identified by Council and are aligned to the Activity Management sections. The table below shows where the programmes contribute to addressing the problems identified in the Strategic Case (Section B02).

TABLE A-2- PROGRAMMES AND THEIR CONTRIBUTION TO THE PROBLEM STATEMENTS

Work Programme	Section	Forestry & Land Use	Needs & Expectations	Climate, Topography & Geology	Safety
Minor Safety Improvements	D02		Yes		Yes
Emergency Works	D02		Yes		Yes
Pavements	D03	Yes	Yes	Yes	Yes
Road Structures	D04	Yes	Yes		Yes
Drainage	D05	Yes	Yes	Yes	Yes
Traffic Services	D06		Yes		Yes
Footpaths	D07		Yes		Yes
Cycleways	D08		Yes		
Bus Shelters	D09		Yes		
Facility Roads & Carparks	D10		Yes		
Environmental Services	D11		Yes		Yes
Network & Asset Management	D12	Yes	Yes	Yes	Yes

A04 DELIVERING THE PROGRAMME (SECTION B04)

Council uses a combination of internal staff, professional services and physical works contracts to deliver the activities identified in the roading programmes.

Network and Asset Management

The current professional services contract runs through to 30 June 2024. In addition to directly delivering the contracted services, this contract has also provided Council with improved access to wider resources and skills not traditionally easily available to the District.

Council has awarded a new professional services contract for infrastructure services to BTW Company Ltd, in partnership with Rationale and Xyst, after a comprehensive tender and evaluation process. The new contract which comes into effect from 1 July now encompasses services for Three Waters, Parks and Reserves, and Solid Waste, in addition to Land Transport services, which GHD provided since 2003.

Operations, Maintenance and Renewals

Operations, maintenance and renewals are delivered under eight physical works contracts and four supplier aggregate agreements.

Capital Improvements / Developments

Capital projects are normally packaged up according to the work type and included in the appropriate contract for that work. Council can contract them out individually if required.

The development programme includes safety work, bridge renewal, associated improvements, walking and cycling improvements.

Minor safety improvements will usually be delivered under the appropriate maintenance contract.

Emergency Works

Historically the impact of unexpected storm events has been significant. Council has allowed a contingency sum for the 3-year period. Each event must be separately submitted to Waka Kotahi for emergency funding. Physical work is carried out under the appropriate maintenance contract.

Council has term contracts for each of these work types. Work programmes have been developed using the schedule quantities in each contract. They have been refined over each iteration but not raised above the contracted amounts.

A04.1.1 Proposed Programme Financials (un-inflated)

The expected cost over the next 3 year programme (2024/25 – 2026/27) is shown in the table below.

TABLE A-3: TOTAL PROPOSED LAND TRANSPORT PROGRAMME 2024-27

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of Total 21-24	Sum of Total 24-27	Sum of % Change
Growth	12,610	0	55,135	58,251	58,251	58,251	67,745	174,753	158%
LOS	24,002	29,721	0	415,667	589,550	624,500	53,723	1,629,717	2934%
Opex	12,534,333	18,916,013	8,386,558	18,078,916	21,984,189	24,576,464	39,836,904	64,639,570	62%
Renewal	7,457,347	8,791,243	7,850,959	8,490,355	8,568,032	8,823,176	24,099,549	25,881,563	7%
Grand Total	**20,028,292**	**27,736,977**	**16,292,652**	**27,043,189**	**31,200,023**	**34,082,391**	**64,057,921**	**92,325,603**	**44%**

Notes:

- Figures provided are not inflated.

TABLE A-4: SUBSIDISED 2024-27 PROGRAMME

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of Total 21-24	Sum of Total 24-27	Sum of % Change
Capital									
LOS	21,802	28,126	0	415,667	589,550	624,500	49,928	1,629,717	3164%
Renew al	7,427,944	8,790,701	7,770,152	8,442,855	8,510,532	8,765,676	23,988,797	25,719,063	7%
Capital Total	**7,449,746**	**8,818,827**	**7,770,152**	**8,858,522**	**9,100,082**	**9,390,176**	**24,038,725**	**27,348,780**	**14%**
Direct Cost									
Opex	8,018,396	11,768,515	8,144,510	9,488,550	13,075,743	15,466,011	27,931,421	38,030,305	36%
Direct Cost Total	**8,018,396**	**11,768,515**	**8,144,510**	**9,488,550**	**13,075,743**	**15,466,011**	**27,931,421**	**38,030,305**	**36%**
Grand Total	**15,468,142**	**20,587,342**	**15,914,662**	**18,347,072**	**22,175,826**	**24,856,187**	**51,970,146**	**65,379,085**	**26%**

Notes:

- Figures provided are not inflated
- The first 3 to 5% of % change relates to inflation between the 3 -year funding periods
- Notable changes are:-
    - Operations and Maintenance
        - Structures - increase of 507% to include new bridge painting programme.
        - Sealed pavement maintenance – increase of 63% to increase programme for deferred work
        - Emergency reinstatement – increase of 53% to allow for weather events
        - 60% decrease over Environmental and Drainage maintenance
        - 110% increase in footpath maintenance to address deferrals
    - Renewals
        - 27% reduction in Sealed Pavement rehabilitation to allow increase to reseals
        - 12% increase in sealed road surfacing to address target length need
        - Structures increase of 81% for bridge renewal and structural component replacements
        - 0% increase in drainage renewals, due to removal of a non subsidised kerb and channel budget
        - 274% increase in footpath renewals to address need
    - Development | Increase for Low Cost Low risk Improvement programme

TABLE A-5: PROPOSED INVESTMENT LEVEL: NON-SUBSIDISED 2024-27 PROGRAMME

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of Total 21-24	Sum of Total 24-27	Sum of % Change
Grow th	12,610	0	55,135	58,251	58,251	58,251	67,745	174,753	158%
LOS	2,200	1,595	0	0	0	0	3,795	0	-100%
Opex	4,515,937	7,147,498	242,049	8,590,366	8,908,446	9,110,453	11,905,484	26,609,265	124%
Renew al	29,403	542	80,807	47,500	57,500	57,500	110,752	162,500	47%
Grand Total	**4,560,150**	**7,149,635**	**377,991**	**8,696,117**	**9,024,197**	**9,226,204**	**12,087,776**	**26,946,518**	**123%**

Notes:

- The first 3 to 5% of % change relates to inflation between the 3 -year funding periods
- O&M | Increase of 1,027% in cycleway maintenance for newly formed trails, 46% in facility road and car park maintenance, 85% increase in kerb and channel maintenance and 54% increase in unsubsidised professional services
- Renewals | 142% increase in facility road renewals
- Development (Improvements)
    - 158% increase for seal extensions
    - 80% reduction in District streetflags
    - Removal of footpath development budget
- Includes depreciation, finance costs and internal charges and applied overhead - $25,051,829 over 3 years

A04.1.2 Proposed Programme Financials (inflated)

For clarity the following two tables show the subsidised activities but in inflated figures as this is how they are submitted to Waka Kotahi.

TABLE A-6: PROPOSED INVESTMENT LEVEL: SUBSIDISED 2024-27 PROGRAMME

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of Total 21-24	Sum of Total 24-27	Sum of % Change
LOS	21,802	28,126	0	430,631	623,154	677,583	49,928	1,731,368	3368%
Opex	8,018,396	11,768,515	8,144,510	9,828,859	13,818,414	16,774,063	27,931,421	40,421,336	45%
Renew al	7,427,944	8,790,701	7,770,152	8,746,799	8,995,632	9,510,759	23,988,797	27,253,190	14%
Grand Total	**15,468,142**	**20,587,342**	**15,914,662**	**19,006,289**	**23,437,200**	**26,962,405**	**51,970,146**	**69,405,894**	**34%**

Notes:

- Figures provided are inflated as advised by Ruapehu District Council finance department

B Business Case

B01 INTRODUCTION

This introduction section provides an overview of the structure of the Activity Management Plan (AMP) itself, and how the different sections fit together to give a comprehensive view of our asset management planning processes and practices.

B01.1 Land Transport Assets

The purpose of the Land Transport activity is to provide a multi-modal network that allows for the safe, reliable, efficient and effective movement of vehicles, cyclists and people

The Land Transport activity is achieved through the following networks and assets:

- A vehicular network, comprising a network of sealed and unsealed roads, parking areas and facility roads, bridges and large culverts.
- A pedestrian network, comprising footpaths, bollards and chains. (Litter bins, monuments, seating and other street furniture are included in the Community Property AMP)
- Enabling infrastructure, comprising kerbs and channels, drainage sumps, culverts, road reserve including berms, and retaining walls.
- Safety infrastructure, comprising street and amenity lighting, road marking and raised pavement markers, street signs, traffic controls, including edge marker posts, pedestrian refuges, speed humps and traffic calming islands.

Council owns and is responsible for the management of the assets outlined in the table below.

TABLE B-1: LAND TRANSPORT ASSET SUMMARY (2023)

Asset Type	Component	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation Cost
Bridge	Bridge (Culvert)	$13,062,075.40	$4,541,238.73	$128,240.51
Bridge	Bridge (Deck)	$129,243,757.23	$53,895,254.56	$1,345,071.42
Crossing	Crossing	$4,575,009.21	$406,489.97	$61,000.12
Drainage	Drainage	$41,071,667.54	$17,313,017.95	$514,012.11
Footpath	Footpath	$13,852,432.80	$7,513,097.62	$201,212.92
Island	Island	$402,680.77	$173,787.68	$5,369.08
Minor Structure	Minor Structure	$1,753,156.91	$1,127,114.71	$48,341.98
Railing	Railing	$3,629,879.97	$513,630.85	$25,467.64
Retaining Wall	Retaining Wall	$9,196,653.77	$7,528,719.06	$116,456.58
SW Channel	SW Channel	$31,524,591.11	$11,848,563.38	$394,057.39
Sign	Sign	$1,489,367.51	$187,394.86	$26,808.62

Land Transport Activity

Asset Type	Component	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation Cost
Street Light	Street Light (Bracket)	$2,025,416.11	$205,161.29	$14,346.70
Street Light	Street Light (Light)	$613,423.73	$281,082.82	$25,385.87
Street Light	Street Light (Pole)	$2,611,492.15	$529,467.23	$39,208.96
Traffic Facility	Traffic Facility	$62,784.80	$743.40	$454.96
Treatment Length	BC Rural Seal Access	$18,508,014.82	$12,248,838.04	$185,080.15
Treatment Length	BC Rural Seal Access LV	$3,707,658.37	$2,070,431.71	$37,076.58
Treatment Length	BC Rural Seal P&S Collector	$8,426,951.50	$5,486,109.44	$84,269.52
Treatment Length	BC Rural Unsealed	$38,422,438.74	$28,340,582.39	$384,224.39
Treatment Length	BC Urban Seal Access	$2,318,349.48	$1,105,189.21	$23,183.49
Treatment Length	BC Urban Seal Access LV	$5,428,631.61	$2,595,521.76	$54,286.32
Treatment Length	BC Urban Seal P&S Collector	$1,989,246.27	$923,454.79	$19,892.46
Treatment Length	BC Urban Unsealed	$302,181.95	$213,275.55	$3,021.82
Treatment Length	Formation Rural	$107,268,748.63	$107,268,748.63	$0.00
Treatment Length	Formation Urban	$14,235,977.08	$14,235,977.08	$0.00
Treatment Length	SB Rural Seal Access	$22,888,672.82	$15,138,582.27	$228,886.73
Treatment Length	SB Rural Seal Access LV	$3,755,744.31	$2,096,281.11	$37,557.44
Treatment Length	SB Rural Seal P&S Collector	$9,990,541.45	$6,512,875.66	$99,905.41
Treatment Length	SB Rural Unsealed	$42,654,225.19	$42,654,225.19	$0.00
Treatment Length	SB Urban Seal Access	$2,563,608.66	$1,222,107.65	$25,636.09
Treatment Length	SB Urban Seal Access LV	$4,716,586.96	$2,255,081.02	$47,165.87
Treatment Length	SB Urban Seal P&S Collector	$2,199,689.48	$1,021,147.46	$21,996.89
Treatment Length	SB Urban Unsealed	$348,447.19	$348,447.19	$0.00
Treatment Length	Surface Structure	$33,473,821.70	$12,451,359.56	$1,467,807.78
Totals		**$578,313,925.23**	**$364,252,999.85**	**$5,665,425.80**
Treatment Length	Land Under Roads	$43,124,461.00	$43,124,461.00	$0.00
Total Including Land Under Roads		**$621,438,386.23**	**$407,377,460.85**	**$5,665,425.80**

B01.2 Asset Management Introduction

The Plan covers the financial and technical aspects of providing the multi-modal networks to customers at an appropriate level of service. As such, it describes the strategies, work programmes and long term financial forecasts for the activities undertaken under Land Transport.

Under the Local Government Act 2002, Council has to deliver revised Plans to its community on a three yearly cycle. The Plans must contain a minimum of ten years financial forecasts and detailed asset information for the Land Transport activity.

The plan has been written to provide the information required for good asset management planning as set out in:

- LGA 2002 Schedule 10
- Auditor-General's overview Matters arising from the 2006-16 Long-Term Council Community Plans. *(https://oag.parliament.nz/2007/ltccp)*
- Audit New Zealand Asset management for public entities: Learning from local government examples (*https://auditnz.parliament.nz/resources/asset-management/asset-management-for-public-entities*)
- Activity Management Planning: A Guide to integrating the NZTA's Business Case Approach & Self-assessment – Draft, 8 March 2016, Erik Barnes, LGNZ & Caroline Hutchison, NZTA *(https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/Activity-Management-Planning-A-Guide-to-integrating-the-NZ-Transport-Agencys-Business-Case-Approach-Self-assessment.pdf)*
- International Infrastructure Management Manual version 6 2020, published by the National Asset Management Steering Group.

B01.2.1 Outlook and Timeframes

Asset management planning and therefore this Plan, has three time horizons:

- 1 year outlook | This aligns to the Council Annual Plan process
- 3 year outlook | This aligns to the 3-yearly AMP updating cycle
- 10 year outlook | This aligns to the Council LTP financial requirements.

B01.3 Document Overview

Activity Management Plans are tactical plans which provide the link between Council outcomes, the levels of service Council provides to the community, the suitability, sustainability and performance of the assets covered by the plans, and the risks of holding the assets. The Land Transport Activity is an important part of achieving Council's vision.

The layout of this Plan is:

Part 1 | Section A - Land Transport Activity - Executive Summary
Part 1 | Section B - Land Transport Activity - Strategic and Programme Business Case
Part 1 | Section C - Land Transport Activity - Asset Planning
Part 1 | Section D - Land Transport Activity - Lifecycle Management Activities
Part 1 | Section E - Land Transport Activity - Finances
Part 2 - Land Transport Activity – Appendices

B01.4 Strategic and Programme Business Case

The Business Case Approach is a process that improves investment decision-making by clarifying why we are doing work, defining our strategic problems and benefits, ensuring there is robust evidence behind our strategic response, and building a robust case for investment.

The approach demonstrates the degree to which the proposed programme of works is the right solution in which to invest and seeks to clearly define the problems and contextual state of the district at the earliest stage of the process, with engagement of key partners and stakeholders where necessary. This early engagement is to assist getting understanding of the cause and scale of consequences and benefits of addressing the problems.

The business case also seeks to make sure during the lifecycle of a programme or project that the 'reasons' for doing it are still sound, and that it has a clear link back to organisational priorities and issues.

This Plan fulfils the requirements to provide a **Strategic Business Case** and **Programme Business Case** in support of the funding requests also included.

The following provides the nine steps that form the Strategic and Programme Business Case for the District, and are further explained below:

Strategic Case (Section B02)

"Why we have to invest"

1. What outcomes does the activity deliver and why is it important to the Community?
2. Outlines what services are currently delivered, and how they are delivered
3. Clearly articulates the land transport problems and the benefits of addressing them or the consequences of ignoring them
4. Assesses the portfolio's current state and level of service, as well as the desired state and level of service provided to customers
5. Compares the portfolio's current state against the desired state, and identifies any gaps or deficiencies. So this entails assessing stages 2, 3 and 4

Programme Case (Developing the Programme) (Section B03)

"What we have to invest"

1. Develops options (for programmes of work) to achieve the desired outcomes (this is an iterative process)
2. Includes asset, economic, financial, commercial and management elements to substantiate and test the options
3. Recommends the preferred option for programmes of work and presents this for LTP and RLTP consideration

Delivering the Programme (Section B04)

"How we have to invest"

1. In support of the Programme Case, this section outlines how the programme will be successfully delivered.

B01.5 Asset Planning

Asset Planning (other than Lifecycle Management Activities) are covered in two ways.

The aspects that relate to the wider Council and its activities are covered in Parts 1 and 2 of the AMP

The aspects that relate to the Land Transport Activity are covered in Part 3 - the 'C' Sections. These are summarised briefly below.

B01.5.1 Managing Growth and Demand (Section C01)

This section provides the context for managing the District's growth and demand for services, and shows how Council has identified trends and factors that influence the future demand for assets. It also identifies the information and data used for growth assumptions to inform decisions on infrastructure and investment as incorporated into the AMP and the Long Term 10-Year Plan.

The Ruapehu environment is largely high quality, with a relatively low number of heavy industries or high intensity residential development. The high quality of the environment makes the District attractive to visitors who seek to visit natural and unspoilt landscapes. The number of visitors continues to grow and is expected at similar levels.

In the foreseeable future, growth in visitor numbers will ultimately result in growth in related businesses which may see some flow on demand in residential housing. Such growth is unlikely to put significant additional demand on the Land Transport portfolio. Growth in rural produce, is also not expected to put significant additional demand on the network. Carbon farming may see demand decline.

As a consequence of the small and dispersed population, large tourism industry and large land area, the District faces many challenges in meeting the current and future service expectations of residents and visitors, in terms of Council's ability to fund the desired service levels at an affordable (sustainable) cost level.

B01.5.2 Managing Risk (Section C02)

This section explains Council's Risk management framework and practices for its structured approach to identifying, assessing, and treating risks associated with the delivery of infrastructure services.

The AMP also identifies and assesses specific activity risks by assessing the consequence and likelihood of risk events, understanding what are the critical assets, and how these risks are managed by control, mitigation or removal.

The risks are assessed from both external and internal contexts. The external (PESTLE) context categories are:

- Political and Policy
- Economy
- Social
- Technological
- Legal and Regulatory
- Environmental

B01.5.3 Environmental Stewardship (Section C03)

Stewardship of the natural environment is extremely important to Council. This section demonstrates our understanding, commitment and interventions to actively protect the environment by mitigating harmful effects and risks that may arise from transport activities. Council actively manages its environmental obligations through its consenting and compliance monitoring practices. The section also discusses the risks to the transport activity from climate change and other natural hazard events.

There are a number of adverse environmental effects that can occur in the process of undertaking Transport related development, particularly major construction projects. The potential effects of the Transport activity can be generated during both the construction phase and the operational use of the network. This Plan seeks to identify and document environmental risk and associated mitigation measures that could be employed.

B01.5.4 Levels of Service (Section C04)

Levels of service are key customer and stakeholder outcome statements that drive and set a standard for all infrastructure operational and investment decisions. Council recognises there is a wide range of customers and stakeholders with an interest in how activities are managed, including the resident community, visitors, specific interest groups within the community and regional and central government agencies. This section identifies proposed transport-specific service levels, with identified performance measures and risks. Subsections include:

- Land Transport Levels of Service
- Customer Service Requests and Complaints
- Accelerated and Enhanced Development Plans, such as at specific town centres
- Levels of Service Benchmarking
- Potential Negative Effects
- Future Levels of Service Improvement

B01.5.5 Data Quality (Section C05)

The quality of underlying data and information directly affects the confidence we can have in the infrastructure and investment decisions we make. This section identifies the confidence we have in our data through detailed examination of the reliability of the data with respect to its completeness and accuracy, and gives specific confidence ratings for the different types of transport assets. It also identifies gaps and shortcomings in data quality, and then describes planned improvements to rectify those gaps.

Te Ringa Maimoa initiated nationwide Data Quality reporting to elevate the focus and outcomes of getting better data quality. This section highlights the latest reports and areas that need more focus.

B01.5.6 Plan Improvements (Section C06)

Asset Management is about the People, Processes, Practices, Data and Systems required to make evidence-based, risk based decisions on infrastructure objectives, works and investment.

This section summarises the planned improvements to current AM planning and the AMP. This is based on assessment of the current practices against desired practices. It contains a

timelined programme of AM improvements that will be implemented and monitored over time.

B01.6 Lifecycle Management Activities (Section D)

Section D is broken into 11 different asset / activity classes as well as an introduction section.

These sections explain the methods that Council uses to decide on the most effective and efficient infrastructure works to not only achieve service objectives, but to also sustain the network in the long-term. The section outlines the maintenance and renewals strategies and works that are planned over the next 10 years to operate the assets at agreed service levels while optimising long-term costs.

These sections also cover in detail the physical description and condition of the assets and how Council proposes to maintain, renew and improve existing assets, taking into account the associated risks and their criticality. The possible development of new assets to cope with growth or demand changes are also discussed and included in financial forecasting. When necessary, disposal options will also be considered for assets no longer used or considered to be worthy of retention for reasons of possible future use.

B01.7 Finances (Section E)

The section summarises the investment forecast for the next 10-years for asset management and physical works activities needed to manage and operate the transport network. This includes

- Operational Expenditure (OPEX) for both operations and maintenance, as well as
- Capital Expenditure (CAPEX) for both asset renewals as well as for new, upgraded and improvement works.

This section breaks up the finance information into the following three areas:

- E01 - Financial Management
- E02 - Financial Summary
- E03 - Asset Valuation

B02 STRATEGIC CASE

B02.1 Point of Entry

Council has completed a Point of Entry exercise for the preparation of the 2024 Activity Management Plan (AMP).

This included an external review of the current 2021 AMP as well as a review of the current industry guidelines and expectations from Te Ringa Maimoa and Waka Kotahi NZ Transport Agency.

It was agreed:

- The Problem Statements workshopped and identified during the preparation of the 2021 AMP are still true and correct for the District and are to be used again in the 2024 AMP.
- In general, current levels of services will be maintained.
- Asset management improvement activities are ongoing providing a focus on continuous improvement.

Maintaining the current levels of service will need significant investment. In 2022, the majority of roading services were due for tender. Inflation has risen worldwide since 2020, with cost adjustments increasing 22% between July 2020 and 2022.

As part of it's tender exercise, Council examined the contract schedules to ensure quantities were sufficient to address need. This also resulted in increases.

B02.2 Introduction

This Plan demonstrates the case for change or intervention – that is, the clear rationale and evidence for proposed smart, best-value investments and work programmes to address the transport infrastructure problems facing the District. The case for intervention and change includes the benefits of addressing the problems and the consequences of not.

The transport infrastructure of the Ruapehu District (District) is ageing and was not originally built to handle the heavy traffic that the District sees today. Many of the roads are windy, narrow, designed for slow travel speeds, and, together with the ageing infrastructure can create hazardous conditions and serious safety issues. The number of tourists visiting the rugged natural beauty of the District is increasing, and so too is the amount of forestry log haulage. The Council desires to build and maintain a safe network that is able to cater for residents, road users, pedestrians, cyclists and tourists and the growing demands of commercial developments such as freight, produce and forestry.

B02.3 Strategic Direction

Land Transport receives its strategic direction from both Council as well as the New Zealand Government (via Waka Kotahi) as a co-investor. A lot of the inputs and directions from both of these parties is covered in the Strategic Context (B02.4) section below.

Government provides its strategic direction through the **Government Policy Statement (GPS) on Land Transport**. This AMP is based on the draft GPS ***"Te Tauākī Kaupapa Here a te Kāwanatanga mō ngā waka whenua | Draft Government Policy Statement on land transport 2024/25-2033/34"***

Te Tauākī Kaupapa Here a te Kāwanatanga mō ngā waka whenua | Draft Government Policy Statement on land transport 2024/25-2033/34 changed in response to recent large scale weather events. The draft strategic priorities are:

- **Maintaining and operating the system** | The condition of the existing transport system is efficiently maintained at a level that meets the current and future needs of users.
- **Increasing resilience** | The transport system is better able to cope with natural and anthropogenic hazards.
- **Reducing emissions** | Transitioning to a lower carbon transport system.
- **Safety** | Transport is made substantially safer for all.
- **Integrated freight system** | Well-designed and operated transport corridors and hubs that provide efficient, reliable, resilient, multi-modal, and low-carbon connections to support productive economic activity.
- **Sustainable urban and regional development** | People can readily and reliably access social, cultural, and economic opportunities through a variety of transport options. Sustainable urban and regional development is focused on increasing housing supply, choice and affordability, and developing resilient and productive towns and cities through effective transport networks that provide a range of low-emission transport options and low congestion.

Anthropogenic hazards describes hazards in nature made by people. It chiefly pertains to pollution or environmental change.

The Minister's headline expectations are to deliver on GPS outcomes in a way that provides value for money; investments must be efficient and effective and building back better so that investment in maintenance and renewals is fit for the future (not just replacing like for like).

If adopted, NLTF revenue is set to rise from $15.5 billion in 2021/22-2023/24 to $20.8 billion in 2024/25-2026/27, an increase of 34 percent (including inflation).

However, the National-led government has announced that it will be updating the GPS with a likely release in February 2024. Any changes from this will be reflected in Appendix A.

Within the Land Transport activity the following strategic directions have also influenced the development of this plan.

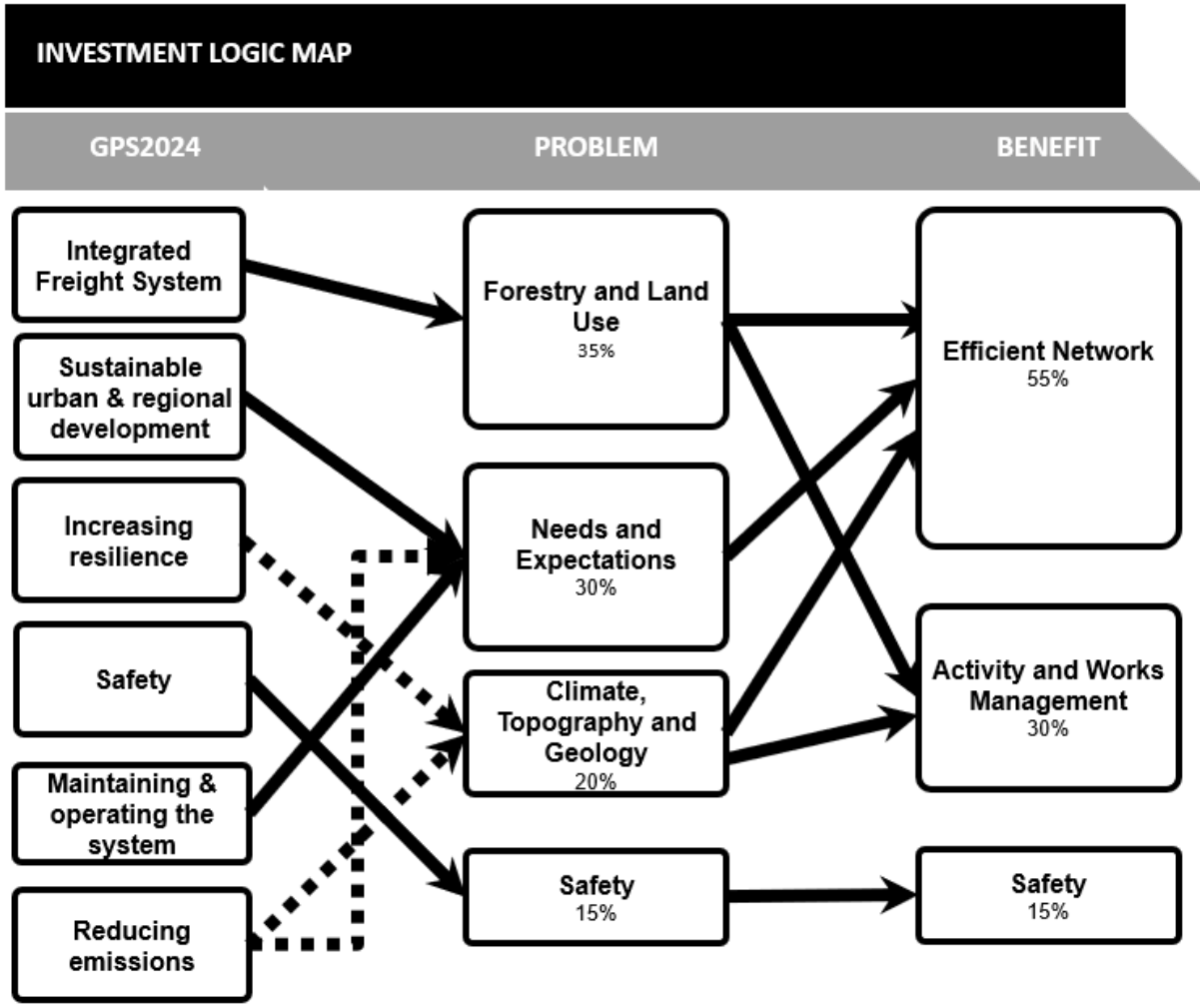
- To follow national and regional plans and strategies (see Strategic Context (B02.4))
- To address the problem statements (see Strategic Assessment (B02.6)
- To maintain and renew the existing network and assets to ensure that they provide the expected level of service at the lowest whole of life cost while managing risk (see Activity Management sections (Section D)

As an example, it has been identified that a more proactive approach is required to maintain the existing aging bridge assets by undertaking specialist painting to ensure that the full life of the bridges can be achieved while minimising the amount of ongoing maintenance.

Another example is increasing the amount of maintenance and renewal work in pavements and drainage, to meet current levels of service. For example, introducing increased rolling effort in combination with maintenance grading, carrying out targeted unsealed road metal strengthening on forestry haul routes and achieving the existing target length for resealing.

Council's Problem Statements (documented in this AMP) align to the draft GPS2024 strategic direction in that each problem is addressing one or more of the strategic priorities either directly or indirectly. The alignment is shown in the figure below.

FIGURE B.1: ALIGNMENT OF COUNCIL PROBLEM STATEMENTS TO DRAFT GPS2024 STRATEGIC PRIORITIES



There is further detail on each problem statement in Strategic Assessment (section B2.6), in summary:

- **Forestry and Land use |** indicates that there is freight moving on Districts roads in order to get to the State Highway network.
- **Needs and Expectations |** provide the options that district road network users require in order to travel through the district
- **Climate Change |** The district is initially focused on building the resilience of the road network to adjust for weather events brought about by climate change but is aware of the need to also reduce their climate impact over time.
- **Safety |** At all levels of planning there is always the need to implement the safest options possible.

B02.4 Strategic Context

This AMP and Business Case exists within National, Regional and Local level contexts. All three levels have requirements and drivers that affect the need to invest in the Land Transport assets and activities.

Requirements usually create an obligation on the Land Transport activities and can include:

- Legislation
- Regulations
- Strategies
- Plans
- Policies

Drivers are usually more local and include:

- Problems identified by valley meetings, council and other local organisations
- Network usage and performance
- Asset condition and performance
- Economic environment
- The environment
- Growth in population and land transport usage

The national, regional and local framework is described below.

B02.4.1 National Context

Legislation

The following legislation all sets expectations and obligations on Council that must be followed as part of delivering Land Transport activities

- Local Government Act 1974 and 2002 | Council's leadership and governance follows the following role and principles in the Act (and subsequent amendments):
    - To enable democratic local decision-making and action by, and on behalf of communities
    - To meet the current and future needs of communities for good-quality local infrastructure, local public services, and performance of regulatory functions in a way that is most cost-effective for households and businesses.
- Land Transport Management Act 2003
    - Schedule 10 of the Local Government Act identifies the information required to be included in the Long Term Plan (LTP). Specifically Part 1 section 2 (1) (c) states:
        - “outline any significant negative effects that any activity within the group of activities may have on the social, economic, environmental, or cultural well-being of the local community:”
    - Sets out requirements and process for development of Council’s Land Transport Programme, provides a framework for receiving funding from NZTA and allows for the establishment of future toll roads under certain conditions
- Land Transport Act 1998
    - Controls aspects of road and traffic operations and includes traffic regulations, bylaws, and enforcement

- Te hau mārohi ki anamata - Towards a productive, sustainable and inclusive economy – Aoteroa New Zealand's First Emissions Reduction Plan
- Traffic Regulations 1976 and Land Transport Rules
    - This legislation details Road Rules and Regulations to be adhered to and monitored. This affects the operation and use of transportation assets, e.g. signage, speed limits, parking restrictions, installation of traffic signals (if appropriate in the future), and school patrols
- Utilities Access Act 2010
- Resource Management Act 1991
    - The RMA has a single overarching purpose: To promote the sustainable management of natural and physical resources.
    - The land transport activity needs to be aware of the requirements of the RMA especially through:
        - Safeguarding the life-supporting capacity of air, water, soil and ecosystems.
        - Avoiding, remedying or mitigating any adverse effects of activities on the environment.
- Building Act 1991
- Health and Safety at Work Act 2015
- Civil Defence Emergency Management (CDEM) Act 2002
    - The CDEM Act 2002 ensures that New Zealand has the resources to manage disasters.
    - The CDEM Act 2002 requires:
        - Ruapehu District to form a Civil Defence and Emergency Management Group (CDEM Group).
        - Development of a Civil Defence Emergency Management Plan that identifies risks from hazards and puts readiness, response and recovery procedures in place. The Plan is developed with public input to ensure hazards and risks are dealt with to a level accepted by the community.
- Building Act 2004
- Public Works Act 1981
    - Public works often cannot be carried out without affecting private landowners and their interests in land. For these reasons the Crown provides itself with legislative powers to acquire land compulsorily for public works so that public works proposals are not unreasonably delayed. A basic principle of the Act is that no person shall be deprived of land without receiving fair compensation.
- Telecommunications Act, Electricity Act, Gas Act, Railway Safety and Corridor Management Act
    - Provides utility operators, and others, with powers to use road corridors

Other Relevant Documentation

The following documentation sets expectations and obligations on Council as part of delivering Land Transport activities

Strategic and Planning Drivers

- Government Policy Statement
    - The Draft 2024 statement, discussed above

Strategies and Spatial Plans

- Road to Zero: New Zealand's Road Safety Strategy for 2020 – 2030
- Arataki – Our 30 year Plan.
    - Waka Kotahi's sector view of how to plan develop and invest in the land transport system in the next 30 years.
- Ruapehu District Council's Taumarunui | Manunui Spatial Plan Foundation Document – August 2022
- Ruapehu District Council's Ohakune Spatial Plan Draft Preferred Option - 24 May 2022

Draft Investment Prioritisation Method (IPM) 2024-27

The Draft Investment Prioritisation Method (IPM) 2024-27 has been developed to give effect to the Government Policy Statement on Land Transport 2024 by prioritising activities into activity classes in the 2024-27 National Land Transport Plan and to confirm priority when an investment decision is made. It is in draft at present, but will be used to prioritise 2024-27 investment decisions.

One Network Road Classification (ONRC)

The One Network Road Classification framework provides a nationally consistent method to classify the road network and includes associated customer focussed levels of service, performance measures and related national benchmarking.

Refer to the following website for current classifications and associated rules:

https://www.nzta.govt.nz/roads-and-rail/road-efficiency-group/projects/onrc/

The ONRC Customer levels of service are expanded fully in Levels of Service (section C04). in summary they are

- Mobility (travel time reliability, resilience of the route)
- Safety
- Amenity (travel quality and aesthetics)
- Accessibility (land access and road network connectivity)

One Network Framework (ONF)

ONF is a system two-dimensional classification tool focused on Movement and Place. This has been applied to the District.

Roads and streets are mapped with consideration to the mix and balance of transport modes, the built environment, the aesthetic quality and character of the place and the types of modes appropriate to the place. It takes Place (the land-use vision and user experience

that transport needs to support) and Movement (the mix of transport modes) into consideration.

The AMP includes reporting on ONF where it is available.

Waka Kotahi State Highway Investment Proposal (SHIP)

The Waka Kotahi Investment Proposal sets out the 10-year programme of activities that Waka Kotahi proposes for inclusion in Regional and National Land Transport Programmes to make the network safer more resilient, accessible and protects routes that support urban growth.

National Land Transport Programme (NLTP)

Is the collation of the district and regional programmes, detailing how land transport funding will be used nationally over a three year period.

New Zealand Transport Agency Audits

As part of quality processes and as co-investor in the Council land transport activities, the Agency carries out technical and investment audits across all Road Controlling Authorities within New Zealand. These audits are intended to check compliance with NZTA's procedures and policies. They also check processes, systems and personnel are in place to support analysis and good asset management decision making.

The audit reports assess Council effectiveness and provide some recommendations and expectations for the Council to follow up on.

A Procedural Audit was carried out in November 2022, followed by a Technical Audit in September 2023.

Both audit types have a five yearly cycle.

Other Key National Planning Documents

The following documents provides further national context that may have implications or create expectations on Council that must be followed as part of delivering Land Transport activities

- He Whakakaupapa mō Te Hanganga o Aotearoa - The Infrastructure Action Plan May 2023

B02.4.2 Regional Context

Ruapehu sits at the northern end of the Horizons Manawatu-Whanganui Region.

The Manawatu-Whanganui region is a predominantly rural region with a few main centres of population. It lies in the lower central North Island and has good land connections to the rest of New Zealand.

Economic outcomes vary across the Region and while the Region has not experienced the population and economic growth of some of the more densely populated regions in New Zealand, it has a number of unique features that contribute to the way in which goods and people are transported through and around the Region. It is identified as a surge region, identified as needing investment for regional growth by the Government.

Horizons Regional Land Transport Plan Draft 2024-2034

Councils in the Region feed into the Plan, which lays out the strategic direction for the region. The 2024 - 2034 Plan is under development at present.

The issues / problem statements identified in the Draft RLTP are:

- **Infrastructure (30%)** | Ageing infrastructure, sub optimal maintenance and renewals, network inefficiencies and land use conflicts are leading to a degraded transport network with less effective transport routes.
- **Climate change and resilience (30%)** | Impacts from climate change and natural hazards are leading to a less resilient network with increasing vulnerability and costs, and decreased reliability.
- **Safety (20%)** | Increasing conflict between competing modes, poor user behaviour , and inadequate infrastructure is leading to deaths and serious injuries.
- **Transport Choices (20%)** | A lack of transport choices for people and freight and heavy reliance on fossil fuelled transport is leading to increased carbon emissions and a decline in environmental quality.

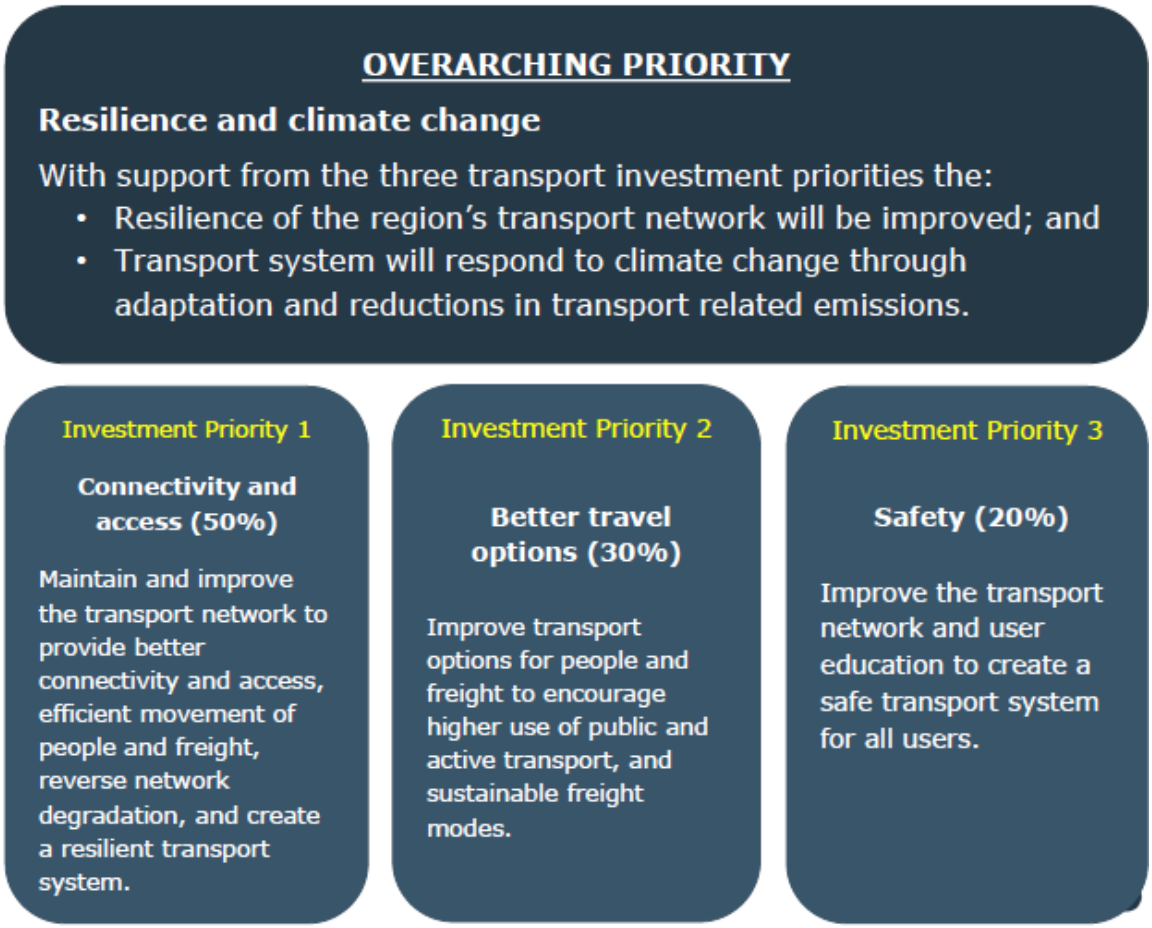
The draft vision is:

- A region that connects central New Zealand and provides resilient, safe, accessible and sustainable transport options.

The objectives are:

- **Travel Choice |** Transport users in the region have access to affordable transport choices that are attractive, viable and encourage multi-modal travel and a reduction in light vehicle kilometres travelled.
- **Connectivity and Efficiency** | The Regional transport network connects central New Zealand and is efficient, reliable and resilient
- **Safety** | The transport network is safe for all users
- **Climate change and resilience** | The transport system is is resilient, minimises climate change through reduction in emissions, and reduces adverse effects from transport on the environment.
- **Network quality and integration** | The transport network is well maintained and integrates with current and planned land use to a level which supports a well functioning and fit for purpose system.

Transport Investment Priorities are shown below



Accelerate 25 Regional Economic Action Plan

In 2015 a Government driven Regional Growth Study was undertaken to identify economic opportunities for the Manawatu-Whanganui Region. 'Distribution and Transport' was identified as a key enabler to unlock potential economic growth. The Study identified access to the rural area for movement of products as being vital, as well as providing access to previously land locked areas, which, when economically viable, will open up new opportunities for the region.

Horizon's One Plan

The One Plan defines how the natural and physical resources of the Region (including fresh air, clean water, productive land and natural ecosystems) will be cared for and managed by the Regional Council in partnership with territorial authorities and the community. Council is required to take account of the One Plan when carrying out maintenance, renewal and capital work in the Transport programme

Local Context

Some of the network challenges include:

- Low usual resident population.
- Tourism peaks
- High percentage of lower socio-economic residents
- Difficult conditions of soft soils, hilly terrain, high rainfall.
- Ageing, speed and weight restricted bridge structures
- Narrow roads with restricted visibility

- Roads with high personal risk due to geographic features such as hilly terrain
- Spine road networks limiting access if access is affected on spine roads

Long-Term Plan

The Plan sets out an agreed vision and Council outcomes for Ruapehu District. The framework of this plan is in line with the requirements of the Local Government Act 2002 (LGA 2002).

Annual Plan

The works identified in the AMP should automatically become the basis on which future Long Term and Annual plans are prepared.

District Plan

This core document incorporates policies and objectives for land use in Ruapehu District, and designations for future works incorporated in the AM Plan.

The current District Plan became operative in its entirety on 24 December 2014.

Asset Management Policy

Articulates the principles, requirements and responsibilities for the on-going management of Council's assets, so that Council services meet community expectations in relation to timeliness, quality and value for money now and in the future.

Community Well-being Framework

Council's Wellbeing Framework is guided by the pillars of Te Tiriti o Waitangi and Strong Leadership, Advocacy and Financial Stewardship.

The Outcomes are:

Community	• our infrastructure assets and services are resilient and fit for purpose
Community	• our communities are thriving and enabled to pursue their aspirations
Community	• our businesses are prosperous and connected to their community
Community	• our natural and built environment is healthy, safe and strong
Organisation	• diverse, positive and engaged workforce that values people, teamwork and continuous improvement while serving our communities

Land Transport activities contribute to the following Outcomes:

- our infrastructure assets and services are resilient and fit for purpose
- our natural and built environment is healthy, safe and strong
- our communities are thriving and enabled to pursue their aspirations

The Council Activities works and programmes are derived from the priorities that Council identified during the development of its Strategic Plans with its community.

B02.5 Engaging Our Customers, Partners and Stakeholders

The LGA 2002 requires Council to consult with affected and interested parties in making decisions. As a leader in the community, Council acts on behalf of the diverse "communities of interest" within the District, and works with residents and ratepayers so that they can confidently participate in local decision-making.

The following table lists the main customers (who benefit from the investment), partners (who share in the costs and benefits) and stakeholders (who help our planning efforts) who are affected by this business case:

TABLE B-2: CUSTOMERS, PARTNERS AND STAKEHOLDERS

Customer/ Partner	External Stakeholders	Internal Stakeholders

● Local iwi
● Citizens and ratepayers, tenants, visitors to the District, local community groups
● Road users including:
  o Motorists – private and commercial cars, vans, trucks and motorcycles
  o Cyclists
  o Pedestrians.
● Disabled users, including wheelchair and mobility scooter users
● Recreational users, including runners and skaters, trail cyclists
● Customers of cafes, restaurants and bars with outdoor seating
● Visitors to the District
● New Zealand Transport Agency (funding department)
	● Local Government NZ
	● Waha Kotahi NZ Transport Agency (highways department)
	● Department of Conservation
	● New Zealand Police
	● Office of the Auditor General
	● Ministry of Civil Defence and Emergency Management
	● Ministry for the Environment
	● Horizons Regional Council
	● Ruapehu Alpine Lifts
	● Automobile groups
	● New Zealand Historic Places Trust
	● Iwi
	● Environmental groups
	● Service utility providers
	● Consultants and contractors
	● Community Groups
	● Federated Farmers
	● Forest Owners Association
		● Councillors and Management Team
		● Community Boards
		● Land Transport Team
		● Corporate, Finance and Planning Team
		● Solid Waste, Stormwater, Wastewater and Water Supply Team
		● Community Development Team
		● Recreation and Community Facilities Team.
		● IT Manager
		● Customer Services Team.

Council engages with the public in a number of forums and ways.

B02.5.1 Long Term Plan Pre Engagement – "What's Important to you?"

Before developing the new ten-year plan, Council asked the community to share their thoughts on the key priorities to focus on, asking the community what was important to them. They received 3,584 responses, highlighting the appreciation for Ruapehu's safe, community-focused environment, alongside concerns about healthcare access, housing costs, job availability, and living expenses.

Respondents answered several questions.

Q1. What does community wellbeing look like to you?

- Road maintenance: gravel road improvement, pothole fixes
- Quality: A want for high-quality road infrastructure.
- Accessibility: Concerns about the accessibility of roads
- Safety: A strong emphasis on roading safety
- Environmental Sustainability: recognition of the importance to have environmentally sustainable practices in road management.
- Road upgrades: improvement of existing roading network

Q2. What do you love about the Ruapehu District?

- Road safety: impacts on local businesses, concerns relating to people stopping in unsafe areas.
- Quality: perceived lack of maintenance

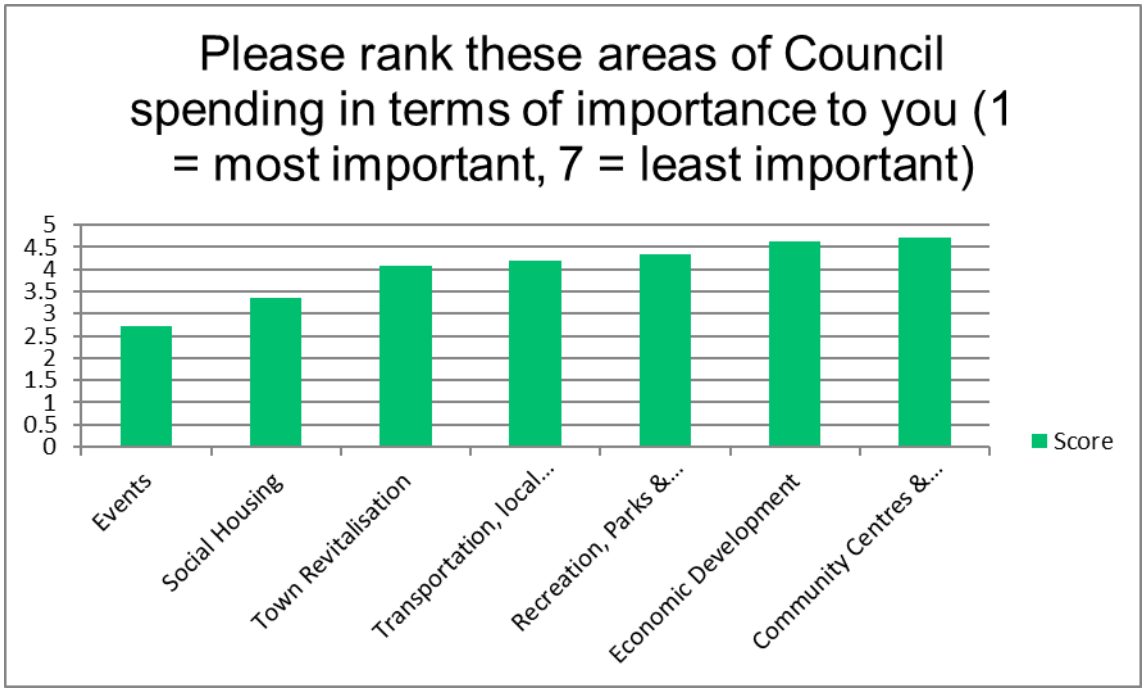
Q3. What are the main challenges that you and your whanau face living in the Ruapehu District?

- Poor road maintenance: Concern about level of maintenance.
- Traffic safety: Need to improve traffic safety.
- Lack of investment in roading infrastructure: Concerns around lack of investment in roading infrastructure.
- Safety: improve safety in areas prone to hazards or high volumes of traffic

Q4. What is something that would improve your quality of life in the Ruapehu District?

- Road Upgrades: Improve existing road networks.
- Road maintenance: Fixing of potholes, improve gravel roads, main street Taumarunui condition

Q6. Please rank these areas of Council spending in terms of importance to you (1 = most important, 7 = least important)Ranking



Analysis

The Activity Management Plan aligns with the issues that are important to the community.

While not of the highest importance, transport spending is shown as being important to the community. The middle ranking could reflect that it is well developed and fairly stable. It is part of the fabric of life.

The formal consultation period will be in the first half of 2024.

A full summary of the Long Term Plan engagement process can be found in the final LTP.

B02.5.2 River Valley Meetings

Three River Valley Community Engagement meetings are held per year, rotating around ten valleys in a three yearly cycle. After a break during the Covid period, they were restarted in 2023. The meetings provide an opportunity for locals to meet roading staff and hear their issues and safety concerns in their valley to inform the Low cost low risk safety improvement programme.

Meetings were held in Kirikau and Ngakonui Valleys in October. Issues raised included blind corners, drainage issues, dropouts, vehicle speeds, rubbish and efficiencies with physical work.

B02.5.3 Resident Customer Satisfaction Survey

Council carries out a three yearly Customer Satisfaction Survey as a means of measuring its effectiveness in representing the wishes and viewpoints of its residents.

Respondents rate their satisfaction with footpaths and with the maintenance of urban and rural roads.

TABLE B-3: 2022 CUSTOMER SURVEY RESULTS

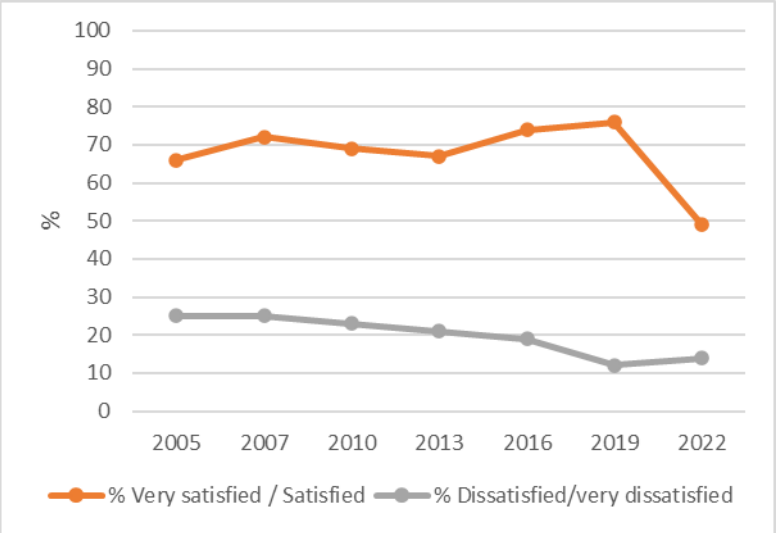
Column %	Maintenance of urban streets	Maintenance of rural roads	Footpaths
1: Very dissatisfied	12%	19%	6%
2: Dissatisfied	14%	24%	8%
3: Neutral	33%	24%	29%
4: Satisfied	24%	20%	34%
5: Very satisfied	11%	10%	15%
Don’t know	6%	3%	8%

The question was changed in the latest survey to rate the maintenance of ***urban*** and ***rural*** street. Prior to this (2010 – 2021), the survey asked about the maintenance of ***sealed*** and ***unsealed*** roads, so the road results are not comparable from year to year.

In 2022, 35% of respondents were satisfied or very satisfied with urban streets, with most complaints being around poor or irregular maintenance, potholes and substandard repairs. 30% of respondents were satisfied or very satisfied with rural roads, with complaints also being around poor or irregular maintenance, needing regular grading, potholes, slips and contractors needing monitoring.

The footpath results are comparable year on year and are shown below.

FIGURE B.2: NRB CUSTOMER SURVEY RESULTS - FOOTPATH MAINTENANCE



A large drop off occurred in satisfaction, with almost 80% of the dissatisfaction in footpaths being around

- Lack of maintenance/need weeding
- No footpaths/safety issue
- Not enough footpaths/need footpaths on both sides of the road

Survey results and findings are discussed further in Section C04 Levels of Service.

B02.5.4 Level of Service Survey

Council began an annual survey in 2012/13 to ask 'How satisfied are you with District Roads (excluding State highways)?". The survey targets visitors or users of Council services. It is attached to letters that Council sent to customers (eg dog registrations), available in hard copy at Council offices and a link included in emails.

The results are shown below.

TABLE B-4: LEVEL OF SERVICE SURVEY RESULTS 2012 - 2020

Year	No of Responses	Satisfied / Very Satisfied	Neutral	Unsatisfied	N/A
2012/13	133	57.9%	16.5%	25.6%	
2013/14	518	57%	21.6%	21.4%	
2014/15	160	50%	23.8%	26.3%	
2015/16	401	71.1%	Not reported	28.2%	0.7%
2016/17	167	70.1%	Not reported	29.9%	
2017/18	98	65.30%	Not reported	34.70%	
2018/19	247	78.14%	Not reported	17.41%	4.45%
2019/20	143	75%	Not reported	16%	9%

In 2020, the survey questions were changed to split sealed and unsealed road responses. The results are shown below.

TABLE B-5: LEVEL OF SERVICE SATISFACTION WITH SEALED ROADS SURVEY RESULTS 2020 - 2023

Year	No of Responses	Satisfied / Very Satisfied	Unsatisfied	N/A
2020/21	106	66.04%	33.02%	0.94%
2021/22	123	65.04%	32.52%	2.44%
2022/23	246	53.26%	45.12%	1.63%

TABLE B-6: LEVEL OF SERVICE SATISFACTION WITH UNSEALED ROADS SURVEY RESULTS 2020 - 2023

Year	No of Responses	Satisfied / Very Satisfied	Unsatisfied	N/A
2020/21	102	50%	27.45%	22.55%
2021/22	122	53.28%	36.07%	10.66%
2022/23	239	47.7%	40.17%	12.13%

Results are consistent for both road surfaces but have dropped from the results of 2020. The survey does not enquire about reasons for the responses, making analysis difficult.

It is expected that there will always be a certain level of dis-satisfaction but Council would not like to see the trend rise.

B02.6 Strategic Assessment

This Strategic Assessment section defines:

- The key issues facing the District (the ***Problem*** statements)
- How we plan to ***respond*** to the problems
- The ***consequences*** of not addressing the problems
- The ***benefits*** that would result from solving the problems.
- Status of the existing ***evidence base*** as a means of assessing the robustness of the problems and benefits from current information and stakeholder knowledge
- ***Performance measures*** that will be used to judge how an investment has contributed to the benefits of solving or realizing an opportunity identified in the strategic case

B02.6.1 Key Issues facing the District (the Problem Statements)

A facilitated Investment Logic Mapping workshop was held in November 2016 to identify and consider the key issues and problems in the District. Stakeholders represented Councillors (Mayor and Deputy Mayor), NZ Police, NZ Transport Agency (Safety Manager), Road contractors, consultants, Land Transport business unit staff and Council accountant. This was reviewed first as a desktop exercise in 2020 and again in 2023, with the outcome being that the statements are still fit for purpose and relevant to the network issues.

The key issues and problems relating to the management of the transport activities are as follows:

1. Forestry and Land Use

- Changing land use (ie forestry) is **resulting** in and will **increase** the deterioration of the network, causing increased reactive (unplanned works to maintain the roading environment) maintenance and repair cost.

2. Needs and Expectations

- The needs and expectations of road users (local, freight, events, tourists) is **resulting** in **increased investment** to maintain and / or improve the form and function of the road network

3. Climate Change (formerly Climate, topography and geology)

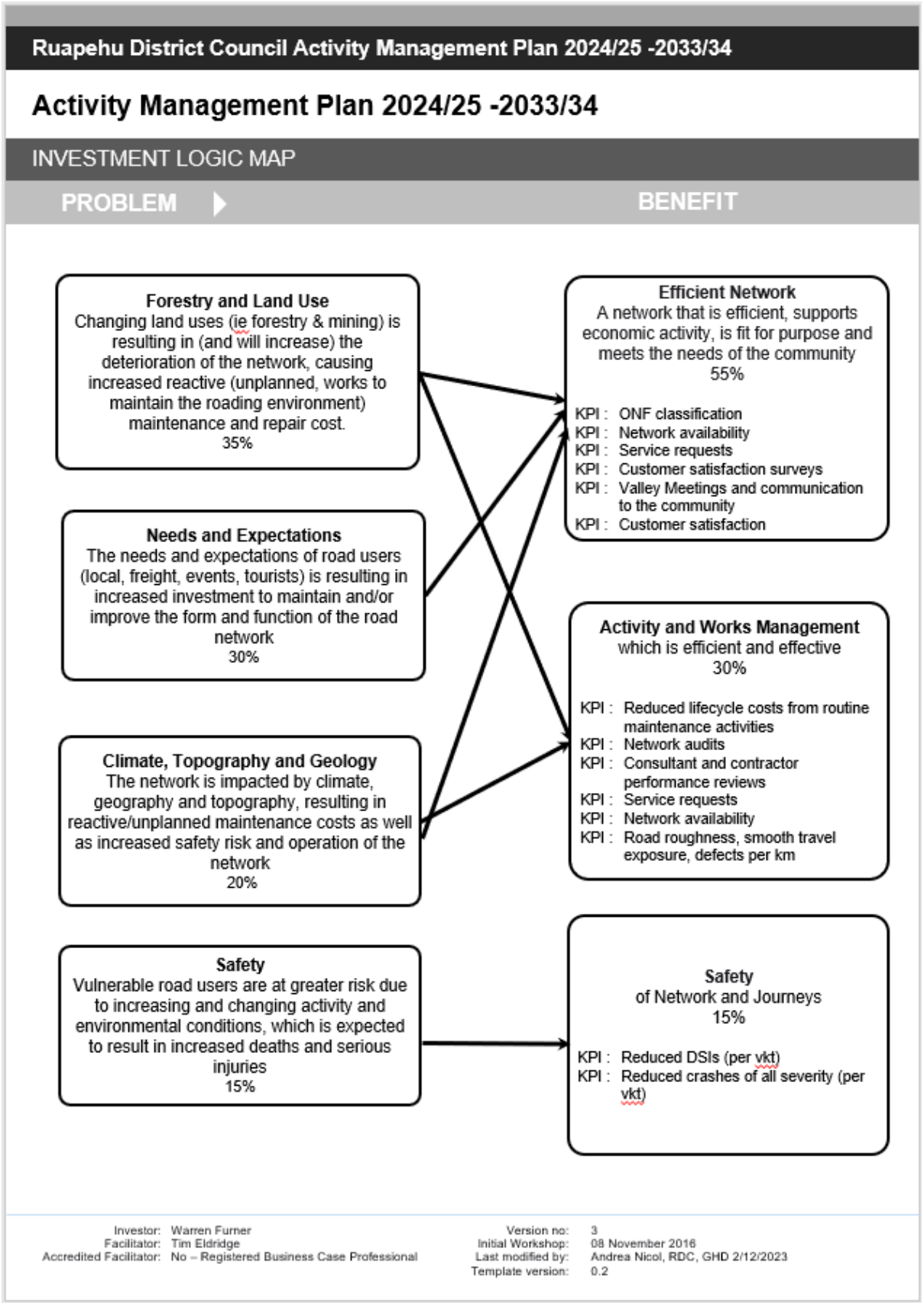
- Network is impacted by climate, geography and topography, **resulting** in reactive / unplanned maitenance costs as well as **increased** safety risk and operation of the network

4. Safety

- Vulnerable road users are at greater risk due to increeasing and changing activity and environmental conditions. Expected to result in **increased** deaths and serious injuries

The problem statements and the benefits of solving the problems are shown in more detail in the investment logic map below.

FIGURE B.3: INVESTMENT LOGIC MAP



B02.6.2 How We Plan to Respond

The investment objectives Land Transport wants to achieve are:-

- Providing **sustainable** and **resilient** infrastructure
- Managing the network with a strong focus on **safety**
- Providing an **affordable** transportation network that meets the reasonable needs of the wider community
- Maintaining the network so that **service capacity** and integrity is not reduced

From that, the following strategic responses have been developed to drive change:-

- Focus on key routes
- Advocacy and Relationships
- Value for money
- Network safety and resilience – planning and targeted improvements
- Maintain level of service capacity
- Targeted Improvements for active modes (eg Walking, cycling, mobility, micro-mobility)

B02.6.3 Alignment of Problems with Strategic Objectives

	Local	Regional	National	
Problem Statement	**Land Transport Investment Objectives**	**Regional Problems**	**ONRC Customer Outcomes**	**Draft GPS 2024 – Strategic Priorities**
Changing Land Use such as Forestry and Mining is resulting in, and will increase, the deterioration of the network, causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair cost.	Providing an **affordable** transportation network that meets the reasonable needs of the wider community Managing the network with a strong focus on **safety** Maintaining the network so that **service capacity** and integrity is not reduced	**Infrastructure:** Ageing infrastructure, sub-optimal maintenance and renewals, network inefficiencies and land use conflicts are leading to a degraded transport network with less effective transport routes.	**Accessibility** Providing a transportation network that allows land use access and network connectivity	**Integrated freight system** **Maintaining and operating the system:** investments in maintenance renewals and replacements support base asset condition
Needs and expectations of road users (local, freight, events, tourists) are resulting in increased investment to maintain and/or improve the form and function of the road network, Increasing demand for limited resources	Providing an **affordable** transportation network that meets the reasonable needs of the wider community Managing the network with a strong focus on **safety** Maintaining the network so that **service capacity** and integrity is not reduced	**Infrastructure** **Transport choices**: A lack of transport choices for people and freight and heavy reliance on fossil fuelled transport is leading to increased carbon emissions and a decline in environmental quality.	**Safety** Maintaining roads in such a way as to ensure that people feel safe driving them **Amenity** Providing travel quality and comfort to road user **Accessibility** Providing a transportation network that allows land use access and network connectivity	**Sustainable regional development** **Maintaining and operating the system**
Network is impacted by climate, topography and geology: resulting in reactive/unplanned maintenance costs as well as increased safety risk	Managing the network with a strong focus on **safety** Providing an **affordable** transportation network that meets the	**Infrastructure** **Climate change and resilience:** Impacts from climate change and natural hazards are leading to a less resilient network with	**Mobility - Resilience** Limiting disruption to traffic affected by unplanned events and the impacts of closures that occur	**Increasing resilience:** existing infrastructure will have increased adaptive capacity

	Local	Regional	National	
Problem Statement	**Land Transport Investment Objectives**	**Regional Problems**	**ONRC Customer Outcomes**	**Draft GPS 2024 – Strategic Priorities**
and operation of the network.	reasonable needs of the wider community Maintaining the network so that **service capacity** and integrity is not reduced	increasing vulnerability and costs, and decreased reliability.		
Safety of road users: vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which are expected to result in increased deaths and serious injuries.	Managing the network with a strong focus on **safety** Providing an **affordable** transportation network that meets the reasonable needs of the wider community	**Infrastructure** **Safety:** Increasing conflict between competing modes, poor user behaviour and inadequate infrastructure is leading to deaths and serious injuries.	**Safety** How road users experience the safety of the road	**Safety:** the system is on track to achieve the Road to Zero targets

B02.6.4 Benefits of Investing

The benefits of addressing the key issues are to have:

- A network that is efficient, supports economic activity, is fit for purpose and meets the needs of the community.
- Activity and works management which is efficient and effective
- Safe network and safe journeys

The performance measures (also known as key performance indicators KPIs) quantify the benefits of investment and are used to judge how an investment has contributed to the benefits of solving or realizing an opportunity identified in the strategic case. Performance measures identified are listed below and explored in further detail in – Levels of Service (LoS) We Provide (Section C04)

Council uses measures that align with their Community Outcomes, along with Te Ringa Maimoa ONRC measures, Waka Kotahi's Benefit Framework and Department of Internal Affairs mandatory measures. Alignment of the benefits and Investment Objectives are shown in the table below.

TABLE B-7 BENEFITS OF INVESTMENT

Problem	Investment Objective	Benefits of Investing (Waka Kotahi Investment Framework)	Performance Measures	Key Strategic Response
Forestry and Land Use Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	Managing the network with a strong focus on safety	Benefit 1.1: Reduced social cost of deaths and serious injuries The impact of reducing the number of deaths and serious injuries (DSIs) on all land transport modes and their social costs.	BF 1.1.1 (ONRC Safety CO2): Collective Risk BF 1.1.2: Crashes by severity BF 1.1.3: Deaths and serious injuries BF 1.1.4 (ONRC Safety CO3): Personal risk	Network safety and resilience – planning and targeted improvements • Continue Low Cost Low risk safety programme for targeted improvements • River Valley meetings to identify locals' safety concerns
	Maintain network so that service capacity and integrity is not reduced	10.1 Impact on user experience of the land transport system	BF 10.1.15 Percentage travel on road network classified as smooth as per defined level of service ONRC Amenity CO2: Peak Roughness ONRC Amenity TO1: Roughness of the road (median and average)	Maintain level of service capacity • Continue pavement investment to provide the current level of service • Continue Pavement renewal programme and address minor alignment issues, widening and corner widening in conjunction • Update RDC's 2006 forest planting survey
	Providing an affordable transportation network that meets the reasonable needs of the wider community	10.1 Impact on user experience of the land transport system	BF 10.1.15 Percentage travel on road network classified as smooth as per defined level of service ONRC Amenity CO2: Peak Roughness ONRC Amenity TO1: Roughness of the road (median and average)	Key Routes • Prioritisation of heavy maintenance and renewal on forest plantation cartage roads, ideally following the initiation of the forestry activity. This removes the risk that investment is made and then a change occurs to the use of the forestry route. Advocacy and relationships • Advocacy role with private and commercial forest owners to identify harvest plans and ages of forests, and projected traffic loadings on local roads • Liaise with the Ministry of Primary Industries and the Forest Owners Group. • District and Regional plans - when they are reviewed, take opportunity to get more

Problem	Investment Objective	Benefits of Investing (Waka Kotahi Investment Framework)	Performance Measures	Key Strategic Response
				controls eg resource consent to limit time period harvests can be undertaken Value for Money • On low volume unsealed roads, work with forest owners for maintenance and targeted improvements for harvest period prep, duration and completion.
Needs and Expectations The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Maintain network so that service capacity and integrity is not reduced	Benefit 10.1: Improved user experience of the transport system	BF 10.1.5 (ONRC Amenity CO1): Smooth Travel Exposure (STE) ONRC Amenity CO2: Peak Roughness ONRC Amenity TO1: Roughness of the road (median and average) Number of weight and speed restricted bridges	Network safety and resilience – planning and targeted improvements Network and Asset Management • Continue Low Cost Low risk programme to address minor safety issues • River Valley meetings to identify locals' safety concerns Maintain level of service capacity Pavement Programme • Continue investment to provide the current level of service • Continue Pavement renewal programme and address minor alignment issues, widening and corner widening in conjunction • Continue existing road maintenance and renewal programme
	Providing an affordable transportation network that meets the reasonable needs of the wider community	Benefit 10.1: Improved user experience of the transport system	Customer Satisfaction surveys Service Request numbers ONRC Resilience CO1: No. of journeys impacted by Closure ONRC Resilience CO2: The number of instances where road access is lost	Targeted improvements on active modes • Footpath Development and Renewal Policy lays out criteria for assessing new footpath requirements Advocacy & Relationships • Work with the community (for example through the River Valley Engagement meetings) to prioritise spending such as from the minor improvement funds from Waka Kotahi and better targeted renewals • Advocacy role with ski operators for more comfortable spread of peak traffic flows.

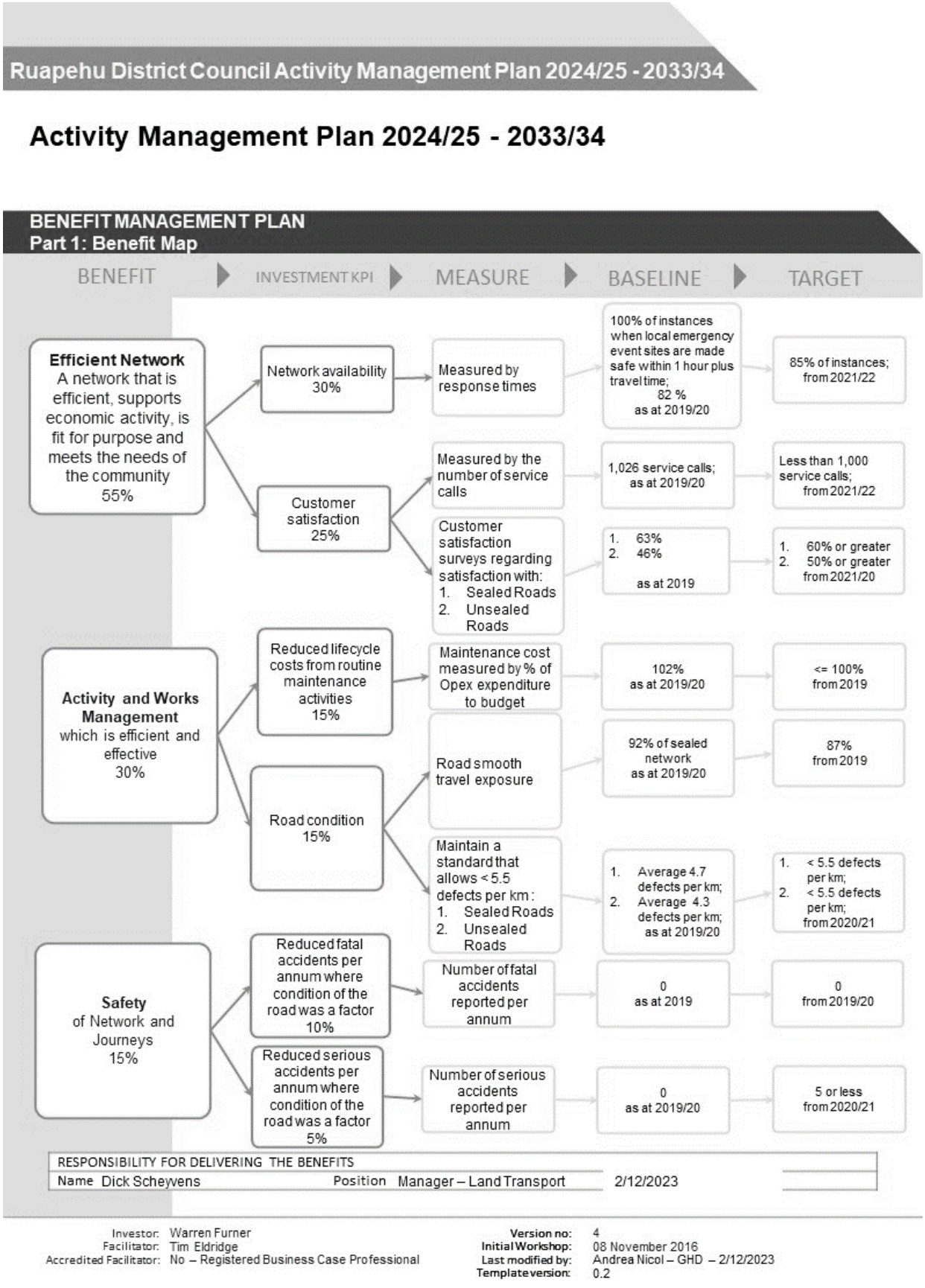
Problem	Investment Objective	Benefits of Investing (Waka Kotahi Investment Framework)	Performance Measures	Key Strategic Response
			ONRC Accessibility CO1: Proportion of Network not available to Heavy Vehicles ONRC Cost Efficiency 1: Pavement Rehabilitation ONRC Cost Efficiency 1: Chipseal Resurfacing ONRC Cost Efficiency 3: Asphalt Resurfacing ONRC Cost Efficiency 4: Unsealed Road Metaling ONRC Cost Efficiency 10: Maintenance costs DIA PM4: Network condition - footpaths	Improved road geometry and technical design to improve performance of the road for passenger service vehicles. Minor improvements to relieve known congestion points caused by loss of traction in winter driving conditions, snow and ice • Develop partnerships with the community and developers Network safety and resilience – planning and targeted improvement Structures • Address bridge widening where necessary in conjunction with bridge renewal work • Unsubsidised seal extension programme
Climate, topography and geology The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	Providing sustainable and resilient infrastructure	Benefit 4.1: Reduced impact on system vulnerabilities and redundancies	ONRC Resilience CO1: No. of journeys impacted by Closure ONRC Resilience CO2: The number of instances where road access is lost	Network safety and resilience – planning and targeted improvements • Targeted water channel renewal programme • Continue to use appropriate rainfall forecast data for culvert size calculations • High Intensity Rainfall Design System (HIRDS) developed by NIWA which incorporates climate change projection information based on IPCC scenarios. • Main features of New Zealand climate change projections for 2090 (Ministry for the Environment, 2008) • Ensure new bridges are designed to accommodate appropriate climate change impacts. • Have subcontractor presence around network for resilience response

Problem	Investment Objective	Benefits of Investing (Waka Kotahi Investment Framework)	Performance Measures	Key Strategic Response
				• Maintain permanent flood hazard signs in flood hazard areas • Hazardous tree programme Maintain level of service capacity • Continue table drain cleaning and culvert flushing programme. • Continue culvert replacement programme to address under size culverts • Address scouring as soon as possible • Keep inlets and outlets free of debris Advocacy & Relationships • Hold River Minor Valley meetings to identify hazardous areas and locals' safety concerns • Work with Horizons regarding river channel maintenance Value for Money • Consider adding a climate change factor to the O&M forecast needs of the road network over the next 30 years (for example +0.5% factor per annum)
Safety Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Managing the network with a strong focus on safety	Benefit 1.1: Reduced social cost of deaths and serious injuries	BF 1.1.1 (ONRC Safety CO2): Collective Risk BF 1.1.2: Crashes by severity BF 1.1.3: Deaths and serious injuries BF 1.1.4 (ONRC Safety CO3): Personal risk ONRC Accessibility TO1: The number of instances where the road is not marked in	Maintain level of service capacity • Continue pavement renewal programme • Continue low cost, low risk minor safety programme Network safety and resilience – planning and targeted improvements • Continue network audits and inspections • Continue Road Safety Audits for capital works as appropriate • Continue to investigate serious and fatal crashes with respect to road conditions • Continue to ensure road hazards are appropriately signed

Problem	Investment Objective	Benefits of Investing (Waka Kotahi Investment Framework)	Performance Measures	Key Strategic Response
			accordance with national standards	• Investigate safe and appropriate speed limits for high risk routes • Stop / Give Way controls at Intersection evaluations Walking and Cycling • Additional signage on cycling tourism routes
				Targeted improvements on active modes • Advocate on behalf of vulnerable users for state highway works • Hold River Minor Valley meetings to identify hazardous areas and locals' safety concerns
				Advocacy and relationships • Continue to work with Ruapehu Road Safety Action Plan joint effort between organisations with a road safety responsibility, such as Horizons and NZ Police.

The Benefits Management Plan is shown below. Further Key Performance Indicator information can be found in - Levels of Service (LoS) We Provide (Section C04).

FIGURE B.4: BENEFITS MANAGEMENT PLAN



The benefits of investing, consequences of not investing and strategic responses are detailed further in the individual problem sections below.

B02.7 Problem 1 – Forestry and Land Use

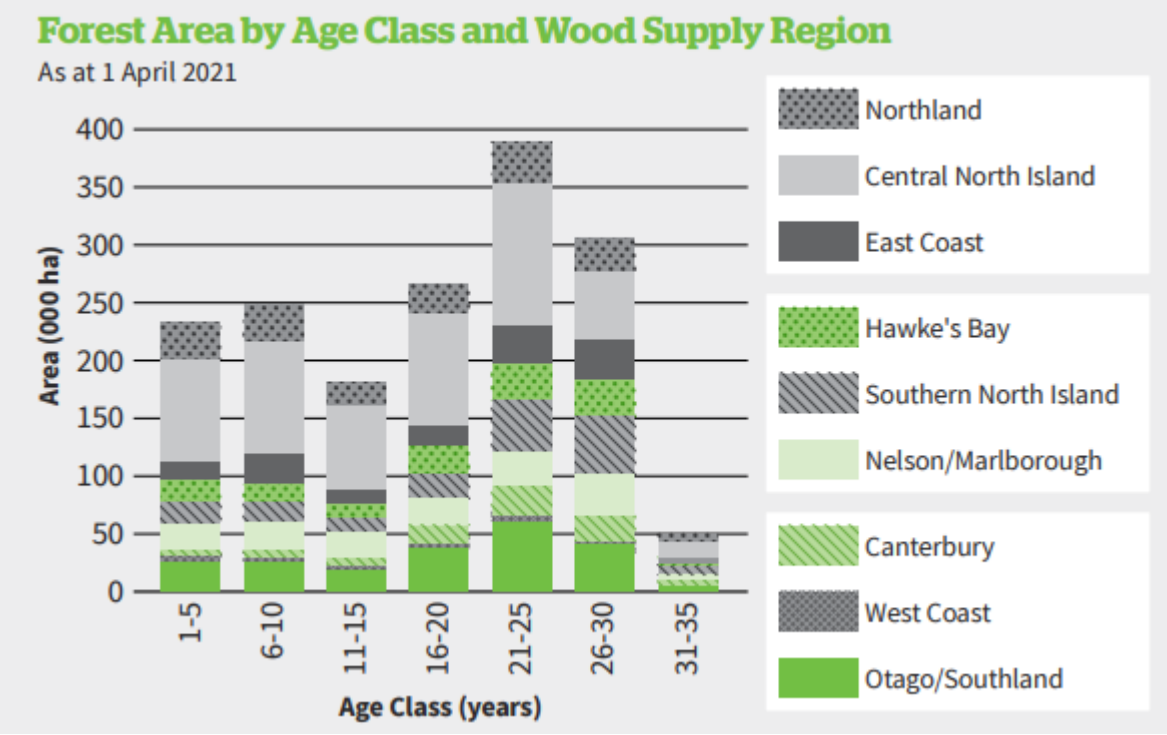
Definition | Increased forestry activity is resulting in (and will increase) the deterioration of the network, causing increased reactive (unplanned works to maintain the roading environment) maintenance and repair cost.

B02.7.1 Evidence

This section provides the background and evidence to support that scope and scale of the problem.

Central North Island has the largest wood supply area in New Zealand. (https://www.canopy.govt.nz/forestry-data-research/forestry-distribution) Commercial and farm forestry is present throughout much of the District, with many of the plantations based at the network's extreme edges. The distribution is split between plantation and private forests.

FIGURE B.5: FOREST AREA BY AGE CLASS WOOD SUPPLY REGION – NZ FOREST OWNERS ASSOCIATION



Harvesting has been underway for a number of years and is set to continue throughout this AMP period. NZ Forest Owners Association reports in 2021-22 that the approximate harvest age of pinus radiata is 28.7 years over the past five years. The net stoked area by age class graph shows at April 1 2021, 21-25 year old forests make up the largest age class in NZ. In Ruapehu District, 53,704 ha of forest exists as at 1 April 2022, with an area weighted average age of 18.2 years (Ministry of Primary Industries, December 2022, National Exotic Forest Description as at 1 April 2022 (NEFD), https://www.mpi.govt.nz/dmsdocument/55996/direct)

Forest harvests affect roads by their weight and frequency compared with other traffic.

A harvest can increase truck movements by roughly 30 logging loads per hectare. Harvests usually take place over a short period of time. Sustained loading in a short time frame has a large detrimental effect on roads that are typically low volume and do not have the pavement depth to accommodate this.

Metal roads are more susceptible to damage in winter months so harvesting in this period is not ideal for maintenance. However, harvesting can be reactive to log pricing, triggering winter harvesting for one off lots. Plantation forests have more capacity to time summer harvesting. In 2022, the NEFD reports that 95%, of owners owned between 40 and 999 hectares of forest and 5% owned 1,000 hectares or more. This 5% accounts for 70% of the total exotic plantation forest estate in New Zealand. The report acknowledges it is difficult to estimate the number of owners with less than 40 hectares, but that it is likely to be over 10,000 in New Zealand. These are likely to be the farm forestry lots. It is not possible to gain specific figures for Ruapehu District, but Council is aware that farm lots make up a not insignificant amount of forestry in the District. As farm forestry is typically placed on unproductive land, it tends to be at the extremities of the network, serviced by low volume, metal roads.

Freight and haulage associated with servicing sheep and beef and dairy farming is less frequent and the network is more able to recover.

The main roads that are being directly impacted by forestry are shown below. They are a mix of sealed and unsealed, high and low volume.

FIGURE B.6: ROADS AFFECTED BY FORESTRY

Sum of Length (km)	Rural			Urban			
	Peri-urban Roads	Rural Roads	Rural Total	Local Streets	Urban Connectors	Urban Total	Grand Total
KURURAU ROAD		26.058	26.058	0.474	1.122	1.596	27.654
MANGAPAPA ROAD		10.736	10.736				10.736
MIDDLE ROAD		13.34	13.34				13.34
NGAKONUI ONGARUE ROAD		29.174	29.174				29.174
OIO ROAD		43.175	43.175				43.175
OKAUAKA ROAD		6.304	6.304				6.304
ONGARUE BACK ROAD		20.153	20.153				20.153
ONGARUE STREAM ROAD		20.151	20.151				20.151
ONGARUE WAIMIHA ROAD		18.001	18.001				18.001
PIPIRIKI RAETIHI ROAD	0.923	24.684	25.607				25.607
PORO O TARAO ROAD		9.332	9.332				9.332
UEPANGO ROAD		5.744	5.744				5.744
WAITAANGA ROAD		24.032	24.032				24.032
WHANGANUI RIVER ROAD		0.245	0.245				0.245
Grand Total	**0.923**	**251.129**	**252.052**	**0.474**	**1.122**	**1.596**	**253.648**

The highlighted roads are inter District roads. Some carry freight that has not been generated within the District.

This length is approximately 19% of the network total.

Carbon Farming

Carbon farming is seeing an increase in the District. At this point, it is difficult to measure the number of conversions. Local knowledge identifies many have taken place. This is more

likely to affect the needs and expectations (Problem 2) of ratepayers than reduce heavy haulage, if farm land is being converted, rather than existing forestry lots.

Effect on budgets

The recent retendering of our Road Maintenance contract allowed Council to examine the schedule quantities needed and work methodologies to achieve the current levels of service. Part of this is in relation to heavy traffic use. Sealed and unsealed maintenance work needs to increase, metal and seal renewal work also needs to be increased to be able to meet the current level of service work.

B02.7.2 Asset Impacts

Pavements and surfacing:

Sealed roads

- Increased repetitive loading resulting in defects and poor performance.
- Ruapehu lacks data on pavement depth for a large part of the sealed network. We know that many roads were sealed 'as is' as part of government seal extension grants. Test pits carried out on roads prior to rehabilitation have generally found 100mm of pavement depth on top of natural ground.
- **Example: Ongarue-Waimiha Road and Poro-O-Tarao Road**
    - This is a sealed route leading out of the District. Manulife Forest Management began harvesting their Ongarue blocks in 2015, with a 13 year harvest plan. No winter harvesting has been carried out. Forecast truck movements were for 2,112,301 tonnes to come out over the 13 year period with up to 478,410 tonnes/year. It should be noted that Manulife is only one of three fores owners harvesting in this area.
    - NZ Transport Agency Technical Audit carried out in February 2017 found "there is some evidence however that tight budgets are resulting in tension between asset management and safety activities in some instances. For example Ongarue Waimiha Road had a number of serious surface defects posing a road safety risk which were generally accepted, due to planned asset management activities extending as far as 2021/22". The next Audit took place in September 2023 and we are awaiting the final report. However, we have pavement repairs within the District that have been deferred due to the need to focus the budget on reseal sites.
    - We responded by prioritising this route for pavement rehabilitation above others. Since 2016, we have carried out 22.03km length of works at a cost of $8,024,000 in rehabilitation work. We increased pavement depth up to 400mm in places due to heavy traffic, which increased our costs by $40,000 per km. That is 80% of the route.
- **Example: Pipiriki Raetihi Road seal defects**
    - This is a sealed route with a perpetual forest, i.e. an ongoing 25 year harvest cycle.
    - Seal repairs completed in 2017-2023 totalled $364,000

Unsealed roads

- Increase in metalling and grading required when forestry harvests are carried out. Soft spots, corrugations are frequent.

- Farm forestry tends to be on these roads and carried out year round, increasing damage
- Slash can wash into culverts causing damage
- **Example: Waitaanga Road**
    - Waitaanga Road is a metal road connecting Ruapehu and New Plymouth Districts. It is used for logging traffic to cart out of the Ruapehu district. Ongoing harvesting on Waitaanga Road has seen unsealed pavement digouts frequently undertaken to address soft spots with $121,800 in 2016/17, $134,400 in 2017/18, $9,400 (2018/19), $32,600 (2019/20) and $30,035 (2022-23) with an aggregate supply value of $226,700. This road requires frequent grading to address corrugations.
- **Example: Waikaka Road 2019/20**
    - Three small farm forestry blocks (17Ha, 34Ha and 53Ha) harvested over a 10km stretch of road during July, August and September 2019. The first, smallest block resulted in a lot of slash, which washed down and blocked a culvert during two lots of heavy rain. Culvert had to be unblocked twice. The inlet was damaged while locating it and the saturated fill scoured away resulting in the culvert and road formation needing to be replaced. Maintenance metalling of 447t was carried out in March. This would typically only be repeated every 4 to 5 years. Following onset of logging, soft spot metalling was required in August, heavy metalling in September and top up in December, making an additional 1512t of metal being applied.
    - Total cost to Council for typical maintenance - $15,800. Cost to Council for all of above $61,100. Of this amount $43,200 was unprogrammed, reactive work needing to be carried out.
    - Council was not advised of this harvest taking place and had no chance to influence logging timeframe.
    - Even if Council were aware of the logging, our District plan allows logging so we would not have been able to influence this, unless the landowner was agreeable to a change. We have no way to recover any costs from the landowner outside of our rating policies.
    - It is noted that some forestry companies will agree to maintain roads at their cost while using them. This relies on Council being aware of upcoming harvests and agreeable forestry companies.
- **Example: Mangaeturoa North Road**,
    - which required grading 8 times over a 9 month period, in comparison with 4 – 5 times on the adjacent metal roads.

Structures

- Increased repetitive loading resulting in increasing strain on bridge structures eg Poro-O-Tarao bridge - Minor repairs and cross bracing April 2017 $11,613 to achieve Class 1 loading, with logging harvest onset subsequently structurally affecting bridge, leading to beam and deck replacement in December 2017 at a cost of $231,779
- Increase in overweight vehicles and permits to use bridges for loads for which they were never designed
- Several weight restricted structures have anecdotally been used to carry loads greater than their weight restriction would allow, such as Mangateitei Rail Overbridge, putting road users, drivers and rail at greater risk.

- A number of currently weight restricted bridges are undergoing assessment for renewal on forest harvest routes

Environmental Services and Emergency Works:

- Vegetation control – increased blade work on forestry routes to ensure clear sight lines.

B02.7.3 Potential Consequences

If the problem is not addressed then some of the following consequences are likely. The severity of the consequence will depend on what level of investment is made to address the problem as well as other factors that might be disconnected specifically from this problem:

- Not meeting Council outcomes:
    - Provide a network that is safe, reliable and endeavour to meet the needs of the users
    - Core infrastructure endeavours to keep pace with changing demand
- Likely to impact on the following ONRC Customer Outcomes:
    - Accessibility: of the transport networks available and network connectivity
    - Amenity: The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment
    - Safety: How users experience the safety of the road
- Increasing cost to maintain the network
- Loss of asset life
- Increasing operating costs for road users
- Increased dissatisfaction from customers due to the condition of the affected roads

B02.7.4 Benefits of Investment

In the ILM exercise it was identified that addressing this problem would contribute to the following benefit areas (as indicated in the ILM diagram above):

- Efficient Network
- Activity and Works Management
- Safety

These benefits are discussed more broadly in the Benefits of Investment section below.

In addition to the formal benefits mentioned above you can also assume that the consequences of not investing, documented above, will be reduced or eliminated.

B02.7.5 Strategic Response

Strategic Response	Strategies to Address
Value for Money	Pavement Programme • Ensure sufficient funding available to react to pavement wear caused by the forestry routes
Key Routes	Pavement Programme • Prioritisation of heavy maintenance and renewal on forest plantation cartage roads, ideally following the initiation of the forestry activity. This removes the risk that investment is made and then a change occurs to the use of the forestry route. • Targeted unsealed road strengthening on inter regional haul routes

Strategic Response	Strategies to Address
Maintain level of service capacity	Network & Asset Management • Update RDC's 2006 forest planting survey Pavement • Continue pavement investment to provide the current level of service • Continue Pavement renewal programme and address minor alignment issues, widening and corner widening in conjunction
Advocacy & Relationships	Network & Asset Management • Advocacy role with private and commercial forest owners to identify harvest plans and ages of forests, and projected traffic loadings on local roads. • Liaise with the Ministry of Primary Industries and the Forest Owners Group. • District and Regional plans - when they are reviewed, take opportunity to get more controls eg resource consent to limit time period harvests can be undertaken • Work with forest owners to create maintenance and minor improvement funding or physical works agreements for harvest period preparation, duration and completion
Network safety and resilience – planning and targeted improvements	Network & Asset Management • Continue Low Cost Low risk safety programme for targeted improvements • River Valley meetings to identify locals' safety concerns

B02.8 Problem 2 – Needs and Expectations

Definition | The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and / or improve the form and function of the road network.

The community expects Council to:-

- Have a safe, reliable and appropriate road network. The community wants better and safer roads to support local lifestyle and work, and commerce such as tourism, farming and forestry.
- Provide better access for heavy vehicles to improve freight efficiency
- Seal unsealed roads
- Maintain and renew existing footpath and fill in the missing links

The recent retendering of our Road Maintenance contract allowed Council to examine the schedule quantities needed and work methodologies to achieve the current levels of service. This work contributes to have a safe, reliable and appropriate road network. Sealed and unsealed maintenance work needs to increase, metal and seal renewal work also needs to be increased to be able to meet the current level of service work.

B02.8.1 Evidence

This section provides the background and evidence to support that scope and scale of the problem.

B02.8.2 Asset Impacts

Sealed and unsealed Surfaces and Pavements

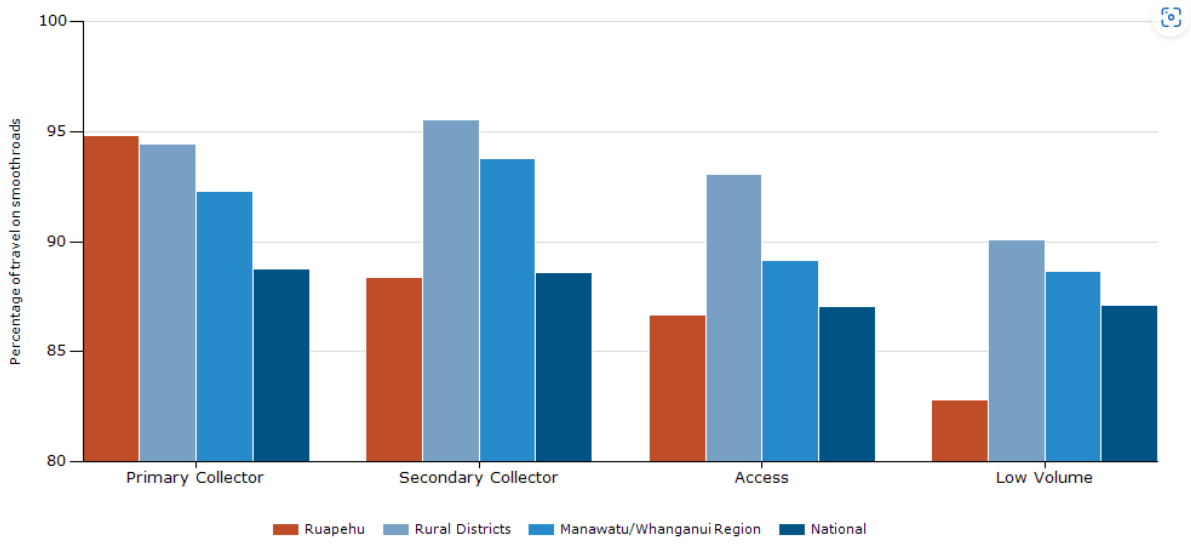
Many of Council's roads are narrow and windy and are shared by mixed modes

TABLE B-8: TREATMENT LENGTH LENGTH(KM) IN WIDTH BANDS

Treatment Length	Treatment Length Width (km)			
	<4m	4<=x<6	>= 6m	% < 6 m
Sealed Roads	14.3	249.8	232.3	53%
Unsealed Roads	491.6	357.3	6.0	99%
Total	**505.9**	**607.1**	**238.8**	82%

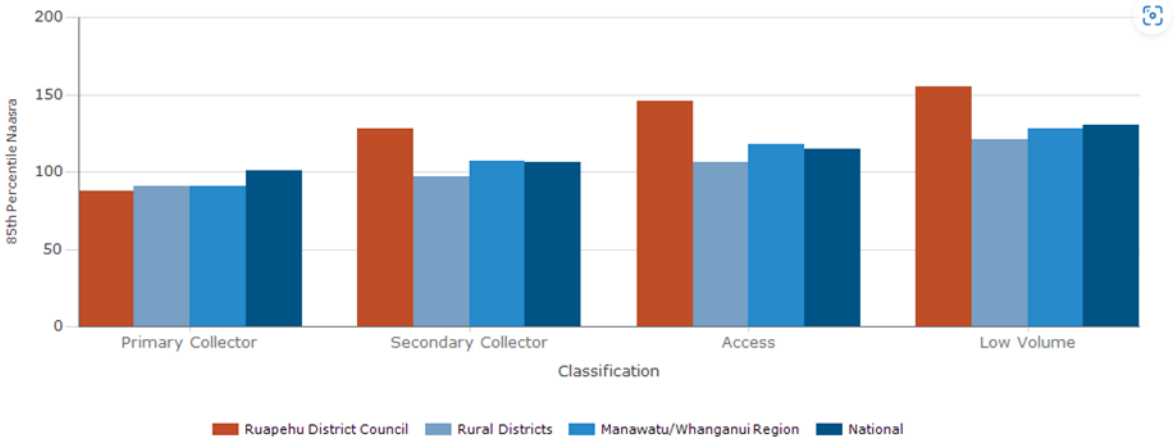
The following unmet customer needs have been identified

- Network restrictions exist, with 8 roads having length restrictions, meaning trucks can't use trailers.
- 2022 Customer survey footpath results show low results on urban (35%) and rural (30%) road maintenance satisfaction. Although this is unable to be compared to previous results, which were measured on sealed and unsealed road maintenance, the responses were higher for those years.
- Roads are rough:-
    - STE – targets have been achieved overall, but the breakdown into ONRC classifications reveal that only primary collectors are performing well.



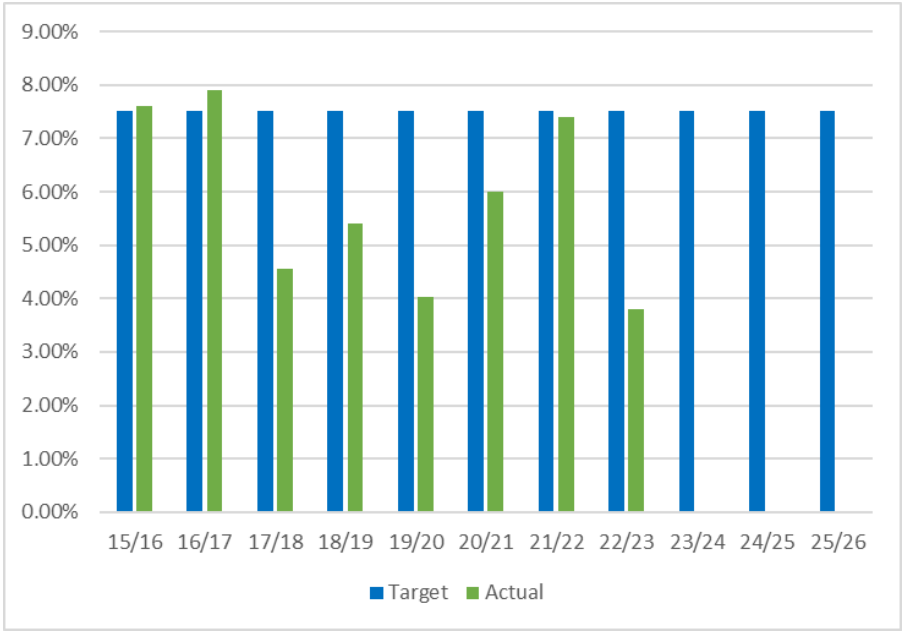
- Ruapehu is an outlier in peak roughness trends against peers, regionally and nationally in all classifications other than primary collector. In urban areas, we are on a par with our peers, but rurally (where the access and low volume access roads are predominantly located) we are an outlier. Our pavement rehabilitation programme in this AMP is rurally targeted.

FIGURE B.7: PEAK ROUGHNESS 85TH PERCENTILE COMPARISON



- Target resurfacing lengths are not being achieved due to budget constraints and a volatile bitumen price index. For this report Resurfacing includes Reseals, Rehabilitation, Minor Improvement and other full width seal resurfacings. This will have detrimental long term effect.

FIGURE B.8: PERCENT OF NETWORK RESURFACED



- Two thirds of the network is unsealed. Pothole calls increased 13% in 2022/23 from the previous year.
- Residents living on rural roads that are becoming semi-urban would prefer the roads to be sealed.
- Dust treatment requests are frequent. More data is being gathered on the health disbenefits of living on a dusty road.
- Flooding is experienced on some roads in moderate events.
- Ohakune Mountain Road (OMR) is at capacity during the peak morning and afternoon times during the ski season.
- Requests for service numbers though declining, continue to be higher than the KPI baseline of 1,000. (With 1,433 calls being received in 2022/23.)

Road Structures

- 17 Weight restricted bridges, with 6 further speed restricted, restrict accessibility within the network to heavy traffic.
- In 2022/23, 8.3% of the access and low volume network was unavailable to Class 1 HCV and 13.1% unavailable to 50 Max vehicles, largely due to bridge capacity.
- 79% (242) of bridges are one lane
- There are no HPMV approved routes, but permits can be applied for and issued on a case by case basis dependant on route, load and vehicle size
- The following figure and table give an indication of bridges and large culverts which may need renewal over the next 40 years. This is based solely on bridge age and construction type. Further investigation and condition rate will be used to identify and prioritise as the renewal timeframe is reduced. More detail in lifecycle section - Structures (Section D04)

FIGURE B.9: STRUCTURE RENEWAL INDICATIVE PROGRAMME

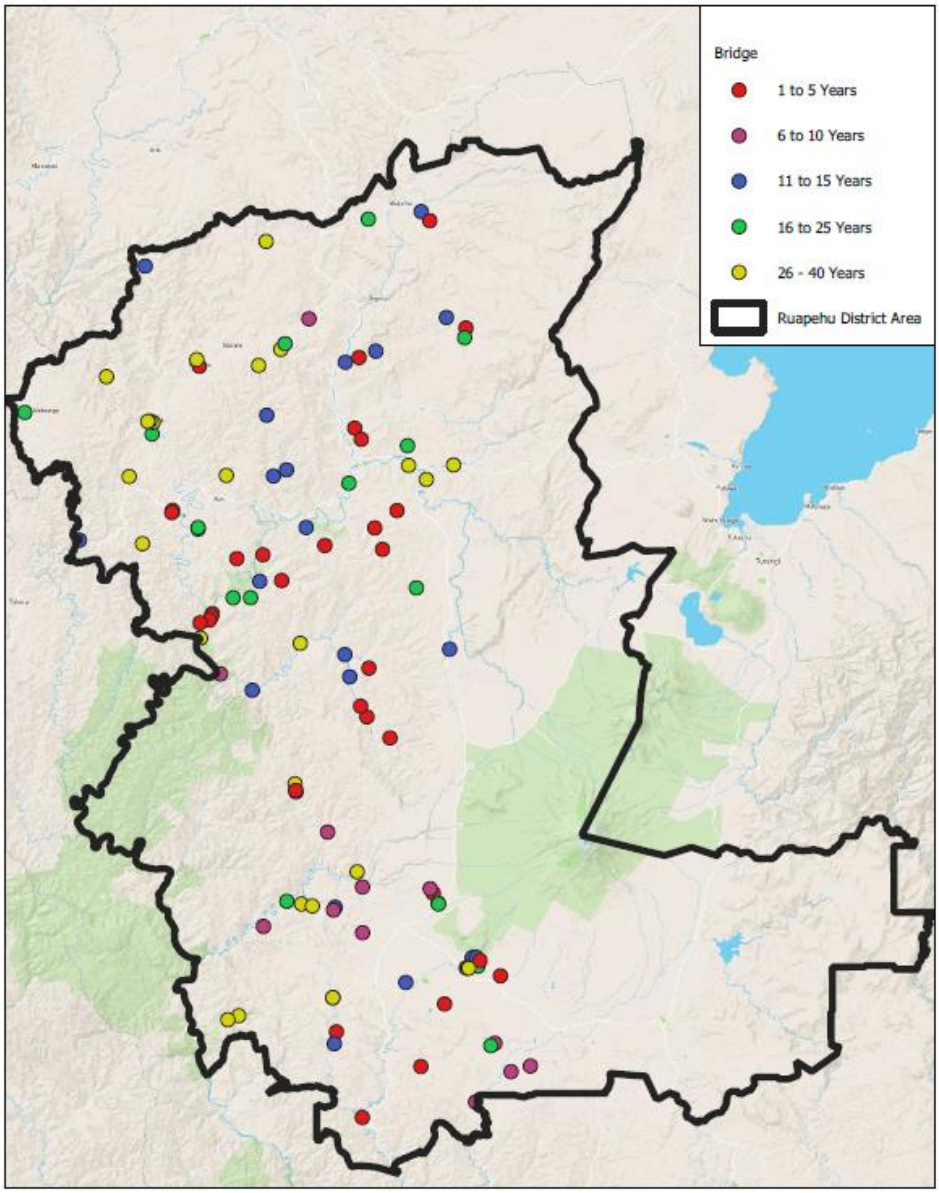


TABLE B-9: STRUCTURES RENEWAL INDICATIVE PROGRAMME

Structure	Age in Years					
	1 to 5 Years	6 to 10 Years	11 to 15 Years	16 to 25 Years	26 - 40 Years	> 40 Years
Bridge	9	2	9	6	7	256
Major Culvert	23	11	13	11	18	87

Other Assets

The following provides a brief insight into how other assets and activities are affected by changing needs and expectations:

- Drainage - tolerance for flooding and slips, and therefore network availability, is dropping resulting in a news for more planned resilience and quicker emergency responses
- Signs - modest impact caused by increased vehicle movements generally relates to an increase in associate risk of accidents occurring.
- Streetlights - increasing network and increased expectation of being able to safely use the road network to walk around at nighttime. Many streets do not meet NZS standards. Council does not have pedestrian lighting in the majority of it's streets.
- Footpaths - increased push to support walking and cycling travel modes leads to an increase in deterioration of the existing assets as well increased expectations about the usability of the current footpaths (eg: need to reduce trip hazards). 2022 Customer survey footpath results showed an increased number of dissatisfied or very dissatisfied responses, with over 25% being for lack of footpaths.
- Great Rides (Cycleways) - community expectation on Councils to provide more recreational and outdoor facilities like the Great Rides

B02.8.3 Potential Consequences

If the problem is not addressed, then some of the following consequences are likely. The severity of the consequence will depend on what level of investment is made to address the problem as well as other factors that might be disconnected specifically from this problem:

- Not meeting Council outcomes:
    - Providing a network that is safe, reliable and endeavours to meet the needs of the users.
    - Core infrastructure endeavours to keep pace with changing demand.
    - Managing the network with a strong focus on safety to avoid or mitigate significant hazards.
- Likely to impact on the following ONRC Customer Outcomes:
    - Amenity: The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment
    - Accessibility: The ease with which people are able to reach key destinations and the transport networks available to them
- Not providing appropriate resilient connections
- Not minimising the risk of transport disruption
- Increase in bridge damage due to inappropriate use.

- Increase in crash numbers.
- The network struggles to respond to changing transport demands and expectations.
- Providing appropriate resilient connections
- Increases in the risk of transport disruption versus expectations of a more resilient network.

B02.8.4 Benefits of Investment

In the ILM exercise it was identified that addressing this problem would contribute to the following benefit areas (as indicated in the ILM diagram above):

- Efficient Network
- Activity and Works Management

These benefits are discussed in more broadly in the Benefits of Investment section below.

In addition to the formal benefits mentioned above, it is also assumed that the consequences of not investing, documented above, will be reduced or eliminated.

B02.8.5 Strategic Response

Strategic Response	Strategies to Address
Maintain level of service capacity	Pavement Programme • Continue investment to provide the current level of service for reseals, pavement rehabilitation, pavement maintenance and unsealed maintenance • Continue Pavement renewal programme and address minor alignment issues, widening and corner widening in conjunction and targeted metal strengthening • Continue existing road maintenance and renewal programme.
Network safety & resilience - planning & targeted improvements	Network and Asset Management • Continue Low Cost Low risk programme to address minor safety issues • River Valley meetings to identify locals' safety concerns Targeted Improvements Structures • Address bridge widening where necessary in conjunction with bridge renewal work • Unsubsidised seal extension programme
Advocacy & Relationships	• Work with the community (for example through the River Valley Engagement meetings) to prioritise spending such as from the minor improvement funds from Waka Kotahi and better targeted renewals • Advocacy role with ski operators for more comfortable spread of peak traffic flows. Improved road geometry and technical design to improve performance of the road for passenger service vehicles. Minor improvements to relieve known congestion points caused by loss of traction in winter driving conditions, snow and ice • Develop partnerships with the community and developers
Targeted Improvements for active modes (eg Walking , cycling, mobility, micro-mobility)	• Footpath Development and Renewal Policy lays out criteria for assessing new footpath requirements

B02.9 Problem 3 – Climate, Topography and Geology

Definition | The network is impacted by climate, geology and topography, resulting in reactive / unplanned maintenance costs as well as increased safety risk and operation of the network.

B02.9.1 Evidence

This section provides the background and evidence to support that scope and scale of the problem.

B02.9.2 Network Impacts

The climate has changed and is expected to continue to change. There are longer periods of dry weather and more intense rainfall events leading to higher incidence of storm damage and increased effort to maintain road access. The District's steep topology and geology of soft papa make it more vulnerable to increasing weather events.

There are increasing requirements for sustainability and resilience across Council activities.

Resilience to respond to natural events:

- Limited availability of alternate routes in the rural network impacts on travel time reliability
- Several low level roads prone to flooding in moderate events with no alternate routes available
- Road closures over the previous 10 years due to storm damage have decreased but the number when a major storm hits are still high, with the nature of the District leading to long detours or parts of the district cut off.
- Non planned road closures are increasing
- Accept some roads will not be available in storm damage events, the reason for a road closure could be storm damage due to slips and washouts from heavy rain or trees downed by heavy winds.

TABLE B-10: ROAD CLOSURES WITH A DETOUR PROVIDED AND THE NUMBER OF VEHICLES AFFECTED BY THE CLOSURES ANNUALLY

Fin Yr	Primary Collector		Secondary collector		Access		Low Volume	
	Road closures	Journeys Affected	Road closures	Journeys Affected	Road closures	Journeys Affected	Road closures	Journeys Affected
2019/20					4	30	12	36
2020/21			2	2	6	99	14	3
2021/22	0	0	6	168	25	207	28	96

TABLE B-11: THE NUMBER OF INSTANCES WHERE ROAD ACCESS IS LOST

Fin Yr	Primary Collector		Secondary collector		Access		Low Volume	
	Road closures	Vehicles affected	Road closures	Vehicles affected	Road closures	Vehicles affected	Road closures	Vehicles affected
2018/19			1	10	4	46	10	9
2019/20							16	61
2020/21	1	1	2	6	4	4	29	19
2021/22	2	67	12	146	10	94	67	295

- 5 year average of $1.6M expenditure on emergency works and minor events to 2022/23. Managing expenditure to respond to flood damage is a significant issue. Land Transport's budget is balanced, based on the local share cost. The five year

average cost is used to forecast an indicative budget for emergency works. However, when this is exceeded by emergency events within a financial year, maintenance and renewal work has to be reduced in order to accommodate this. This has an impact on the level of service achievements on the rest of the network over time.

FIGURE B.10: EMERGENCY REINSTATEMENT

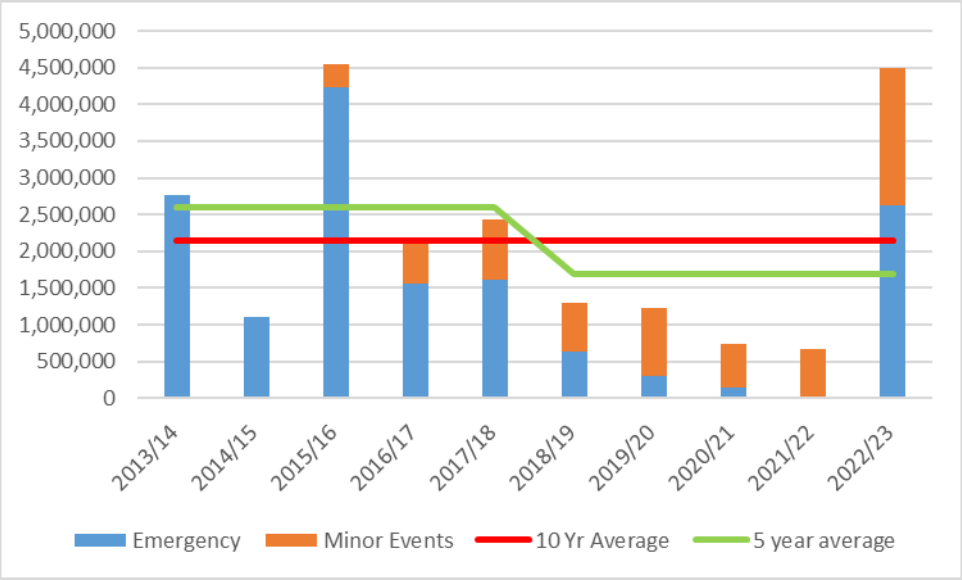
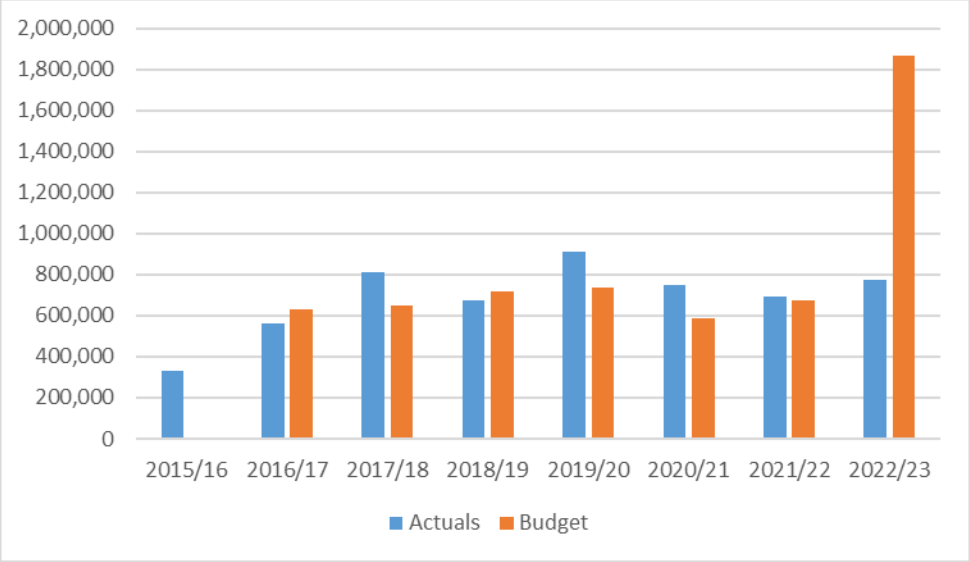


FIGURE B.11: MINOR EVENTS BUDGET VS ACTUAL



B02.9.3 Assets Impacted

- Sealed pavements - dropouts, overslips, scouring
- Unsealed pavements - as above
- Bridges - scouring at abutments, build up of debris around abutment and piles, wash out of deck.
- Drainage - blocked culverts, damage at inlet/outlet.

B02.9.4 Potential Consequences

Council's response to the problem is to ensure there is resilience to manage large water events. If the problem is not addressed, some of the following consequences are likely. The

severity of the consequence will depend on what level of investment is made to address the problem as well as other factors that might be disconnected specifically from this problem:

- Not meeting Council outcomes:
  - Providing a network that is safe, reliable and endeavours to meet the needs of the users
  - Managing the network with a strong focus on safety to avoid or mitigate significant hazards
  - Excellent standards of safety and welfare are promoted and respected
  - Preparation, planning and timely response; protect people and property from natural hazards
- Likely to impact on the following ONRC Customer Outcomes:
  - Accessibility: of the transport networks available and network connectivity
  - Safety: How users experience the safety of the road
  - Resilience: The availability and restoration of each road when there is a weather or emergency event
- Increasing cost to maintain the network
- Loss of asset life
- Increasing operating costs for road users
- Increased dissatisfaction from customers due to the condition of the affected roads

B02.9.5 Benefits of Investment

In the ILM exercise it was identified that addressing this problem would contribute to the following benefit areas (as indicated in the ILM diagram above):

- Efficient Network
- Activity and Works Management
- Safety

These benefits are discussed more broadly in the Benefits of Investment section below.

In addition to the formal benefits mentioned above you can also assume that the consequences of not investing, as documented above, will be reduced or eliminated.

- A network that is efficient, supports economic activity, is fit for purpose and meets the needs of the community
- Safety of network and journeys
- Minimise disruption when unplanned events occur
- Meeting ONRC CLOS for accessibility
- Providing appropriate resilient connections

B02.9.6 Strategic Response

Strategic Response	Strategies to Address
Maintain level of service capacity	• Continue table drain cleaning and culvert flushing programme. • Continue culvert replacement programme to address under size culverts • Address scouring as soon as possible • Keep inlets and outlets free of debris

Strategic Response	Strategies to Address
Network safety & resilience - planning & targeted improvements	• Targeted water channel renewal programme • Continue to use appropriate rainfall forecast data for culvert size calculations • High Intensity Rainfall Design System (HIRDS) developed by NIWA which incorporates climate change projection information based on IPCC scenarios. • Main features of New Zealand climate change projections for 2090 (Ministry for the Environment, 2008) • Ensure new bridges are designed to accommodate appropriate climate change impacts. • Have subcontractor presence around network for resilience response • Maintain permanent flood hazard signs in flood hazard areas • Hazardous tree programme Walking and Cycling • Additional signage on cycling tourism routes
Advocacy & Relationships	• Hold River Minor Valley meetings to identify hazardous areas and locals' safety concerns • Work with Horizons regarding river channel maintenance • Council is a member of Horizons Regional Joint Climate Action Plan
Value for Money	• Consider adding a climate change factor to the O&M forecast needs of the road network over the next 30 years (for example +0.5% factor per annum)

For further information, refer to the Sustainability section under Section 14 of this AMP.

B02.10 Problem 4 – Safety

Definition | Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions, which if not mitigated could result in increased deaths and serious injuries

B02.10.1 Evidence

This section provides the background and evidence to support that scope and scale of the problem.

B02.10.2 Network Impacts

Fatal and serious injury (DSI) crashes:

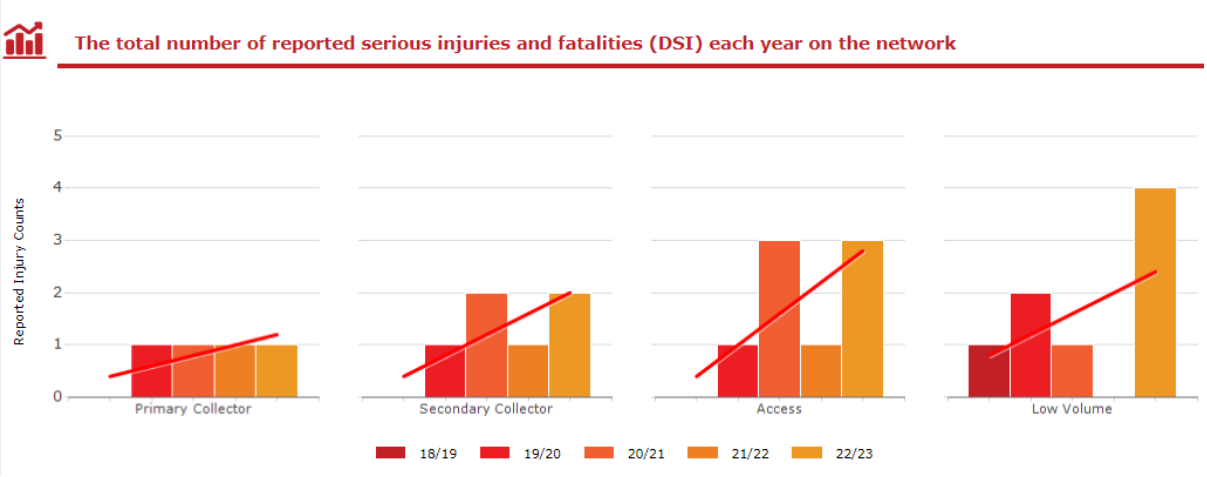
- DSI Crash numbers are low with the number of crashes over the last 5 years being too low to be sure of a definite trend in all but low volume roads, the total number of crashes over the last five years is increasing as seen in the figure below.
- When reviewing the risk factors
    - Personal risk is a measure of the danger to each individual using the road being assessed.
    - Collective risk is a measure of the total number of Serious Injuries and Fatalities (DSI) per km over a section of road.

  Ruapehu's personal risk, while low, is higher than it's peers, region and national result see benchmarking results for details (section B02.7).

- An increase in large haulage vehicles also presents a significant safety risk to all road users.

- We are concerned that volume increases would see a rise in crash numbers, particularly with the mix of different users, such as cyclists, light vehicles and heavy vehicles.

FIGURE B.12: CRASHES RESULTING IN DEATHS OR SERIOUS INJURIES



B02.10.3 Potential Consequences

If the problem is not addressed then some of the following consequences are likely. The severity of the consequence will depend on what level of investment is made to address the problem as well as other factors that might be disconnected specifically from this problem:

- Not meeting Council outcomes:
  - Providing a network that is safe, reliable and endeavours to meet the needs of the users
  - Managing the network with a strong focus on safety to avoid or mitigate significant hazards
- Likely to impact on the following ONRC Customer Outcomes:
  - Safety: How users experience the safety of the road
  - Resilience: The availability and restoration of each road when there is a weather or emergency event
  - Accessibility: The ease with which people are able to reach key destinations and the transport networks available to them
- Increasing trend of fatal and serious injury significantly impacting on the local community
- Council strategic objective for providing a safe transport network not being met
- GPS strategic directive for safer journeys not met

B02.10.4 Benefits of Investment

In the ILM exercise it was identified that addressing this problem would contribute to the following benefit areas (as indicated in the ILM diagram above):

- Safety

These benefits are discussed in more broadly in the Benefits of Investment section below.

In addition to the formal benefits mentioned above you can also assume that the consequences of not investing, documented above, will be reduced or eliminated.

The benefits of addressing this specific problem would include:

- Increasing safety for users of the network – safety for network and journeys
- Freight and passenger users can safely, efficiently and reliably get to their destinations as planned
- The network can respond to changing transport demands and expectations
- Meeting Council strategic objectives to provide a safe transport network
- Providing appropriate resilient connections

B02.10.5 Strategic Response

Strategic Response	Strategies to Address
Maintain level of service capacity	• Continue pavement renewal programme • Continue low cost, low risk minor safety programme
Network safety & resilience - planning & targeted improvements	• Continue network audits and inspections • Continue Road Safety Audits for capital works as appropriate • Continue to investigate serious and fatal crashes with respect to road conditions • Continue to ensure road hazards are appropriately signed • Investigate safe and appropriate speed limits for high risk routes • Stop / Give Way controls at Intersection evaluations
Advocacy & Relationships	• Continue to work with Ruapehu Road Safety Action Plan joint effort between organisations with a road safety responsibility, such as Horizons and NZ Police.
Value for Money	• Advocate on behalf of vulnerable users for state highway works • Hold River Minor Valley meetings to identify hazardous areas and locals' safety concerns

B02.10.6 Performance Measures

The performance measures (also known as key performance indicators KPIs) quantify the benefits of investment and are used to judge how an investment has contributed to the benefits of solving or realizing an opportunity identified in the strategic case. Performance measures identified are listed below and explored in further detail in – Levels of Service (LoS) We Provide (Section C04)

B02.11 Benchmarking

B02.11.1 Benchmarking Background

The District was benchmarked against councils from the Rural Districts peer group. This peer group is made up of Districts with less than 10% urban roads and include the following Councils:

TABLE B-12: PEER GROUP COUNCILS

Council	Council
Ashburton District Council	Otorohanga District Council
Carterton District Council	Rangitikei District Council
Central Hawke's Bay District Council	Selwyn District Council
Central Otago District Council	South Taranaki District Council
Chatham Islands Council	South Wairarapa District Council
Clutha District Council	Southland District Council

Council	Council
DoC Roads *	Stratford District Council
Far North District Council	Tararua District Council
Gore District Council	Waikato District Council
Hurunui District Council	Waimate District Council
Kaipara District Council	Wairoa District Council
MacKenzie District Council	Waitaki District Council
Manawatu District Council	Waitomo District Council

* Excluded in some measures

Sourced from Transport Insights reporting tool, the table below shows the District's network characteristics. Journeys travelled are measured by multiplying the volume of traffic on a road by its length.

Primary collector routes make up less than 1% of the network by length but carry 18% of the journeys. Access roads take the majority of traffic, followed by Secondary collector and low volume access.

It should be noted that all these benchmarks exclude Ohakune Mountain Road due to its status as a Special Purpose Road.

TABLE B-13: NETWORK CHARACTERISTICS

ONRC	Total Length (Km)	Urban (Km)	Rural (Km)	Sealed (Km)	Unsealed (Km)	Urban Journeys (M VKT)	Rural Journeys (M VKT)	Annual Total Journeys Travelled (M VKT)	%travelled per ONRC category
Primary Collector	11	0.7	10	11		0.7	8.2	8.9	18%
Secondary Collector	80	14	66	80		7.5	4.8	12.3	25%
Access	334	19	315	250	84	4.1	11.9	16.0	33%
Low Volume	902	78	824	138	763	4.0	7.4	11.5	24%
Unclassified	6.9								0%
TOTAL NETWORK	**1,333**	**112**	**1,214**	**479**	**847**	**16.3**	**32.4**	**48.7**	**100%**

(VKT) = Vehicle Kilometers Travelled

B02.11.2 Benchmarking Results

The results of the Benchmarking categorised into the following:

- Safety
- Amenity
- Cost Efficiency

The key tool used in benchmarking is the ONRC performance management reporting tool (PMRT), below are some key benchmark categories. All graphics are PMRT reports for 2022/23 unless otherwise stated.

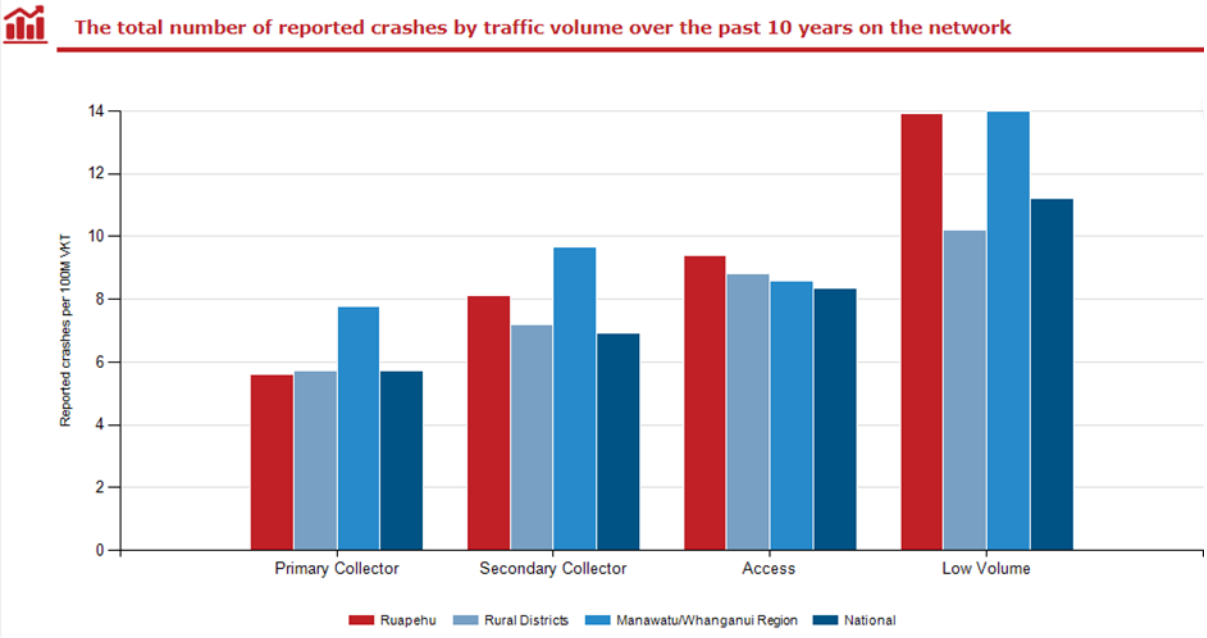
Safety

Collective and Personal Risk risk ratings were devised by the New Zealand Road Assessment Programme (KiwiRAP – a partnership between the Automobile Association, NZ Transport Agency, Ministry of Transport, ACC and NZ Police). These measures take in the last 10 years of information, the risk for primary collectors may be distorted due to the length of primary collectors (excluding OMR) in the district.

As discussed in Problem 4 - Safety (section B02.6.5) safety is a strategic problem that the District is focused on. While DSI numbers are low they are not decreasing either and the risk ratings compare unfavourably for rural, regional and national results for personal risk.

Personal risk measures the danger for each road user. Our personal risk is higher than our peers in each category.

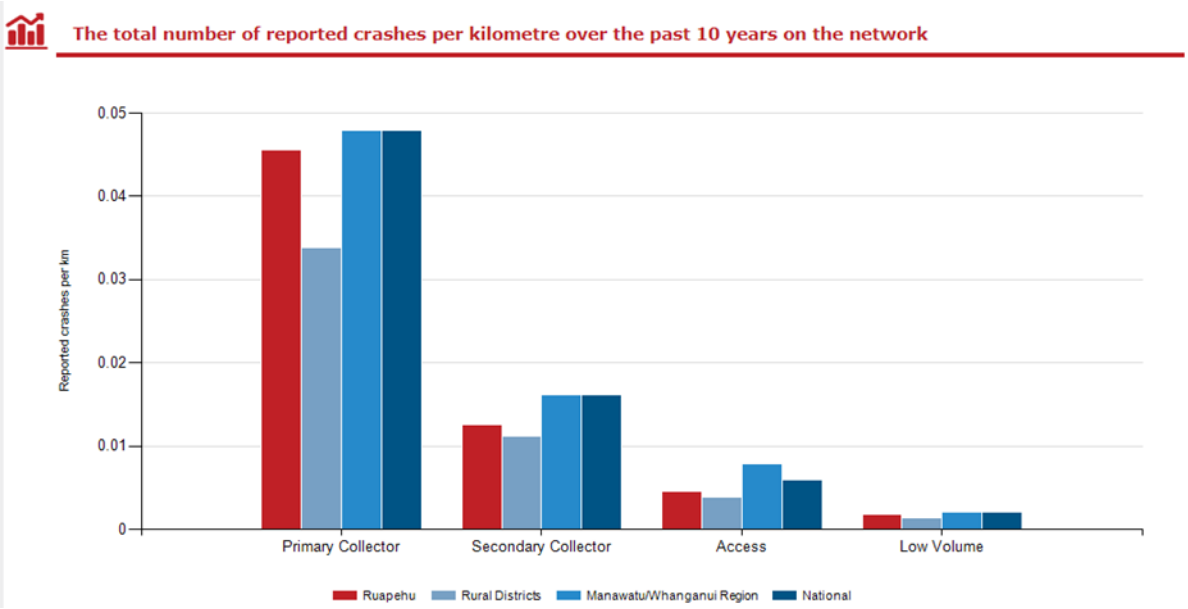
FIGURE B.13: PERSONAL RISK - SERIOUS INJURIES AND FATALITIES (DSI) PER KM OF ROAD BY ONRC CATEGORY



We are addressing issues through our work programmes such as minor safety, River Valley Engagement, and when we design flood damage and pavement rehabilitation repairs. We also regularly inspect the network for safety deficiencies that can be addressed through our maintenance programme. This measure takes in the last 10 years of information, the risk for primary collectors may be distorted due to the length of primary collectors (excluding OMR) in the district.

Collective risk is a measure of the total number of Death (Fatalities) and Serious Injuries (DSI) per km over a section of road.

FIGURE B.14: SAFETY CUSTOMER OUTCOME 2 – COLLECTIVE RISK - SERIOUS INJURIES AND FATALITIES (DSI) PER KM OF ROAD BY ONRC CATEGORY



We are addressing issues through our work programmes such as minor safety, River Valley Engagement, and when we design flood damage and pavement rehabilitation repairs. We also regularly inspect the network for safety deficiencies that can be addressed through our maintenance programme. This measure takes in the last 10 years of information, the risk for primary collectors may be distorted due to the length of primary collectors (excluding OMR) in the district.

Amenity

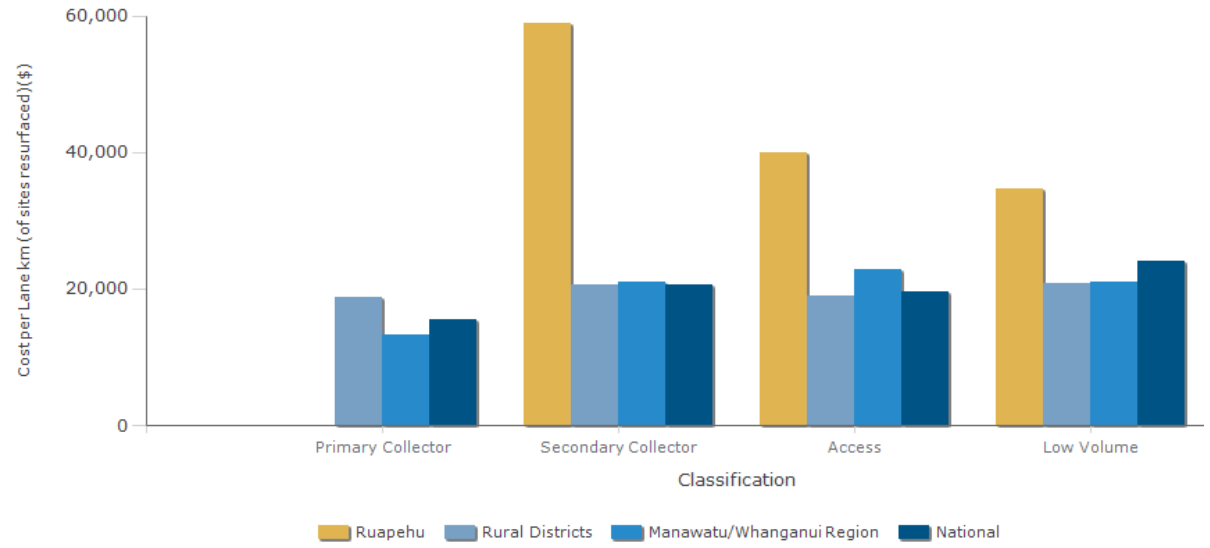
The amenity measures review the smoothness or roughness of a ride road users experience.

Smooth Travel Exposure (STE) is a measure of the percentage of kilometres travelled that are considered smooth. Information can be found under Problem 2 – Needs and Expectations.

Cost Efficiency

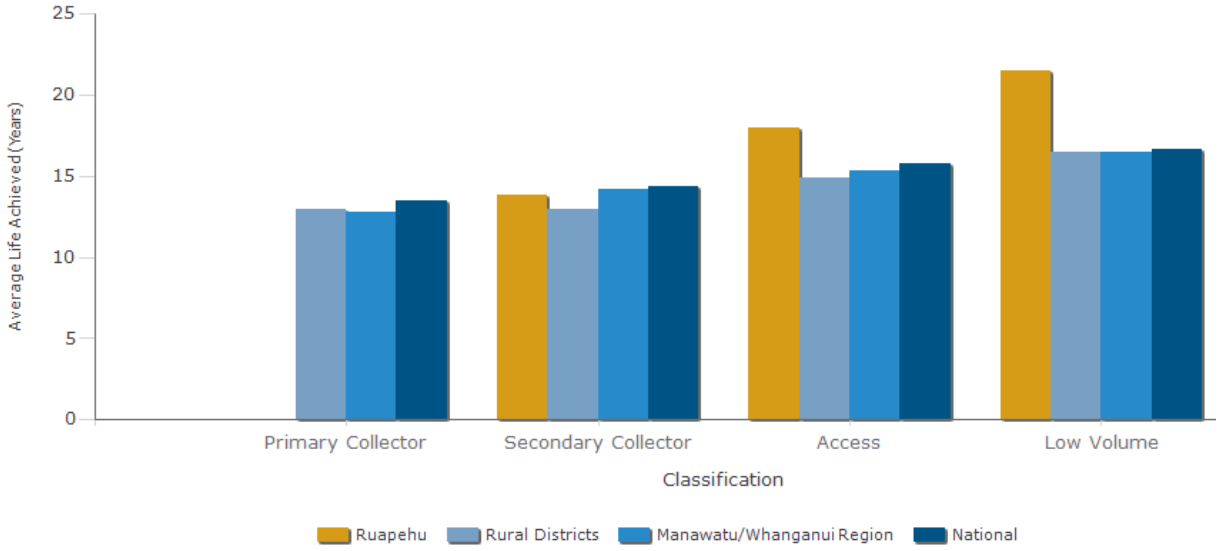
Districts costs for chipseal per lane km are shown below (2021/22)

FIGURE B.15: CHIPSEAL RESURFACING (COST) 2021/22



Districts costs are significantly higher than any of the benchmarking groups. In part this is due to the remoteness of the district. A new resurfacing contract began in 2022/23, leading Council to be able to test their rates at the tender box. This will be monitored for benchmarking. Council is confident that its contract model and technical requirements are in line with industry good practice, and as such the costs are the result of an open and competitive process and therefore the best that Council could get at the time of tender.

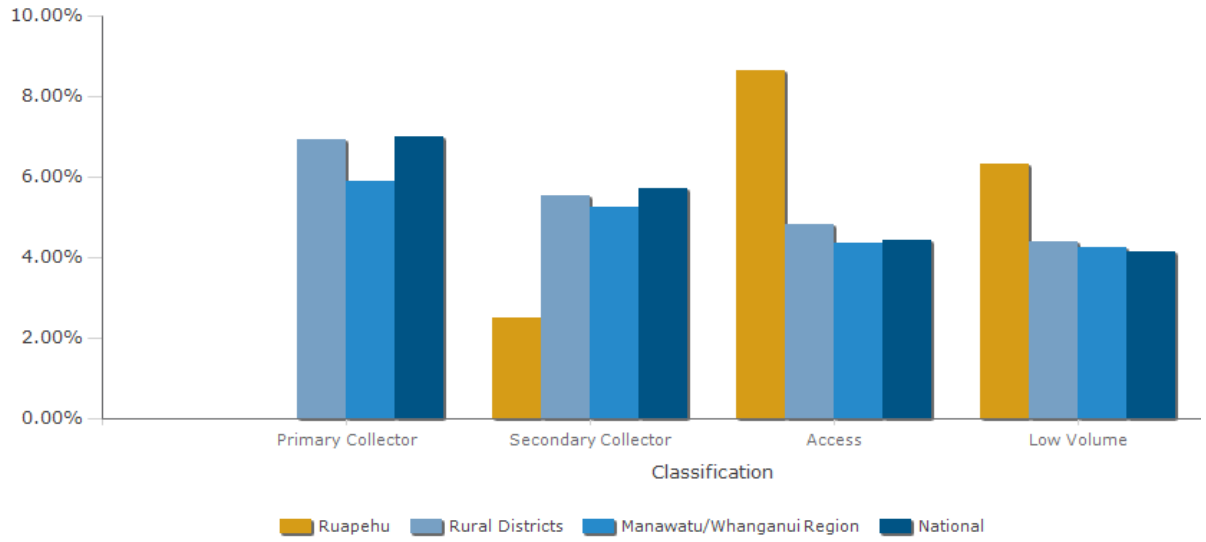
FIGURE B.16: CHIPSEAL RESURFACING (AVERAGE LIFE ACHIEVED) (2021/22)



Council is achieving (on average) a longer life from its surfaces prior to renewing them. This can reflect the result of some good maintenance practices but there when also looking at the STE results it can indicate that some surfacing is being stretched too far before it is renewed.

It also relates to a backlog of reseals with the budget not aligning to resurfacing needs. This budget has been increased in this AMP to address this issue.

FIGURE B.17: RESURFACING (PERCENTAGE RESURFACED) (2021/22)



Percentage of network surfacing renewed is now in line with peers with further funding in this AMP to reduce the reseal backlog.

Overall, we are not achieving our target reseal lengths.

Ruapehu designs pavements to last 25 years but expects them to have a 70 year return period. There was significant underinvestment following amalgamation in 1989 until 2005. There are a high number of sealed pavements that were constructed in the 1950s which are showing signs of stress and fatigue. In addition, key forestry routes are showing signs of significant deterioration. The reseal and rehabilitation programmes in this AMP continues on the current target length to address this.

B03 PROGRAMME BUSINESS CASE

B03.1 Developing the Programme

The Programme Business Case considers the options for investment.

It provides the strategic response of the planned future state, identifies a programme of works or activities that deliver on the strategic case.

The programme business case includes:

- Robust evidence that a decision to invest in a programme of work represents best value for money.
- Identification of a long list of alternatives, options, potential costs and identifies a preferred programme of activities to progress.
- A complicated balanced approach across investment spending in different programmes as well as the movement of budgets within the programmes.

The strong focus is that the investment will deliver the best long term value for money across the full life of the assets while providing the appropriate levels of service to the customers.

B03.1.1 Identifying the Programmes

The following work programmes have been identified by Council and are aligned to the Activity Management sections. You will therefore find additional analysis and information within each of the individual activity management sections. This includes:

- At the start of each Activity section, a table that provides commentary on how it contributes toward addressing the problem statements and a second table that comments on how it contributes positively towards customer level of service.
- Documentation of any strategies or policies that apply to these programmes.

The table below shows where the programmes contribute to addressing the problems identified in the Strategic Case (Section B02).

TABLE B-14: PROGRAMMES AND THEIR CONTRIBUTION TO THE PROBLEM STATEMENTS

Work Programme	Section	Forestry & Land Use	Needs & Expectations	Climate, Topography & Geology	Safety
Minor Safety Improvements	D02		Yes		Yes
Emergency Works	D02		Yes		Yes
Pavements	D03	Yes	Yes	Yes	Yes
Road Structures	D04	Yes	Yes		Yes
Drainage	D05		Yes	Yes	Yes
Traffic Services	D06		Yes		Yes
Footpaths	D07		Yes		Yes
Cycleways	D08		Yes		

Work Programme	Section	Forestry & Land Use	Needs & Expectations	Climate, Topography & Geology	Safety
Bus Shelters	D09		Yes		
Facility Roads & Carparks	D10		Yes		
Environmental Services	D11		Yes		Yes
Network & Asset Management	D12	Yes	Yes	Yes	Yes

B03.2 Programme Alternatives & Options

B03.2.1 Programme Alternatives (non-asset solutions)

The following table lists non-asset alternatives for each of the programmes. Council endeavours to consider all of these options when optioneering and when appropriate to the situation.

The value of these alternatives are when they can support one or all of the below outcomes:

- A reduction in demand for use of assets
- A reduction in physical works expenditure
- An improvement to a current level of service.

TABLE B-15: PROGRAMME ALTERNATIVES

Programme	Alternatives (non-Asset Solutions)
Minor Safety Improvements	● Increase driver education and safety campaigns. ● Consider reduction of speed limits on high risk roads. ● Review and improve design and engineering standards. ● Consider creating sight benches on windy roads.
Emergency Works	● Where a slip occurs and closes a lane, during an emergency event, leave it closed if the traffic volumes mean there will be no undue delays caused by just a single lane. ● Leave a road closed if there is an acceptable alternative route.
Pavements	● Close or cease public ownership of certain roads of very low or single property usage, when appropriate. ● Develop end user maintenance agreements for single owner roads, where appropriate. ● Dig up sealed roads and revert them back to unsealed roads where traffic volumes are low enough and the costs to maintain and renew can be reduced. ● Advocate for passenger transport options that reduce demand on the use of roads, ie public transport routes across the District. ● Campaign for passenger transport options that reduce demand on the use of roads ie rideshare, active travel modes. ● Allow some unsealed roads to narrow when low traffic volumes indicate that the current width is above the minimum standard. ● Reduce maintenance on some low traffic volume roads.
Road Structures	● Close, demolish or cease public ownership of certain structures of very low or single property usage, when appropriate ● Increase or impose weight and / or speed restrictions ● Where feasible replace low volume bridges with fords or level crossings

Programme	Alternatives (non-Asset Solutions)
Drainage	● Allow more surface flooding where feasible ● Infill berm between parallel kerbs and stop maintaining the inner kerb where feasible ● Join planning with councils infrastructure divisions (roading, 3 waters and open spaces)
Traffic Services	● Reduce quantity (and therefore level of service) of lighting, signage and road marking to reduce maintenance and renewal costs
Footpaths	● Walking and cycling strategy to ensure that investment made is in the correct locations
Cycleways	● Walking and cycling strategy to ensure that investment made is in the correct locations
Bus Shelters	● Relocate shelters ● Remove unused bus shelters
Facility Roads & Carparks	● Get involved at planning of new facilities and carparks to influence the design to allow for reduced total cost of life
Environmental Services	● Reduce spray frequency ● Reduce berm mowing frequency ● Confirm Levels of Service are still appropriate to Customer Levels of Service and climate change
Network & Asset Management	● Not Applicable

B03.2.2 Programme Options

A 2016 NZ Transport Agency Technical Audit highlighted issues with safety and the condition of the network, noting that the network showed evidence of expenditure being at the level of affordability, rather than need. AMPs from 2018 onwards began work to address this, leveraging from increased financial assistance levels that same year. This AMP continues to address this issue, aiming to meet existing Levels of Service and working to align affordability and need more closely.

We recognise that this won't be fully achievable in this AMP period and affordability is a major consideration given the current economic climate.

There will always be a healthy tension between affordability and need.

To consider the impacts of different funding options, we initially considered three funding levels to evaluate for our subsidised work programmes, Options A, B and C, as described below.

Council then added Option D, a revision of Option C.

OPTION A

Increased Funding | Achieving and Maintaining Levels of Service

- An increased level of expenditure when compared to the current levels (plus inflation). One measure that illustrates this is the Waka Kotahi cost adjustment factors, which show for example, a 20.35% increase in maintenance from March 2019 to March 2023.
- Required to fund the work activities to keep delivering the current level of services during the ten-year period.

- Cost estimates for this option have been supported by the tender prices received for the 2022 contract schedules, where quantities were included to maintain the levels of service.
- With an increase in activities able to be completed, compared to previous LTPs, there is a reducing risk of assets deteriorating at a faster rate, maintaining network resilience and customer outcomes.
- Traffic management costs have increased with it being separated out in the 2022 new contracts.
- Unless otherwise specified, percentage increases relate to RDC Year 1 figures.
- Pavement: 15% decrease in stabilisation pavement repairs, meaning repairs will be targeted to pre-reseal sites, then the worst condition repairs. Ability to carry out 34km of reseal and 4.5km of rehabilitation, nearly meeting target of 37km per annum of resurfacing. Rehabilitation is reduced from 5km in 22/23 as condition does not warrant 5km. Reseal achievement trend has been under due to budget so attention is needed on bringing them up to target lengths.
- Drainage: 300% increase in water channel maintenance from 9mth level in 22/23 to increase network resilience. 370% increase in culvert renewals from 9mth achievement in 22/23 to ensure condition replacements are carried out in good timing and to ensure network resilience.
- Structures: Maintenance – 63% structural member painting, remainder maintenance to address condition defects. Increase in maintenance from 22/23 funding levels. 736% increase in structural component replacements from 22/23 funding levels to address deferrals. Carry out a consistent condition based bridge renewal programme
- Level Crossing Devices: Increase to address inflation.
- Network and Asset Management: Increase over 22/23 to bring value to that of the 2021/24 average plus inflation. No changes to work provided in this work category; namely to provide a core team for contract, network and asset management, materials and suppliers for delivery (eg RAMM, Before U dig) and additional support for projects such as AMDS, asset management and operational improvements, writing AMP plans.
- Environmental: Increase over 2022/23 funding levels to address cost changes with new mowing and spraying contracts and allow for reactive work in the Maintenance contract. No change from delivery in 2022/23.
- Traffic Services: Maintenance: 50% increase over 2022/23 funding level to address cost changes with new streetlight and maintenance contracts. Renewals: 0.12% reduction from 22/23 funding level, affecting the amount of sign or light renewals that can be carried out.
- Minor (Emergency) Events: 15% decrease in 2022/23 funding level. If more events occur than budgeted for, then maintenance work must be reduced to accommodate the increase.
- Footpaths: Consistent cleaning level as 2022/23 for non-subsidised cleaning in town CBDs. Physical work maintenance level consistent with 2022/23 levels as footpath condition survey shows network in good condition. 300% increase in renewal to catch up on 2 years of deferment.
- Emergency Works (Council): 2022/23 saw a large increase in Emergency works needed over previous years, with 100% funding being granted as a one off. Therefore, the budget has been set at the 5-year average. 18% decrease from 22/23 actual expenditure.

- Low Cost Low Risk: Local road improvements: - this budget was reduced on local roads in 2021/24, but was at a high level for Ohakune Mountain Road, a Special Purpose Road. The programme request for 2024/27 has seen local road improvements increased to be able to address identified minor works sites that need safety improvements, but there is a reduction in the scale of the SPR programme, to guardrail work mainly. No streetlight improvements are programmed for 24/27. Road to Zero infrastructure to install and support compliance with speed management changes are included in this request, at a higher level than 2021/24.
- Non-subsidised Maintenance: Continuation of continuous maintenance budget levels and work delivery from 2022/23, except for 100% increase in cycleway maintenance for trail extensions and kerb and channel cleaning.
- Non-subsidised Renewal and Development: Renewals: Continuation of continuous renewal budget levels and work delivery from 2022/23. Development: 500% increase in Footpath Development to be able to address areas that are under served or require upgrade to accessible standards. Inclusion of:
    - Taumarunui River path development fund
    - Facility road improvements to Council assets such as landfills
    - Wayfinding and Interpretive signage in towns and larger villages
    - Completion of the Taumarunui Main Street Manuaute Street upgrade project
    - Provision of a cycleway hub at Horopito for the Mountains to Sea cycleway
    - Extension of the Mountains to Sea cycleway from Pōkakā to National Park
    - Completion of the Ohakune to Raetihi cycle trail (currently underway).

OPTION B

Maintain Funding Level | Reducing Levels of Service

- A level of expenditure based on 2022/23 levels plus inflation.
- With reduced activities being able to be completed, compared to previous LTPs, there is an increasing risk of assets deteriorating at a faster rate resulting in decreasing network resilience and reduced customer outcomes.
- Inflation over recent years has meant that less activities can be completed for the current funding levels. One measure is the Waka Kotahi cost adjustment factors, which show for example, a 20.35% increase in maintenance from March 2019 to March 2023.
- Traffic management costs have increased with it being separated out in the 2022 new contracts.
- Unless otherwise specified, percentage increases relate to RDC Year 1 figures.
- Pavement: 23% reduction in pavement stabilisation repairs from 2022/23 levels. Repairs will prioritise pre-reseal sites, then prioritise and address the worst of the rest. Ability to carry out 34km of reseal and 4.5km of rehabilitation, nearly meeting target of 23.5km per annum of resurfacing, a 36% reduction on the target level. Rehabilitation is reduced from 5km in 22/23 as condition does not warrant 5km. Reseal achievement trend has been under due to budget so attention is needed on bringing them up to target lengths.
- Drainage: 246% increase in water channel maintenance from 9mth level in 22/23 to increase network resilience. 62% decrease in culvert renewals from 9mth achievement in 22/23 which would only address the worst condition culverts.

- Environmental: Increase over 2022/23 funding levels to address cost changes with new mowing and spraying contracts, but 30% reduction in reactive work in the Maintenance contract.
- Traffic Services: Maintenance: Same programme as Option A. Renewal: 42% reduction from 22/23 funding level, affecting the amount of sign or light renewals that can be carried out.
- Minor Events: 56% decrease in 2022/23 funding level. If more events occur than the budget will allow for response to, maintenance work must be reduced to accommodate the increase.
- Footpaths: Consistent cleaning level as 2022/23 for non subsidised cleaning in town CBDs. 297% increase in physical works maintenance budget. 300% increase in renewal to catch up on 2 years of deferment.
- Effectively the same budget / programme as Option A:
    - Road Structures
    - Level Crossing Devices: Increase to address inflation.
    - Emergency Works (Council)
    - Low Cost Low Risk
    - Non subsidised Maintenance
    - Non subsidised Renewal and Development: Renewals

OPTION C

Maintain Funding Level | Less Reducing LoS through Targeted Activities

- A level of expenditure based on 2022/23 levels plus inflation, with targeted increases in specific programmes that will reduce rate of deterioration and risks.
- With reduced activities being able to be completed, compared to previous LTPs, there is an increasing risk of assets deteriorating at a faster rate resulting in decreasing network resilience and reduced customer outcomes.
- Inflation over recent years has meant that less activities can be completed for the current funding levels. One measure is the Waka Kotahi cost adjustment factors, which show for example, a 20.35% increase in maintenance from March 2019 to March 2023.
- Traffic management costs have increased with it being separated out in the 2022 new contracts.
- Unless otherwise specified, percentage increases relate to RDC Year 1 figures.
- Pavement: 49% increase in stabilised pavement repairs from 2022/23 levels, so that repairs can be done through out the network, not just pre-reseal sites. Ability to carry out 34km of reseal and 4.5km of rehabilitation, nearly meeting target of 34.5km per annum of resurfacing, a 7% reduction on the target level. Rehabilitation is reduced from 5km in 22/23 as condition does not warrant 5km. Reseal achievement trend has been under due to budget so attention is needed on bringing them up to target lengths.
- Drainage: 297% increase in water channel maintenance from 9mth level in 22/23 to increase network resilience. 370% increase in culvert renewals from 9mth achievement in 22/23 to ensure condition replacements are carried out in good timing and to ensure network resilience.
- Structures: Maintenance – 44% structural member painting, remainder maintenance to address condition defects. Increase in maintenance from 22/23 funding levels, but reduced from Option A. 310% Increase in structural component replacements from

22/23 funding level, to address deferrals. Carry out a consistent condition based bridge renewal programme.

- Network and Asset Management: Funding level reduced marginally to allow for reduction in project work on the Special Purpose Road.
- Environmental: Same programme as Option B.
- Traffic Services: 4.6% reduction in sign maintenance from 22/23 funding level, 8.5% increase in streetlight maintenance funding from 22/23 and 10% increase in power charges from 22/23. Renewal: 42% reduction from 22/23 funding level, affecting the amount of sign or light renewals that can be carried out.
- Minor Events: 57% decrease in 2022/23 funding level. If more events occur than the budget will allow for response to, maintenance work must be reduced to accommodate the increase.
- Footpaths: Consistent cleaning level as 2022/23 for non-subsidised cleaning in town CBDs. 14% decrease in physical works maintenance budget. 300% increase in renewal to catch up on 2 years of deferment. (Same as Option B)
- Emergency Works (Council): 56% decrease from 22/23 actual expenditure, increasing risk of emergency events exceeding the budget.
- Non-subsidised Renewal and Development:
    - Removal of non-subsidised seal extension budget ($58,251)
    - Taumarunui River Path Development ($1,048,320)
    - Facility road improvements ($25,000)
    - Manuaute Street upgrade ($780,000)
    - Tokirima School frontage footpath ($20,000)
- Effectively the same budget / programme as Option A:
    - Level Crossing Devices
    - Low Cost Low Risk
    - Non subsidised Maintenance

OPTION D

Maintain Funding Level | Reducing LoS through Targeted Subsidised Activities and 'right sizing' unsubsidised programme

- Council considered Option C at their workshop in December 2023. Funding constraints within the bigger Council picture placed restrictions on affordability.
- The option was refined further, creating Option D. This was done by reducing bridge spending and substantially reducing or changing timing in the unsubsidised funding.
- Due to changes in timing, Option D analysis will be for 2024/27, compared with the same period for Option C. Changes with greater than + / - 5% difference are discussed below
- Over the 3 year period, Option D has a 22% reduction from Option C. By extending some programme's time frames, this reduces to a 4% reduction over the ten years.
    - **Subsidised Programme – 10% reduction**
        - Network Improvements | 36% reduction from Option C, due to removal of speed management capital programme and level crossing upgrade programme
        - Structures | 44% reduction in bridge renewals from Option C
    - **Unsubsidised Programme – 82% reduction**
        - Cycleway | 93% reduction from Option C as the Great Ride story telling and Horopito Hub projects have been moved to years 4 to 10

- Drainage | 35% reduction from Option C, due to removal of Kerb and channel development budget
- Facility Roads | 87% reduction from Option C in removal of budgets for facility road renewal budget category, Ohakune Park and Ride extension and Waiouru truck parking facility.
- Footpath | 100% reduction from Option C, with removal of Taumarunui River path development, National Park footpath and Walking and cycling safety improvements.
- Network Improvements | 100% reduction from Option C, due to removal of Ohakune Junction development project
- Pavement | 834% increase due to new budget to repair damage caused by forestry, funded from a forestry rate differential
- Structures | 100% decrease from Option C by removal of Stock truck effluent disposal site project to later in the 10 year period.
- Traffic Services | 98% reduction from option C by removal of Taumarunui, Ohakune and National Park way finding projects.

The funding proposals for each option are shown in the table below.

TABLE B-16: BUDGETS FOR OPTIONS A, B, C AND D – COUNCIL BUDGETS (UNINFLATED)

This table shows direct costs for subsidised and non subsidised budget options. It does not include depreciation, finance costs or internal charges and applied overhead.

Activity	RDC 22/23 Actual	Previous Programme 2021/22 - 2023/24	Option A Cost 2024/25 - 2026/27	% Change to 21-24	Option B Cost 2024/25 - 2026/27	% Change to 21-24	Option C Cost 2024/25 - 2026/27	% Change to 21-24	Option D Cost 2024/25 - 2026/27	% Change to 21-24
Opex										
Cycleway	79,464	197,695	450,000	127.6%	450,000	127.6%	450,000	127.6%	427,900	116%
Drainage	732,188	3,224,240	3,801,444	17.9%	3,558,496	10.4%	3,749,009	16.3%	3,714,311	15%
Environment	1,608,139	4,219,802	5,083,542	20.5%	4,773,639	13.1%	4,773,639	13.1%	4,773,639	13%
Facility Roads	11,387	33,540	39,615	18.1%	39,615	18.1%	39,615	18.1%	39,615	18%
Footpath	146,628	371,943	438,652	17.9%	690,273	85.6%	590,840	58.9%	590,841	59%
Level Crossing	42,608	96,323	66,576	-30.9%	63,550	-34.0%	77,367	-19.7%	91,183	-5%
Network – Emergency Works	4,488,367	6,886,848	4,771,637	-30.7%	8,893,863	29.1%	7,879,842	14.4%	7,865,822	14%
Network & Asset Management	1,614,529	3,763,721	5,320,287	41.4%	5,340,522	41.9%	5,241,127	39.25%	5,709,885	52%
Pavement	2,690,528	6,885,289	13,204,111	91.8%	8,430,416	22.4%	9,484,426	37.8%	10,641,983	55%
Structures	41,949	670,859	4,162,268	520.4%	4,169,336	521.5%	3,100,910	362.2%	3,100,910	362%
Traffic Services	657,542	2,233,550	2,981,127	33.5%	2,923,710	30.9%	2,777,682	24.4%	2,631,653	18%
Opex Total	**12,113,329**	**28,583,810**	**40,319,260**	**41.1%**	**39,333,419**	**37.6%**	**38,164,457**	**33.5%**	39,587,741	38%
Capex										
Bus Shelters	0	41,752	37,500	-10.2%	37,500	-10.2%	37,500	-10.2%	37,500	-10%
Cycleway	1,595	3,795	5,940,737	156,441.2 %	5,940,737	156,441.2%	5,940,737	156,441.2%	0	-100%
Drainage	443,778	1,469,353	1,722,103	17.2%	1,192,452	-18.9%	1,494,960	1.7%	1,344,984	-8%
Facility Roads	8,219	50,997	165,000	223.6%	890,000	1645.2%	855,000	1576.6%	80,000	57%
Footpath	(2,926)	372,484	2,992,503	703.4%	2,744,605	636.8%	1,405,202	277.3%	675,202	81%
Network – Improvements	498,263	4,574,442	6,906,870	51.0%	7,406,870	61.9%	6,626,870	44.9%	3,948,870	-14%

Activity	RDC 22/23 Actual	Previous Programme 2021/22 - 2023/24	Option A Cost 2024/25 - 2026/27	% Change to 21-24	Option B Cost 2024/25 - 2026/27	% Change to 21-24	Option C Cost 2024/25 - 2026/27	% Change to 21-24	Option D Cost 2024/25 - 2026/27	% Change to 21-24
Pavement	6,399,840	18,429,450	30,832,689	67.3%	17,397,755	-5.6%	17,912,649	-2.8%	17,970,900	-2%
Structures	1,614,901	3,043,720	10,135,824	233.0%	14,235,824	367.7%	13,573,944	346.0%	3,223,944	6%
Traffic Services	236,652	554,846	5,653,486	918.9%	4,669,635	741.6%	4,669,635	741.6%	404,634	-27%
Capex Total	**9,200,322**	**28,540,839**	**64,386,712**	**125.60%**	**54,515,378**	**91.0%**	**52,516,497**	**84.0%**	**27,686,033**	**-3%**
Grand Total	**21,313,651**	**57,124,649**	**104,705,972**	**83.3%**	**93,848,797**	**64.6%**	**90,680,954**	**58.74%**	**67,273,774**	**18%**

TABLE B-17: WAKA KOTAHI FUNDED WORK PROGRAMMES – BUDGET REQUESTS FOR OPTIONS A, B, C AND D (INFLATED)

This table includes inflation. It does not include any non-subsidised programmes or budgets i.e. programmes that do not attract funding from Waka Kotahi, depreciation, finance costs or internal charges and applied overhead.

	Waka Kotahi 22/23 Actual	Waka Kotahi Previous Programme 2021/22 - 2023/24	Option A Cost 2024/25 - 2026/27	% Change to 21-24	Option B Cost 2024/25 - 2026/27	% Change to 21-24	Option C Cost 2024/25 - 2026/27	% Change to 21-24	Option D Cost 2024/25 - 2026/27	% Change to 21-24
Opex										
Drainage	920,761	3,208,623	3,717,320	15.9%	3,453,818	7.6%	3,644,331	20.4%	3,586,395	12%
Environment	1,524,312	4,056,672	5,287,422	30.3%	4,951,299	22.1%	4,951,299	22.5%	4,835,933	19%
Footpath	57,561	277,084	473,621	70.9%	746,529	169.4%	647,096	74.9%	626,124	126%
Level Crossing	18,074	71,959	72,209	0.4%	68,927	-4.2%	82,743	-14.1%	96,626	34%
Network – Emergency Works	1,869,716	3,107,686	5,175,341	66.5%	9,646,326	210.4%	8,632,305	25.3%	8,355,828	169%
Network & Asset Management	1,377,261	3,732,515	5,744,692	53.9%	5,738,721	53.8%	5,505,031	47.7%	5,563,512	49%
Pavement	2,653,779	7,205,293	14,291,322	98.3%	9,113,750	26.5%	10,167,760	48.3%	11,281,637	57%
Structures	41,949	799,805	4,407,211	451.0%	4,414,877	452.0%	3,346,451	398.8%	3,311,635	314%
Traffic Services	623,140	2,411,418	3,208,967	33.1%	3,146,692	30.5%	3,000,664	35.7%	2,763,647	15%
Opex Total	**9,086,553**	**24,871,055**	**42,378,105**	**70.4%**	**41,280,939**	**66.0%**	**39,977,681**	**43.34%**	**40,421,336**	63%

Land Transport Activity

	Waka Kotahi 22/23 Actual	Waka Kotahi Previous Programme 2021/22 - 2023/24	Option A Cost 2024/25 - 2026/27	% Change to 21-24	Option B Cost 2024/25 - 2026/27	% Change to 21-24	Option C Cost 2024/25 - 2026/27	% Change to 21-24	Option D Cost 2024/25 - 2026/27	% Change to 21-24
Capex										
Drainage	441,322	1,336,375	1,620,583	21.3%	1,074,607	-19.6%	1,377,115	0.6%	1,417,728	6%
Footpath	16,163	294,198	1,024,826	248.4%	769,287	161.5%	698,204	286.4%	716,922	144%
Network – Improvements	477,194	6,386,559	5,701,675	-10.7%	6,201,674	-2.9%	6,201,674	35.6%	4,190,641	-34%
Pavement	6,414,740	17,153,892	31,602,874	84.2%	17,753,849	3.5%	18,326,994	-0.2%	18,838,677	10%
Structures	1,832,554	6,019,554	4,467,555	-25.8%	13,767,555	128.7%	13,105,675	330.6%	3,439,617	-43%
Traffic Services	198,351	752,205	637,548	-15.2%	370,719	-50.7%	370,719	-14.8%	380,973	-49%
Capex Total	**9,380,324**	**31,942,783**	**45,055,060**	**41.1%**	**39,937,691**	**25.0%**	**40,080,382**	**43.3%**	28,984,558	-9%
Grand Total	**18,466,877**	**56,813,838**	**87,433,165**	**53.9%**	**81,218,631**	**43.0%**	**80,058,063**	**43.3%**	**69,405,894**	**22%**

The table below provides an assessment of the impacts, including risks and consequences, these different funding options would have on the different work programmes.

TABLE B-18: QUALITATIVE IMPACT ANALYSIS OF FUNDING OPTIONS

Option A Increased Funding | Achieving and Maintaining Levels of Service	Option B Maintain Funding Level | Reducing Levels of Service	Options C and D Maintain Funding Level | Less Reducing LoS through Targeted [Subsidised] Activities (Option C) [and 'right sizing' unsubsidised programme (Option D)]
Emergency Works		
Using the 5-year average provides a reasonable assumption for determining the likely cost of works.	Increased funding will reduce the risk that funding will need to be taken from other maintenance activities to fund the emergency works.	Same as Option B
Pavements		
Sealed • Maintenance: budget increased to be able to address pavement defects around the network, as well as in pre-reseal sites • Ability to address pavement failures, increasing safety for users. (Problem Statement 4) • Renewals: Significant cumulative benefits by achieving resurfacing and rehabilitation targets, to lower the average age of the asset base and have an effect of lowering the maintenance need. This frees up maintenance funding to deal with other backlogs or areas struggling to meet expected levels of service • Pavement rehabilitations kept at 2021 AMP target level 7km (Problem Statement 1) • Ability to keep up pavement renewal required within existing budget on forestry haul routes. • LoS Impacts: ○ Lower average roughness ○ Possible improved safety ○ Better reliability **Unsealed** • Some ability to introduce rolling effort, to maintain surface for longer and impact grading cycle, with aim to reduce reactive maintenance effort required.	**Sealed** • Maintenance: Majority of reactive maintenance budget will address pre-reseal requirements. • Risk of not being able to keep up with pavement failures, increasing safety risk to users. (Problem Statement 4) • Risk of no real ability to address ongoing defects • Pre-reseal repairs tackled without being able to address other priority failures • Renewals: Reduced budget due to both the reduction in investment and the need to move further funds to maintenance to compensate for the expected increase in maintenance works. Reseal target 19km. • Further wider long term impacts could result from having to focus the limited renewals investment on to the forestry routes • Risk of not being able to keep up pavement renewal required within existing budget on forestry haul routes. (Problem Statement 1) • Other pavements in need of renewal are delayed, increasing reactive maintenance costs (Problem Statement 1) • LoS Impacts: ○ Higher roughness	**Sealed** • Maintenance: budget increased to be able to address pavement defects around the network, as well as in pre-reseal sites • Renewals: Achieve target reseal lengths (around 30km / years) under target • Reduce pavement renewal rate due to condition (4.5km/yr) **Unsealed** • Current level of grading, limited ability to introduce rolling effort • Reduction in amount of metal that can be applied, losing resilience, strength and condition

Option A Increased Funding | Achieving and Maintaining Levels of Service	Option B Maintain Funding Level | Reducing Levels of Service	Options C and D Maintain Funding Level | Less Reducing LoS through Targeted [Subsidised] Activities (Option C) [and 'right sizing' unsubsidised programme (Option D)]
• Metal strengthening on key unsealed routes (Problem Statement 1) • LoS Impacts: ○ Possible improved safety ○ Better reliability	○ Decreasing safety ○ Reliability and resilience may be impacted **Unsealed** • Current level of grading, limited ability to introduce rolling effort • Reduction in amount of metal that can be applied, losing resilience, strength and condition	
Road Structures		
● Maintenance: Continue systematic approach to inspection programmes leading to a clearer identification of maintenance need, requiring increase to investment. ● Maintenance: Significant increase to support the repainting of bridges (expensive work) to get long term life improvements ● Ability to address required bridge structural component repairs (Problem Statement 1 & 2) ● Ability to address bridge renewals for bridges reaching the end of their lives ● LoS Impacts: ○ No decrease in safety ○ Maintain or improve access to network (weight restrictions) ○ Maintain and improve reliability and resilience	● Same as Option A	● Routine maintenance: increased from 21/24 expenditure to address defects ● Maintenance: Small increase to support the repainting of bridges (expensive work) to get long term life improvements. ● Risk that increasing the painting over a longer period will lead to increased whole of life costs ● Increase in bridges needing to be have loading and / or speed restrictions applied (Problem Statement 1 & 2) ● More locals impacted by restricted bridges including economic impact for some businesses ● Component Replacements and Structures Renewals increased but not to level required ● LoS Impacts: ○ Decreasing safety ○ Limiting access to network (weight restrictions) ○ Reduced reliability and resilience
Drainage		
● Maintenance: Large increase to water channel cleaning programme (from 22/23) to maintain and preserve pavement integrity. Maintain existing network ● Renewals: Pavement integrity protected with ongoing programme. ● Incidences of flooding not increased and keeps up with likely increase in intensity of rain events ● LoS Impacts: ○ Improvement in reliability and resilience	● Maintenance: : Increase water channel cleaning programme to maintain and preserve pavement integrity. Maintain existing network ● Renewals: Minimal funds available to increase the size of culverts when damaged and need to be replaced. ● Improvements: No funds available to proactively improve drainage to meet current standards and cope with the increasing frequency and size of rain events (climate change)	● Maintenance: : Increase water channel cleaning programme to maintain and preserve pavement integrity. Maintain existing network ● Renewals: Pavement integrity protected with ongoing programme. ● Incidences of flooding not increased and keeps up with likely increase in intensity of rain events ● LoS Impacts: ○ Improvement in reliability and resilience

Option A Increased Funding | Achieving and Maintaining Levels of Service	Option B Maintain Funding Level | Reducing Levels of Service	Options C and D Maintain Funding Level | Less Reducing LoS through Targeted [Subsidised] Activities (Option C) [and 'right sizing' unsubsidised programme (Option D)]
○ No reduction in level of service for pavements affected by water	● Poorer side drainage will lead to an increase in pavement maintenance as the pavements become more saturated permanently or with slower recovery after rain events ● LoS Impacts: ○ Reduction in reliability and resilience in emergency events ○ Reduction in amenity as pavements affected by water	
Traffic Services		
● Maintenance: maintain current service levels ● Renewals: maintain current levels of service and funding as budget is reactive to damaged assets ● Improvements: Way finding signage projects around town centres to improve way finding and provide information on the area to users (non subsidised) ● LoS Impacts: ○ Current amenity and safety LOS are maintained	● Maintenance: reduced budgets leading to reduction in the frequency of some cyclic maintenance, eg: painting of railings, painting of line markings ● Renewals: reduction in budget will effect reactiveness damaged assets eg Signs get dirtier and not fixed as quickly ● Improvements: Way finding signage projects around town centres to improve way finding and provide information on the area to users (non subsidised) ● Risk in more crashes occurring due to an asset in poor conditions, eg: line marking that has faded ● LoS Impacts: ○ Reduction in current amenity and safety	● Maintenance: further reduction in budgets leading to reduction in the frequency of some cyclic maintenance, eg: painting of railings, painting of line markings ● Renewals: : reduction in budget will effect reactiveness damaged assets eg Signs get dirtier and not fixed as quickly ● Risk in more crashes occurring due to an asset in poor conditions, eg: line marking that has faded ● Improvements: Way finding signage projects around town centres to improve way finding and provide information on the area to users (non subsidised)
Footpaths		
● Maintenance: Budget at existing level due to footpath condition ● Renewals: Large increase to allow ability to make minor improvements as part of renewals, like width improvements to bring paths and ramps up to current engineering standards ● Improvements (non subsidised): Increase in rollout of new footpaths to bring more existing streets up to the expected LoS ● Township projects to increase new footpaths and provide for walking and cycling (non subsidised) ● LoS Impacts:	● Maintenance: increase in maintenance because of the reduction on renewals leading to more safety related faults that need to be addressed ● Cleaning urban streets (non subsidised): increased to meet new contractual level of service. ● Renewals: Current levels of condition related renewals ● Township projects to increase new footpaths and provide for walking and cycling (non subsidised) ● LoS Impacts ○ Maintain amenity and safety	● Maintenance: current levels in maintenance ● Cleaning urban streets (non subsidised): increased to meet new contractual level of service. ● Improvements (non subsidised) minimal rollout of new footpaths to bring more existing streets up to the expected LoS ● Township projects to increase new footpaths and provide for walking and cycling (non subsidised) ● LoS Impacts: ○ Maintain amenity and safety

Option A Increased Funding | Achieving and Maintaining Levels of Service	Option B Maintain Funding Level | Reducing Levels of Service	Options C and D Maintain Funding Level | Less Reducing LoS through Targeted [Subsidised] Activities (Option C) [and 'right sizing' unsubsidised programme (Option D)]
○ Improvement to amenity and safety ○ Improvements to providing alternatives to vehicles ○ Ability to improve needs and expectations of accessible users (Problem Statement 2)	○ The lack of renewals will eventually lead to not enough maintenance budget causing a deterioration downward spiral	○ The lack of renewals will eventually lead to not enough maintenance budget causing a deterioration downward spiral
Cycleways		
● Maintenance: Increase for new extensions RDC is responsible for. ● Improvements: Facilities to support Mountains to Sea Great Rides ● Extension of Great Ride Mountains to Sea trails ● Mountains to Sea Way finding and interpretive signage project ● The improvements will only go ahead if external funding is received. ● LoS Impacts: ○ Maintenance: No effective change as increase is related to quantity, not service level ○ Improvements: Improvements in economic development and tourism experience	● Same as Option A	● Same as Option A
Bus Shelters		
● Budget decreased to existing expenditure levels. ● LoS Impacts: No change	● Same as Option A	● Same as Option A
Facility Roads & Carparks		
● Maintenance: No effective change ● Renewals: These assets are inspected and included in the future renewals programme requiring investment. Same budget level as existing. ● Improvements: Small programme to start to bring assets up to an acceptable LoS ● LoS Impacts: ○ Improvement to current amenity	● Maintenance & Renewals: No effective change ● Improvements: No allowance for LoS Improvements	● Same as Option B
Environmental Services		
● Existing levels of service	● Same as Option A	● Same as Option A

Option A Increased Funding | Achieving and Maintaining Levels of Service	Option B Maintain Funding Level | Reducing Levels of Service	Options C and D Maintain Funding Level | Less Reducing LoS through Targeted [Subsidised] Activities (Option C) [and 'right sizing' unsubsidised programme (Option D)]
● LoS Impacts: ○ No effective change		
Network & Asset Management		
● Continue ability to make a step change in asset and network data quality. ● Improvements to the ways that data are utilised for improved decision making. ● Ability to invest in automating some process and analytics. ● Initiate systematic inspections of retaining walls. ● Improved customer levels of service. ● Continues ability to implement a data driven approach to the management of the new Road Maintenance and Renewal contracts.	● Same as Option A	● Same as Option A

B03.3 Recommended Programme

The recommended programme is Option D.

While Option A would be the preferred programme to maintain the Levels of Service established under the last LTP / AMP, this is not affordable in the current financial environment.

Option B generally follows the previous funding levels (plus inflation) and split across activities, but Option D is the better option as this reviews some work priority and needs and makes some pragmatic changes by concentrating on the work programmes that will have the biggest impact on asset deterioration on some of Council's critical assets.

Council will consult on Option D.

For detailed information about the activities and lists of specific works in the programmes, then refer to Activity Management (Section D).

B03.4 Programme Risk

Risks associated with the Recommended Programme are identified in Managing Risk (Section C02) and Appendix D.

B03.5 Programme Financial Case

Further financial details can be found in Finances (Section E), indicating any agreements or understanding in place with commissioning bodies and/or any affordability gaps.

B04 DELIVERING THE PROGRAMME

The Council maintains ownership and responsibility for managing the delivery of the land transport activities and programmes of work.

Council procures professional service and physical work suppliers to supplement their internal resources to deliver the programme. The following sections provide further details on the approach that Council uses.

The management and administration of Council's Land Transport assets is undertaken by the Land Transport Professional Business Unit, a small team of Council staff. The Activity management plan is delivered through eight physical works service contracts, four aggregate supply contracts and one Professional Services contract Council.

B04.1 Procurement

B04.1.1 17A Review

The physical works component of Land Transport delivery was considered as per the requirements of the Local Government Act 2002 Section 17A Delivery of Services review in 2020/21 and went to market in 2022. Professional Services were reviewed in a partial Section 17A review in early 2023.

B04.1.2 Procurement Strategy

Council's approved procurement strategy is called "Procurement Strategy 2023-2026. Making the most of what we have", carrying on the work started in 2020-23.

Its strategic focus points are:-

- Supply chain isolation
- Value for community
- Demand predictability
- Relationships
- Continuous Improvement

The strategic road map for addressing the issues is shown below.

TABLE B-19: STRATEGIC ROAD MAP WORKSTREAMS

Workstream	Description	Strategic Focus Issue being addressed
1 Work more closely with earh other	Project team to co-ordinate and take advantage of opportunities with aligning significant procurement and Section 17A reviews	Supply Chain isolation Demand Predictably Value for Community
2 Manage our suppliers better	Project team to address Contract management	Relationships

Workstream	Description	Strategic Focus Issue being addressed
3 Collaborate for Value for Community	Appoint a steering team to develop capability, identify partners for vertical and horizontal supply chain partners, share forward works planning, look into social procurement	Value for Community Relationships
4 Learn and Grow	Capturing learning from earlier workstreams and identifying subsequent improvement initiatives. Governance and resource for continuous improvement	

The AMP supports demand predictability and addressing supply isolation with it's planned forward work programme. A predictable work programme enables contracts to be set up to support this and to grow the market. This was used to great effect in 2014.

The provision of a safe, reliable road network that supports the needs of it's users contribute to value for community, relationships and continuous improvement

B04.1.3 Te Ringa Maimoa Smart Buyer Assessment

Council carried out the Smart Buyer assessment in March 2024, with a result in the range "Our organisation has embraced Smart Buyer principles and still has some areas where it can improve". This is the same range as their last assessment in 2020. While Council employs best appropriate practice procurement, contracting, network management practices that comply and NZTA Procurement Manual requirements, the follow items for improvement will be the focus

- The exploration of opportunities to increase engagement with industry in order to provide longer term views of the capital works pipeline
- Council's procurement strategy has identified that the best strategic opportunity lies in getting better value from its existing contracts and relationships and will focus on improving the long term value.
- There is an opportunity to develop a more formal relationship in receiving candidate feedback from supplies as to the performance of council as a client.

The full Assessment can be found in Appendix J.

B04.2 The Council Team

The Council's Land Transport team is responsible for the delivery of the land transport, through overview of delivery, financial accountability, policy, strategy, customer services, political reporting and relationships and stakeholder relationships.

Network management and physical works are contracted services to Council.

This wider transport team, that includes network consultants and works contractors, has a strong working relationship which supports improved outcomes.

Council's delivery structure for Land Transport is described below:

Within Council (list in hierarchical order)

- Chief Executive | Clive Manley
- Land Transport and Economic Development Manager | Vini Dutra
- Team Leader | Dick Scheyvens
- Land Transport team members

External Contracts

- Network Management and Professional Support x 1
- Physical works contracts x 12

Contract Execution

Contractors are required to programme and report comprehensively on the execution of the works. The contract documents specify technical standards required and define response times and cyclic inspection periods.

B04.3 Professional Services

The Council Procures the following professional services to deliver this plan:

Network Management Consultant | **GHD | 2015 to 2024**

- Professional advice, design, project management, reports
- Recommendations for strategies, programmes, projects and expenditure
- Network operations and management
- Preparation and procurement of maintenance and capital works contracts
- Contract administration and monitoring
- Asset Management
- Asset information capture
- Assist in the programme development and delivery as required
- Bridge management and inspections
- Implementation of Strategies and Policies
- Survey
- Engineering Design
- Environmental Consulting
- Review of new developments and assets
- Traffic Counting
- Corridor Access Requests (CARs) and Traffic Management Plans (TMPs) management
- Temporary Traffic Management Auditing

Network Condition Suppliers as required:

- Road Roughness
- Visual Condition Rating
- Pavement Testing

Other Services that require other suppliers:

- Engineering consulting (not provided by the Network Management Consultant)
- Procurement

B04.4 Physical Works

All maintenance, renewals and capital improvements are carried out through a variety of contracts.

The current maintenance and renewals term contracts are listed below.

TABLE B-20: CURRENT LAND TRANSPORT TERM CONTRACTS

Cnt No.	*CONTRACT NAME*	*Term*	*Contract Commencement*	*Contract Completion Current Minimum*	*Contract Completion Maximum*
1880	Ohakune Mountain Road Traffic Management	5+1+1+1 (in Yr 4)	1-Jul-19	30-Jun-24	30-Jun-27
1900	Streetlight Services	5+2+1 years	1 Oct 2022	30 Jun 2027	30 Jun 2030
1901	Road Network Maintenance and Reseals	8 years	1 Oct 2022	30 Jun 2030	30 Jun 2030
1902	Sealed Pavement Rehabilitation	2 to 5 years	1 Oct 2022	30 Jun 2024	30 June 2027
1903	Road Network Vegetation Control	5+3 years	1 Oct 2022	30 Jun 2027	30 Jun 2030
1905	Structural Maintenance and Renewals	5+2 years	1 July 2023	30 Jun 2028	30 Jun 2030
1906	Roadside Spraying and Plant Pest Control	5+3 years	1 Oct 2022	30 Jun 2027	30 Jun 2030
1912	Road Network Marking	5+2+1 years	1 Oct 2022	30 Jun 2027	30 Jun 2030
1916	Aggregate Supply (KC Quarries)	Annual	1-July-2022	30-Jun-30	30-Jun-30
1917	Aggregate Supply (Byfords)	Annual	1-July-2022	30-Jun-30	30-Jun-30
1918	Aggregate Supply (Inframax)	Annual	1-July-2022	30-Jun-30	30-Jun-30
1919	Aggregate Supply - Frasers	Annual	1 Sep 2022	30 Jun 2030	30 Jun 2030

The following specific strategies are adopted, in addition to the general strategies discussed at the beginning of this section.

Council has endeavoured to make its contracts as effective as possible. Work programmes of each of the options have been developed using the schedule quantities in each contract. While the work programmes have changed in each of the options, they have not been raised above the contracted schedule quantities.

Work Prioritisation

The programme of works is fiscally responsible and includes evidence-based, risk-based supporting analyses, included the following:

- Best value solutions to address the specific key problems and demands identified.
- Comparison of network condition trends with past expenditure levels.
- Benefit cost ratio (BCR).
- Life cycle analyses including consideration of annual depreciation of asset.
- Effectiveness of historical programmes and expenditures.

- Considerations of the costs, benefits and risks of alternatives and options.

Performance Management

Contract performance is undertaken by the Professional Services Consultant. This includes:

- Monthly contract meetings
- Tracking deliverables and milestones
- Monthly programming discussions for maintenance contracts
- Financial management
- Performance management, including tracking of performance KPIs.

The Land Transport Team Leader also attends monthly contract meetings to ensure the connection through to the client is maintained in the contractor relationships.

A Forward Works Programme (FWP) setup has been implemented in RAMM that provides a single source of the truth for programmes being delivered and tracking the status and delivery progress.

Confidence in Delivery

Agile | The different physical work contracts require the appropriate level of management and flexibility to deal with changing situations. For example, a contract to deliver a capital project has a clear scope and definition from start to end of the project, whereas maintenance contracts need to react to situations that can change on a daily basis during an emergency event (eg: severe storm). The more dynamic needs are managed through strong relationships on a daily basis through to formal monthly meetings and programming processes.

Resources | While there can be challenges attracting and retaining skilled resources in the regions, Council has achieved access to the right skills to deliver the work programme through the core team provided through the Professional Service contract and through the wider resources that the Professional Service contract have across New Zealand.

Continuous Improvement | Council has invested in improving its AMP and asset management practices, but this is part of a permanent programme of review and improvements. Councils has established an Asset Management Improvement programme which is currently tracking improvement tasks at various stages of delivery.

Sound Financial Delivery | Council has a good track record delivering the financial programme over each of the last three years of the 2021-24 funding block.

Integration / Partnering | The Land Transport Team integrates and partners in a number of ways. Here are some examples:

- Leads the Ohakune Mountain Road Joint Advisory Committee which comprises the Department of Conservation, Ruapehu Alpine Lifts and iwi to manage Ohakune Mountain Road to it's Memorandum of Understanding.
- Member of the Horizons Regional Advisory Group, which comprises the Local Authorities within the Horizons Region. Opportunities for collaboration are explored in this Group.

- Attends Road Safety Action Group with Waka Kotahi, Police and Horizons addressing road safety issues.
- Plans to collaborate with Waka Kotahi on speed management issues where highway and local roads are affected.

B04.5 Programme Monitoring

The Land Transport Team provides reporting to the Executive Management Team and Council on the progress of delivery of the programme.

Performance scorecard systems are used to manage contractual performances and provide opportunities for regular open dialogue with the suppliers.

Network consultant runs monthly supplier meetings with Council attending. Suppliers report on delivery and financial aspects of their contracts monthly.

Council also reports to Waka Kotahi (as the co-investor):

- Financially through claims monthly
- End of Year Achievement Reporting

The Land Transport team and operations are audited regularly by NZTA Investment Team, NZTA Technical Audit Team and Audit NZ. Feedback is incorporated into the Asset Management Improvement Programme to be prioritised and actioned.

C Asset Management Planning

C01 MANAGING GROWTH AND DEMAND

This section outlines the Ruapehu District Council strategy for growth and demand related to the transport activity.

The Local Government Act 2002 requires that changes in growth and demand be considered as part of asset management planning, as part of a 30 year infrastructure strategy, to ensure that future requirements are identified and planned for. This will ensure that the needs of the individuals, the community and the District can be maintained over the long term. Relevant legislation is discussed in Strategic Context (Section B02.4).

Planning for changes in future growth and demand is imperative to provide an economically sustained pathway to meet the needs of the District residents and visitors. The provision of the transport activity and its management is an essential element in the planning process.

C01.1 Planning for District Growth

The Ruapehu environment is predominantly rural, with a relatively low number of heavy industries or high intensity residential development. The high quality of the environment makes the District attractive to visitors who seek to visit natural and unspoilt landscapes, such as the nearby National Parks, river and ski fields.

The number of visitors has been impacted in recent years due to the impact of Covid-19. Variability in visitor numbers may continue, depending on the impact of inflationary growth on household discretionary income. However the long term trend remains at positive growth with many attractions and activities on offer to nearby major centres, such as Hamilton, Auckland and Palmerston North.

Growth in visitor numbers will ultimately result in growth in related tourist businesses. Such growth is unlikely to put significant additional capacity demands on the transportation network.

As a consequence of the small and dispersed population, large tourism industry and large land area, the District faces many challenges in meeting the current and future level of service expected by residents and visitors. Council's ability to fund the communities desired service levels at an affordable and sustainable cost level is a constant source of discussion.

C01.2 Growth versus Demand

Growth and demand planning allows for the identification and quantification of areas within the District that are likely to experience upward or downward pressures. Although Growth and Demand are considered together in this section, it is worth noting that they do have different implications regarding the ongoing function/delivery of the activity.

Growth in relation to the transport activity mainly refers to the growth/changes in

- Land Use.
- Population.
- Number of dwellings or business premises.
- Total size of economic activity.
- Total vehicle kilometres travelled (including % of heavy vehicles)

- Changes in Level of Service expectations and/or delivery

These changes can affect traffic flows leading to changes in volume, peak movements and locations of traffic movements. This in turn impacts on the needs and timing of the maintenance, operations and renewals delivery.

C01.3 Key Demand Drivers

Future demand for roading and transportation services for the Ruapehu District is driven by:

- Population and demographic patterns
- New residential dwellings and sub divisional activity
- Commercial, industrial and agricultural development
- Economic development
- Vehicle ownership and usage
- Climate change
- Legislative demands
- Community expectations and modality shifts
- Accessing services and recreation
- Restrictions on availability of parts of the network
- Passenger transport (or lack of)

C01.4 Population and demographic patterns

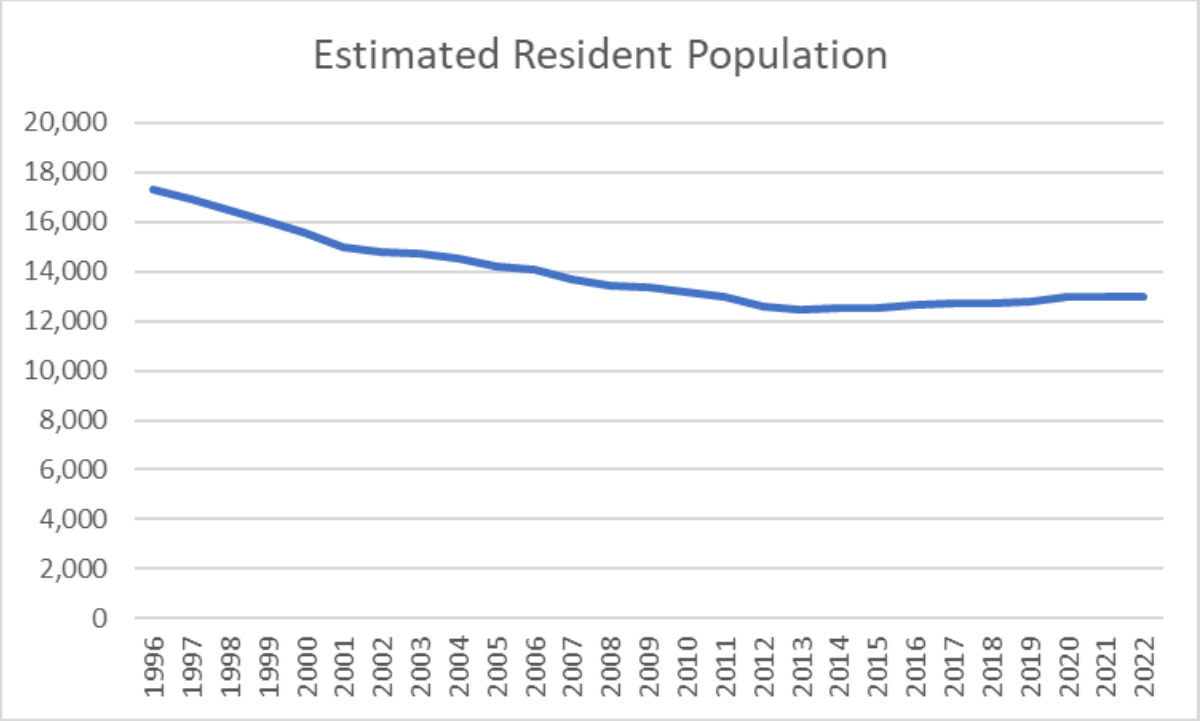
Detailed population and demographic pattern information is provided in the 'Growth Planning Assumptions Ruapehu District Council LTP 2024-2034' document supporting this AMP. The following information relates specifically to Land Transport. The key forecast assumptions regarding peak population for the period are:

1. *The assumption has been made that all identified communities (SA2's) within the District will experience an increase in Usually Resident Population (URP) over the next 10 years, experiencing a mixture of low, medium, and high growth levels.*
    a. *The URP of townships within the District will experience yearly growth ranging from 0.188% - 0.372% per year.*
    b. *The total District URP is expected to increase by up to 3.5% between 2024 – 2034*
2. *The assumption has been made that the Peak Population (combination of URP, Holiday Homes, Commercial Accommodation, and Day Visitors) will decrease in most identified communities (SA2's) within the District.*
    a. *The Peak Population of most townships will experience declines ranging from 0.26% to a decline of -0.03% per year.*
    b. *The total District Peak Population is set to decreased by up to -2.66% between 2024 – 2034.*

Overall, the population of the district has remained static over the last ten years. The main impact of the population is increasing urbanisation with an aging population retiring to main centres and the ongoing decrease in farming staff due to agricultural process changes and changes of land use from farming to forestry or carbon farming.

FIGURE C.1: ESTIMATED RESIDENT POPULATION

Source MBIE - Regional Economic Activity web tool

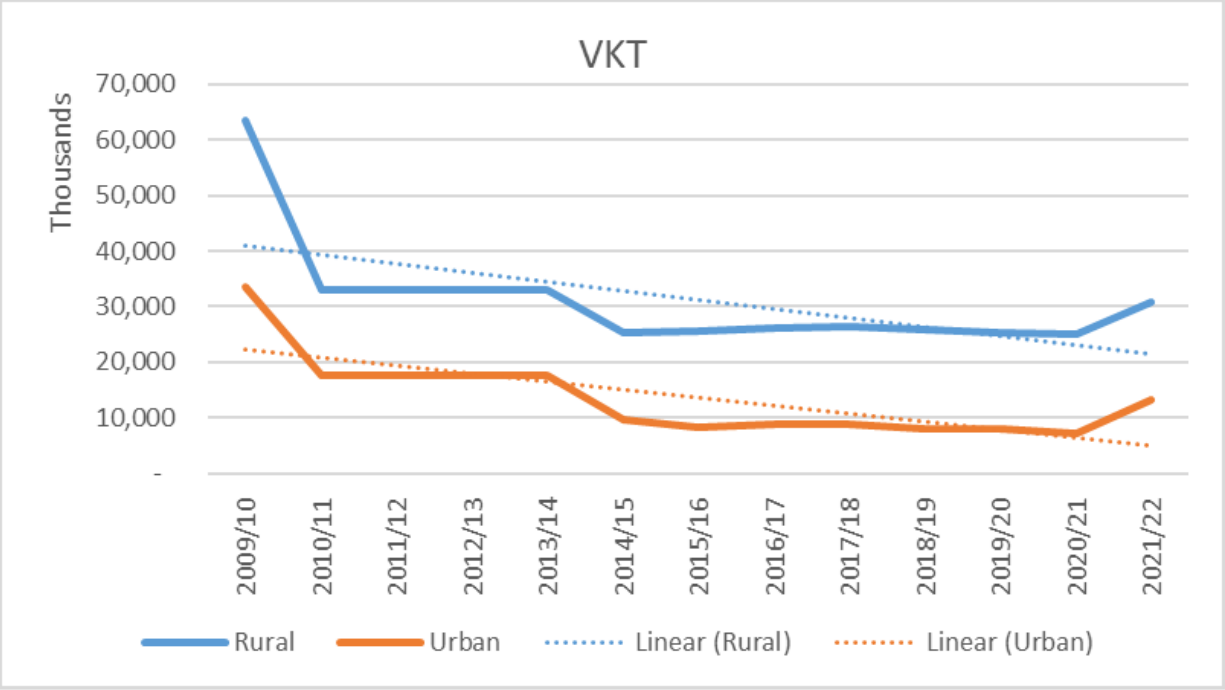


C01.5 Traffic patterns

Traffic counts indicate that in the last thirteen years, overall vehicle kilometres travelled (VKT) has declined overall. However over the past eight years the trend has been static and shows initial signs of a return to a growth phase.

FIGURE C.2: VEHICLE KM TRAVELLED PER ANNUM (000'S)

Source Waka Kotahi Data and Tools - Vehicle use (VKT) 'Vehicle Kilometres Travelled – Local Roads



The seasonal peaks generated by ski and outdoor activity traffic in the area mainly contribute to traffic patterns on the State Highways, apart from ski field access. Parking numbers are capped on both skifield roads, requiring a joint approach from the skifield operator, Department of Conservation, New Zealand Transport Agency and Council to ensure safe, efficient access to the fields is provided using travel demand management in conjunction with provision of assets.

Winter peaks will be affected by any decision about the operation of the two skifields.

Council continues it's work with relevant industry groups to better understand timings, vehicle numbers, loadings and routes affected to enable strengthening, capacity, safety-related realignment works and demand management strategies.

Council believes that forecast traffic and population trends can be accommodated within the roading network capacity. Demand is more likely to be affected than growth. For example, demand to seal busier rural roads, to provide for peaks or to attend to safety of one type of user when interacting with another (eg vehicles and walkers).

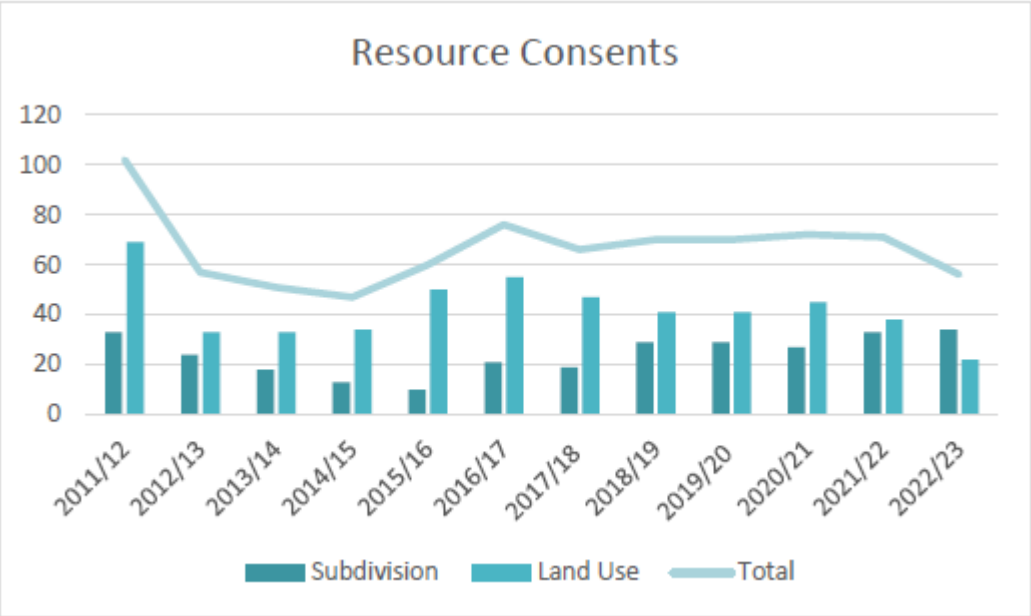
C01.6 Sub divisional Activity and Rateable Assessments

Subdivisions can increase traffic numbers and change travel routes to education, work and recreational opportunities. Detailed information is provided in the Planning Assumptions document supporting this AMP.

Subdivision resource consents have increased in the last two financial years, with 34 applications being received in 2022/23, a 12 year high. Growth is mostly in Ohakune, but there are a number of lifestyle blocks being developed throughout the District.

FIGURE C.3: 2010 – 2023 RESOURCE CONSENTS

Source: Growth Planning Assumptions Ruapehu District Council Ltp 2024-2034



Currently, significant subdivisions that may come online in the 10 year period are:

- Hidden Valley, Ohakune (71 Lot Subdivision)

- 134B Miro Street, Ohakune (97 Lot Subdivision)
- 140/148 Taupo Road (34 Units)
- Teitei Drive Social Housing in Ohakune (46 Lot Subdivision)

Council takes the following approach where new assets are created as part of a subdivision.

- If the road was not part of the maintained network, the developer will be required to bring it up to Council-specified standard and then Council may agree to incorporate it as part of the maintained network.
- If the general standard of the subdivider's road is a sealed environment then the subdivider may be required to upgrade the adjacent Council road e.g. from unsealed to sealed.
- If there are a number of small subdivisions, development contributions may be used in addition to other funding sources to allow Council to seal the road up to those subdivisions. Typically, this is a case where no one subdivision causes enough extra use on the network to justify asking that individual to upgrade the road.

Sub Divisional growth may result in Council upgrading the adjacent existing local road.

Rateable assessments are another indicator of growth but it must be noted that they can fluctuate due to a number of factors. Over the past 14 years, there has been an increase of 22 units per year. The assumed rate of growth for the next 10 years is the same.

C01.7 Sealing Urban and Peri-Urban Roads

There are a small number of unsealed roads in urban areas (6.7km - 25,650sqm) or in nearby peri-urban areas where pressure is being placed on Council to seal these roads to increase amenity values and reduce dust.

These roads have been prioritised based on housing density in a 100m section and daily traffic numbers.

If residents wish to advance a road up the priority order, they must pay the cost of the local share. The table below shows the first ten roads in the priority list. The full list is available from Land Transport. Council's "Privately Funded Road Improvement Policy" covers dust seal extensions on rural roads

TABLE C-1: URBAN SEAL EXTENSION PRIORITIES

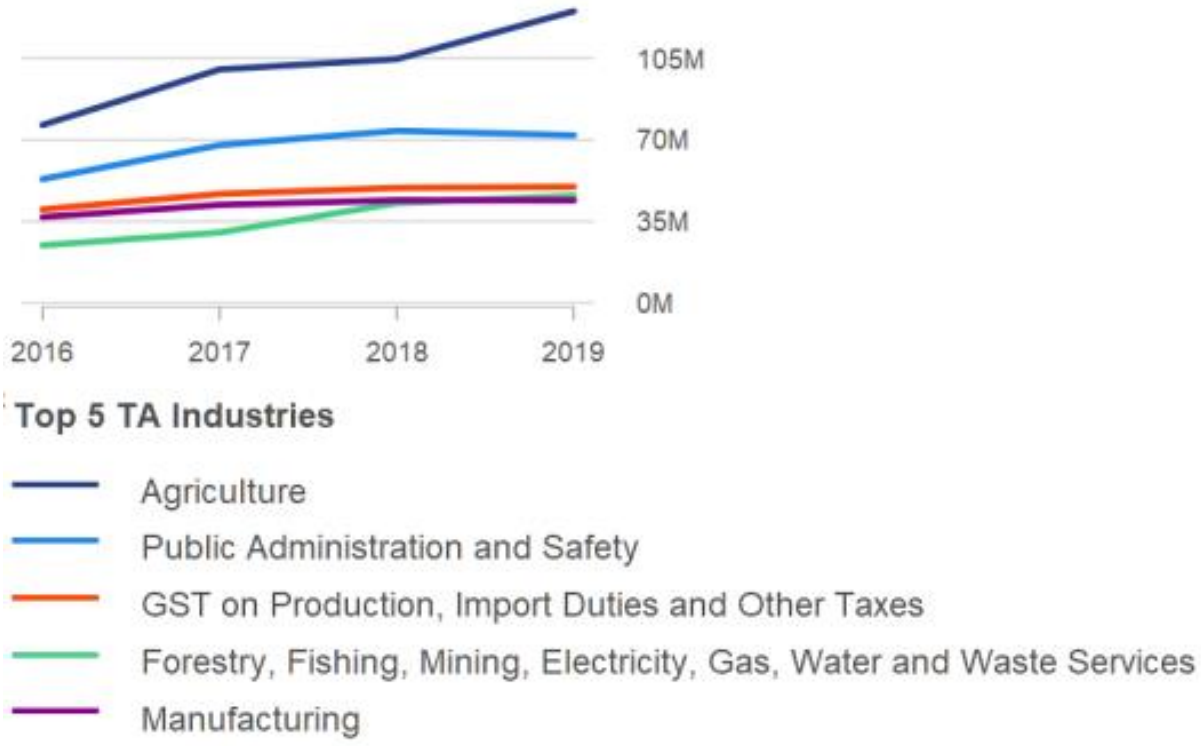
Priority Order	Road	Locality	Unsealed Length	Proposed Width	AADT	Dwellings	Housing Density in 100m section (HD=D ÷ L)	Estimated Cost	Traffic Housing Units of Demand AADT x HD (THUD)
1	Raurimu Road	Raurimu	513m	6m	63	17	0.33	$308,000	21
2	Pito Street	Raurimu	261m	6m	27	12	0.46	$157,000	12
3	Ohoeka Street	Owhango	345m	6m	37	8	0.23	$208,000	9

4	Onematua Road	Owhango	476m	6m	65	5	0.11	$286,000	7
5	Owhango Road	Owhango	119m	6m	27	3	0.25	$72,000	7
6	Poro Street	Raurimu	209m	6m	13	10	0.48	$126,000	6
7	Tuka Street	Piriaka	130m	6m	14	4	0.31	$78,000	4
8	Tanoa Street	Piriaka	257m	6m	20	5	0.19	$155,000	4
9	Miharo Street	Rangataua	32m	6m	6	2	0.63	$19,000	4
10	Ward Street	National Park	112m	6m	10	4	0.36	$67,000	4

C01.8 Tourism, Commercial, Industrial and Agricultural Activity

FIGURE C.4: GDP BY INDUSTRY ($M)

Source: Transport Insights Tool - 2020/21 Ruapehu District Council RCA Report



C01.8.1 Pastoral Farming

Traditional pastoral farming of sheep beef, and to a lesser extent deer are a significant driver for the local economy.

The ongoing move to larger farming units and vehicles of greater mass and size places demands on the roading network as narrow rural roads and bridges become choke points. Heavier vehicles may require bridge capacity increases beyond that of the original design.

The trend also affects the connecting routes, many of which are still relatively narrow and winding, with inadequate pavement foundations. This has impacts both on the ongoing maintenance of the transport network pavement, as well as on safety with sight lines and truck rollover on shoulders being an issue.

C01.8.2 Carbon Farming

The land in Ruapehu District is not highly productive in general, according to the Manaaki Whenua Landcare Research Land Use Capability Survey Handbook. There are eight classifications ranging from Class 1 (very few limitations) to Class 8 (very severe limitations). based on its physical limitations. Classifications are based on things such as climate, soil, erosion, and drainage.

Most of the land in Ruapehu District is in Classes 4, 5, 6, and 7, which means it has moderate to severe limitations for primary production. This makes it attractive to plant in carbon farming. The impact of farms being converted into carbon farming is that it lessens the number of residents and therefore vehicle kilometres travelled.

It is difficult to obtain numbers on the number of conversions that have taken place in the last three years, however, Council is aware of a number of that have been done. Council will continue to monitor through methods such as traffic counts, Census data and population forecasting.

Roads that become predominantly carbon farmed are likely to need a lower level of ongoing maintenance. Council will need to identify policies to deal with this.

C01.8.3 Market Gardening

Ohakune has a rich history of market gardening, and produces significant quantities of vegetables, especially carrots. This is because Ohakune has a favourable microclimate and irrigation that allow it to grow crops that are not common in the rest of the District. Market gardening's demand on the network is availability and having structures with appropriate capacity. An example of where this is currently an issue is Bridge 292 on Mangateitei Road, where a weight restriction impacts the market gardeners beyond it. It is in the programme for replacement.

TABLE C-2: PRODUCE

Crop	2008			2012			2022		
	Ruapehu (Ha)	NZ (Ha)	%	Ruapehu (Ha)	NZ (Ha)	%	Ruapehu (Ha)	NZ (Ha)	%
Carrots	223	684	33%	368	857	43%	219	1770	12%
Potatoes	332	5,476	6%	527	5,442	10%	480	8424	6%

C01.8.4 Tourism

Tourism is a major contributor to the District's economy. Tourism is estimated to be 80% domestic, receiving 783,000 visitors annually, according to the 'Growth Planning Assumptions Ruapehu District Council LTP 2024-2034.'

The sector was heavily affected by COVID-19 restrictions and the District had a challenging three seasons for snow related tourism activity. This situation could improve over the coming year. The outcome of the RAL liquidation is expected to influence winter tourism.

Ruapehu works to increase shoulder season and year round tourism in areas such as recreational and off road cycling. River tourism is another large contributor over summer.

Tourism affects demand by:

- Winter peaks in Ohakune and National Park associated with accessing the skifield at either end of the day along with parking.
- Seasonal through traffic. The seasonal peaks generated by ski and outdoor activity traffic in the area mainly contribute to traffic patterns on the State Highways, apart from ski field access.
- Potential conflict between different types of road users. Oio Road provides access to the Whanganui River as well as farming areas. Some low volume rural roads make up parts of the Te Araroa Trail for walkers, provide access to recreational off road cycle trails (Mountains to Sea and the Timber Trail) or are part of a 'Heartland Ride' for cyclists.

FIGURE C.5: TOTAL STAY UNIT NIGHTS - OCCUPANCY

Source: Growth Planning Assumptions Ruapehu District Council LTP 2024-2034

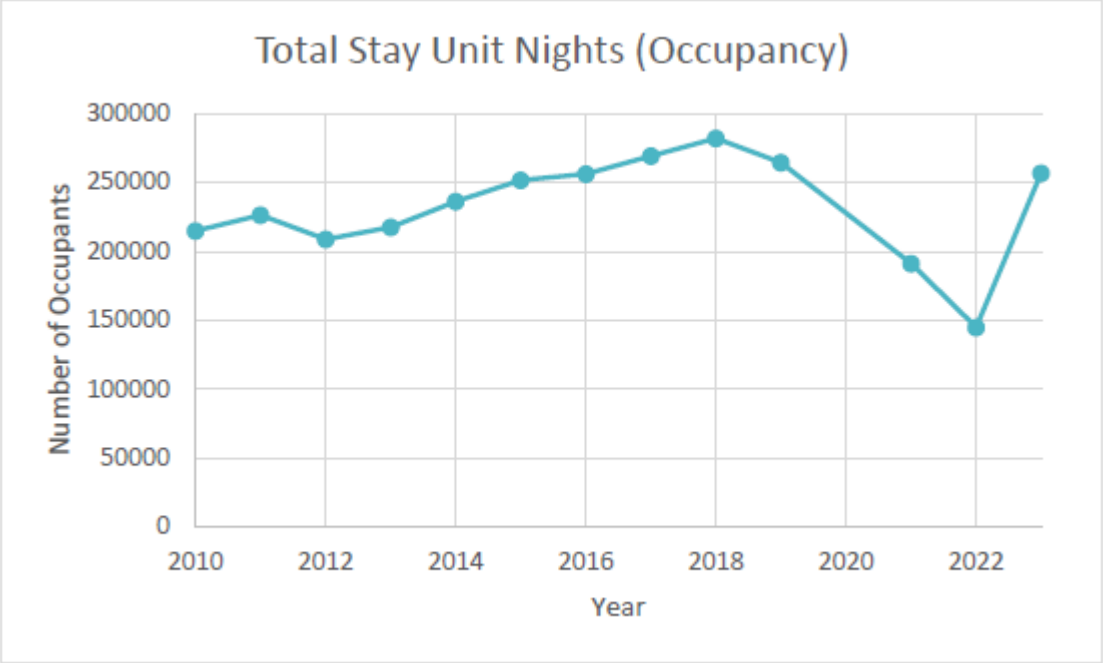
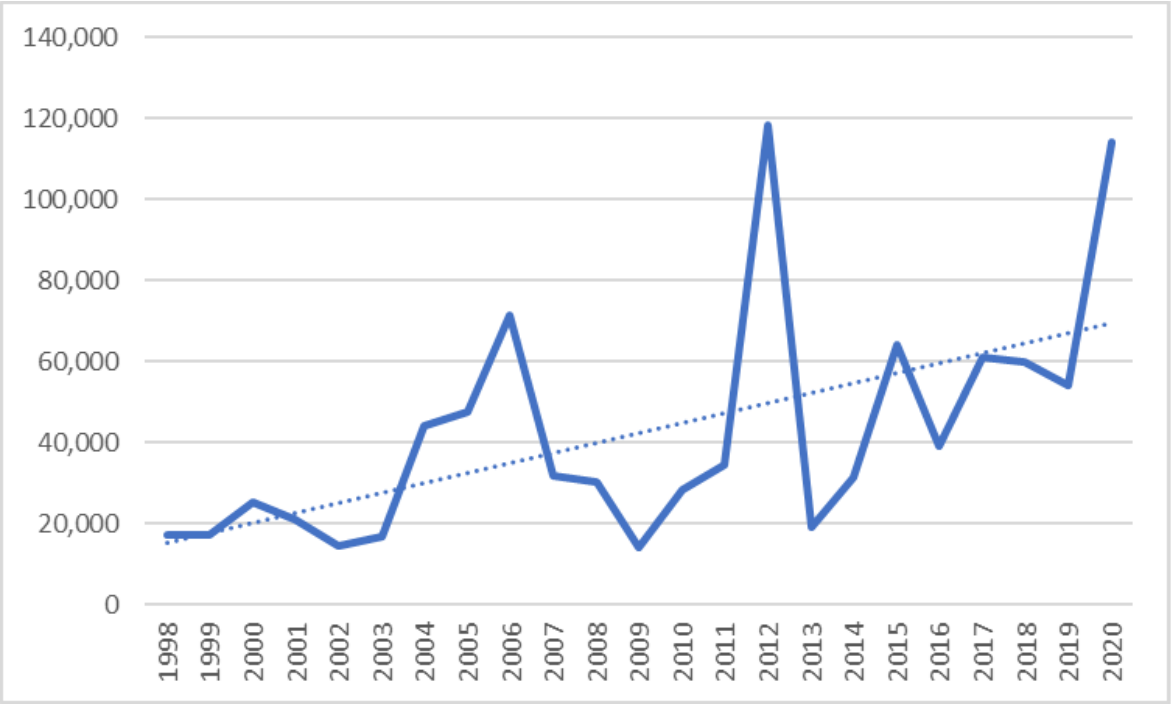


FIGURE C.6: INTERNATIONAL VISITOR NIGHTS – RUAPEHU DISTRICT

Source: MBIE Regional Economic Activity web tool



More detailed information about tourism growth and demand is included in the Planning Assumptions document supporting this AMP.

C01.8.5 Forestry

The harvesting of large areas of forestry throughout the District is having a major impact on the District roading network.

The majority of planting occurred in 1989-90 and is reaching harvest maturity currently. Harvest demand can fluctuate significantly in the short term, dependant on log prices set in China. It is prevalent throughout the District with an even mix of plantation and farm forestry. Some plantations are on perpetual harvest (e.g. Raetihi Pipiriki Road), while others have 5-10 year durations (Ongarue and Waimiha) or are one off (majority of farm forests).

Maturing forestry plantations, as well as a trend to larger, heavy vehicles is leading to significantly increased heavy vehicle traffic around the harvested areas. This is having an effect on the rate of pavement deterioration. On sealed roads, this has previously been addressed within the existing pavement rehabilitation programme. However, this will not be sustainable in the long term.

Forest blocks have also been converted to carbon farms in recent years. Carbon farming demand, which is driven by the ETS, is a relatively new income stream for the agricultural sector and the impacts of which are not well understood for the Ruapehu District. There have also been ongoing legislative changes and consultations which will impact which forestry blocks are eligible and will therefore be withdrawing from the forestry market. An investigation on where these blocks are or likely to be and the potential reduction to wear and tear on the transport network via the reduction of logging trucks is required and will be included in the Improvement Plan.

Source: Statistics NZ

C01.8.6 Mining

Ruapehu has a variety of sources of aggregate throughout the District, as well as coal deposits in the Ohura area. Most aggregates in the north have come from river gravels, while in the south, it is pit sourced.

Demand for coal periodically sparks renewed interest in coal deposits in the Ohura area.

If this eventuated, road or rail could be used to transport to market. The uncertainties around timing and destinations make it difficult to plan for the road usage. Any response will be largely reactive.

C01.9 Changing Vehicle Use and Type

C01.9.1 Private vehicles

Vehicle ownership and usage continues to grow and the lack of passenger transport available means that residents rely on their personal vehicles or friends.

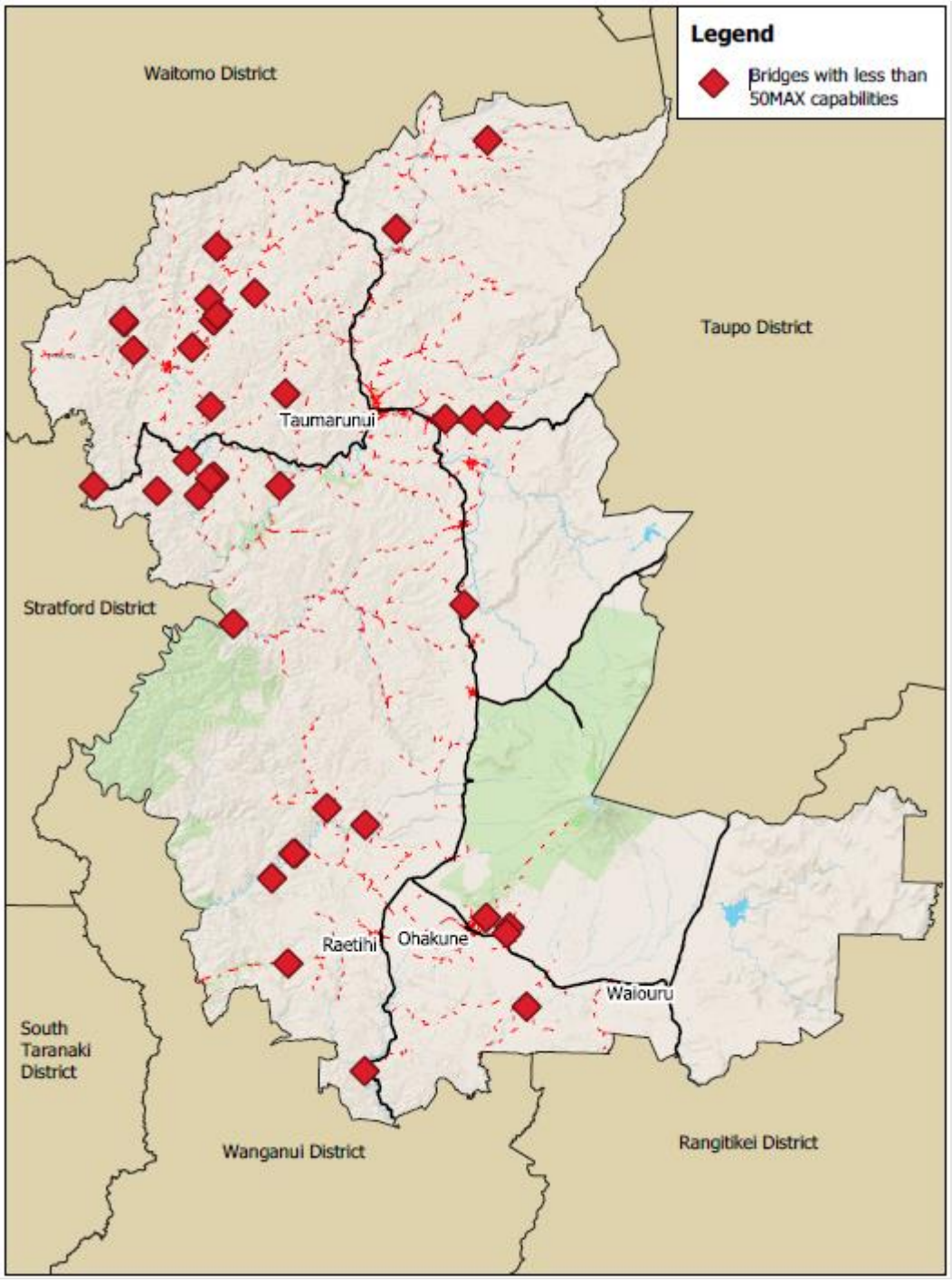
C01.9.2 50Max and HPMV vehicles

As 50Max trucks become more commonplace, there will be pressure to increase the capacity of these bridges on select routes.

High Productivity Motor Vehicles (HPMV) are vehicles that can carry a load that either exceeds 47T or 20m in length. They can only travel on permitted routes with enabling infrastructure. For example, Waiaruhe Road, Waiouru is regularly used for servicing a fertiliser plant.

The presence of these vehicles can impact demand if there is desire to open more of the network for them. Currently, 92.5% of the network is available to 50Max and HPMV vehicles and Council does not have any work specific capacity improvement work programmed to increase this. Some bridge upgrades that address weight restrictions may also benefit accessibility. Capacity upgrades may be to road alignments, widening or bridge capacity increases.

FIGURE C.7: MAP OF BRIDGES RESTRICTED TO 50MAX VEHICLES



There are 38 bridges restricted to 50Max trucks, a full list can be found in Appendix G.

It should be noted that the majority of bridges within the District were designed and constructed prior to the first national guideline for seismic design of bridges being published in 1980.

C01.9.3 Route Security

One of the major challenges facing the District is its vulnerability to extreme weather events and natural disasters. These events are becoming more frequent due to the impacts of Climate Change discussed below. This has an impact on all modes of transport and is a

factor in the planning of both land use and transport infrastructure. The network is characterised by main roads that follow deeply incised, papa based rivers, with short feeder roads that serve farms. The geological characteristics of the papa belt mean that the main road network is built in a very unstable country that suffers from major slips which are very difficult to prevent.

C01.9.4 Walking & Cycling

Ruapehu District's urban area is well served by footpaths. Demand focuses on condition, and accessibility. Council is slowly working to address this and provide accessible routes.

TABLE C-3: LOCATION OF FOOTPATHS

Location	Length (m)	Area (m2)
National Park	3,526	4,277
Ohakune	210	252
Ohura	1,971	3,693
Taumarunui	40,233	67,169
Waimarino	23,961	38,987
Waiouru	616	903
TOTAL	**70,517**	**115,280**

The cycling focus in Ruapehu is for recreational, off road cycling, rather than congestion relief. The District has the 'Mountains to the Sea' and 'The Timber Trail' cycle ways, along with 144km of "off road" tracks and 237km of Heartland on road rides. The cycleways have benefits for tourism and the District economy. The Tour Aotearoa and Kopiko Aotearoa cycle trails both pass through the district and utilise local roads as well as cycle trails.

The introduction of cycleways, Kopiko Aotearoa and Tour Aotearoa increased the number of cyclists on rural roads, raising concerns around safety, with cyclists and walkers sharing the road with vehicles. Often the roads do not have shoulders. As the roads are low volume, the different types of users can take each other by surprise. Ruapehu District has a Cycle Awareness Strategy which is predominately a signage campaign for affected roads, reminding users to 'Share with Care'.

C01.10 Climate Change

The Resource Management Act 1991 requires Council to consider the effects of climate change. This is backed by conclusive evidence both nationally and internationally that the climate is changing, resulting in rising sea levels, increases in weather extremes, such as "Weather Bombs" (increased intensity of El Nino and La Nina conditions) – more storms, intense rainfall, flooding and drought, all of which impact on rainfall quantity and the interactions with the human and physical environment.

Council recognises climate change and its potential impact on the land transport activity. Increased rainfall intensities have the most significant impact. Council has planned for this with the emergency works budget, response requirements within the maintenance contract and increasing capacity when replacing bridges and culverts.

C01.11 Legislative changes impacting on demand

The following legislative changes might have small incremental impacts on growth or decline in demand over time:

TABLE C-4: LEGISLATION THAT COULD IMPACT ON DEMAND

Legislation	Change and potential impact
Resource Management Act	Changes in RMA could stimulate growth.
New Zealand Emissions Trading Scheme (NZ ETS)	Changes in the NZ ETS will have an impact on forestry and the resulting carbon farming could decrease the intensity of logging traffic

C01.12 Impacts of Changing Demand on the Land Transport Activity

The following table summarises the effects of the identified growth and demand trends on the land transport activity.

TABLE C-5: GROWTH AND DEMAND TRENDS

Growth/Demand Trend	Impact
Overall population and sub divisional growth patterns	
Overall usually resident population is static in the District	Any decrease in the rating base to fund works is partially offset by increased holiday home development in specific locations. Aging population is retiring to urban centres and overall declining trend in agricultural staff required due to transition to carbon farming.
Sub Divisional activity and holiday home growth in: ● Ohakune ● Rangataua ● National Park ● Horopito	Growth in asset base through adoption of third party infrastructure. Increasing community expectation regarding levels of service, in particular widening roads, and provision of footpaths, kerbing and stormwater channels. Increased rating base in specific locations may enable enhanced service levels there. Inflationary impacts may slow the growth in demand for holiday/second homes

Growth/Demand Trend	Impact
Increasing visitor numbers	
Growing tourism industry leading to increased visitor numbers and significant holiday home development in ● Ohakune ● Rangataua ● Horopito	Increasing visitor numbers and holiday home development leads to more vehicular and pedestrian traffic and changes in peak/route variations. While the majority of the District's roads have sufficient capacity to be able to manage the foreseeable demand, the following specific routes have been identified as having capacity-related issues: ● Ohakune Mountain Road – peak day tidal traffic exceeds capacity and is expected to continue to increase. ● Raetihi-Pipiriki Road – unsealed and areas of poor geometry with increasing tourism traffic expected. ● Oio Road – unsealed, areas of poor geometry with increasing tourism traffic expected. Increasing numbers of rented motor-homes. These are sometimes uninsurable on unsealed roads, leading to increased pressure on Council for seal extensions on tourist routes. Increasing expectations regarding vehicular ride comfort and urban periphery pavement sealing. Increasing expectations regarding the amenity value of "visitor townships".
Increasing heavy vehicle numbers and size	
Harvesting of forests leading to significantly increased heavy vehicle traffic.	Accelerated pavement deterioration and shortened pavement lives on specific routes. Increased need to improve the geometrics and other manoeuvrability and safety aspects of pavements on specific routes to accommodate increased numbers of large vehicles. Potential for an increase in need to upgrade restricted bridge capacity or geometry to allow more of the network to be travelled by heavier vehicles
Move to larger farming units and larger heavy vehicles.	Accelerated pavement deterioration and safety issues as above. Bridge capacity or geometry issues as above
Increased aggregate extraction from pits in the north, and renewed interest in coal deposits in Ohura leading to increased heavy vehicle traffic.	Accelerated pavement deterioration and safety issues as above. Bridge capacity or geometry issues as above
Increasing vehicle ownership	
Increasing vehicle ownership leading to increased vehicle trips.	Accelerated wear and tear on the Land Transport network, although this is minor in comparison to the deterioration caused by heavy vehicular traffic. Increased community expectations for improved ride comfort. Higher incidence of vehicular accidents.
Aging Population	Increased level of service requirements in urban centres for footpaths to decrease the potential for trip hazards and to support the growth in mobility scooter access.

C01.13 Demand Projections

The following assumptions have been made for planning to manage practically the demand projection implications:

- Increasing expectations caused by growing populations in specific locations, and increased vehicular trips will be managed through ongoing community consultation as part of the service level reviews.
- The seasonal traffic generated by the ski, cycling and outdoor activities in the area mainly contributes to a change in the traffic patterns on the State Highways. It has little effect on the District Land Transport network, except for Ohakune and National Park. Traffic counts indicate that in the last ten years traffic volumes have been declining marginally.
- Assumptions have been made on the following specific routes:
    - Peak traffic flows on the Ohakune Mountain Road are expected to increase to 2,000 vehicles per day in each direction to align with car parking and lower mountain facility “comfortable carrying capacity” provided by Ruapehu Alpine Lifts (RAL). The one-way capacity of this road is currently limited to around 950 vehicles per hour.
    - Traffic volumes on Oio Road will increase over the next 10 years with increasing tourist volumes, including buses, mini buses and private motor cars. This will lead to the need to achieve a more uniform pavement width, widen and straighten sections of the roads within this 10 year planning period. It is anticipated these changes can be addressed within the minor improvements and rehabilitation programme.
- Heavy vehicle movements on feeder roads from forestry areas to state highways will increase in each direction throughout the district.
- Ruapehu will continue to apply sound pavement design with future loading forecasts to address increased deterioration rates caused by the shift to larger heavy vehicles.
- Increasing vehicle ownership and vehicular trips have negligible effect on the deterioration rate of the network.
- Increasing visitor numbers implies more vehicular and pedestrian traffic, and an increased peak/low variation.

C01.14 Meeting Growth and Changing Demand Needs

C01.14.1 Growth and Demand Forecasting

The following contribute to the robustness of the growth and demand forecasting, and management processes. With Council undertaking the following:

- Traffic volumes and patterns on the identified critical routes are monitored.
- Working closely with Waka Kotahi and Horizons to ensure consistency is achieved in local, regional and national land transport strategies.
- Liaises with KiwiRail to explore alternative transportation modes and benefits in a local and regional context as required.
- Working closely with industry groups to better understand anticipated demand increases. These groups include forestry groups, farmers, quarrying and mining companies.

C01.14.2 Demand Management Forecasting

As traffic growth on the majority of the District's roads is not likely to lead to congestion, techniques used by Council is currently focussed on limiting damage to pavements caused by heavy vehicles by:

- Discussion with transport operators to identify routes which are better suited for heavy vehicle use.
- Regulation - Traffic bylaws (restricting traffic use on specified routes, use of air brakes, speed etc).
- Key tourism routes will continue to be monitored for congestion during peak periods (for example Ohakune Mountain Road) and appropriate management strategies adopted.
- Responses will be developed to address demand on local roads e.g. potential to heavy vehicle parking areas to address damage from parking on local roads in Waiouru.

C02 MANAGING RISK

C02.1 Overview

This section covers the risk management implemented by Council and how it applies to current and future Land Transport activities.

The risks are assessed from both external and internal contexts. The external (PESTLE) context categories are:

- **P**olitical and Policy
- **E**conomy
- **S**ocial
- **T**echnological
- **L**egal and Regulatory
- **E**nvironmental

The internal Asset Management context categories for each asset type are:

- Asset condition and performance
- Activity planning
- Activity management (operational)

The risk context and risk register were reviewed and updated in June 2023 and are discussed further on.

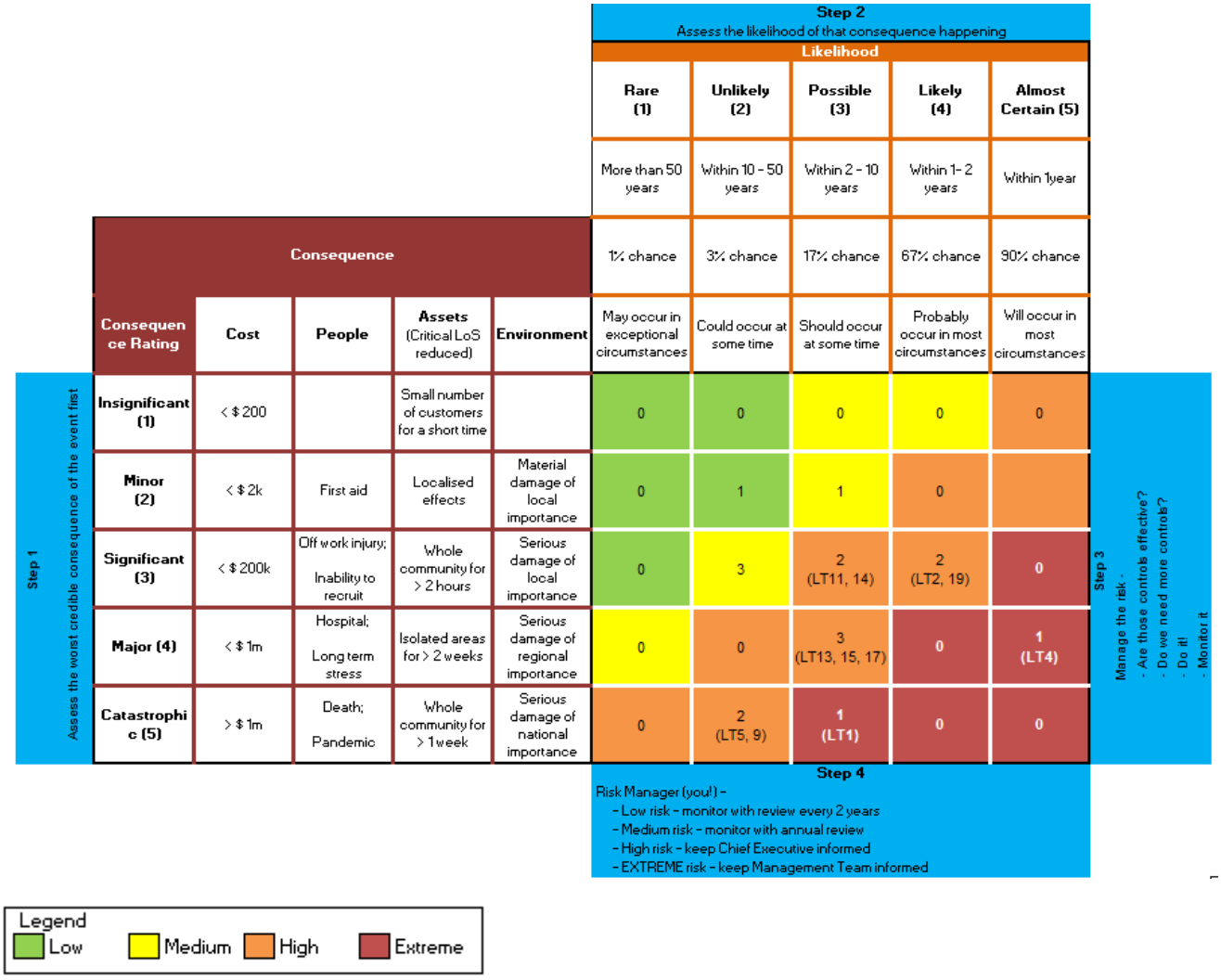
C02.2 Risk Context

Each of the elements that define the context for risk management applicable to the Land Transport activity has been examined and results have been summarised in Appendix D, Schedules 1 and 2.

C02.3 Risk Register

A Stakeholder workshop was held in 2015 to process potential external (PESTLE) risks and the internal asset (AM functions) risks. This was distilled into a register of medium, high and extreme risks. Both the PESTLE and Risk Register were reviewed in November 2020 with each risk described and evaluated per the Risk Management Framework in the figure below and management options discussed. The Risk Register was updated in a Land Transport staff workshop in June 2023.

FIGURE C.8: RISK MANAGEMENT FRAMEWORK



The resulting matrix shows one risk identified as two extreme and nine high risks. The complete risk register can be reviewed in Appendix D.

Risks should be monitored and reviewed regularly. The following table outlines the expectation dependent on the Risk level.

FIGURE C.9: RISK MANAGEMENT METHODS

Risk Score	Risk Management Method
Extreme Risk	**Treat risk** **Risk Manager keeps Management Team informed**
High Risk	Treat risk Risk Manager keeps Chief Executive informed
Medium Risk	Risk Manager monitors with annual review
Low Risk	Risk Manager monitors with review every two years

C02.4 Extreme and High Residual Risk Land Transport Activity Risks

Of those specific risks listed in the Risk Action Plan, the following remain with extreme or high residual risk and are worthy of note:

Extreme Risks

- LT04 Removal of full funding for Special Purpose Roads
- LT01 Collapse of non-maintained bridges

High Risks

- LT19 Climate change causing more severe weather events
- LT17 Cost of maintaining minimum levels of service becomes unaffordable
- LT13 Ability to resource the delivery of Asset Management Programme
- LT09 Changing road user trends – safety issues
- LT14 Availability of materials (Aggregates)
- LT02 Increased pavement deterioration due to forestry haulage
- LT05 Collapse of maintained bridges
- LT11 Snow and Ice causing road closures
- LT15 Achieving the expected lives for pavements and surfaces

C02.5 Risk Treatment Programme Exceptions

Any costs/resources needed to treat a specific risk are:

- Listed in the Risk Register
- Specified to be done by a determined date
- Provided for in the Long Term Plan

C02.6 Critical Assets and Routes

Critical assets are those for which the consequences of failure would be sufficiently serious that their failure should be prevented to the extent that it is practicable to do so. The consequences of asset failure may be evaluated with respect to:

- Impact on service delivery (i.e. levels of service)
- Impact on compliance requirements
- Impact on people (i.e. risk to life)
- Impact on property and infrastructure (i.e. disruption to others)
- Impact on the environment
- Cost to repair

Although a formal criticality assessment has not been undertaken, the following routes have been identified as critical, with a greater level of management applied to assets along them:

- Ohakune Mountain Road – a Special Purpose Road providing the only vehicular access to the Turoa Ski Area. This road is sometimes unable to meet current peak traffic demands, which are expected to increase, has safety issues and is in a sensitive and harsh environment.

- Raetihi-Ohakune Road - this is an important tourist road and link between Raetihi and Ohakune, heavily used during the ski season.
- Ruatiti Road – This route has increasing tourism traffic. It has areas of poor geometry, particularly on the unsealed section. Work has been done over the past ten years on sealed sections to improve alignment, geometry and safety.
- Raetihi-Pipiriki Road – this road leads to the Pipiriki Township, on the banks of the Whanganui River.
- Oio Road – this important route is unsealed. It has areas of poor geometry, with increasing tourist traffic.
- Okahukura Saddle Road – This is one of the main routes into the Ohura hinterland.
- Ohura Road – provides access to Ohura and Matiere and surrounding farmland.
- Paparoa Road – provides only access to Kirikau and Tawata Valley across Te Maire Bridge.
- Ongarue Waimiha Road – provides access from SH4 to Ongarue.
- Poro O Tarao route from Taumarunui to Benneydale – inter district link to Benneydale and Timber Trail. This route is relied on by commercial traffic associated with forestry, stock truck and tourism traffic servicing the Timber Trail cycleway. It is currently sealed but is narrow with areas of poor geometry.
- Hekeawai Drive – provides alternative access to Taumarunui Hospital in emergency events should SH43 Hospital be closed or blocked. Also an increased use due to recent and current developments.

C02.7 Resilience

Resilience refers to the ability of the transport network to support the safe evacuation of people and emergency response during and following a significant adverse event. This includes:

- The performance of transport assets during a significant event such that they do not create a hazard to people.
- The availability of key transport assets and routes to support evacuation and emergency response following a significant event.
- The capacity to return assets or routes to service following an unplanned disruption.

The adverse events which are considered for the purposes of a resilience assessment are:

- Major Earthquake
- Volcanic Eruption
- Extreme Wind
- Flooding
- Fire
- Land slip

Ruapehu District Council is predominantly a spine network with valley roads forming sole access to properties from the state highway.

Horizons Civil Defence Emergency Management Group Plan 2016 - 2021 (Version 1.3 June 2018) identifies Makatote Viaduct on State Highway 4 between National Park and Ohakune as the only area in our District with lifeline utility interdependencies.

C03 ENVIRONMENTAL STEWARDSHIP

C03.1 Overview

This section describes the environmental legislative obligations that Council has in undertaking the Land Transport activity including requirements specified as conditions of resource consents. It also demonstrates Ruapehu District Council's commitment to environmental stewardship through the inclusion of environmental impact mitigation in relevant Council strategies.

Environmental sustainability, protection of heritage values and the enhancement/protection of amenity are very important to the community. Maintaining these values is essential to tourism, economic viability, and the social and cultural health of the Ruapehu District communities. This section pulls together the many elements that contribute to good environmental management as relevant to the Ruapehu District Council.

C03.2 Sustainability Outcomes

A generally accepted definition of sustainability states that development should:

"Meet the needs of the present without compromising the ability of future generations to meet their own needs"

(Brundtland Commission Report, Our Common Future, Oxford University Press, 1987).

Whilst this definition nicely frames our ambition, it needs to be broken down further to identify the actions and changes in current behaviour that are required. When people are asked to behave sustainably they often respond "define it and we will do it".

The key to this is context. For example:

- What are the unique needs, challenges and opportunities facing Ruapehu District Council at this time?
- What particular tools, techniques and policies can Council use in its move towards sustainability?

In other words:

- What needs to be done here, and why?
- How are we going to do it?
- What are the resources required?

There is no "one size fits all" approach and every organisation must discover how to implement sustainability principles in a way that works best for them.

This section defines Sustainability in a context that is relevant to Council and how this can be practically integrated into Ruapehu's ethos and ultimately into the delivery of Land Transport services.

C03.3 Sustainability Context

Sustainability and Local Government in New Zealand

The desire to implement sustainability is found in legislative drivers that affect everyone from central government to regional authorities to local bodies.

- The concept of sustainability is particularly important for government organisations, whether they be central, regional or local, due to the responsibility to manage society's resources in a manner that is in the best interest of all.
- Working collaboratively can accelerate the process as we build on each other's skills and experience to develop and disseminate best practices. This can be done through businesses, community-based organisations, and others.
- Local government functions are guided by the Local Government Act (LGA) 2002, the Resource Management Act (RMA) 1991, the Natural and Built Environment Act 2023 (NBA) and the Spatial Planning Act 2023 (SPA). These statutes require councils to address economic, environmental, social and cultural sustainability in their decision making and activities.
- For local government, it is about planning and providing for the needs of individuals and communities, protecting ecosystems and their services and creating prosperity.
- The Horizons Regional Council is responsible under the RMA for ensuring that the natural and physical resources of the region (such as the land, air, water and coastal resources) are managed in a sustainable manner.

C03.4 Legislation

There are a number of legislative mechanisms aimed to avoid or mitigate potential adverse environmental effects associated with the management of the Transport network. These are set at national, regional and district level and are covered in Section B - Land Transport Activity - Strategic and Programme Business Case.

C03.5 Resource Consents

If the construction of an asset does not meet the development controls outlined in the District Plan or relates to an activity that has the potential to result in adverse effects on the environment, beyond those contemplated by the District Plan provisions, resource consent may be required.

An Assessment of Environmental Effects (AEE) is required to support any resource consent applications to the respective Councils when seeking approval to construct, alter or vary the use of a facility or building that is not permitted by the relevant plan.

The AEE process involves the identification and assessment of both the potential and the perceived physical, social and cultural impacts that the proposed works may have on the existing environment, and includes the examination and comparison of options and

alternatives for mitigating any identified adverse effects, and the confirmation and recommendations on the preferred options and methodology to carry out the works.

The critical environmental factors requiring consideration may include geological and geotechnical effects of land movement (cut and fill), the ecological and biological effects of vegetation removal or earthworks, and the cultural, archaeological and social effects on the environment of the development. These, together with noise, traffic, and visual effects, may require specialist inputs and consultation with the local communities.

The AEE process involves:

- The effects of the proposal on other person(s), e.g. neighbours affected by dust or noise.
- The effects of the proposal on the natural environment e.g. increase in the amount of dust or the disturbance of waterways due to earthworks.
- The visual impact of the proposed activity.
- Proposed methods of how any identified adverse effects are minimised.

The critical environmental factors requiring consideration include:

- Ecosystems and their constituent parts, including people and communities.
- All natural and physical resources.
- Amenity values.
- The social, economic, aesthetic, and cultural conditions which affect the matters stated in the paragraphs above.

Council holds a number of resource consents to enable the safe and environmentally appropriate operation of its Transport activities. Details of the consents are outlined in Appendix E: Resource Consents.

C03.6 Designation

The purpose of a designation within a District Plan is to:

- Inform the community about the route and operation of existing and future transportation networks.
- Allow the designating authority to do anything that is in accordance with the designation (without the need for other resource consents under the district plan). The usual provisions of the district plan do not apply to the designated site. Environmental compliance is ensured with Outline plans.
- Protects future routes from inappropriate development and can assist in strategic planning.
- Allow land to be purchased for transportation purposes.

Designations need to be implemented within a specific timeframe. However, they may be rolled over into new plans.

The District Plan contains the following Transport designations:

TABLE C-6: DISTRICT PLAN DESIGNATIONS

Plan Ref	Purpose
No 25 Map B2	Middle Road Gravel pit (metal reserve) Sec 9 Blk XV Manganui SD Gravel Pit GAZ 80/3273 Operative District Plan 2000 Requiring Authority RDC
No 26 Map A2	Whangaehu Valley Road Metal Pit (Ross's Pit) Pt Sec 6 Pts Rangiwaea 4F14D2B 4F14D3A2 Blk XIII Karioi SD – Metal Pit Operative District Plan 2000 Requiring Authority RDC
No 86 Various	District Railway Purposes Main Trunk Railway and Okahukura – Stratford Railway Requiring Authority New Zealand Railways Corporation
	Railway Purposes (Secondary) As marked on planning maps. NZ Railways Corporation
No 87 Various	State Highway 1, 4, 43, 41, 47, 48, 49 (Road Reserve) All State Highways within the Ruapehu District existing on the date that a decision was made on this Plan Requiring Authority NZ Transport Agency

C03.7 Potential Issues

There are a number of adverse environmental effects that can occur in the process of undertaking Transport related activities, during both construction and operational use of the network.

The information provided below outlines some of these issues and associated mitigation measures that could be employed.

TABLE C-7: POTENTIAL ENVIRONMENTAL ISSUES

Issue	Description	Mitigation Measures
Dust	Dust can affect vegetation health along the edge of construction works or earthworks areas, can be a nuisance to the surrounding public, and can contribute to sediment loads by being deposited in areas without sediment control measures. Sediments deposited on sealed public roads can also result in a dust nuisance. Similarly, unsealed roads can present a dust nuisance during periods of prolonged drought.	The following mitigation measures may be considered in the control of dust emissions: ● Wheel washing for trucks leaving development sites. ● Spraying down areas (with water) to control dust emissions. ● Monitoring at site boundaries.
Sediment Runoff	Sediment runoff from construction works is generally controlled via sediment control techniques and administered by the Regional Council. Sediment from exposed areas of land can enter waterways, streams and rivers, potentially causing adverse effects to fauna and flora.	The following mitigation measures may be considered in the control of sediment runoff: ● Effective sediment control techniques such as cut-off drains, ponds, and silt fences retain sediment and prevent it from entering water systems. ● Compliance with an approved sediment and erosion control plan.
Noise	Noise is a factor to be considered during construction projects. The District Plan contains the standards for noise and the restrictions imposed on construction such as hours of operation and the decibel limits to be adhered to. Monitoring typically takes place to establish background noise levels against which construction and traffic noise can be measured. The documents that Council shall have regard to include: ● NZS 6806: 1993 Road Traffic Sound. ● "Guidelines for the Management of Road Traffic Noise – State Highway Improvements" by Transit New Zealand 1994.	The following mitigation measures may be considered in the control of noise emissions: ● Hours of permitted work ● Monitoring at site boundaries ● Compliance with standards ● Community consultation
Landscape Values	The Whanganui River is an outstanding landscape feature in the district and conservation of landscape value is to be taken into account with any proposed developments. Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 provides a framework for governance and management of the River.	The following mitigation measures can be considered when taking into account landscape values: ● Review District Plan maps ● Community consultation

Issue	Description	Mitigation Measures
Cultural Heritage	Places of particular cultural heritage value have been scheduled and identified on the District planning maps so that location is known and can be taken into account when considering development and applying for resource consents. The scheduled sites are those that are registered under the Historic Places Act 1993, or those requested to be scheduled following consultation with iwi. Not all sites are recorded and for major developments it is important that consultation be undertaken with tangata whenua, registered archaeologists, NZ Historic Places Trust and the Regional Council. Protocols can be developed in the event of discovery.	The following mitigation measures may be considered when taking into account cultural heritage values or sites: ● Consultation with key stakeholders ● Development of protocols ● Due diligence prior to development
Stormwater Discharge	Stormwater discharges need to be managed to prevent pollutants from entering waterways. Roads provide a number or potential contaminants such as metals (from vehicles), hydrocarbons, gross pollutants (litter) and herbicides (from vegetation control). These can cause adverse effects for flora and fauna in receiving waters. In addition, stormwater pipes/culvert outlets can cause scour during large flows.	The following mitigation measures may be considered in the control of stormwater discharges: ● Adequate maintenance and clearing of channels, catchpits and roadside drains. ● Retention dams, swales, and outfall structures to dissipate flows. Any number of options can be evaluated prior to consent approvals. ● Evaluate receiving waters to determine background water quality ● Monitoring of the mixing zone.

C03.8 Climate Change

New Zealand's climate varies significantly from year to year and from decade to decade. Human-induced long-term trends will be superimposed on these natural variations and it is this combination that will provide the future climate extremes to which New Zealand society will be exposed.

The Ministry for the Environment has produced a document entitled "Climate Change and Long Term Council Community Planning" (October 2008) which advises that 'Local government is required to operate under a range of principles that are set out in law or have evolved through good practice and case law. The key principles are:

- Sustainability
- Consideration of the foreseeable needs of future generations
- Avoidance, remedy or mitigation of adverse effects
- Adoption of a precautionary approach
- The ethic of stewardship/Kaitiakitanga
- Consultation and participation
- Financial responsibility
- Liability
- Resilient communities

- Spill

The Ministry for the Environment climate change projections for the Manawatu/ Whanganui region relevant to Ruapehu District are:

- Temperatures are likely to be around 0.7˚C to 1.1˚C warmer by 2040 and 0.7˚C to 3.1˚C warmer by 2090, compared to 1998.
- In Taumarunui, average annual rainfall is likely to increase by 7% to 16% by 2090.
- Future changes in the frequency of storms are likely to be small compared to natural inter-annual variability. Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur.
- The frequency of extremely windy days in the Manawatu-Whanganui region is not likely to change significantly by 2090. There may be an increase in westerly wind flow during winter and north-easterly wind flow during summer.
- A reduction in the number of annual snow days is predicted. Significant decreases in seasonal snow are projected for the Central Plateau. The duration of snow cover is also likely to decrease, particularly at lower elevations. Less winter snowfall and an earlier spring melt may cause marked changes in the annual cycle of river flow in the regions. Places that currently receive snow are likely to see increasing rainfall as snowlines rise to higher elevations due to rising temperatures.
- Source: https://environment.govt.nz/facts-and-science/climate-change/impacts-of-climate-change-per-region/projections-manawatu-whanganui-region/

The Ministry for the Environment's analysis on what this will mean for Manawatu-Whanganui relevant to the Ruapehu District and the Land Transport Activity are:

- Flooding – More heavy rainfall will increase the risk of flooding, which could become up to four times as frequent by the end of the century. This could have large implications for areas already prone to river flooding.
- Erosion and landslides – Drier average conditions, combined with more intense rainfall at times, could lead to increased problems with erosion, landslides and sedimentation in rivers. Some areas already at high risk include the hill country within the Ruapehu District.
- Biosecurity – Warmer, wetter conditions could increase the spread of pests, weeds and diseases over time.
- Agriculture - Warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better crop growing conditions. However, these benefits may be limited by negative effects of climate change such as prolonged drought, increased flood risk and greater frequency and intensity of storms.

The following mitigation measures are considered when taking into account climate change:

- Have regard to projections during planning phases
- Cognisance of areas located as being potential hazard zones
- Specialist advice

Ruapehu is a member of the Manawatū-Whanganui Climate Action Joint Committee. The Committee released the inaugural Manawatū-Whanganui Joint Climate Action Plan in May 2023. The key points are:

- The changing climate is happening now. Over time, it will affect our whānau, farms, businesses and communities in many different ways.
- Climate change is one aspect of the relationship between people and the environment. Supporting a healthy environment by actively enhancing Te Taiao is at the heart of our response to climate change.
- Councils will work with communities, tangata whenua and central Government to adapt to the changing climate, make our region more resilient and reduce emissions.
- As we adapt to climate change, councils are committed to making changes in a fair and equitable way and upholding the principles of the Treaty of Waitangi.
- This report makes recommendations to the eight councils in the region and includes proposals to reduce our contribution to climate change and adapt to its effects in Manawatū-Whanganui.
- Councils also need central Government's support to adapt and transition.
- There are things we can all do now, to make the things we care about more resilient to the impacts of a changing climate. Each of us doing what we can to reduce our carbon footprint will also reduce the severity of those impacts.
- Taking action now to adapt and reduce carbon emissions will give us more options to respond as the climate changes.

The report makes recommendations to the committee. Each Council will need to consider their response and develop an Action Plan. Ruapehu is in the process of this.

C03.9 Hazards

The Ruapehu District and surrounding regions are exposed to several natural hazards. From an activity point of view hazards have the potential to cause major disruption and need to be considered.

Information on the risk posed by natural hazards is sparse for the Ruapehu District. In conjunction with the Horizon Regional Council the Council has developed a database of natural hazards.

Under Horizon Regional Council's One Plan, Council is responsible for developing objectives, policies, and methods (including rules) for the control of the use of land.

The following hazard types have been identified as being significant to the Land Transport activity. Monitoring of natural hazards and their impacts are ongoing.

Flooding

Flooding is a commonly occurring major natural hazard that results when the natural and modified drainage systems fail in a particular rainfall event. The risk of flooding is influenced by several factors such as:

- Weather systems
- Hydrological factors (catchment size, rainfall intensity and infiltration)
- Hydraulic factors
- Soil type
- Land use
- Ground saturation

- Storm events and the resulting flooding can result in significant adverse effects on both residents and the environment. These effects may include:
- Personal injury or loss of life, property and possessions or livelihood
    - Disruption of utilities and transportation networks
    - Impacts on the environment may include vegetation and habitat loss, erosion and sedimentation in waterways, and soil and water contamination.

Flooding hazards within the Ruapehu District have principally occurred within the Ohura area, although other areas are subject to flooding.

Horizons Regional Council has modelled flood risks for Ohakune and Taumarunui.

Landslides

Landslides are generally caused by slope saturation and can include mudslides, debris flow or avalanches, rock falls and rock slides. Increased ground saturation can be caused by intense rainfall, changes in groundwater and water level changes in rivers, earth dams, lake banks and the coastline. Generally flooding and landslide events are closely linked as they both result from heavy rainfall, stormwater runoff and ground saturation.

The risk of landslide is influenced by several factors such as:

- Underlying geology. Predominance of papa in District makes landslides or underslips highly likely in rural areas.
- Proximity to rivers, lakes and the coast.
- Past and present land use including vegetation changes.
- Infrastructure development.

Landslides can result in significant adverse effects on the road network including loss of access for short term or longer periods.

Snow and Ice

Snow and ice on the roads can make driving conditions hazardous in places in winter. Grit is used in places to mitigate this, along with CMA in specific locations.

Earthquakes

New Zealand is considered amongst the most seismically active places on earth, as it is located on an active boundary of two tectonic plates.

Volcanic Activity

Mt Ruapehu is one of New Zealand's most active volcanoes. Major eruptions have been recorded approximately 50 years apart (1895, 1945 and 1995/96). Minor eruptions are frequent. The eruptions are not the only threat. There is a more serious threat from lahars (volcanic mud flow). In between eruptions, a lake forms in the volcano's caldera from melting snow. If a previous eruption has deposited a dam of ash, rocks and mud in the lake's natural overflow point, then the lake becomes dangerously full, held back only by the temporary damThe impacts from a 1-in-1,000 year event may include:

- Several eruptions over several months, that send eruption –columns between 8 - 12 km high, and that disperse between 1 and 10 mm of ash across much of the Region.

- Crater rim collapse and production of a ~6 million cubic metre lahar down the Whangaehu Valley.
- Localised projectiles, pyroclastic surges and lahars impact upon the mountain (particularly the Western ski fields and Whakapapa Village).

C03.9.1 Impacts on the Roading Network

Events can cause localised or widespread disruption and loss of access on the network.

The main causes of large-scale failure are earthquake and river flooding, with severe storms and landslides causing most site-specific failures.

The consequences are primarily social and economic, around isolation and restricted or lost access. Many local roads have no alternative detour routes available.

Plans to deal with a large scale failure are detailed in the CDEM Plan.

C04 LEVELS OF SERVICE

Levels of Service (LoS) standards define the levels to which Ruapehu District provides services to the community. Some standards are defined by statutory requirements, others in conjunction with the community, and some with key stakeholders.

These standards (or levels of service) provide a basis for determining whether assets need to be constructed, replaced, remanufactured, or maintained. These LoS measures have been defined to enable Ruapehu District's performance to be measured and reported against.

Council's Significance and Engagement Policy 2018 provides guidance on determining matters of significance for elected members and the community, along with informing the community on how they can expect to be engaged in Council's decision making process.

Council is expected to deliver the Land Transport Activity in perpetuity and assets are maintained and replaced as required to enable this where it is most desirable and affordable.

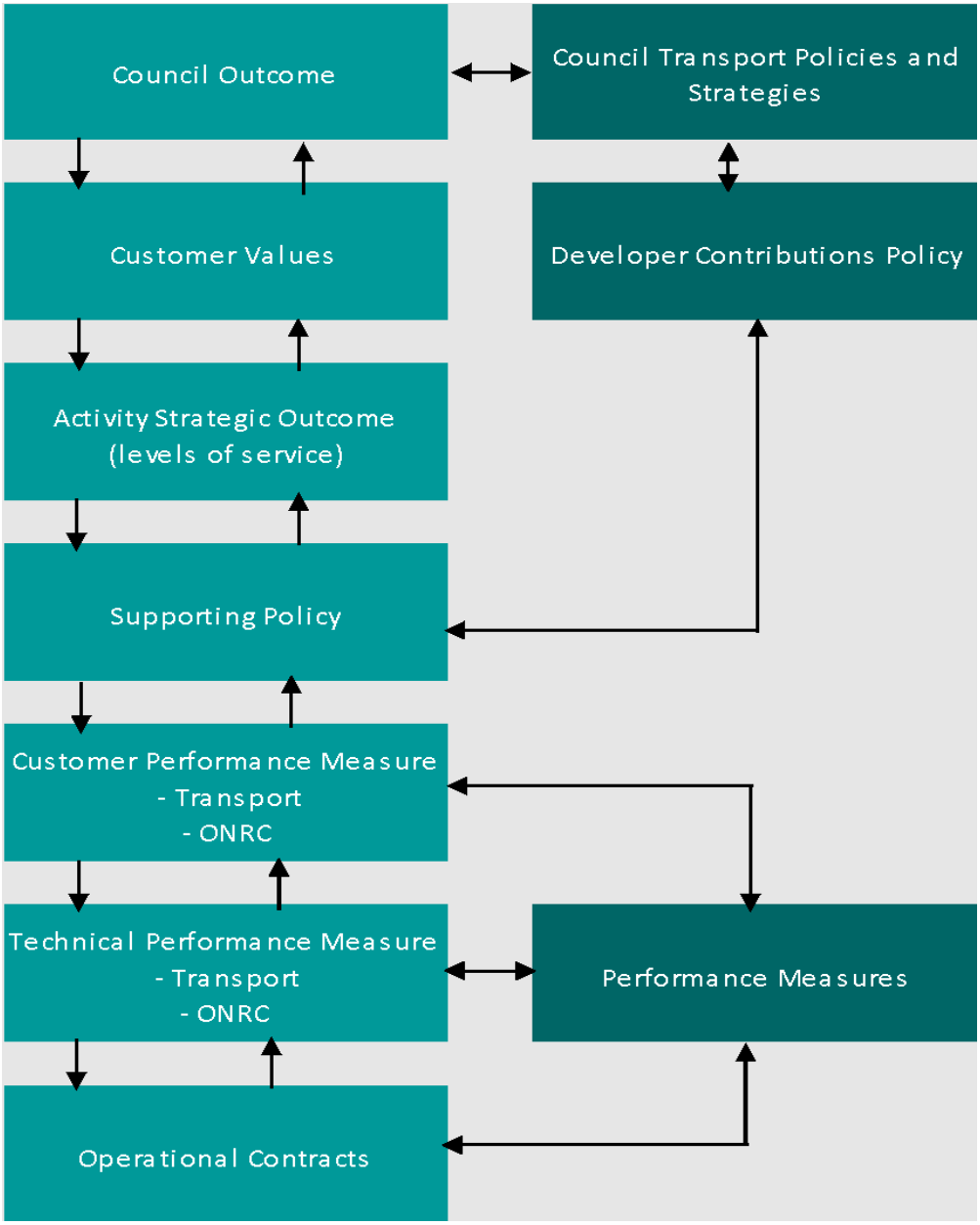
Council operates several programmes that assist in these improvement activities including:

- ∉ Sealed Pavement and Rehabilitation programme.
- Low cost low risk minor safety project programmes.
- Footpath safety improvement and development.
- Kerb and channel development.
- Bus shelters development.

Council Outcomes identify the community priorities and direction that the Council wants to deliver. To deliver these Outcomes, it is important that the transport technical and customer services and operational and maintenance contracts are clearly linked to achieve this.

The diagram alongside outlines how the Council outcomes are linked to the performance measures and transport policies and strategies.

FIGURE C.10: LEVEL OF SERVICE LINKAGES



C04.1 Land Transport Levels of Service

The levels of service Council provides are presented in the following tables. Performance against these targets will be reported annually unless specifically noted.
Council has prioritised its Land Transport Levels of service in order of importance as below:

1. ONRC Performance Measures / Customer Levels of Service
    a. NZTA allocates funding based on RCA's performance
2. Department of Internal Affairs Non Financial Performance Measures
    a. Legislatively required since 30 July 2014
3. Council's own Levels of Service

C04.1.1 ONRC Levels of Service

Under ONRC, RCAs manage their networks at fit-for-purpose customer levels of service. The Transport Agency is co-funding RCAs at a level to operate, maintain and improve its network in line with its classification, and the desired levels of service for safety and speed – taking a one network approach to improve consistency and predictability.

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

TABLE C-8: ONRC PERFORMANCE MEASURES / CUSTOMER LEVELS OF SERVICE

Customer Level of Service	Sub-Category	Description
Mobility	Reliability	Travel time reliability – the consistency of travel times that road users can expect
	Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided
Safety		How users experience the safety of the road
Amenity		The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor
Accessibility		The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity

The ONRC Performance Measures are shown in the table below.

TABLE C-9: ONRC LEVELS OF SERVICE

Targets	ONRC LOS	Frequency	Source	Current Perfor-mance 2022/23	Year 1 target 2024/25	Year 2 target 2025/26	Year 3 target 2026/27	Years 4-5 target 2027/28 – 2028/29	Years 6-10 target 2029/30 - 2033/34
85th Percentile NAASRA roughness index across the urban sealed	Amenity	Biannual Inspections	ONRC Transport Insights	134* 21/22	150	150	150	150	150

Targets	ONRC LOS	Frequency	Source	Current Perfor-mance 2022/23	Year 1 target 2024/25	Year 2 target 2025/26	Year 3 target 2026/27	Years 4-5 target 2027/28 – 2028/29	Years 6-10 target 2029/30 - 2033/34
pavement network									
85th Percentile NAASRA roughness index across the rural sealed pavement network	Amenity	Biannual Inspections	ONRC PMRT	137.8* 21/22	120	120	120	120	120
The average quality of ride on a sealed local road network, measured by smooth travel exposure	Amenity	Annually	ONRC PMRT	90%	≥87%	≥87%	≥87%	≥87%	≥87%
The total number of reported serious injuries and fatalities (DSI) each year on the network	Safety	Annually	ONRC PMRT	10	<5	<5	<5	<5	<5

C04.1.2 Department of Internal Affairs (DIA) Levels of Service

In addition to the ONRC Performance Measures above, the Secretary for Local Government has developed mandatory non-financial performance measures for local authorities to use when reporting to its communities. This has been mandated through the Local Government Act 2002 Amendment No 2 to help the public contribute to discussions on future levels of service for their communities and participate more easily in their local authority's decision-making processes.

As Council is required to report on these measures specifically, they are detailed below. It is noted that there is some overlap with the existing measures.

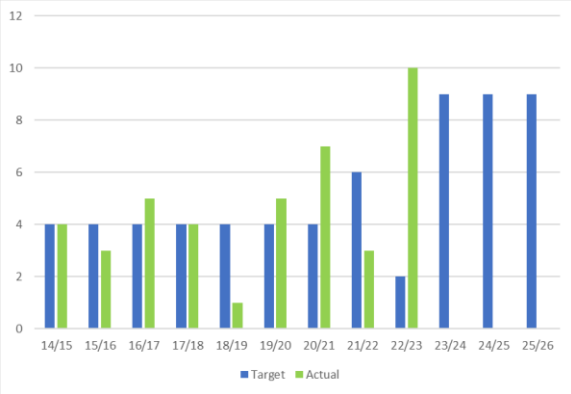
TABLE C-10: DIA LEVELS OF SERVICE TARGETS

Measure	Frequency	Reported to	Current Perfor-mance 2022/23	Year 1 target 2024/25	Year 2 target 2025/26	Year 3 target 2026/27	Years 4-5 target 2027/28 – 2028/29	Years 6-10 target 2029/30 - 2033/34
The change from the previous financial year in the number of fatalities and serious injuries on the local road network, expressed as a number	Annually	Annual Report	+6	A decrease of 1 or greater	A decrease of 1 or greater	A decrease of 1 or greater	A decrease of 1 or greater	A decrease of 1 or greater
The average quality of ride on a sealed local road network, measured by smooth travel exposure	Annually	Annual Report	90%	Target level of smooth travel exposure ≥87%	Target level of smooth travel exposure ≥87%	Target level of smooth travel exposure ≥87%	Target level of smooth travel exposure ≥87%	Target level of smooth travel exposure ≥87%
The percentage of the sealed local road network that is resurfaced	Annually	Annual Report	3.8%	≥7%	≥7%	≥7%	≥7%	≥7%
The percentage of footpaths within Council's district that fall within the level of service or service standard for the condition of footpaths that is set out in Council's Activity Management Plan.	Annually	Annual Report	85% / 3.8%	90% of network to be in average condition or greater & not more than 5% of network in Poor condition	90% of network to be in average condition or greater & not more than 5% of network in Poor condition	90% of network to be in average condition or greater & not more than 5% of network in Poor condition	90% of network to be in average condition or greater & not more than 5% of network in Poor condition	90% of network to be in average condition or greater & not more than 5% of network in Poor condition
The percentage of customer service requests relating to roads and footpaths to which the Council responds within the time frame specified in the long term plan (Note 1)	Annually	Annual Report	78%	≥85%	≥85%	≥85%	≥85%	≥85%

Note 1: The Request for Service targets are outlined in Appendix J

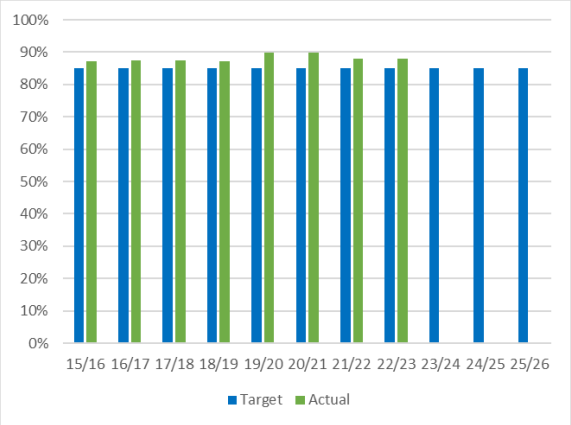
FIGURE C.11: DIA LEVELS OF SERVICE TRENDS

Number of fatal & serious injuries



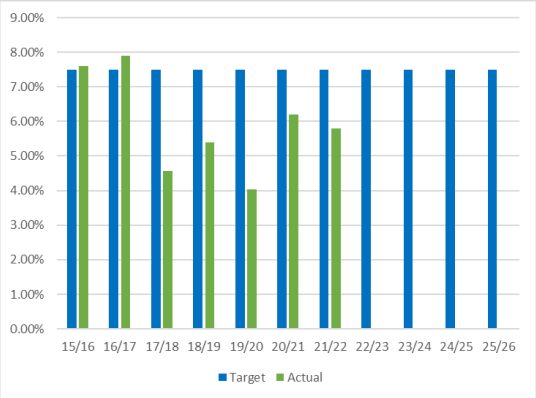
LOS achieved if Actual equal or less than Target
Result: LOS not achieved
Source: Transport Insights – Safety Outcome 1 Serious and Fatal crashes

Smooth Travel Exposure



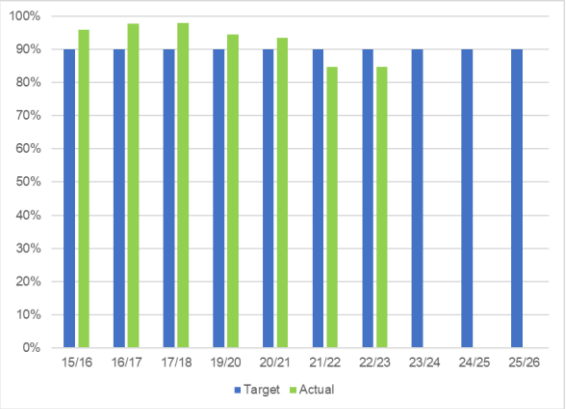
LOS achieved if Actual equal or greater than Target
Result: LOS achieved
Source: Transport Insights - Average STE of ONRC hierarchies

Percentage of sealed network that is resurfaced

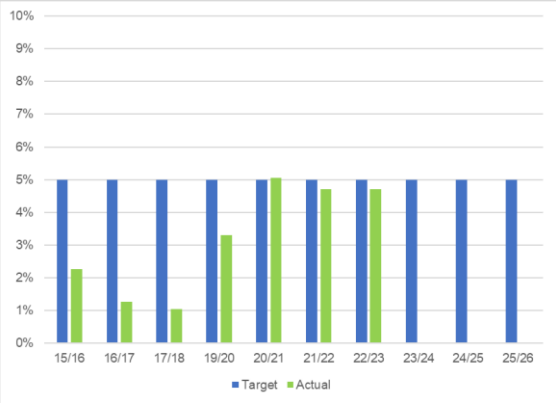
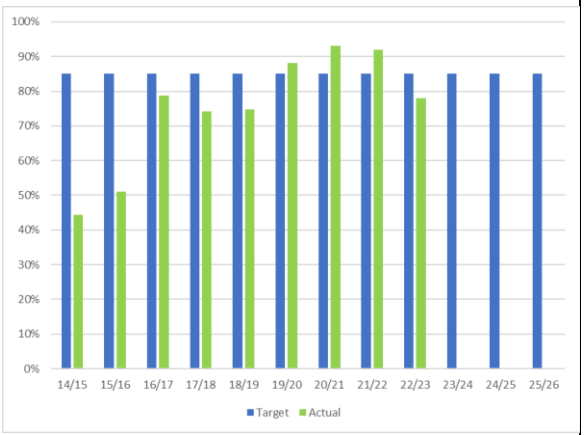


LOS achieved if Actual equal or greater than Target
Result: LOS not achieved
Source: Transport Insights – Cost Efficiency 2 - Chip seal resurfacing (length and area). Average of ONRC hierarchies.
Note: 2022-23 data missing from Transport Insights

Percentage of footpaths in average condition or higher



Target: 90% in average or greater condition
LOS achieved if Actual equal or greater than Target
Result: LOS not achieved
Source: Footpath condition rating 2022
Note: Issue with network length in 2022 affecting results

Percentage of footpaths in poor condition	**Percentage of customer service requests responded to in timeframes specified**
	
LOS achieved if Actual equal or less than Target Result: LOS achieved *Source: Footpath condition rating 2022* *Note: Issue with network length in 2022 affecting results*	LOS achieved if Actual equal or greater than Target Result: LOS not achieved 2022/23 *Source: Ruapehu DC Annual Reports 2020-21, 21-22, 22-23*

C04.1.3 Ruapehu District Council Levels of Service

Outside of the ONRC Performance Management LoS and the DIA LoS, Council has set several LoS for the District, as shown below.

TABLE C-11: COUNCILS LEVELS OF SERVICE

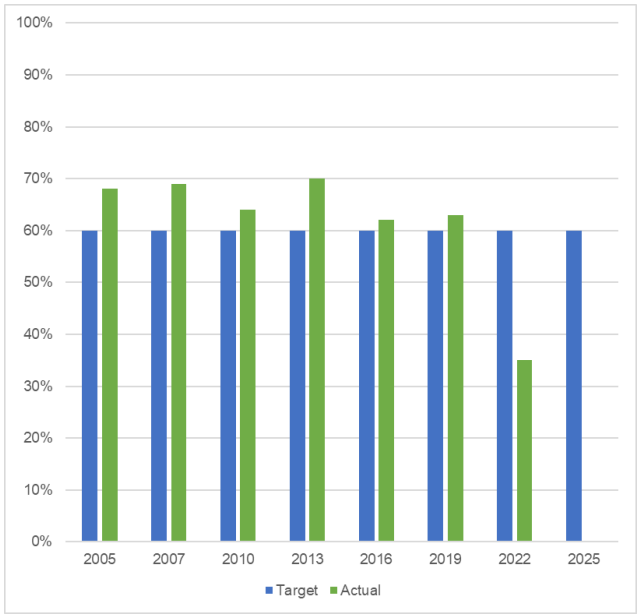
Targets	Frequency	Reported where	Current Perfor-mance 2022/23	Year 1 target 2024/25	Year 2 target 2025/26	Year 3 target 2026/27	Years 4-5 target 2027/28 – 2028/29	Years 6-10 target 2029/30 - 2033/34
Customer satisfaction with Sealed roads	3 yearly	RDC Customer Survey	35% Fail 2022	60% or greater	Not measur ed	Not measur ed	60% or greater	60% or greater
Customer satisfaction with Unsealed roads	3 yearly	RDC Customer Survey	30% - 2022	50% or greater	Not measur ed	Not measur ed	50% or greater	50% or greater
Response times: Percentage of instances when local emergency sites advised by service calls are made safe within 2 hours plus travel time within 60 minutes.	Quarterly	GHD Report	Info not collected	85%	85%	85%	85%	85%
Maintain the sealed roads to a standard that allows < 5.5	Annual	Annual Report	Q1 – 4.1 Q2 – 4.0	< 5.5 defects	< 5.5 defects	< 5.5 defects	< 5.5 defects	< 5.5 defects

Targets	Frequency	Reported where	Current Perfor-mance 2022/23	Year 1 target 2024/25	Year 2 target 2025/26	Year 3 target 2026/27	Years 4-5 target 2027/28 – 2028/29	Years 6-10 target 2029/30 - 2033/34
defects per km based a 10% sample monthly audit			Q3 – 3.8 Q4 – 3.1					
Maintain the unsealed roads to a standard that allows < 5.5 defects per km based a 10% sample monthly audit	Annual	Annual Report	Q1 – 4.6 Q2 – 3.7 Q3 – 3.6 Q4 – 4.1	< 5.5 defects	< 5.5 defects	< 5.5 defects	< 5.5 defects	< 5.5 defects

The following figure provides the Levels of service trends since 2015/16, with targets until 2025/26.

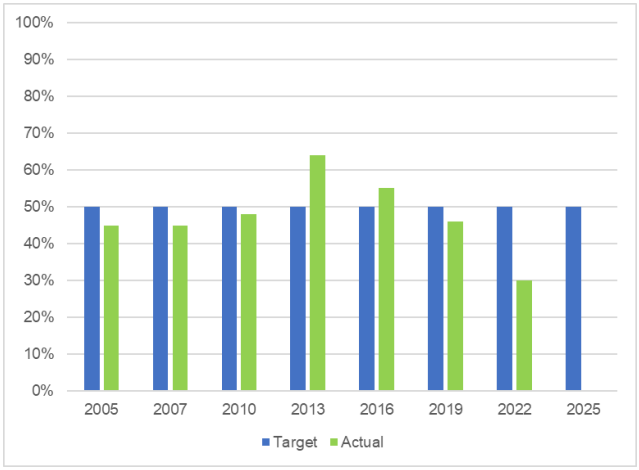
FIGURE C.12: DISTRICT LEVELS OF SERVICE TRENDS

Customer Satisfaction of Sealed Roads



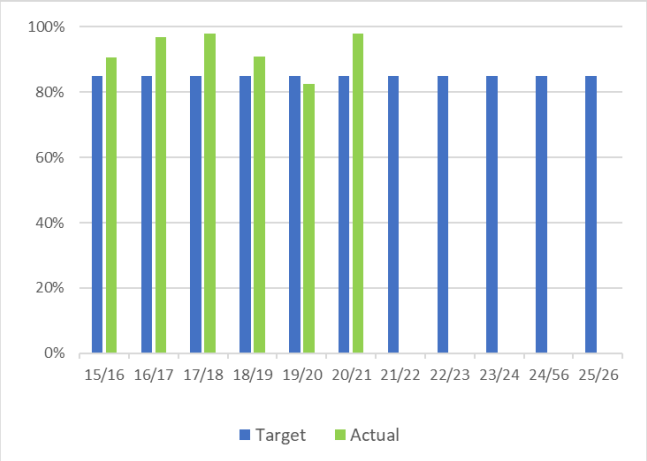
% of customers satisfied / Very Satisfied
Target is 60% or greater
LOS achieved if Actual **equal or more** than Target
Result: LOS not achieved 2022
Source: Three yearly customer satisfaction survey

Customer Satisfaction of Unsealed Roads



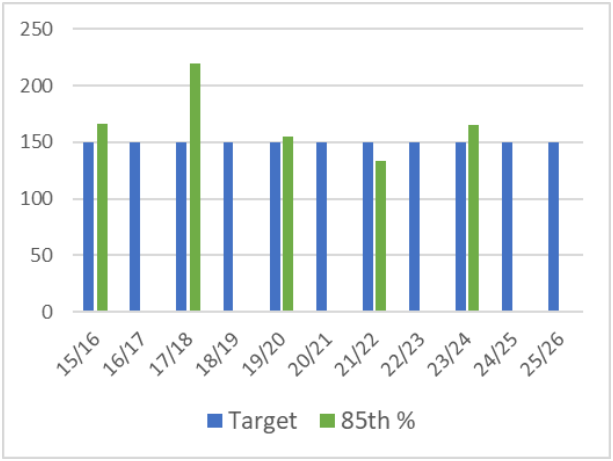
% of customers satisfied / Very Satisfied
LOS achieved if Actual equal or more than Target
Target from 2013 onwards is 50% or greater
Result: LOS not Achieved 2022
Source: Three yearly customer satisfaction survey

Response times



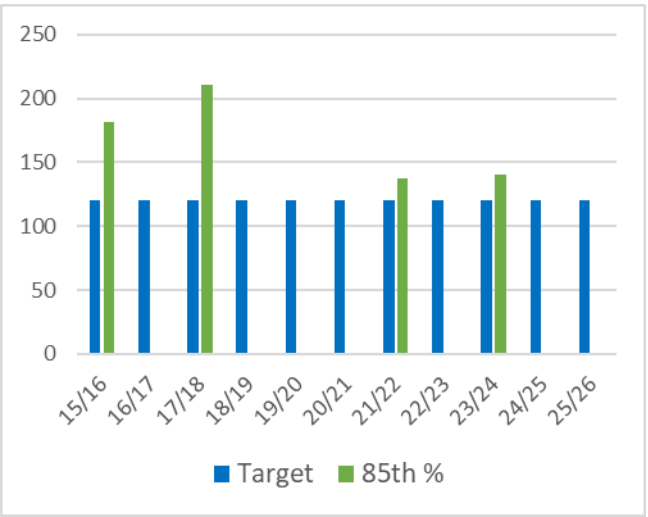
Percentage of instances when local emergency sites advised by service calls are made safe within 2 hours plus travel time.
LOS achieved if Actual equal or more than Target
Result: LOS Achieved 2020/21
Source: Service Request Latest – Summary GHD spreadsheet.
Note: Info not collected in 21/22 and 22/23

85th percentile NAASRA roughness index across the urban sealed pavement network



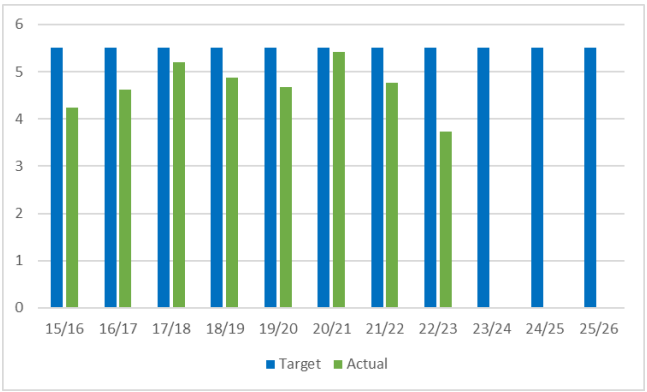
Note: LOS achieved if Actual equal or less than Target
Result: LOS not achieved
Source: RAMM Roughness report

85th percentile NAASRA roughness index across the rural sealed pavement network



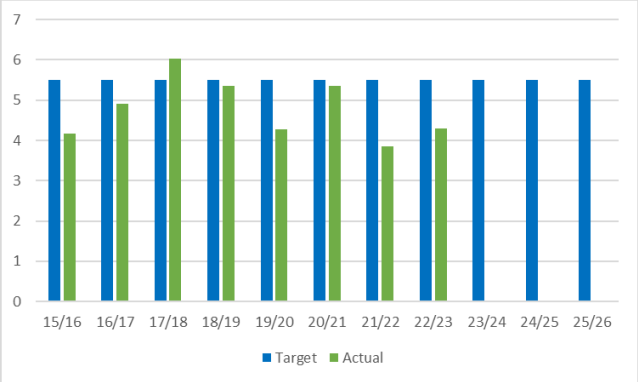
Note: LOS achieved if Actual equal or less than Target
Result: LOS not achieved
Source: RAMM Roughness report

Maintain the sealed roads to a standard that allows < 5.5 defects per km



LOS achieved if Actual less than Target
Result: LOS Achieved
Source: GHD RDC Network Audit Oct 2023

Maintain the unsealed roads to a standard that allows < 5.5 defects per km



LOS achieved if Actual less than Target
Result: LOS Achieved
Source: GHD RDC Network Audit Oct 2023

TABLE C-12: AFFORDABILITY/SUSTAINABILITY LEVELS OF SERVICE

Level of Service	**The safety of the land transport network is acceptable to users**							
Links to Investment Outcome	Providing sustainable and resilient infrastructure Managing the network with a strong focus on safety Provide an affordable transportation network that meets the reasonable needs of the wider community							
Links to Community Outcomes	Council is proactive, transparent and accountable							
Customer Value	The core customer value this service aims to provide is: Affordability / Sustainability							
ONRC Customer Value	Value for Money							
Level of Service	**The Number of Weight Restricted Bridges is kept to a minimum**							
Targets	**Frequency**	**Reported to**	**Current Per-formance 2022/23**	**Year 1 target 2024/25**	**Year 2 target 2025/26**	**Year 3 target 2026/27**	**Years 4-5 target 2027/28 – 2028/29**	**Years 6-10 target 2029/30 - 2033/34**
Maintain the number of Restricted Bridges - less than Class 1	Annual	Land Transport	17 restricted	16	15	15	15	15

We will achieve this level of service by:	Upgrading restricted bridges where applicable Managing the maintenance of sealed roads to minimise faults Managing the maintenance of unsealed roads to minimise faults Ensuring compliance with all maintenance KPIs in Road Maintenance Contract Ensuring compliance with all response times specified in Road Maintenance Contract Ensuring compliance with response times in Council's Request for Service System (Ozone)
We will measure whether this level of service is achieved by:	Three yearly RDC Customer Satisfaction Survey Annual Ruapehu District Council Level of Service Customer Survey Recording the number of service calls related to all roading activities Road smoothness two yearly inspections Contractual KPI reporting
Planned improvements	Increasing capability by Reducing weight restrictions on selected bridges Seal extension programme

TABLE C-13: FINANCIAL MANAGEMENT LEVEL OF SERVICE

Level of Service	**The financial management of the land transport network is acceptable to users**							
Links to Investment Outcomes	Providing an affordable transportation network that meets the reasonable needs of the wider community							
Links to Community Outcomes	Council is proactive, transparent and accountable							
Customer Value	The core customer value this service aims to provide is: Affordability / Sustainability							
ONRC Customer Value	Value for Money							
Customer Measure	**Maintenance, renewal capital work programmes are completed within budget**							
Targets	**Frequency**	**Reported to**	**Current Per-formance 2022/23**	**Year 1 target 2024/25**	**Year 2 target 2025/26**	**Year 3 target 2026/27**	**Years 4-5 target 2027/28 – 2028/29**	**Years 6-10 target 2029/30 - 2033/34**
% of Opex expenditure to budget	Annually	Finance System	118%	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget
% of Capex expenditure to budget	Quarterly	Finance System	48%	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget	+/- 5 % of budget
We will achieve this level of service by:	Managing the works programme and monitoring expenditure							

We will measure whether this level of service is achieved by:	Recording all transactions accurately in the appropriate element of the financial system Analysing the expenditure versus the budgets and comparing the rate of spend, the time of year in terms of construction season and the ability to meet the annual target.
Planned improvements	

TABLE C-14: SAFETY LEVELS OF SERVICE

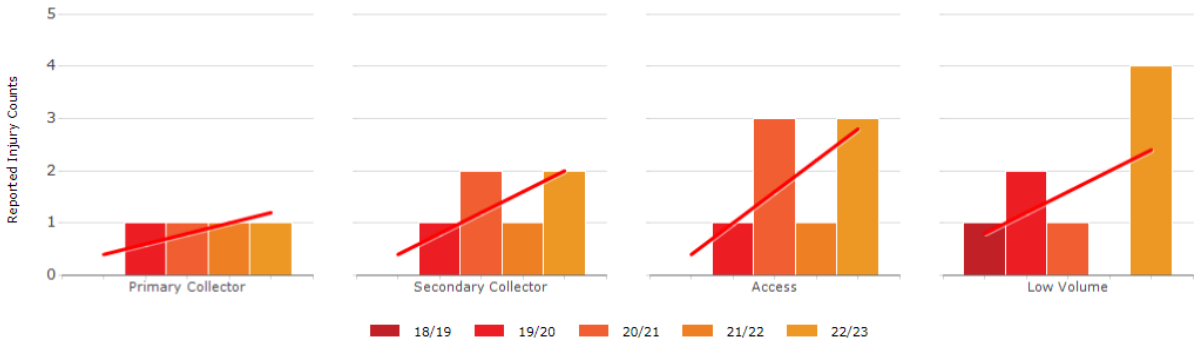
Level of Service	**The safety of the land transport network is acceptable to users**							
Links to Investment Outcomes	Managing the Network with a strong focus on safety							
Links to Community Outcomes	Core infrastructure endeavours to keep pace with changing demand. Excellent standards of safety and welfare are promoted and respected.							
Customer Value	The core customer value this service aims to provide is: Safety							
ONRC Customer Outcome	Safety / Resilience / Accessibility							
Customer Measure								
Targets	**Frequency**	**Reported where**	**Current Per-formance 2022/23**	**Year 1 target 2024/25**	**Year 2 target 2025/26**	**Year 3 target 2026/27**	**Years 4-5 target 2027/28 – 2028/29**	**Years 6-10 target 2029/30 - 2033/34**
All reported fatal and serious crashes are investigated	Annual	TBC	Not available at this time	100%	100%	100%	100%	100%
Improvement recommendations from fatal and serious crash reports implemented	Annual	TBC	Not available at this time	100%	100%	100%	100%	100%
Number of reported fatal or serious accidents per annum	Annual	Annual Report	10	9 or less	9 or less	9 or less	9 or less	9 or less
We will achieve this level of service by:	Inspecting and appropriately modifying fatal and serious accidents sites in accordance with the safety inspection report Maintaining signs and markings in accordance with RDC's "Report on RTS 5 standard roadmarkings – July 2010". Ensuring compliance with all maintenance KPIs in Road Maintenance Contract Ensuring compliance with all response times specified in Road Maintenance Contract							

We will measure whether this level of service is achieved by:	Reporting NZTA CAS records of the number of reported accidents per quarter Monthly 10% network audit by network consultant Monthly maintenance audit reports for signs and markings Contractual KPI reporting
Planned improvements	Minor safety (low cost, low risk) works programme.

As can be seen in the Figure below the number of serious injury or fatal crashes on District roads is random and variable. The variable numbers make it difficult to determine trends. Council investigates each serious and fatal crash to seek to understand if there are road conditions that may need addressing.

FIGURE C.13: SAFETY CUSTOMER OUTCOME 1 – NUMBER OF SERIOUS INJURIES AND FATALITIES (DSI) BY ONRC CATEGORY

Source: Transport Insights



Customer Service Requests

Council has a Service request system to log calls from the public. Council encourages customers to make service request calls. Calls can range from reporting roading issues to requests for engineering design or queries about roading user services, legislation or administration.

FIGURE C.14: TOTAL ROADING SERVICE CALLS

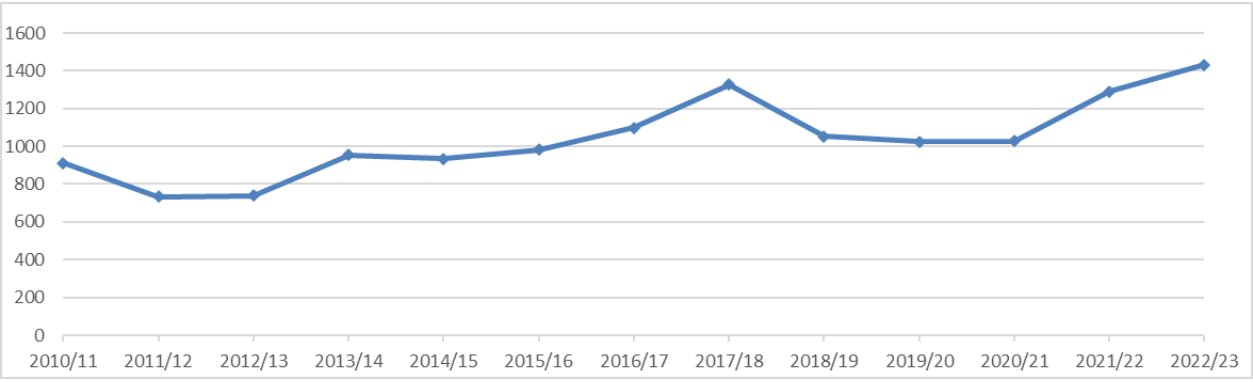
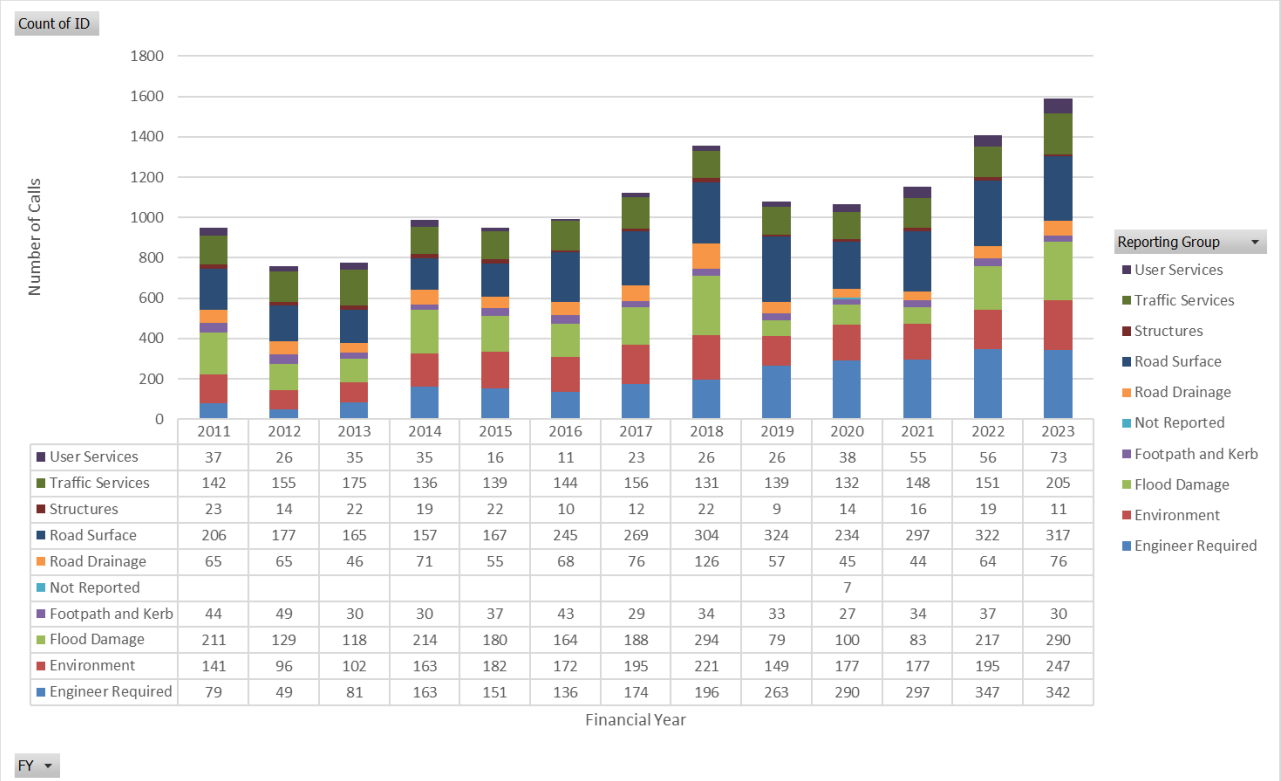


FIGURE C.15: REQUEST FOR SERVICE CALL TYPES



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
User Services	37	26	35	35	16	11	23	26	26	38	55	56	73
Traffic Services	142	155	175	136	139	144	156	131	139	132	148	151	205
Structures	23	14	22	19	22	10	12	22	9	14	16	19	11
Road Surface	206	177	165	157	167	245	269	304	324	234	297	322	317
Road Drainage	65	65	46	71	55	68	76	126	57	45	44	64	76
Not Reported										7			
Footpath and Kerb	44	49	30	30	37	43	29	34	33	27	34	37	30
Flood Damage	211	129	118	214	180	164	188	294	79	100	83	217	290
Environment	141	96	102	163	182	172	195	221	149	177	177	195	247
Engineer Required	79	49	81	163	151	136	174	196	263	290	297	347	342

The graphs above show the total calls and call types over the previous 10 years. The proportions remain relatively steady, typically the largest proportions of calls are Engineer Required, Road Surface, Structures and Flood Damage. In 2022/23, requests for an Engineer were the biggest percentage of roading calls (21%), followed by surface issues (20%).

C04.2 Expected Changes to Service Levels

The LoS tables indicate that service levels Council provides are not anticipated to change.

C04.3 Accelerated and Enhanced Development Plans

Where individual communities wish to increase either the service levels provided or the rate of achievement of the target service levels, the Community Board or Ward Committee may propose and fund one or both of the following:

- An Accelerated Programme, which provides for an increase in the rate or priority of achievement of the standard features for specific locations.
- An Enhanced Programme, which provides for an enhancement of the standards for specific locations such as town centres, e.g., pavers in place of asphalt footpaths, powder coated or specially designed street light poles and fittings, garden features, etc.

C05 DATA QUALITY

C05.1 Overview

There is an expectation for Council to manage and understand the quality of the data used to make decisions. Council uses RAMM as its key asset management tool for Road Transport. In recent years, Te Ringa Maimoa (formerly the Road Efficiency Group or REG) has been publishing data quality reports based on RAMM data.

In 2019 Council subscribed to the MAX.quality tool which identifies and notifies specific asset data quality errors as part of their Data Quality Improvement Programme.

Council will continue with MAX.quality using it to drive data quality improvements by both identifying records needing correction and to help improve processes so that data is correctly entered the first time.

C05.2 Te Ringa Maimoa Data Quality Report 2022/23

The quality of the RAMM data being used by the ONRC Performance Measures Reporting Tool (Transport Insights) is assessed annually by Te Ringa Maimoa. This reporting is done in conjunction with the ONRC Customer Levels of Service. The outputs of the REG data quality project build confidence in the results of the ONRC Customer Levels of Service.

Overall Ruapehu achieved a score of **63** in its 2022/23 Data Quality Report.

Each data quality test has a defined banding as to what is an acceptable result. Each test's outcome means that the data being measured either

- Meets the expected standard
- Has some minor issues
- Has major Issues

The following table outlines the overall breakdown of Council's results for 2022/23. For the 64 tests that are relevant to the District, the table outlines the percentage of Data Quality Tests which fall into each grade.

TABLE C-15: DATA QUALITY REPORT SUMMARY

	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Overall Score	**64**	**46%**	**18%**	**36%**

Each quality test is mainly testing on of 3 Quality Dimensions:

- Completeness
  - This dimension measures the amount populated of a particular data attribute.
- Accuracy
  - This dimension measures the accuracy of the data in terms of location, correct association to related assets as well as whether the entered data makes sense.
- Timeliness

- This dimension measures the temporal aspect in which data is updated for assets such as the ongoing renewal/replacement of assets, the consistency of routine processes like traffic counts and the timeliness in which data is entered following renewals.

TABLE C-16: DATA QUALITY REPORT BY DIMENSION

Quality Dimension	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Completeness	**18**	**46%**	**8%**	**46%**
Accuracy	**27**	**46%**	**31%**	**23%**
Timeliness	**26**	**46%**	**9%**	**45%**

These tests are also categorised as to the asset type or activity they relate to. Details of these breakdowns will be shown alongside the MAX.quality Data Confidence results in Detailed Data Confidence (section C05.4)

C05.3 MAX.quality Data Confidence

The MAX.quality Data Confidence measures summarise the current state of RAMM data is seen by the MAX.quality insight error log. Each Data Confidence measure focuses on an asset type. The results along with the Transport Insights results aligned to each activity lifecycle section are detailed below.

While the Data Confidence Indexes reported below are a single value, they indicate the proportion of asset records without an issue as reported by MAX.quality Data Quality Tests. As these indices report the proportion of records without an issue the higher the percentage the better. It should be noted that they are backed by several MAX.quality data quality tests focusing on individual attributes on an asset or activity.

The use of the MAX.quality tool is to help identify data issues to lead to data improvement programmes, both to

- improve existing data,
- inform data management process improvements
  - for new data to be captured correctly the first time
  - Data updates to be captured and processed timeously.

C05.4 Detailed Data Confidence

To align with each Activity Lifecycle section (Sections D02-D12) a more detailed breakdown of the Transport Insights results and the MAX.quality Data Confidence are summarised and compared.

C05.4.1 C05.4.1 Network (D02)

Data Quality

All the Network Data Quality tests (except two) test for data accuracy.

TABLE C-17: RESULT FOR NETWORK DATA QUALITY

Network Quality	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Network: Carriageway	**8**	**75%**	**25%**	0%
Treatment Length	**5**	**60%**	**40%**	0%

MAX.quality Data Confidence

There currently is not a summarised data confidence Index for Networks.

Data Quality

While none of the results are showing major issues, it should be noted that the quality of the network influences all the asset activities.

C05.4.2 Pavement (D03)

Data Quality

The Pavement Data Quality tests are grouped into Asset inventory and Condition tests as shown below.

TABLE C-18: RESULT FOR PAVEMENT DATA QUALITY

Pavement	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Asset Inventory: Pavement	**3**	0%	0%	**100%**
Asset Inventory: Surfacing	**6**	0%	**25%**	**75%**
Condition: Rating	**2**	**100%**	0%	0%
Condition: Roughness	**2**	**100%**	0%	0%

The tests showing major issues are detailed below.

TABLE C-19: PAVEMENT TESTS SHOWN AS MAJOR ISSUE

Sub category	Ref	Metric Description	Dimension
Surfacing	SURF1a	Achieved chipseal renewal programme as-builted	**Timeliness**
Pavement	PAVE1	Achieved pavement renewal programme as-builted	**Timeliness**
Pavement	PAVE2	Pavement layer records have valid attribute data	**Accuracy**
Pavement	PAVE3	Pavement layer records with Work Origin	**Completeness**

TABLE C-20: MAX.QUALITY DATA CONFIDENCE

Data Confidence Index	Result
Pavement	**29%**
Surfacing	**91%**

Commentary

Surfacing data quality for measures shows a lack of work origin and original cost since these were introduced in the 2016/17 year. As these feed into cost and efficiency measures for renewals work there should be a process to enter both pieces of information as a new surface record is entered into RAMM.

C05.4.3 Structures (D04)

Data Quality

Of the asset types associated with structures, Transport Insights only measures the quality of Retaining walls.

TABLE C-21: RESULT FOR STRUCTURES DATA QUALITY

Structures	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Asset Inventory: Retaining Walls	3	67%	33%	0%
Condition: Structures	1	0%	0%	100%

TABLE C-22: STRUCTURES TESTS SHOWN AS MAJOR ISSUE

Sub category	Ref	Metric Description	Dimension
Structures	RETAIN4	Retaining wall condition within 6 years	Timeliness

TABLE C-23: MAX.QUALITY DATA CONFIDENCE

Data Confidence Index	Result
Bridges	65%
Major Culverts	74%
Retaining Walls	64%

Commentary

The quality of the bridge data contained in RAMM as reported by the GHD MAX.quality system is poor - with only 5% of all bridges having no errors. The majority of these errors are bridges not having the bridge type, lane width or length field populated. It should be noted that there is a lot of information about bridges maintained on spreadsheets, this needs to be reconciled with RAMM and updates made to bring RAMM into alignment with the assets on the ground.

There is a high degree of confidence in the completeness of information for major culverts.

Information on structural retaining walls that is recorded also has a reasonable confidence level. It is known that there are unrecorded rock retaining walls on the network, these are added to the database as they are discovered.

C05.4.3 Drainage (D05)

Data Quality

The reports for drainage are grouped into Drainage (limited to Culverts) and Surface Water Channels.

TABLE C-24: RESULT FOR DRAINAGE DATA QUALITY

Drainage	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Asset Inventory: Drainage	3	0%	**33%**	**67%**
Condition: Drainage	1	0%	0%	**100%**
Asset Inventory: SW Channel	3	0%	**33%**	**67%**
Condition: SW Channel	1	0%	0%	**100%**

The tests showing major issues are detailed below.

TABLE C-25: MEASURES WITH MAJOR ISSUES

Sub category	Ref	Metric Description	Dimension
Drainage	DRAIN5	Culvert assets known	**Completeness**
Drainage	DRAIN3	Culvert data valid	**Accuracy**
Drainage	DRAIN4	Culvert condition within 6 years	**Timeliness**
SW Channel	SWC5	SWC asset known	**Completeness**
SW Channel	SWC2	SWC asset records maintained	**Timeliness**
SW Channel	SW4	SWC condition within 6 years	**Timeliness**

TABLE C-26: MAX.QUALITY DATA CONFIDENCE

Data Confidence Index	Result
Minor Culverts	**21%**
Other Drainage	14%
Surface Water Channels	7%

Commentary

The major issues for both the measures for completeness and MAX.quality is the lack of construction dates. The measures for timeliness are a measure of the proportion of new assets added to RAMM. Two yearly Drainage inspections have been included in the 2022 District Road Maintenance Contract. This will begin to address the asset record maintenance issues.

C05.4.4 Traffic Services (D06)

Data Quality

The reports for Traffic Services are grouped into Streetlights, Signs and Railings.

TABLE C-27: RESULT FOR TRAFFIC SERVICES DATA QUALITY

Traffic Services	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Asset Inventory: Streetlights	3	**67%**	0%	**67%**
Asset Inventory: Signs	3	0%	**33%**	**67%**
Asset Inventory: Railings	2	**67%**	0%	**33%**

The tests showing major issues are detailed below.

TABLE C-28: MEASURES WITH MAJOR ISSUES

Sub category	Ref	Metric Description	Dimension
Lights	LIGHTS5	Sign assets known	**Completeness**
Lights	LIGHTS3	Street light replacement activity	**Completeness**
Signs	SIGNS4	Sign assets known	**Completeness**
Signs	SIGNS3	Sign replacement activity	**Timeliness**
Railings	RAIL4	Railing assets known	**Completeness**

TABLE C-29: MAX.QUALITY DATA CONFIDENCE

Data Confidence Index	Result
Street Lights	93%
Signs	73%
Railings	73%

Commentary

The major factor for both sign and railings ‘assets known’ is the lack of installation dates. It is unlikely that this information will be easily available for these types of assets. From 2019/20, Transport Insights reports with a lack of an installation date on these assets will not be included in the group of assets with missing attributes if this is the only issue and there is a recent (less than 3 years) condition rating on the asset. Therefore, a programme to capture asset condition on a regular basis should be considered.

The signs and railing completeness measures report accuracy by looking at several attributes of each asset and reporting the percentage of records without an error on any of the attributes.

For the timeliness measure for signs, there is a known gap in the signs inventory in RAMM. This measure tests for the number of signs marked “replaced” during a given timeframe. The result is possibly misleading, as while Council may have been replacing signs at the expected rate, without an old sign to mark as replaced, the activity is not being measured by the measure. This should improve over time through the asset data capture requirements in the District Road Maintenance contract.

C05.4.5 Footpaths (D07)

Data Quality

The reports for Footpaths are shown below.

TABLE C-30: RESULT FOR FOOTPATH DATA QUALITY

Footpaths	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Asset Inventory: Footpath	3	0%	**33%**	**67%**
Condition: Pathways	1	0%	0%	**100%**

The tests showing major issues are detailed below.

TABLE C-31: MEASURES WITH MAJOR ISSUES

Sub category	Ref	Metric Description	Dimension
Footpath	FOOT5	Footpath asset known	**Completeness**
Footpath	FOOT3	Footpath data valid	**Accuracy**
Footpath	FOOT4	Footpath condition within 6 years	**Timeliness**

TABLE C-32: MAX.QUALITY DATA CONFIDENCE

Data Confidence Index	Result
Footpaths	**35%**

Commentary

The major factor contributing to this result is the current lack of construction dates and that footpath condition inspections are stored on separate spreadsheets from RAMM.

The gap in known footpath asset data will be addressed as part of the improvement plan.

It is expected that data completeness will continue to improve gradually through business as usual activities of maintenance and inspections. Condition inspections will be uploaded to RAMM as part of the Improvement plan.

C05.4.6 Other Assets (D08-D11)

The assets associated with sections D08-D11 are not currently set up in RAMM, and as such there is not much known about the quality of information known about them.

C05.4.7 Network and Asset Management (D12)

The reports for Network and Asset Management are grouped into Crash Data, Traffic Counting, Traffic Estimates and Maintenance Activity.

TABLE C-33: RESULT FOR NETWORK AND ASSET MANAGEMENT DATA QUALITY

Network and Asset Management	Number of Tests	Grade 1 Expected Standard	Grade 2 Minor Issues Present	Grade 3 Major Issues Present
Crash: Crash Data	2	**50%**	**50%**	0%
Demand/Use: Traffic Count	3	**67%**	**33%**	0%
Demand/Use: Traffic Estimates	5	**100%**	0%	0%
Maintenance Activity: Maintenance Activity	5	0%	0%	**100%**

The tests showing major issues are detailed below.

TABLE C-34: MEASURES WITH MAJOR ISSUES

Sub category	Ref	Metric Description	Dimension
Maintenance Activity	MAINT2	Complete pavement and surface maintenance activity	**Timeliness**
Maintenance Activity	MAINT4	Correctly located pavement, surface, shoulder and drainage maintenance activity	**Accuracy**
Maintenance Activity	MAINT6	Level of pavement, surfacing, shoulder and drainage maintenance activity known	**Completeness**
Maintenance Activity	MAINT1	Consistency of pavement, surfacing and shoulder maintenance activity units	**Accuracy**
Maintenance Activity	MAINT3	Pavement, surfacing, shoulder and drainage maintenance activity known	**Completeness**

MAX.quality Data Confidence

Currently there are no MAX.quality data confidence measures for Network and asset management.

Data Quality

These items have been identified in the recent Waka Kotahi Technical audit as well. They will be addressed in the Improvement plan.

C05.5 Data Confidence Improvement Actions

While the data quality discussed in sections C05.2-C05.4 are all based on RAMM data, the Council has built up a library of additional data which supplements the information in RAMM.

Where appropriate, Council should use this data to reconcile the information in RAMM with a view to improving the data quality results reported by both Te Ringa Maimoa's Transport Insights and MAX.quality Data Confidence Indices.

The data quality issues will be prioritised and addressed in the Improvement Plan focusing on measures which provide benefit to the overall asset management.

C06 PLAN IMPROVEMENTS

C06.1 Overview

Making improvements to the Activity Management Plan is the result of ongoing continuous improvement focus across the Land Transport business and operation.

Council currently has an Asset Management Improvement Programme (AMIP), that includes an online register of improvement tasks. The structure of the AMIP is to provide more focus and structure to the ongoing prioritisation of tasks and support the work is that being progressed.

Improvements to this AMP, and to future AMPs, is a subset of the Asset Management Improvement Programme (AMIP).

Council is focused on delivering appropriate and sustainable levels of improvements each year. A significant amount of these are relatively minor, but valuable, tweaks to business processes, communications and information management.

Council has a comprehensive Improvement Plan. Improvements or recommendations that come from other sources, such as Valuation Recommendations, Audit NZ findings, NZTA Audit findings are all included in the Plan so they can be prioritised, planned and tracked.

Complex and critical assets will be developed towards core-plus in areas of priority agreed by Council. An assessment of Land Transport maturity is required to identify current maturity and actions to address gaps, if any.

C06.2 Improvements Achieved

Council has progressively reviewed and made improvements to its asset management planning since the first AMP was prepared in 1996. In recent years Council has reviewed the format of the AMP to include the Business Case approach, risk management frameworks, ONRC Levels of Service and Benchmarking.

The following provides a few high level highlights of improvements made in the last 3 years:

- AMP | Council had it's 2018 AMP audited by GHD (independent of the team that prepared the AMP) and the improvement suggestions have been included into the AMIP improvement tasks register. A number of these have already been incorporated into this version of the AMP.
- AMP | The AMP document itself has gone through a major upgrade to:
    - remove significant duplication of information,
    - provide consistency of document structure and information across all lifecycle management sections, and
    - simplify the document to make it clearer and easier to use.
- Data quality | Council has implemented the MAX Products (supplied by GHD) to further enhance the focus on data quality, improved reporting and use of information and maintenance contract overview. This data quality transparency has allowed Council to make initial steps forward in improving its data quality.

- Structures Management | Council has established a new field inspection app for Bridge Inspections and all inspection data is now stored and managed in RAMM. This has provided a better 'one source of the truth' by bringing bridge information more fully into RAMM as well as allowing for a few smarts to be included, like taking historical defects back into the field for the next round of inspections.
- Forward Works Programme (FWP) | Council has implemented a single FWP setup in RAMM to provide a 'single source of the truth' for all capital and major renewal programmes.
- Traffic Counting | Council has addressed it's traffic counting issues and has completed a consistent programme for the last 2 years.

A list of completed improvement tasks is included as part of the improvements task register excerpt in Appendix C.

C06.3 Improvement Programme

The development of this AMP is based on existing levels of service, the best available current information and the knowledge of Council staff.

It is expected that the Asset Management Improvement Programme (AMIP) is part of an ongoing process as there are often changes to the environment with which asset planning is occurring. This includes changes to knowledge of customer expectations, improved availability of trusted data, changing expectations from Waka Kotahi and / or the Road Efficiency Group and changing external demands for the use of the networks and assets.

The purpose of the Improvement Programme includes:

- Identify and prioritise ways to cost-effectively improve the quality of asset management planning and practices (as usually documented or referred to in the AMP).
- Identify indicative time-scales, priorities, human and financial resources required to achieve asset management planning objectives.
- Identify data and process improvements in asset management which will improve the accuracy and availability of information available during the writing of future AMPs.

A summary of the current state of the AMIP Improvement Tasks Register is shown below. To support the relationship to the AMP document, the improvement category relates to the sections within the AMP document.

TABLE C-35: IMPROVEMENTS PLAN STATUS SUMMARY BY CATEGORY

	Status			
Improvement Category	**Future**	**Active**	**Completed**	**Total**
B02 Strategic Case		2		2
B03 Programme Business Case		6		6
B04 Delivery - Maintenance Contracts Improvements		4	1	5
B04 Delivery - Network & Asset Management Improvements		2		2
C02 Risk Management Improvements	3	4	3	10
C03 Environmental Stewardship Improvements	1			1
D00 Activity Management		1		1
D01 Activity Management Introduction		1		1
D02 Network Safety Improvements	3	3		6
D03 Pavement AM Improvements	2	4	1	7
D04 Structures AM Improvements	2	2		4
D05 Drainage AM Improvements	6	1		7
D06 Railings AM Improvements	2			2
D06 Signs and Markings AM Improvements	7		1	8
D06 Streetlight AM Improvements	2			2
D07 Footpath AM Improvements	6	1		7
D08 Great Rides (Cycleways) AM Improvements	5			5
D09 Bus Shelter AM Improvements	4			4
D10 Facility Roads and Carparks AM Improvements	3	1		4
D12 Asset Information Management Improvements		3	8	11
D12 Network & Asset Management Improvements	12	11	11	34
E01 Financial Management Improvements	1	1		2
E03 Financial Valuation Improvements	5	1		6
SP Forestry Activity Impacts	3			3
Improvements Total	**67**	**48**	**25**	**140**

D Activity Management

D01 ACTIVITY MANAGEMENT INTRODUCTION

D01.1 Purpose and Strategic Case Link

Each asset class managed by Council as part of the transport activity has a section detailing its link to the Strategic case, how it contributes to serving or addressing the problem statements (from the Strategic Case) and the Customer One Network Road Classification (ONRC) levels of service.

The Activity Management sections provide comprehensive details of how the asset or activity will be managed and delivered during this AMP period.

D01.2 The Need for Investment

Each Activity Management section outlines why Council needs to invest in this asset class, including:

- Known Issues, Needs and Risks
- Historical commentary
- Levels of Service

This provides the background on what is needed, what has happened in the past which affects current and future needs, the current level of service the asset is providing and if there is a need to change the level of service.

The lifecycle of an asset is understanding the rate of change. The primary objective is to know when to maintain, renew, improve (upgrade through capital works) an asset or its component.

D01.3 Benefits of Investing

Investment in each asset class will contribute to the Investment Objectives identified in the Strategic case.

D01.4 Assets to be Managed

Assets to be managed provides a description of the current assets showing:

- Asset Description - Details of the asset quantities and locations
- Asset Values - Details of the current valuation of the assets

D01.5 Asset Performance

Asset performance is broken up into:

- Asset Age / Remaining Useful life
- Asset (or network) Condition
- Asset (or network) Performance

It is critical that Council has clear knowledge of the condition of their assets and how they are performing. Condition data for some assets and networks has been captured over several years, which enables Council to understand future expenditure patterns and to make management decisions regarding maintenance, replacement and renewals.

The development and continued use of condition assessment data will allow preparation of reliable and trusted forward work programmes.

Asset condition over time also supports the ability to verify and update depreciation curves used in RAMM Valuation, which includes the prediction of remaining life.

A number of assets use the 1 to 5 scale for recording their condition.

TABLE D-1: CONDITION GRADE DESCRIPTIONS

Grade	Condition	Description of Condition
1	Very Good	Sound physical condition. Assets likely to perform adequately without major work for 25 years or more.
2	Good	Acceptable physical condition; minimal short-term failure risk but potential for deterioration in long-term (15 years plus). Minor work required.
3	Fair	Significant deterioration evident; failure likely within the next 5 years but further deterioration likely and major replacement likely within next 15 years. Minor components or isolated sections of the asset need replacement or repair now but the asset still functions safely at adequate level of service.
4	Poor	Failure likely in the short-term. Likely need to replace most or all of the assets within 5 years. No immediate risk to health or safety but works required within 3 years ensuring the asset remains safe. Substantial work required in the short-term, asset barely serviceable.
5	Very Poor	Failed or failure imminent. Immediate need to replace most or all of the assets. Health and safety hazards exist which present a possible risk to public safety or assets cannot be serviced/operated without risk to personnel. Major work or replacement required urgently.

D01.6 Asset Management

Asset management provides details of how the assets are managed outlining:

- Standards
- Strategies and Policies
- Risk Management
- Delivery

D01.7 Operations

The Activity Management sections provide the details of operational activities to be undertaken during the lifetime of this AMP, along with the plan of how they will be delivered.

Operational activities do not change the underlying asset but improve the operation of the asset or increase the life, for example:

- Road sweeping - maintains a clean environment and limits run off into drainage

- Grate Cleaning - allows water to flow into sub-surface drainage assets

D01.8 Maintenance

The Activity Management sections provide the details of maintenance activities to be undertaken during the lifetime of the AMP, along with the plan as to how they will be delivered.

The main focus of the maintenance programme is on the rural roading network, primarily to reduce the deterioration of pavement and surfacing which has resulted from the higher traffic loadings of heavy vehicles. Standards are set and monitored by Waka Kotahi.

D01.8.1 Maintenance Types

Maintenance is the regular, ongoing, day-to-day work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make it operational again.

Maintenance falls into the following types:

- **Reactive** | Reactive action to correct asset faults and failures on an as required basis
- **Proactive** | Proactive inspection and maintenance works prioritised and planned to prevent future or further asset failure.
- **Cyclic** | Cyclic work is work that is repeated on a set frequency
- **Emergency** | Emergency work can be done immediately to address an immediate hazard often resulting from a vehicle crash or a storm event. The work is usually limited to making the road safe and then permission is required to do more major repairs

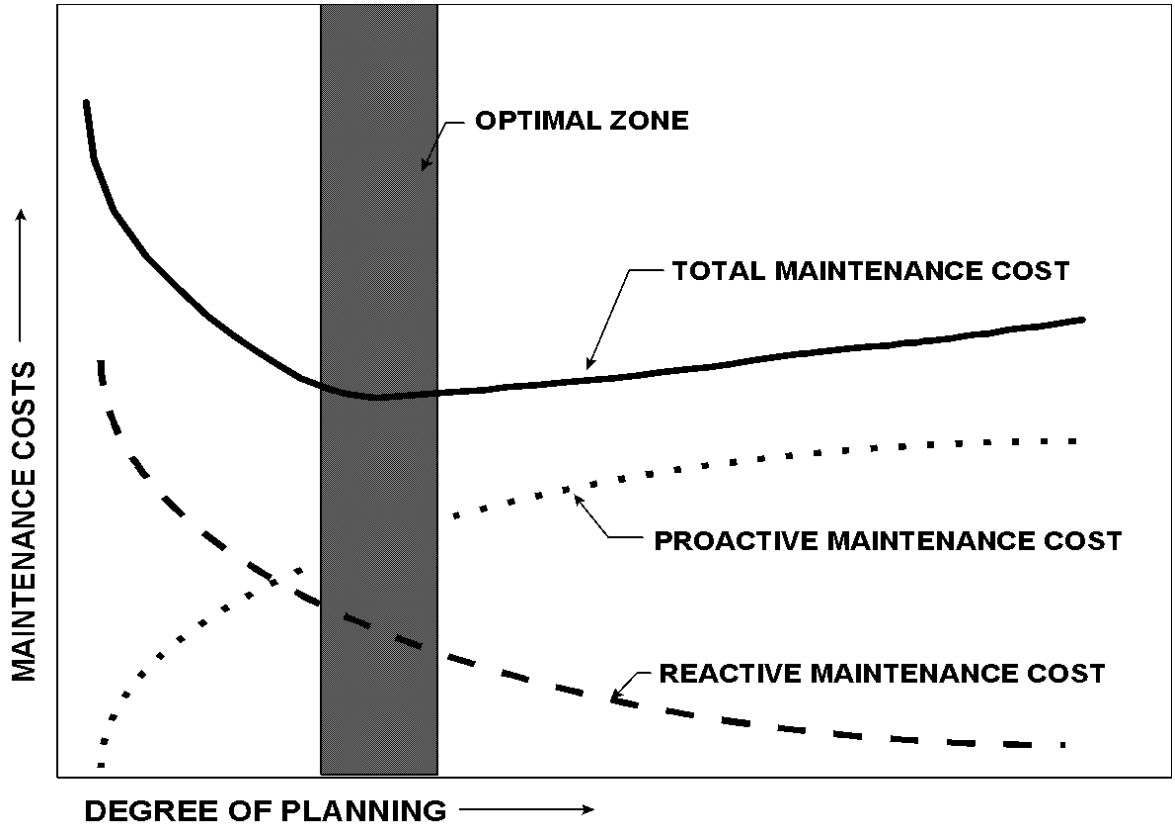
It should be also noted that within the maintenance contracts there are two types of permissions for when the contractor has permission to do the maintenance work.

- **Routine** | The contract specifically gives permission to carry this type of maintenance when the work is identified or comes due (eg: cyclic)
- **Ordered** | The contract requires the contractor to seek permission to do the work prior to commencing. This is normally done through the monthly programming process.

D01.8.2 Maintenance General Strategy

A key element of asset management planning is determining the most cost-effective blend of proactive and reactive maintenance as illustrated below.

FIGURE D.1: OPTIMAL MAINTENANCE ZONE



Maintenance decision making needs to weigh up the following factors to continue to provide an appropriate level of service:

- **Risk of failure** - The risk associated with failure of assets
- **Levels of service** - Meeting the expected levels of service for the ratepayers, businesses and other road and path users
- **Economic efficiency** - Intervening at the right time, using activities like asset condition assessments to help optimise the intervention timing
- **Legislative and standards compliance** – eg, requirements of the LGA 2002, NZTA funding and Waka Kotahi standards

D01.9 Renewals

The Activity Management sections provide the details of the renewal activities to be undertaken during the lifetime of this AMP along with the plan as to how they will be delivered.

An asset renewal restores an existing asset to its original capacity or required condition. The objective in renewing an asset is to apply the correct treatments at the optimum time so that the required level of service is delivered while minimising total lifecycle costs.

Assets for renewal are identified through analysis of the asset information, held in RAMM, which takes into account factors such as age, condition and performance. Technical staff then make an assessment of the data and prioritise a renewal programme taking into account risk and criticality.

Assets are renewed when it is determined to be more cost effective in the long term to replace rather than continue to maintain them. In that sense it can often be a purely economic justification and not only for maintaining customer levels of service.

While the Council recognises that asset development and asset renewal can occur simultaneously, it is important to note that the purpose of asset renewal is to prevent a decline in the service potential of the assets the difference is outlined below:

- **Asset renewal** is concerned with maintaining the condition of the assets and current service levels.
- **Asset development** is concerned with the service improvements, measured by asset performance or asset extensions to provide for growth.

D01.9.1 Renewal Types

Renewals are broken into the following types;

- **Replacement** | involves renewing an asset by replacing it on a like with like basis. The deteriorated asset is removed and an equivalent asset replaced.
- **Rehabilitation** | the process of upgrading major elements of the assets by modifying or rejuvenating them to render them able to deliver the original level of service.

D01.9.2 Renewal General Strategy

The renewals programme must be implemented at adequate levels to maintain current levels of service and the overall quality of assets. Levels of expenditure on the asset renewal programme will vary from year to year, and will reflect:

- The age profile of the assets
- The condition/performance profile of the assets
- The cost to maintain the assets (impacting the benefits of undertaking a renewal)
- The differing economic/useful lives of individual assets comprising the overall system of assets

Failure to maintain an adequate renewal programme will see a decline in the overall standard of the network of assets and a commensurate increase in likely maintenance costs.

D01.9.3 Deferred Renewals

Renewal works identified may be deferred if the cost is beyond Council's ability to pay. This can occur when higher priority works are required on other infrastructure assets, there are short-term peaks in expenditure or if an inadequate funding sources exists.

Although the deferral of some renewal works may not impact significantly on short-term operation of assets, repeated deferral will create a liability for the longer term.

The more deferrals occur, it may create a greater requirement in terms of maintenance funding to retain levels of service.

Renewal deferrals (if any) are detailed in the Life Cycle Management sections.

D01.10 Development Works

The Activity Management sections detail the development activities to be undertaken during the lifetime of this AMP along with the plan as to how they will be delivered.

D01.10.1 Development Work Types

Development works are broken into the following types;

- **Preventative** | involves investments in new assets but with the primary purpose of reducing current and future maintenance costs
- **Improvements** | involves significantly improving an existing asset or improving an intersection or road corridor. This is primarily done to improve customer level of service or cope with growth.
- **New** | involves the construction of brand new assets, intersections or road sections. This is primarily done to improve customer level of service or cope with growth.
- **Vested** | involves the construction of new assets (usually whole roads) that are then 'vested' to Council so that the Council will now own and maintain the assets. This normally occurs as part of the subdivision process.
- **Legislative** | involves assets that are built out of legislative requirements

D01.11 Asset Disposal

The Activity Management sections detail the disposal activities (if any) to be undertaken during the lifetime of this AMP.

Disposal is the retirement or sale of assets whether surplus or superseded by new or improved assets.

Assets could become surplus to requirements for any of the following reasons:

- Under-utilisation.
- Obsolescence.
- Provision exceeds required level of service.
- Assets replaced before their predicted economic life.
- Uneconomic to upgrade or operate.
- Policy changes.
- Service provided by other means (eg, private sector involvement).
- Potential risk of ownership (financial, environmental, legal, social)

D01.12 Funding Request

To undertake the operations, maintenance, renewals and development activities outlined in the sections above, finance is required. This section details the funding needed by the activity.

D01.13 Asset Management Improvements

The details of any improvement project or activities that will improve the management of the asset being discussed. The complete improvement plan is outlined in the "Plan Improvement and Monitoring (section C06), with details in Appendix C.

D02 NETWORK

This section focuses on the network as a whole. The management of individual component assets is described in the individual asset lifecycle sections.

The State Highways that pass through the District are owned and maintained by Waka Kotahi New Zealand Transport Agency (Waka Kotahi). The rail network also falls outside of Council's area of operations and is currently owned and operated by KiwiRail.

D02.1 Purpose and Strategic Case Link

The purpose of land under road is:

Provide a multi-modal network that allows for the safe, reliable, efficient and effective movement of vehicles and vulnerable users, such as pedestrians, cyclists, mobility and micro-mobility users

The legal public road (including unformed road surfaces) is the Council's responsibility to manage. However, the Utilities Act 2010 provides rights for other users to utilise the road corridor, such as:

- Telecommunications
- Power
- Gas
- Water
- Wastewater
- Stormwater

In managing the network, Council undertakes network wide activities, including:

- Low cost, low risk Programme of Works
- Emergency Works and Minor Events – responding to accidents and weather events that cause damage or disruption to the road
- Crash reviews
- Safety reviews

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	This activity doesn't provide any significant contribution towards addressing this problem

	Problem Description	Activity Contribution
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	A large part of the minor safety programme is co-created with the River Valley communities to ensure that it is addressing their needs
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Emergency Works | Provision of appropriate and timely response to emergency and weather events is firstly focused on making the site safe to look after the road users and public Low Cost Low Risk Improvement Programme | This delivers minor improvement works with the focus on improving the safety outcomes for a site or a length of network

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Emergency Works | The efficiency of response to unexpected events reduces the amount of time that the network is restricted. Low cost low risk Improvements | Improving the safety of the network reduces the likelihood and severity of crashes, therefore reducing the amount of restrictions and closures that occur on the network.
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	Emergency Works and Minor Events | The efficiency of response to unexpected events reduces the amount of time that the network is restricted.

	Customer Level of Service Description	Activity Contribution
Safety	How users experience the safety of the road	Emergency Works | Emergency Works and Minor Events Appropriate response to unexpected events helps to make safe the site and network for road users Low cost low risk Safety Improvements | A core activity to addressing safety issues identified on the network
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	This activity doesn't provide any significant contribution towards this customer level of service
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	This activity doesn't provide any significant contribution towards this customer level of service

D02.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include

- Providing sustainable and resilient infrastructure
- Managing the network with a strong focus on safety
- Providing an affordable transportation network that meets the reasonable needs of the wider community
- Maintain network so that service capacity and integrity is not reduced

D02.3 Network to be Managed

D02.3.1 Network Description

The Council roading network of 1,349km is broken down into different classifications below.

TABLE D-2: NETWORK STATISTICS

Asset Type	Quantity	Urban / Rural		ONRC Classification			
	Kilometres	Urban (km)	Rural (km)	Primary Collector (km)	Secondary Collector (km)	Access (km)	Low Volume (km)
Local Authority (LA)							
Sealed	477	110	367	11	79	249	138
Unsealed	847	7	840	-	-	84	763
Other	9	0	9	0	0	1	7

Asset Type	Quantity	Urban / Rural		ONRC Classification			
	Kilometres	Urban (km)	Rural (km)	Primary Collector (km)	Secondary Collector (km)	Access (km)	Low Volume (km)
TOTAL (LA)	**1,333**	**117**	**1,216**	**11**	**80**	**334**	**908**
Special Purpose Road (SPR)							
Sealed	16	0	16	16	0	-	-
Unsealed	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
TOTAL - (SPR)	**16**	**0**	**16**	**16**	**0**	**-**	**-**

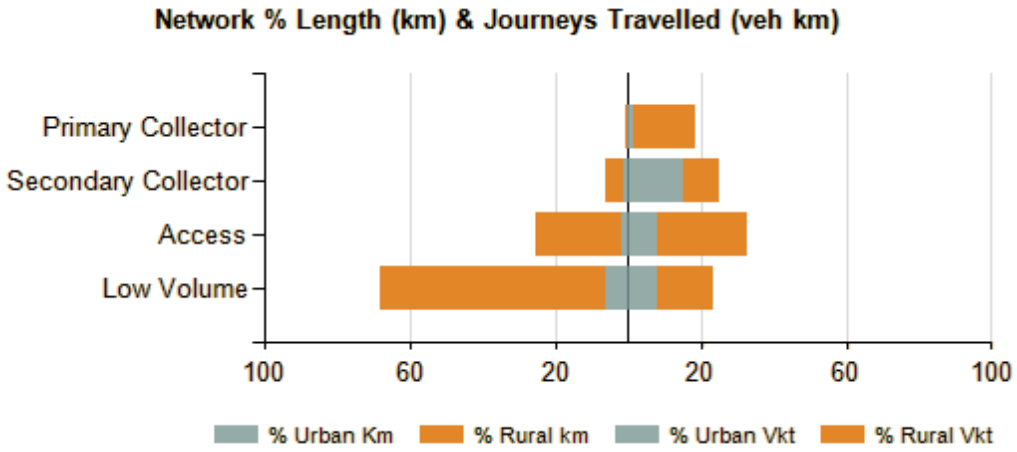
The special purpose road is Ohakune Mountain Road, accessing Tūroa ski area and Tongariro National Park.

In addition to the road network shown in the above table, Council also has the following two further transport related networks to manage:

- A pedestrian network, comprising 70 km of footpaths - see Footpaths (Section D07) for more information.
- Off road Cycleway network 15.4km (plus additional 46km of Council paper roads maintained by DoC) - see Great Rides (Section D08) for more information.

FIGURE D.2:- LENGTH VS VKT BY ONRC CLASS

Source: Transport Insights 2022/23



The figure above clearly shows the disproportionate amount of traffic that is carried by the Secondary collectors when compared to the network length.

The following maps outlines the extent of the roading network by ONRC and ONF classifications.

FIGURE D.3: MAP OF NETWORK BY ONRC CLASSIFICATION

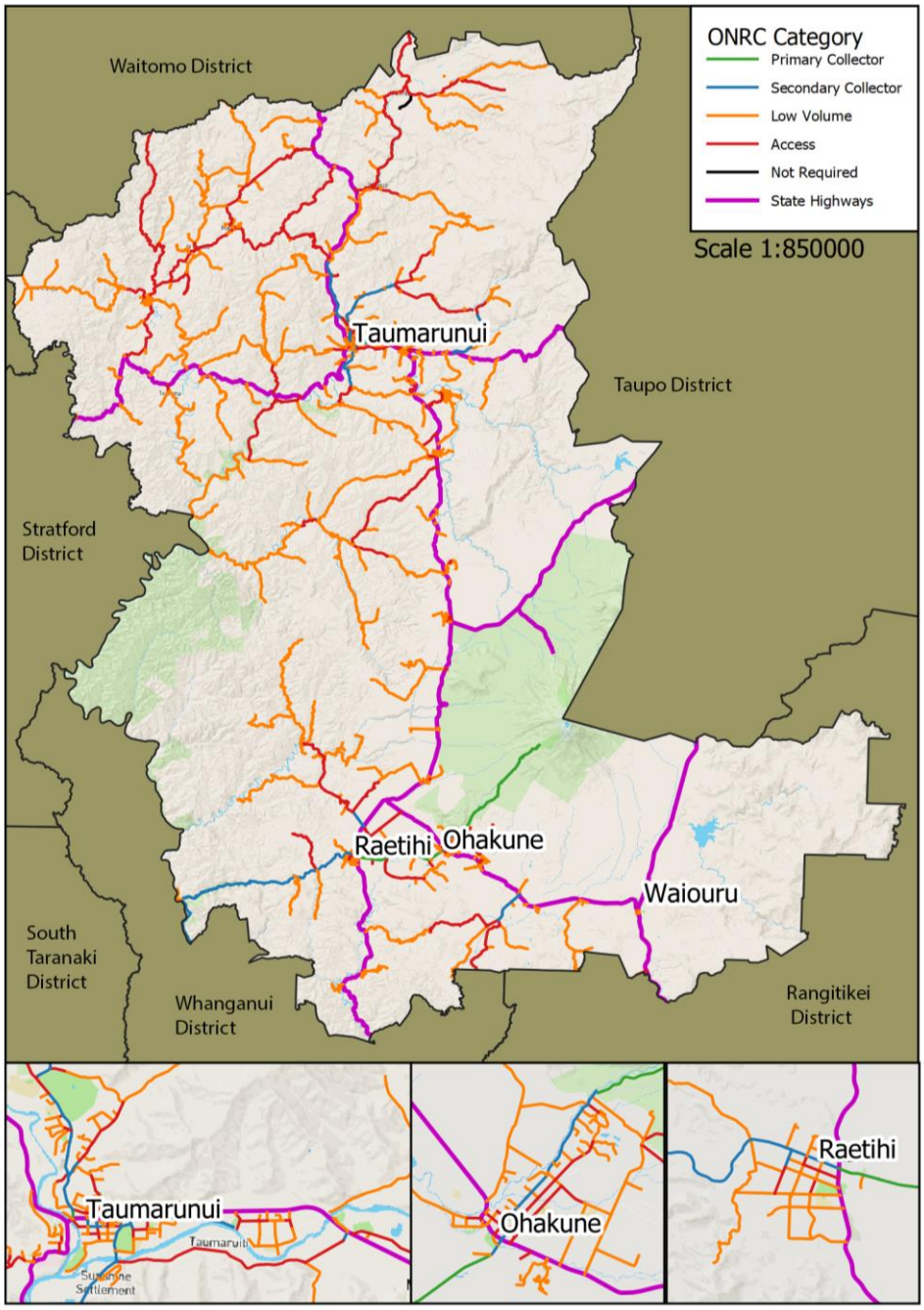
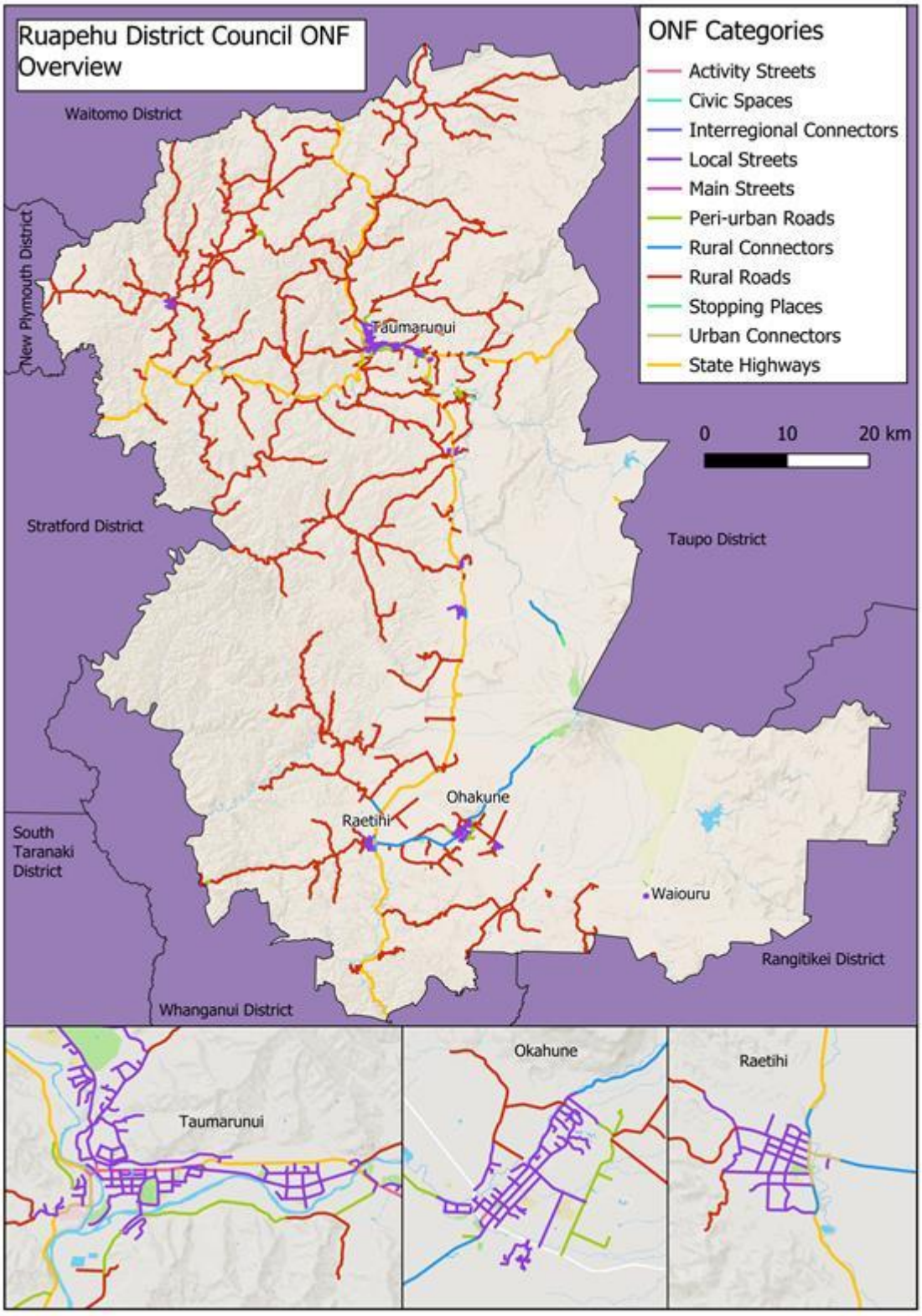


FIGURE D.4: MAP OF NETWORK BY ONRC CLASSIFICATION



Ohakune Mountain Road (OMR)

The OMR provides the only vehicle access to the Tūroa Ski Area within the Dual World Heritage listed Tongariro National Park. The road has historically been managed by Council, under a Memorandum of Understanding (MoU) with Ruapehu Alpine Lifts, the Department of

Conservation (DOC) and Iwi to establish, maintain and promote a collaborative and co-operative working relationship between the parties.

The road is a sealed 2-lane road, generally between 5.5 and 7 metres wide and 16km long. It climbs roughly 1,000 metres to the ski area carpark at an elevation of 1,600 metres. The average grade is 1 in 16 with a maximum of approximately 1 in 7 over a 600m length above the s-bend at the bush line. The OMR has a chipseal surface on the lower altitudes and asphaltic concrete on the higher reaches. The highest hourly flow recorded on the road is 732 vph (downhill, July 2010).

The environment changes significantly as the road climbs the mountain and can be split into three distinct sections:

- Podocarp forest up to about 5 km
- Beech forest that extends up to the bushline at 13 km
- Alpine section up to the carpark at 16 km

The process of managing the road is no different than that for any other road in the network. It's classification as a Special Purpose Road qualified it for 100% national funding until 2024/25. It now changes to the same rate as that of local roads. A programme of pavement renewal and minor improvements was carried out prior to the funding change.

D02.3.2 Asset Values

Replacement Cost and Annual Depreciation

- The network is valued at a component (asset) level. As such, refer to the individual asset lifecycle sections for valuation details.
- Full details available in Finances (Section E)

D02.4 The Need for Investment

D02.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them. Note that the primary network problems are handled and discussed in the Strategic Case (Section B02):

Strategic Response	Key Issue	Response Type	Strategies to Address
Network safety & resilience – planning & targeted improvement	Emergency management response is required to be timely in order to maintain network accessibility and safety during events. ● Weather ● Accident response	**Programme** approach	Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
	Nature of the roads - safety issues Majority of rural roads are narrow and windy with the likelihood for vehicle crashes high. Personal risk (versus collective risk) is high.	**Policy** Approach	**Speed Management** Lowering speed limits around rural schools.
		Policy Approach	**Intersection review** Review intersections to identify those requiring realignment
		Programme approach	**Targeted Maintenance Programmes** Use targeted maintenance programmes for component assets.
		Programme approach	**Targeted Improvement Programmes** Make use of the Low cost low risk Improvements programme to undertake network wide improvements. Can be isolated sites or combined with rural pavement renewals.
	Emergency Works - Impact on network programme finance When there is a need to respond in an emergency situation budget is diverted from other programmes of works	**Programme** approach	Council expenditure is managed to balance the local share budget, which may mean reductions in maintenance and renewal work if emergency works costs are higher than expected.
	Increasing traffic (due to tourist and commercial traffic) imposes demands for safety on roads in difficult terrain	**Programme** approach	The Low cost low risk Improvements programme and targeted maintenance.
	Nature of the roads - safety issues Majority of the Rural roads are narrow and windy with the likelihood for vehicle crashes high.	**Programme** approach	The Low cost low risk Improvements programme and targeted maintenance.

Strategic Response	Key Issue	Response Type	Strategies to Address
	Emergency works - diversion of contractor resource The need to respond to an emergency or undertake reinstatement works can divert contractor resources from other programmes of work.	**Programme** approach	Manage needs during emergency reinstatement works.
	Ohakune Mountain Road Safety Issues Alpine road with risk of ice, traction issues, narrow and steep sections	**Programme** approach	Targeted Safety Improvements Guardrailing, asphalting, widening, horizontal and vertical grade alignments
	Heavy Vehicle Safety on narrow, windy roads Trucks can take the complete road on a corner.	**Programme** approach	The Low cost low risk Improvements programme and targeted maintenance.
Maintain level of service	Assets to fulfil their purpose in accordance with agreed Levels of Service.	**Programme** approach	Purpose is as documented in the D02.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
Targeted improvements for active modes	Interest in winter activities on the mountain (both sides) increases traffic. Traffic is tidal and generates peaks.	**Policy** approach	Work with the various government and stakeholders to advocate for aligned responses and co-ordinated demand management.
		Level of Service adjustment	Investigate options for funded public transport and further park and ride development sites. The Ski area is reaching capacity so traffic on Ohakune Mountain Road should stabilise in winter.
	Increased cycling on the network With the increase in on road cycling tracks within the district and Tour Aotearoa passing through the district there has been a significant increase in the number of cyclists on the network. Along with an increase in tourists using roads to access the cycle tracks. Even though there are more cyclists there is no additional space for the cyclists. Buffer to safely pass cyclists and walkers on the road.	**Level of service** adjustment	Consider widening the road and installing cycle paths where it is feasible.

D02.4.2 Key Risks

Key risks are detailed in Appendix D Risk Register

D02.4.3 Historical Commentary

Ruapehu is one of the largest districts in the North Island, yet has a very small, dispersed population. This has resulted in a large roading network, with a small ratepayer base to support it.

Network Classification

Further to the One Network Road Classification, the One Network Framework has been developed and implemented. ONF is a two-dimensional classification tool focused on Movement and Place. Roads and streets are mapped with consideration to the mix and balance of transport modes, the built environment, the aesthetic quality and character of the place and the types of modes appropriate to the place.

The process of defining these classifications takes into consideration:

- Place – define the land-use vision and user experience that transport needs to support.
- Movement – consider the mix of transport modes and define

The following table shows how ONRC categories map to ONF categories.

FIGURE D.5: ONRC TO ONF: TRANSLATION OF ONRC TO ONF ROAD/STREET CATEGORIES

Source: ONRC to ONF street categories translation (nzta.govt.nz)

Urban

	Transit corridors	Urban connectors	Main streets	Activity streets	City hubs	Civic spaces	Local streets
National high-volume	✔	✔	✔	✔			
National	✔	✔	✔	✔			
Regional	✔	✔	✔	✔			
Arterial		✔	✔	✔	✔		
Primary collector		✔	✔	✔			✔
Secondary collector		✔	✔	✔		✔	✔
Access				✔		✔	✔
Access low-volume						✔	✔

Rural

	Inter-regional connector	Peri-urban roads	Rural connectors	Rural roads	Stopping places
National high-volume	✔	✔			✔
National	✔	✔			✔
Regional	✔	✔			✔
Arterial		✔	✔		✔
Primary collector		✔	✔	✔	✔
Secondary collector		✔	✔	✔	✔
Access		✔	✔ [1]	✔	✔
Access low-volume		✔		✔	✔

Reduction in Low Cost Low Risk Budget during 2021/24

The Low Cost, Low Risk budget allows for projects of up to $2M to be funded for Councils to carry out minor improvement projects. Council uses this fund to improve road alignments and address community safety concerns. Council's funding request for 2021/24 was lowered by 81%, hampering the minor improvements that were able to be carried out on the network in the last three years.

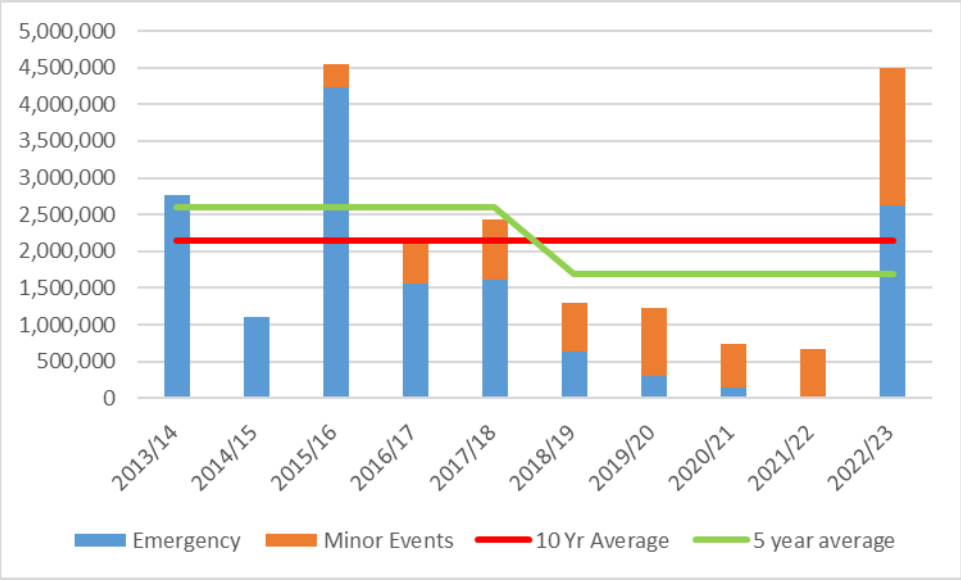
Introduction of Road to Zero Work Activity

Waka Kotahi introduced an activity class targeted towards interventions that are key to contributing to the reduction of deaths and serious injuries sought through the Road to Zero strategy 2020-30. Council was granted $845K of funding for signage infrastructure to lower speed limits around schools in 2021/24 period.

Emergency Works and Minor Events

The unpredictable nature of emergency and minor events make this a difficult issue to budget for. Council uses the five year average to forecast an indicative budget.

FIGURE D.6: EMERGENCY WORKS EXPENDITURE



The graph shows the changeable quantum of work. If the budget is exceeded, maintenance and renewal work may be reduced to accommodate the over expenditure. This has a cumulative impact on forward works achievement and asset condition.

Minor events cover the same type of work as emergency works but are the response to events of less than $100,000. Minor events reduce customer levels of service and are unpredictable.

D02.4.4 Levels of Service

Service Calls

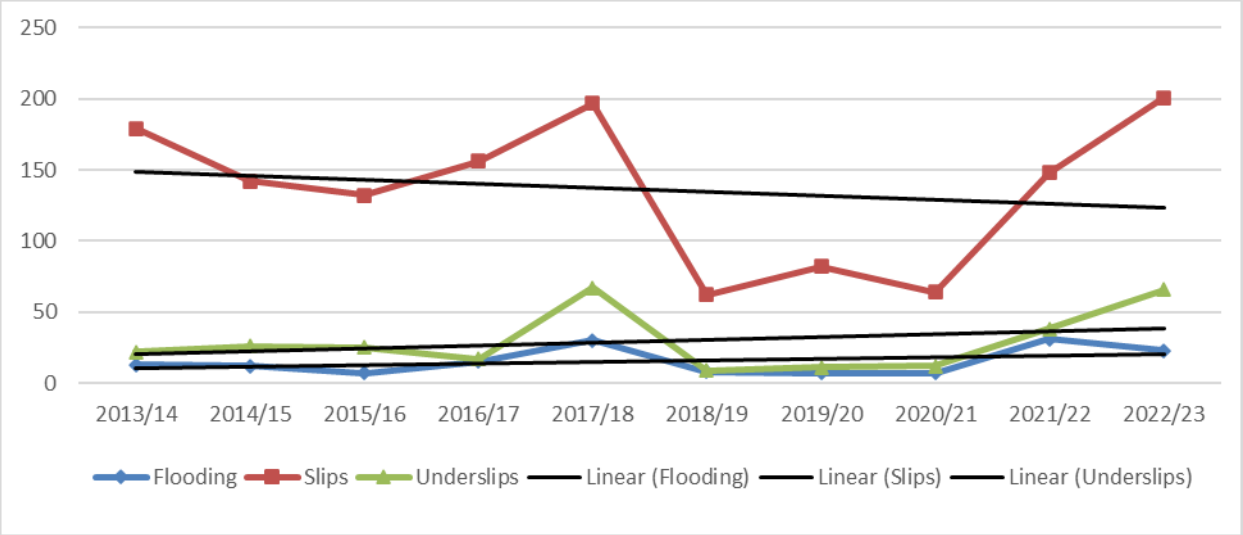
Flood damage calls are related to weather events. Faults include slips, dropouts, fallen trees and flooding. The topography and geology of the District makes it vulnerable to storm damage. Flood damage affects ONRC customer service levels of resilience, accessibility (travel time reliability) and safety.

'Slips' calls are for land slipping on to the road or roadside, different from 'underslip' calls, which cover the road slipping down (ie dropouts)

Call numbers have increased in the last two years.

Focus on drainage maintenance has increased in the last five years and is believed to have influenced the network's ability to cope with weather events.

FIGURE D.7: FLOOD DAMAGE CALLS



Significant LoS Change

No significant change has been made to Network based LoS in recent history.

D02.5 Network Performance

D02.5.1 Age / Remaining Useful Life

The age and remaining useful life of a network is generally considered to relate to the primary asset that supports the function of the network.

- For road networks this is the pavement and surfacing assets
- For cycleway and offroad path networks this would be the footpath assets.

Please refer to the specific asset activity section to see the age and remaining useful life information.

D02.5.2 Condition

The condition of a network is generally considered to relate to the primary asset that supports the function of the network.

- For road networks this is the pavement and surfacing assets
- For cycleway and offroad path networks this would be the footpath assets.

Please refer to the specific asset activity section to see the condition information.

D02.5.3 Network Performance - Safety - crash stats

Network performance can be measured in terms of:

- Safety (crash statistics)
- Volumes of traffic carried (VKT)
- Availability (significant road closures)
- Delay could also be considered but this is not so applicable for the Ruapehu local road network.

The main measures of these are captured as part of the Te Ringa Maimoa Transport Insights Reporting Tool. Refer to Levels of Service (Los) We Provide (Section C04) for access to these measures and some discussion.

D02.6 Asset Management

D02.6.1 Standards

- Road Safety and Geometric Design standards (numerous as known to the industry)
- Standard NZS4404:2010 Land Development and Subdivision Infrastructure, should be used for urban roads.
- Austroads engineering standards should be used for rural roads. This includes:
    - Road geometry
    - Pavement engineering
    - Safety management (relating to pavements).

D02.6.2 Strategies and Policies

- Road safety strategy
- Traffic counting strategy
- Engineering Lifelines (Horizons Council) - Civil Defence Emergency Management - Group Plan 2016-2021. (Version 1.3 June 2018)
- Council Land Transport Policy allows for land owner funded improvements (eg: seal extensions).

D02.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D02.6.4 Delivery

Asset management of the network is delivered operationally by the Professional Services contract and strategically by the Council Manager Land Transport. The table below indicates the responsibilities for operational activities

Activity Type	Activity	Delivery Method
Operations	Network Inspections	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Call Outs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Emergency - Initial Response	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

Activity Type	Activity	Delivery Method
Operations	Emergency - Investigation, design and estimate	Professional Services Contract
Operations	Emergency - Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

D02.7 Operations

D02.7.1 Activities

Routine Inspections

Network inspections are carried out under the Road Network Maintenance & Resurfacing 2022 to 2030 Contract to ensure that the maintenance needs are proactively identified and quantified.

The purpose of the network inspections include, but are not limited to, the following:

- Identification of routine work as well as ordered work
- Provides evidence based decision making
- Clearly scope the work type location, priority, size and choose proposed treatment so that
    - The requirement of resource and materials to undertake the fix is known
    - Through use of multimedia that the required work is clearly understood
- Maintenance 'need' identified
- A programme of ordered works can be developed in regards to the annual maintenance planning cycles
- The analysis of maintenance need identified can be completed to be□er define renewal requirements
- Identification of issues is proactive so that we are aware before the customer tells us
- Work is raised in reference to intervention levels and attended to within the given response times for each routine activity.
- Shows that 'Best Effort' vs 'Must Find' has occurred where it is a requirement of the activity to apply Best Effort during a network inspection.

Inspection frequencies are based on ONRC classifications.

Emergency Works

Work undertaken for Emergency works and minor events depends on the repair method used to reinstate all assets to their pre-existing service level. Repairs can include earthworks (retreats), vegetation removal, retaining walls (gabion, timber and rock), drainage, structures, pavement and surface replacement and traffic services (sight rails, signs, markings).

- The Road Network Maintenance & Resurfacing 2022 to 2030 contractor is responsible for Immediate response work to make the sites safe
- The Professional Services Consultant is responsible for the investigation, design and estimate.
- The consultant is also responsible for carrying out the Waka Kotahi funding approval process
- The Road Network Maintenance & Resurfacing 2022 to 2030 contractor is responsible for implementing the design and carrying out physical works
- Repairs can include
    - Earthworks and retreats

    - Slip removal
    - Retaining structures such as timber, rock wall or gabion baskets
    - Culvert reinstatement
    - Structure reinstatement
    - Pavement reinstatement
    - Surface reinstatement
    - Traffic services such as site rails, signs and markings
- Responsiveness and preparedness
    - A suitable level of preparedness for prompt and effective response to asset failures and emergencies is maintained by ensuring the availability of suitably trained and equipped staff and service delivery contractors. Asset failures are responded to with the initial objective of restoring service as quickly as possible by the most economic method available, and making temporary repairs if major repairs or renewals are required.

Call Outs

- Minor Events are of a smaller scale than emergency works but use the same type of repairs
- These are funded from normal maintenance funding and not from emergency event funding
- Emergency and call centre response

D02.7.2 Plan

The nature of emergency services mean that the service is provided as and when required.

D02.8 Maintenance

D02.8.1 Activities

Maintenance activities are done to individual assets and therefore there are no network level maintenance activities that can be recorded here.

D02.9 Renewals

D02.9.1 Renewals Activities

Renewal activities are done to individual assets and therefore there are no network level renewal activities that can be recorded here.

D02.10 Development Works

D02.10.1 Activities

Development activities covered under this section generally relate to safety and capacity improvements as well as the construction of new roads but usually does not include any activities that are specific to a single asset class.

Drivers for Capital works programmes

The following are drivers for investment in capital projects. Often a project is driven by an agreed mixture of these reasons:

- Growth in the population, ratepayers or demand in the use of the networks
- Renewal of the existing assets (assets have reached the end of their economic life)
- Change to the desired service levels that the network provides
- Improved safety outcomes

Low Cost, Low Risk Roading Improvements (NZTA W/C 341)

Low cost, low risk allows for projects up to $2M focused on the following

- Road 2 Zero
- Walking and cycling improvements
- Local road improvements

These could include:-

- Visibility improvements
- Improved street lighting
- Road curvature realignment
- Signage
- Road widening
- Intersection improvements
- Speed reductions including variable message signage
- Traffic calming
- Safe crossing places
- Improving bridge approaches

Note that from time to time there are minor improvement works that need to be undertaken under Land Transport that are not a subsidisable activity. These are provisioned for in the financial plan as unsubsidised works.

Activities Not Used

The following activities are not being used during the 3-years of this AMP period.

New Roads (NZTA W/C 323) | This provides for the construction of a new road or road link that is additional to the existing road network, including any associated new road structures. This excludes modifications or deviations to existing roads

Road Improvements (NZTA W/C 324) | This provides for:

- improvements to or upgrading of existing roads within the existing or widened road reserve
- deviations onto a new road reserve, where the original road is closed, including any associated new road structures.

Resilience Improvements (NZTA W/C 357) | This provides for non-routine work to protect the following from damage:

- roads
- road structures

- eligible walking facilities
- eligible cycle facilities.

This activity also provides for non-routine work to minimise the threat of road closure from natural phenomena.

Travel Demand Management (NZTA W/C 421) | This provides for travel demand management activities to improve the performance of the land transport system by changing transport demand and travel behaviour.

The purpose of travel demand management is to support efficient and effective use of the transport system, and to reduce the negative impacts of travel and freight movement. Demand management activities influence how, when and where people and freight travels.

The objectives of travel demand management activities are to:

- shape transport demand to better balance it with supply
- shape travel behaviour to ease pressure on the transport network and the environment
- deliver economic benefits to businesses, communities and/or New Zealand from a national perspective.

Vesting of Network assets

Assets may be vested into Council's assets as part of subdivision development. The Developer is required to include the roading assets as part of the subdivision to agreed council standards.

D02.10.2 Plan

The low cost low risk programme will fund the following network improvements over the next 10 years. Improvements are focused on safety improvements, associated improvements, Road to Zero Speed improvements, bridge widening and safety improvements and upgrades of urban streetscapes and level crossing improvements.

TABLE D-3: LOW COST LOW RISK PROGRAMME OF WORKS (UNINFLATED)

Project	Primary FIS	Type	2024/25	2025/26	2026/27	2027/28+
Subsidised						
SLTCON 024 Low Cost Low Risk Improvements	Renewal	Safety	701,153	834,628	858,177	5,625,193
SLTCON 035 Low Cost Low Risk Road 2 Zero	LOS	Safety	740,667	1,279,550	1,287,500	5,064,448
Grand Total			**1,441,820**	**2,614,178**	**2,145,677**	**11,689,642**

The following developer subdivisions will include vested assets across the various activities.

TABLE D-4: DEVELOPER LEAD SUBDIVISIONS

Road	Scope	Timing	Funding
Rimu Street - Ohakune	71 lot subdivision Engineering plans received	Date of handover depends on the developer.	None - Developer
134B Miro Street, Ohakune	97 Lot subdivision	TBC	None – Developer
Joint Venture Social Housing	46 lot subdivision	TBC	Crown and Council

D02.11 Disposal

D02.11.1 Activities

At a network level, disposal activities relate to the divesting of roads or a section of road. The following two scenarios provide a couple of examples of when this would apply:

- The end of a rural cul-de-sac now only serves a single property and so the section of the road that only serves the single property is divested to the property owner.
- A new road is built that renders a section of existing road surplus to any current or future needs.

Each situation needs to be considered carefully and if the Council wants to proceed then there is a formal process, including the involvement of NZ Transport Agency, to go through.

D02.12 Funding Request

Network can be funded by the following NZTA Work Categories:

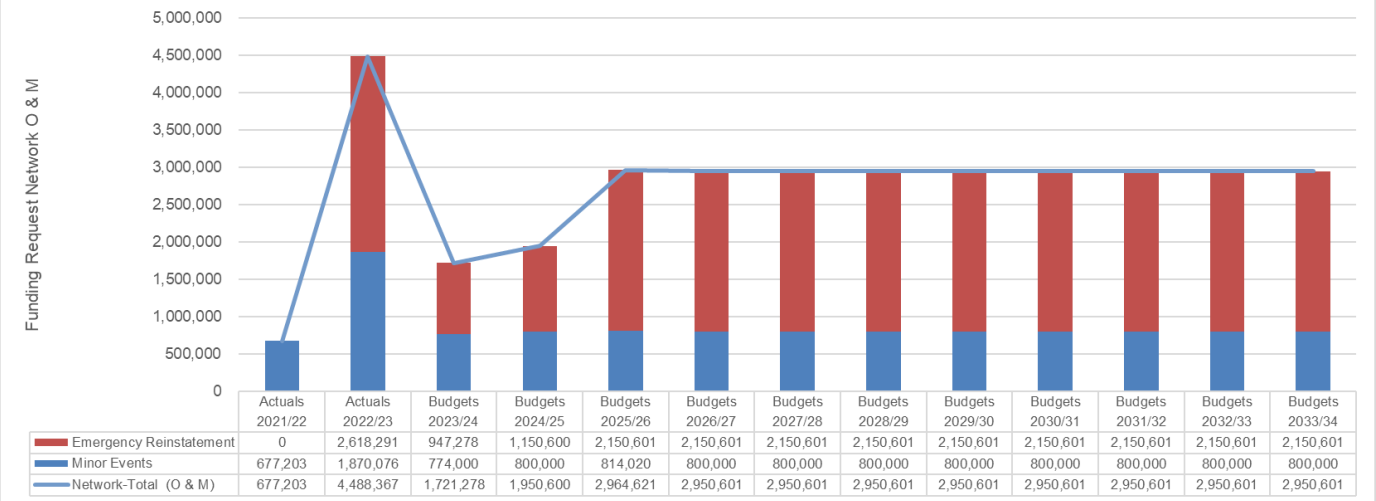
- WC 140: Minor Events
- WC 141: Emergency Works
- WC 341: Low Cost, Low Risk Roading Improvements

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.8: NETWORK - EMERGENCY WORKS HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE

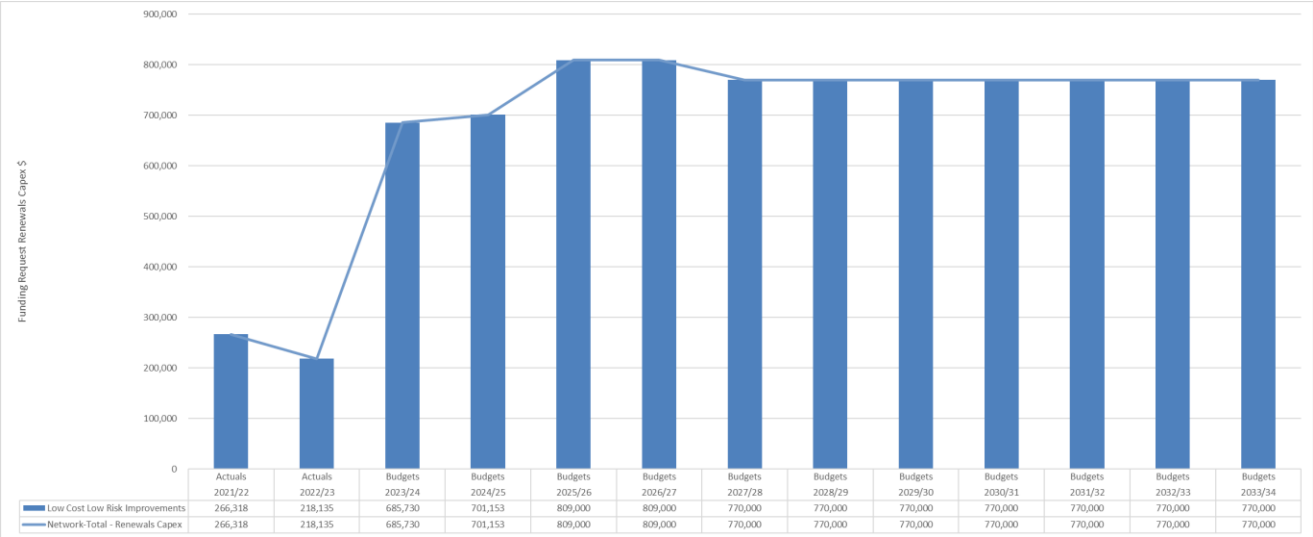
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Year Request Total
Direct Cost														
Emergency Reinstater	0	2,618,291	947,278	1,150,600	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	20,506,007
Minor Events	677,203	1,870,076	774,000	800,000	814,020	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	8,014,022
Direct Cost Total	**677,203**	**4,488,367**	**1,721,278**	**1,950,600**	**2,964,621**	**2,950,601**	**2,950,601**	**2,950,601**	**2,950,601**	**2,950,601**	**2,950,601**	**2,950,601**	**2,950,601**	**28,520,029**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Emergency Reinstatement	0	2,618,291	947,278	1,150,600	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601
Minor Events	677,203	1,870,076	774,000	800,000	814,020	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000
Network-Total (O & M)	677,203	4,488,367	1,721,278	1,950,600	2,964,621	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601

FIGURE D.9: NETWORK - IMPROVEMENTS HISTORICAL AND PROJECTED RENEWALS EXPENDITURE

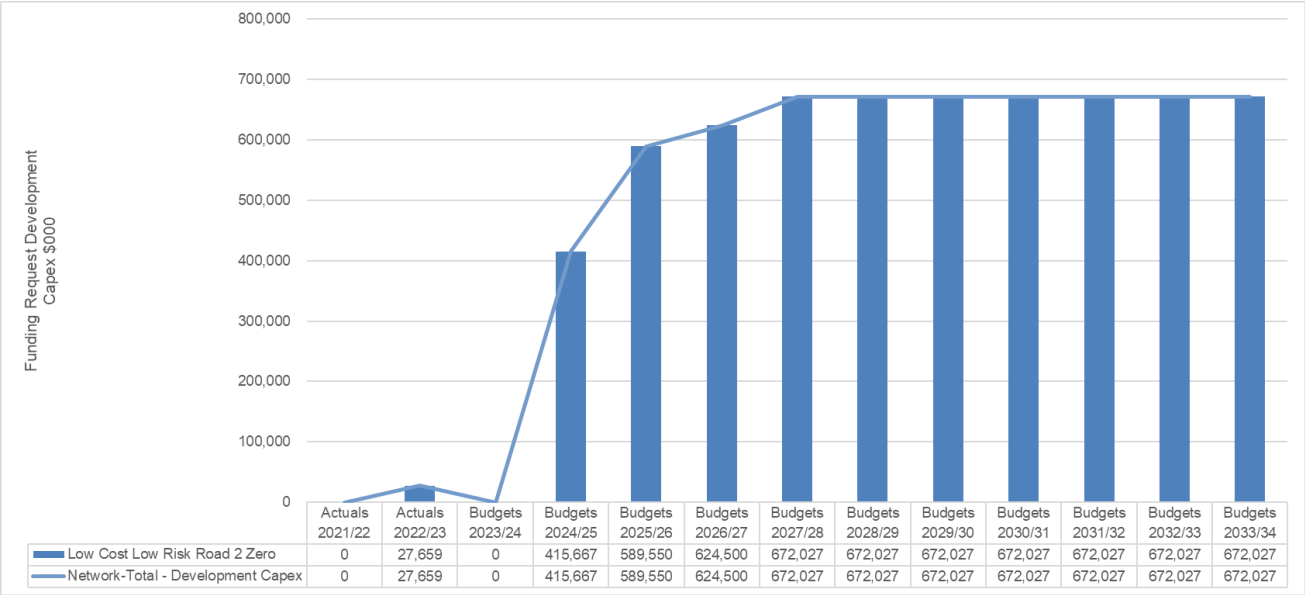
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
Low Cost Low Risk Improvements	266,318	218,135	685,730	701,153	809,000	809,000	770,000	770,000	770,000	770,000	770,000	770,000	770,000	7,709,153
Renewal Total	**266,318**	**218,135**	**685,730**	**701,153**	**809,000**	**809,000**	**770,000**	**770,000**	**770,000**	**770,000**	**770,000**	**770,000**	**770,000**	**7,709,153**



Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

FIGURE D.10: NETWORK - IMPROVEMENTS HISTORICAL AND PROJECTED LEVEL OF SERVICE EXPENDITURE

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
LOS														
Low Cost Low Risk Road 2 Zero	0	27,659	0	415,667	589,550	624,500	672,027	672,027	672,027	672,027	672,027	672,027	672,027	6,333,906
LOS Total	**0**	**27,659**	**0**	**415,667**	**589,550**	**624,500**	**672,027**	**672,027**	**672,027**	**672,027**	**672,027**	**672,027**	**672,027**	**6,333,906**



D03 PAVEMENTS

D03.1 Purpose and Strategic Case Link

The purpose of pavements is:

Provide a road network that is suitable for the safe, effective and efficient movement of vehicles and people through the district while maintaining good access to properties, businesses and other areas of interest.

Pavements are critical infrastructure that enables growth of the economy and connectivity of diverse communities.

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	Strong enough pavements allow heavier vehicles to safely navigate the network with sustainable levels of maintenance required and lower risk of sudden pavement failures
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Pavements are the fundamental element that enable road users to use the network for its intended purpose
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	A well-maintained surface provides a weatherproof coating to protect the pavement, therefore increasing resilience and reducing unplanned costs
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Both the overall condition of the pavement and the specific properties of the surface have a direct impact on the safety of using the road network

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Well maintained pavements are less likely to suffer unexpected failures causing network restrictions or closures

	Customer Level of Service Description	Activity Contribution
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	This activity doesn't provide any significant contribution towards this customer level of service
Safety	How users experience the safety of the road	Both the overall condition of the pavement and the specific properties of the surface have a direct impact on the safety of using the road network
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Well maintained pavements provide a smoother ride, improving the comfort of the road users
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Pavements provide the key element to enable the network and therefore provide accessibility

D03.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include:

- Managing the network with a strong focus on safety
- Providing an affordable transportation network that meets the reasonable needs of the wider community.
- Maintain the network so that service capacity and integrity is not reduced.

D03.3 Assets to be Managed

D03.3.1 Asset Description

Pavement assets managed under the Land Transport Activity include:

- Surfacing
- Pavement Layers (Sealed)
- Pavement Layers (Unsealed)

Pavement assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Pavement Layers
- Surfacing

Note that asset data will be moved to new User Defined Tables (UDTs) in RAMM as part of the Asset Management Data Standard (AMDS) implementation process. The above RAMM

table references will therefore be out of date once the AMDS implementation has been completed for Council in 2026.

Because of the largely rural nature of the District and relatively low traffic volumes, the following main types of pavement surfaces are used by Council.

All the information in this complete Pavement section combines Local Authority roads and Special Purpose Roads.

TABLE D-5: PAVEMENT SURFACE TYPES

Surface Type	Description
Chipseal	Two layers of sprayed bitumen with stone chips spread on each bitumen layer as a running surface. The life cycle for chipseal surfacing varies depending on the chip size used (small chip means less bitumen that can be sprayed as the waterproofing membrane) and by traffic volume.
Asphaltic Concrete	Mix of graded aggregate and asphaltic binder laid in a 25mm - 40mm layer. This is hard wearing and provides a quiet and smooth running surface for main urban areas. This surfacing is limited to main urban routes in Taumarunui and Ohakune, as well as the Ohakune Mountain Road. It is often used to protect against heavy turning movements.
Slurry Seal	Emulsion and fine aggregate is laid between 3mm - 8mm thick.
Unsealed	Graded Metal

TABLE D-6: TREATMENT LENGTH SURFACE DETAILS

	Quantity	Urban / Rural		ONRC Classification			
Asset Type	**Kilometres**	**Urban (km)**	**Rural (km)**	**Primary Collector (km)**	**Secondary Collector (km)**	**Access (km)**	**Low Volume (km)**
Asphalt Mix							
Reseal	9.4	5.6	3.8	3.9	3.4	0.8	1.3
1st Coat	0.0		0.0	0.0			
Total - Asphalt Mix	**9.5**	**5.6**	**3.8**	**3.9**	**3.4**	**0.8**	**1.3**
Chipseal							
Reseal	389.8	94.0	295.8	18.4	55.6	191.3	124.6
1st Coat	29.5	2.4	27.1	-	0.2	26.8	2.5
2nd Coat	78.5	3.9	74.6	4.8	20.7	30.8	22.1
Total - Chipseal	497.7	100.3	397.5	23.2	76.5	248.9	149.2
NO Surface Details							
NO Surface Details	8.5	6.9	1.6	-	0.0	0.4	0.6
Grand Total	**515.7**	**112.8**	**402.9**	**27.1**	**79.9**	**250.2**	**151.0**

As the length of surfaces, shown in the surface length table above, is slightly more than shown in the network breakdowns for sealed pavements on the network, a pavement type review may be needed.

TABLE D-7: TREATMENT LENGTH PAVEMENT DETAILS

	Quantity	Urban / Rural		ONRC Classification			
Asset Type	**Kilometres**	**Urban (km)**	**Rural (km)**	**Primary Collector (km)**	**Secondary Collector (km)**	**Access (km)**	**Low Volume (km)**
Local Authority							
Sealed	480	106	374	11	80	250	139
Unsealed	848	7	841	-	-	84	764
Total - Local Authority	**1,328**	**112**	**1,216**	**11**	**80**	**334**	**903**
Special Purpose Road							
Sealed	16	0	16	16	0	-	-
Unsealed	-	-	-	-	-	-	-
Total - Special Purpose Road	**16**	**0**	**16**	**16**	**0**	**-**	**-**
Treatment Length Total	**1,344**	**113**	**1,232**	**27**	**80**	**334**	**903**

The treatment length table covers most of the network but there is a substantial part of the sealed network where there is no known pavement data as to what is below the surface.

D03.3.2 Asset Values

Replacement Cost and Annual Depreciation

The Council's Land Transport assets have been valued as at 30 June 2023. As part of this process the following are calculated and shown in the tables below:

- RC = Replacement Cost
- DRC = Depreciated Replacement Cost
- AD = Annual Depreciation

TABLE D-8: ASSET TYPES AND VALUATION

Asset Type	Length (km)	RC ($)	DRC ($)	AD ($)
Road Formation	1,456	121,504,725	121,504,725	
Pavement Layers – Basecourse	1,456	79,103,472	52,983,402	791,034
Pavement Layers – Subbase	1,456	89,117,516	71,248,747	461,148
Road Surface	606	33,476,821	12,451,359	1,467,807
Total		**323,199,536**		**2,719,990**

Note that Road Formation is not depreciated. This is due to only having to create the shape of the formation once during the original construction and after that it effectively lasts forever. Hence, it doesn't depreciate in value over time.

D03.4 The Need for Investment

D03.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response: Maintain Level of Service Capacity

Key Need	Response Type	Strategies to Address
Assets to fulfil their purpose • Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	• Purpose is as documented in the D07.1 Overview and Strategic Case Link. • Transport Activity Level of Service is documented in - Levels of Service we Provide (Section C04)
Resurfacing is required • The sealed network requires resealing as the seal wears out causing loss of traction increasing the likelihood of accidents and further pavement deterioration. • The oxidation of the binder, which can lead to chip loss, and more importantly, loss of pavement waterproofing, leading directly to water ingress and pavement damage.	Programme approach	• Renewals annual update process • 3 year planning cycle • Consistent condition data collection process for network condition information
Unsealed road metalling needs to be done • Metal loss from unsealed roads creates unsafe situations for road users and exposes the road base to more rapid deterioration. • Pavement loading contributes to rate of wear.	Programme approach	• Metal requirements are identified by the contractor • Metal strengthening is reactionary when need appears
Metal strengthening programme • Pavement loading contributes to rate of wear. • Frequent heavy loading or traction issues can have a damaging effect. • Pavement depth information is lacking for a lot of the network. • Forest harvest locations and routes are largely changeable, making it difficult to plan strengthening.	Level of Service adjustment	• Investigate need for resurrecting a proactive programme as an Improvement task.
Need for AC surface on the network • Urban network requires AC for resurfacing programme in like for like replacements.	Policy approach	• Council policy required to support existing AC surfaces to be resurfaced with chips when appropriate (eg new subdivision roads)
	Programme approach	• Three yearly AC programme
Need for AC surface on the OMR • Snow and ice clearing on OMR has a risk of damaging the current surface. • AC programme makes it easier to clear snow and ice off it with minimal damage to the road surface.	Programme approach	• Three yearly AC programme to complete AC from top to RP 9km

Key Need	Response Type	Strategies to Address
Reseals not matching need • Reseals are not keeping up with the target reseal re-surfacing due to budget and affordability constraints and variations in bitumen costs. • Ideally, reseals should be ~30 km/year but currently averaging ~22.5km/year. • This results in increasing maintenance requirement and the potential for the network to deteriorate further as waterproofing is lost.	Programme approach	• Reseals are addressed on a needs base and prioritised on condition. • Increase budget in this AMP, continue to monitor the situation further over this AMP period with a potential larger correction needed in 3-years time.
	Policy approach	• Resurfacing First Strategy | Investigate focusing on resurfacing over rehabilitation with an associated move of budgets. • Will require increase in pre-reseal repairs budget. • Risk of chip being available, reduced by ordering and stockpiling early in the season. • Smooth Travel Exposure (STE) has improved recently so there is some conflicting evidence on asset management need vs the current outcomes.
Pavement Rehabilitation construction to keep up with the need. • The pavement rehabilitation sites are required to last an average of 65 years to allow for the current rate of rehabilitation sites to cover the district, however they are only designed to last 25 years with good maintenance practices. • Furthermore, there is a wave of pavement rehabilitation sites expected from those built in the late 60's and 80's and also the increase in logging traffic.	Investigation approach	• Undertake pavement rehabilitations based on site priority. • Continue to monitor the evidence to evaluate the true need going forward in the long term. • Continue to gather enough evidence to allow achieved life analysis to be successfully run.
Growing need for pavement maintenance • With historical resurfacing and rehabilitations struggling to keep up with need, there is an expectation that there will be an associated increase in maintenance needs. • More data is needed to quantify this.	Investigation approach	• The maintenance contractor network inspection programme is expected to provide better information on overall maintenance need. This only started in early 2023 and will take a few years to have enough data to be able to assess the change in need over time. • Moved to 100% condition rating approx 2017/18 and undertaken every two years. • The introduction of the CCDC laser based condition data will provide a further dataset to be able to use for monitoring network condition changes. • Continue to refine how maintenance work is prioritised to support getting the best return from the budgets spent.
Inadequate historical funding • Inadequate historical maintenance and renewals funding.	Programme approach	• Addressed in Activity Management Plan budgets.

Strategic Response: Value for Money

Key Issue	Response Type	Strategies to Address
Carbon farming is reducing demand on some rural roads • Farms are being changed into carbon farms, with usually reduced dwellings. • this is already starting to affect roads in 2023. • mix of through and no exit roads.	Policy and investigation approach	• The options to address this are to consider a policy approach, consider reduction in service level or come to maintenance agreements with the affected landowners. • This is an emerging issue and needs investigation into the extent of the impact over the next three years.
Not of enough knowledge of existing pavement depth • A large amount of older pavements don't have a known depth.	Investigation approach	• Testing for depth and characteristics of the pavement is undertaken before design of rehabilitation treatment.
Pre-seal Coordination • Coordination between pre reseal contractors getting work completed ready for the reseal contractor.	Investigation approach	• Advance condition rating for identifying needs so programming for repairs can be undertaken and reseal repairs undertaken early in preparation for the reseal contractor.
Lack of clarity on ownership of some assets in the non-subsidised space • This has resulted in lack of budgeting, asset management and delivery.	Policy approach	• Land Transport to proactively champion maintenance and renewal, as the Council experts in pavements and road assets, that they take on the role of asset management and delivery ownership for these assets. • Ownership of Improvement planning needs agreement. • In addition, an agreement is needed on whether the asset ownership should sit with Land Transport or the separate Departments that the asset supports. Note that the Asset Owner is responsible for the valuation and budgeting for operations, maintenance and renewals.
Lack of asset management processes being applied • The lack of clarity on ownership has meant that asset management processes have been ad hoc and therefore not ensuring consistent LoS have been achieved.	Investigation approach	• Clarify ownership and the proper practices be documented in the appropriate AMP and delivery.

Strategic Response: Focus on Key Routes

Key Issue	Response Type	Strategies to Address
Logging Traffic creates increased renewal need • Ongoing logging traffic and the consequent increase in heavy vehicle movements increases deterioration and maintenance requirements on the road pavements. • 2 out of 4 commercial harvesters have shared their forestry locations and timing of harvests. • Farm forestry makes up 50% (approx.) of industry and there is less understanding of when this will be harvested (including changing demands and economic environments). • 10 to 20% of logging trucks are inter-district (mainly Waitaanga Road). • Port location changes so the roads used can change quickly.	Programme approach	• Where there is higher demand, due to rapid deterioration from the additional heavy traffic, alter pavement reseal and rehabilitation priorities to routes of current and known logging routes which are causing the deterioration. • Analyse regular count sites for changes in Heavy Vehicle classifications. • Focus on main forestry routes as more consistent usage compared to roads where harvests start and stop. • Council is proposing to increase the forestry differential in the LTP and has included a matching expenditure budget to repair damage caused on roads as a result of intense heavy haulage

Strategic Response: Advocacy & Relationships

Key Issue	Response Type	Strategies to Address
Lack of Kiwirail programme visibility • Only Kiwirail contractors are licensed to work in the rail corridor. Only know of the work when Council receives the invoice.	Policy approach	• Continue to improve relationships with Kiwirail to create greater transparency on both parties activities relating to rail crossings. • Council has requested upfront knowledge of upcoming works and estimates before being invoiced.
Lack of new or upgrade activities when a major change to facilities • New facilities are built or have a major upgrade but the associated access or carpark are not adequately provided or upgraded. • This is leading to the limited renewals budgets being expected to cover new assets or upgrades.	Policy approach	• These need to be addressed as part of the facility project and therefore not part of Land Transport. • Land Transport to advocate that this be addressed during Council projects.

D03.4.2 Key Risks

The following table provides the key risks in this activity.

Risk	Description	Assessment	Controls	Mitigation
Pavements and surfaces don't achieve their expected lives	• The design and workmanship are inadequate for surfaces and pavements to fully achieve their expected lives • This can include premature failure • Rehabilitations being done are on pavements that have not achieved their expected life • Changes in what good design should be over time • Some seal extensions were a thin layer of metal (approx. 50mm) over dirt and then a sealed surface • Most pavements were constructed during 50's to early 80's so potential bow-wave of renewals • Completing the work at the wrong time of year or in inappropriate weather • This is a risk every year from design and works completed in the past • Failures increase the future need for more renewals to be programmed • No actions can be taken to reduce the risk from historical works, but the lessons learned need to be applied to reduce this risk in current and future works. • Risk may increase temporarily when there is a change in designers or contractors.	Consequences: • Not achieving the lowest whole-of-life value for the network • Increased pavement maintenance and renewal costs		• Aiming to keep progressing and advancing work earlier in the prior work whether it is rehab designs or pre-surfacing repairs

Risk	Description	Assessment	Controls	Mitigation
Increased pavement deterioration due to forestry haulage	• Increases in HCVs, primarily due to forestry harvesting over the next 20 years, will impact pavement deterioration. • This is the first round of forestry harvests from the 1990s planting programme. • Over the next 20 years, 24 million tonnes of timber could be exported (23,000 tonnes per week). • Plantation locations are known, but the timing of harvests is unknown. • There is some uncertainty about likely freight routes as influenced by commercial decisions about preferred export locations. • Expect significant impacts on ~15% of the sealed network (~150km). • Forestry harvesting is a certainty in the district.	• Consequences are potentially significant but magnitude, timing and location are uncertain. Forestry driven renewals alone could be > 100% of the current annual district-wide renewal budget. The next 10-20 years will require increased reactive renewals. Consequences: • Potentially reduce pavement life from 65 years to 30 years. Also increased maintenance on the unsealed network. • Increased costs for pavement rehab as there is a need to design for increased HCV loads (expect most plantations to be replanted).	Engagement with the forestry sector	• Budget allocation for pavement renewals was increased from 0.5km in 2006 to 7km per year in 2009. • Have targeted pavement renewals on strategic forestry routes. • RDC has agreements on a case-by-case basis with some forest owners that they will pay for any increased maintenance on the unsealed network due to forestry haulage. This covers some of the unsealed roads likely to be affected. • Due to the difficulty of predicting pavement deterioration, we typically respond reactively to forestry industry requests for work on roads.
Availability of aggregate declining	• Some quarries closing or looking to close. • Getting harder to get resource consent to open or continue a quarry. • Difficult to get consent and / or iwi approval for using river gravels. • Increased H&S requirements on quarries increases costs. • Nationwide shortages of suitable aggregate causing scarcity and cost increases.	Consequences: • Costs will increase for aggregates and travel costs will increase and transporting has to come from further afar. • Wouldn't be able to complete work due to aggregates becoming more scarce. • Negative impact on carbon usage when increasing cartage distances.	• Annual aggregate negotiations at start of financial year • NZTA specs for other aggregates that can be used (but don't meet M4 standard)	Further actions: • Actively identify, and prepare, sites for mobile crushers to be used. • Look at the use of more alternative specs for aggregates that can be used. • Use of recycled glass. • Monitor progress with the use of metal blends for unsealed road maintenance metaling.

D03.4.3 Historical Commentary

During the late 1960's to early 1980's, Council strengthened a lot of the original road pavements and sealed them.

This means many pavements and surfaces will be coming to the end of their useful lives in the coming years.

Furthermore, the 1958/59 amalgamation of councils to larger districts provided subsidies for improvements. Many roads were sealed as is, without widening or pavement design. This has left the narrow, sealed pavements inherently weak, with poor sight visibility and geometry. Lack of information concerning pavement depth across the network hinders the identification of under designed or weakened segments. This knowledge gap affects effective maintenance and resurfacing planning for informed decision-making and improved infrastructure durability.

The ongoing need to balance minor and emergency events within local share budgets has seen maintenance underspent in some years.

At a high level, B Business Case and C04 Level of Service sections demonstrate that Council is struggling to meet it's Key Performance levels. This can be further demonstrated by calling out the Annual report measure for percent of network resurfaced per annum, shown below.

TABLE D-9: THE PERCENTAGE OF THE SEALED LOCAL ROAD NETWORK THAT IS RESURFACED

Amount	2019/20	2020/21	2021/22	2022/23
Target	≥7.5% of network resurfaced	≥7.5%	≥7.5%	≥7.5%
Actual	Not achieved 5.3% 25.5km out of 486km	Not achieved 6.0% 29.5km out of 488km	Not achieved 7.4% 36.1km out of 488km	Not achieved 3.8% 18.6km out of 488km

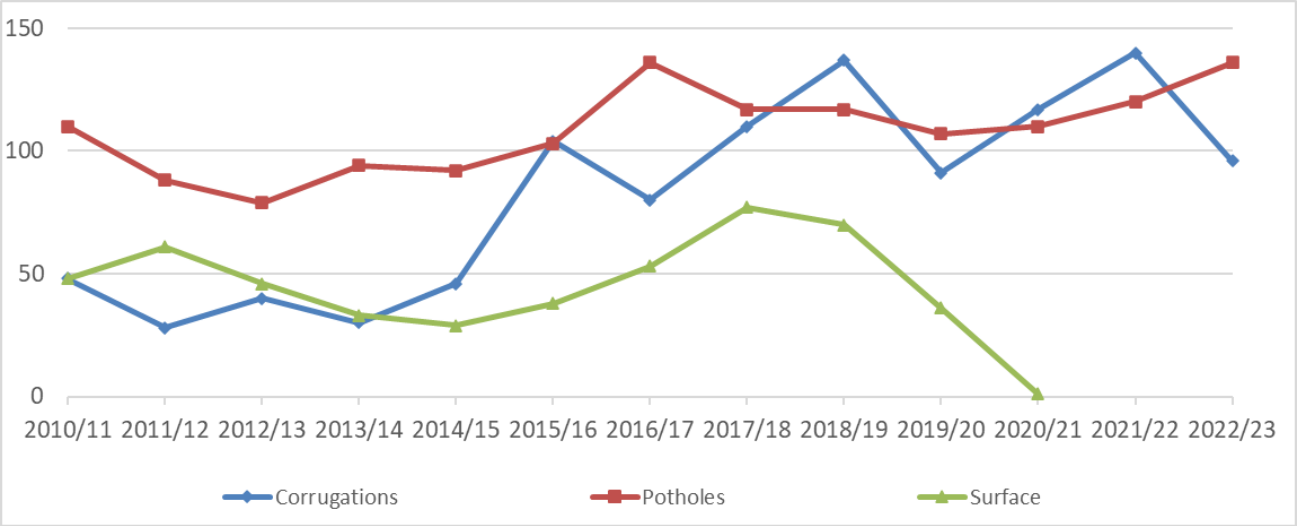
D03.4.4 Levels of Service

Road Surface Service Calls

Road surfaces are susceptible to weather events, increased loading, surface condition and grading techniques. Surface call type was discontinued from 2021/22. The trend shows that pothole calls have continued to rise from 2019/20 and corrugation calls are highly variable but overall higher than 8 years ago. More analysis is needed to tie these trends to root causes.

Calls regarding the surface of 'main' unsealed roads have risen since logging has been carried out around them. Other unsealed roads have also had a rise in calls due to an increase in activity from an increase in home and lifestyle blocks along the road and the development of these properties.

FIGURE D.11: ROAD SURFACE SERVICE CALLS



Customer Satisfaction Survey

Customer satisfaction survey results indicate that 35% of residents are satisfied or very satisfied with the maintenance of urban roads and 30% of residents are satisfied or very satisfied with the maintenance of rural roads. Dissatisfied responses pertain primarily to a lack of maintenance.

Results have dropped from previous years. The survey was carried out by a different provider for the most recent results.

Significant Customer LoS Change

Funding levels over a long duration have reduced ability to deliver optimal resurfacing and pavement rehabilitation works reducing the following customer LoS (CLoS)

- Amenity: road rougher / customer satisfaction
- Safety: road rougher

Improved investigation and design for pavement rehabilitation is improving the following customer LoS

- Affordability - rates due to improved whole of life costs
- Accessibility - less road works due to longer expect pavement life

Road pavements are always in a state of decay. As they age, their condition deteriorates and the cost of maintenance increases. The rate of deterioration is a function of the initial pavement strength, traffic loading and the maintenance effort applied.

In a low volume network, the rate of change is lower. However increases in traffic loading, such as forest harvesting, will accelerate the rate of change.

Level of service is about managing the rate of change against user expectations and agreed performance, contract and maintenance intervention levels.

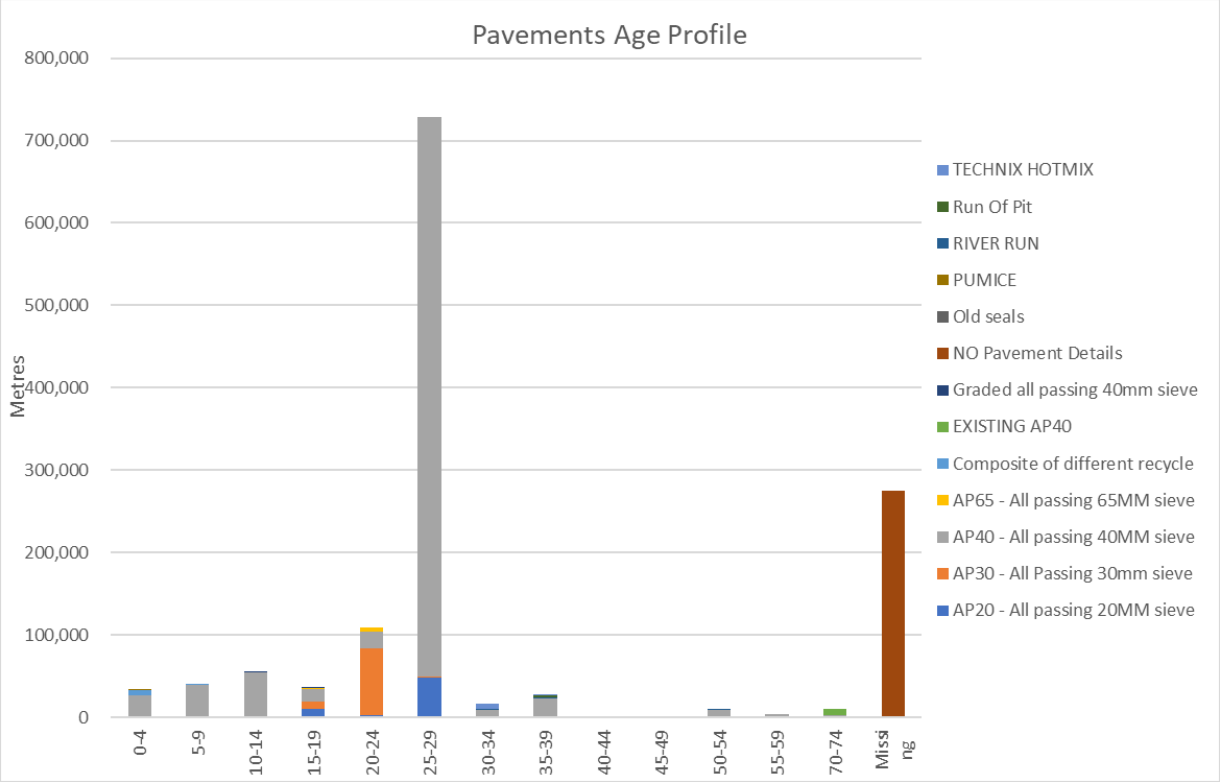
D03.5 Asset Performance

D03.5.1 Age Profile / Remaining Useful Life

The tables below show the average age of each asset type.

FIGURE D.12: PAVEMENT AGE PROFILES BY METRES

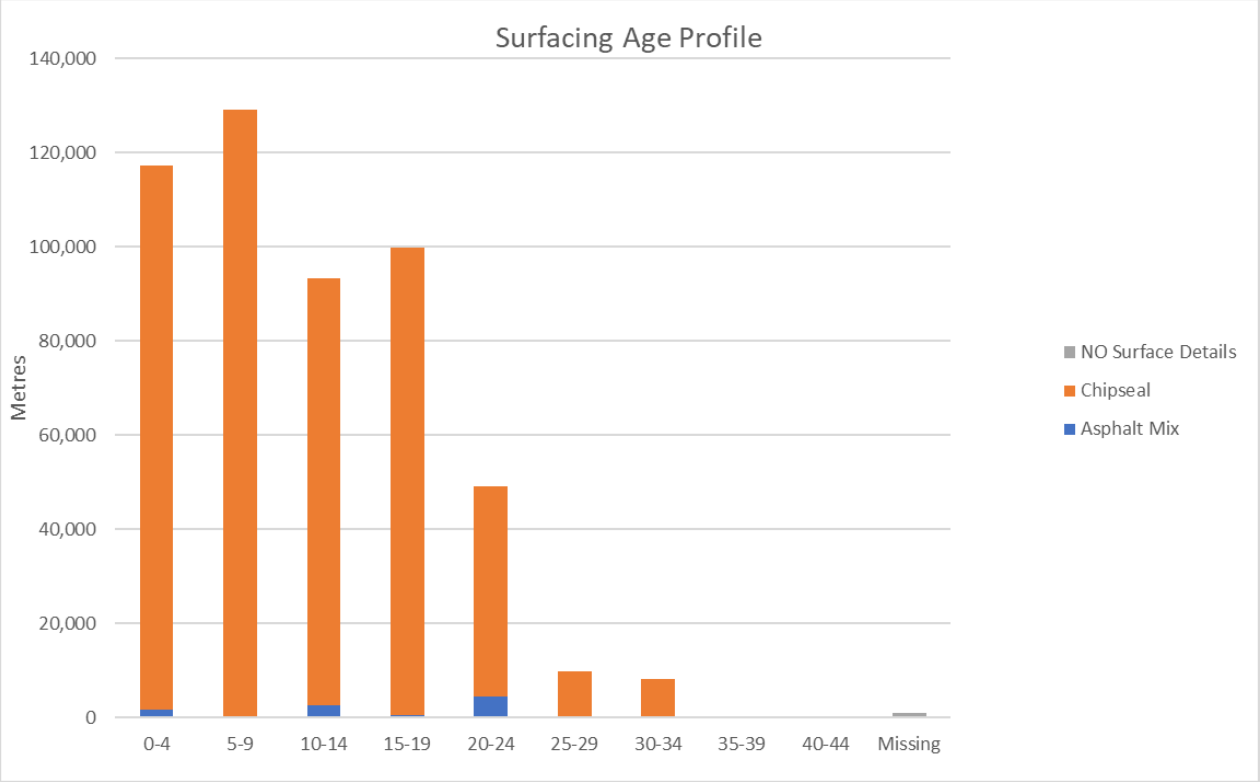
Source: AMP Tool V1.1 ex RAMM



The above figures for pavement age profiles are limited to the proportion of pavement where details are known. See assets to be managed (Section D03.2). 51% of sealed pavements are without detail, distorting the profile, possibly looking better than it should.

FIGURE D.13: SURFACING AGE PROFILES BY METRES

Source: AMP Tool V1.1 ex RAMM



On average, a seal life of 13 years is considered appropriate for the Ruapehu network. Reseals are triggered by need and condition, rather than age. The graph indicates that a considerable amount of the network will need resurfacing in the coming years depending on field verification.

D03.5.2 Condition

The following information provides an overview of the condition data for the road network.

Pavement Roughness

Road roughness, as defined in terms of NAASRA (National Association of Australian State Roading Authority) counts, is an indicator of road condition and performance. These counts are measured by either a standard response meter or laser profilometer at 20 m intervals which are then averaged and reported for every 100m for all sealed roads.

A count of <70 is the standard requirements for new construction and rehabilitation of sealed roads.

A count of >150 is regarded as a “rough pavement” and generally recognised as the point at which customer complaints begin to be generated. Depending on traffic volumes a smoothing treatment may be appropriate.

Smoothing rough pavements will only be subsidised by Waka Kotahi if carried out in conjunction with replacing failed pavements.

The tables below show the 2021 roughness results by different parameters. The only road group that failed to meet the target was urban ADT 200 – 1,000. However, results in ‘Very

good' and 'Moderate' have dropped compared to previous years, with 'good' and 'poor' growing. 2023 data is yet to be received.

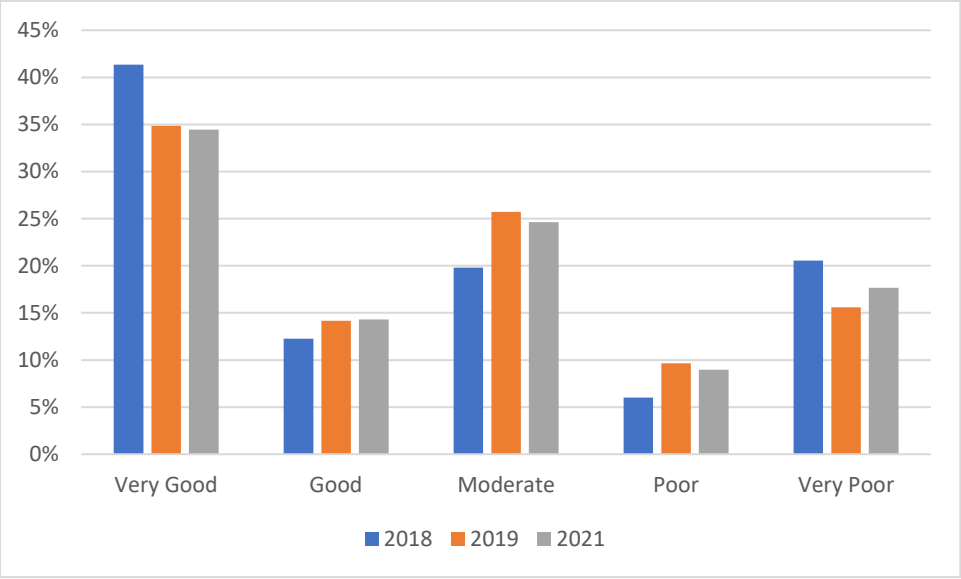
TABLE D-10: 2021 AVERAGE ROUGHNESS BY ONRC HIERARCHY

2021 Roughness Survey	Average Roughness (NAASRA)	
	Urban	Rural
Primary Collector	106	71
Secondary Collector	113	99
Access & Access Low Volume	128	106

TABLE D-11: 2021 AVERAGE ROUGHNESS BY TRAFFIC VOLUME

Road Group	Average NAASRA result	Target Average NAASRA
Urban C ADT 1,000 - 5,000	110	110
Urban D ADT 200 - 1,000	**126**	**120**
Urban E ADT < 200	129	140
Rural C ADT 1,000 - 5,000	69	100
Rural D ADT 200 - 1,000	93	110
Rural E ADT 50 - 200	99	120
Rural F ADT < 50	118	140

FIGURE D.14: ROUGHNESS PERFORMANCE 2018 - 2021



Peak roughness

Peak roughness for both ONRC and ONF is shown in the graphs below. Ruapehu has rougher roads in all categories than the peer group average, apart from Primary collector. Our rural roads are outliers to our peers in all categories except Primary Collector.

Roughness is addressed through pavement rehabilitation or seal smoothing. Rehabilitation work is justified economically by the cost of repair outweighing the cost of fixing each defect, a wider driver than roughness alone. Ruapehu has reduced the length of rehab in this

programme as the wider need has reduced. Instead it is focusing on achieving reseal lengths, to slow deterioration before a rehab is needed.

FIGURE D.15: URBAN ROADS – 85TH PERCENTILE COMPARISON BY ONRC CATEGORY 2022/23

Source: Transport Insights 2022/23

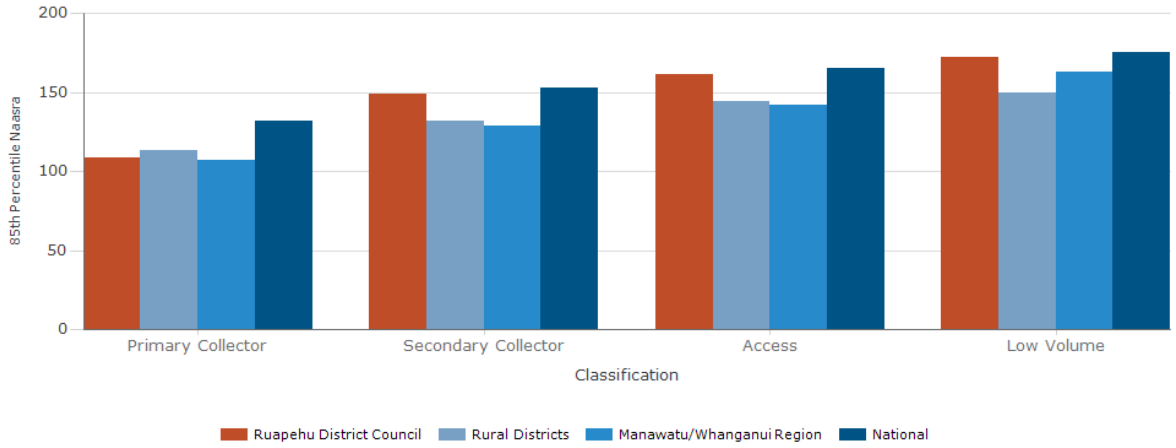
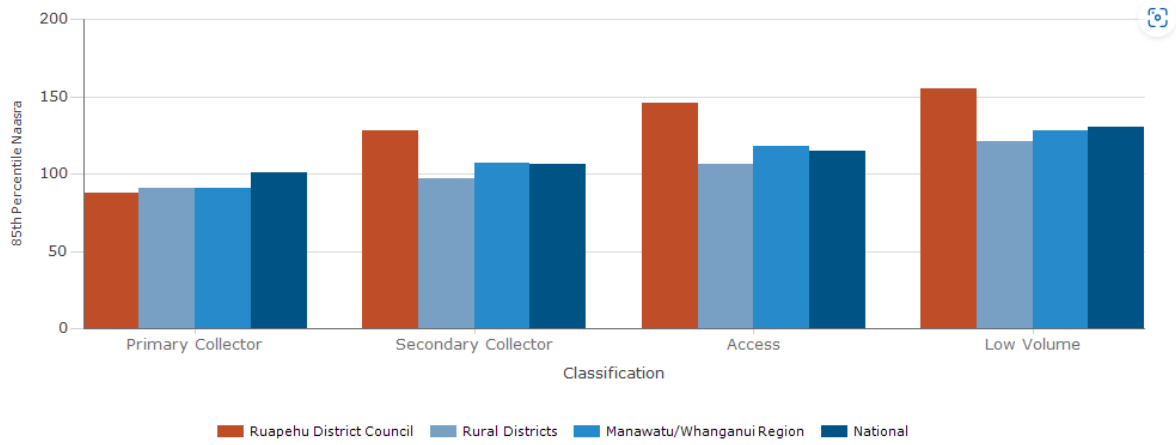


FIGURE D.16: RURAL ROADS – 85TH PERCENTILE COMPARISON BY ONRC CATEGORY 2022/23

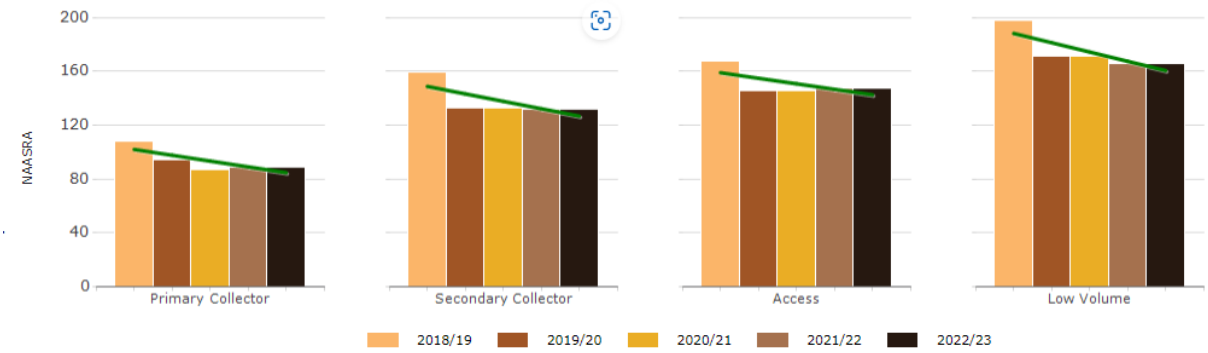
Source: Transport Insights 2022/23



The 85th percentile comparison by year shows a trend improvement since 2018/19, but primary and access roads are marginally worse in the latest results than the previous years. If this trend continues, peak roughness will be getting worse. Land movement underlying pavement is an issue in Ruapehu contributing to the roughness.

FIGURE D.17: COMBINED 85TH PERCENTILE COMPARISON BY ONRC CATEGORY 2022/23

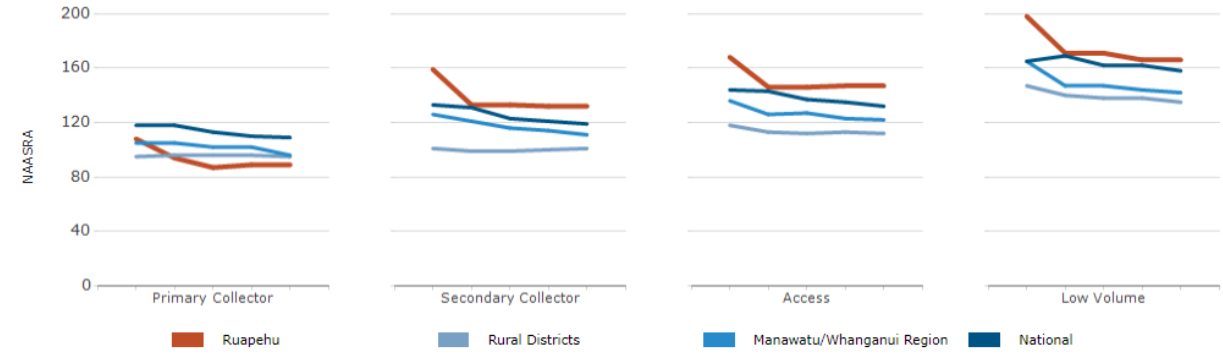
Source: Transport Insights 2022/23



Nationally and regionally, 85th percentile roughness results are lower and trending down, compared to Ruapehu's result.

FIGURE D.18: 85TH PERCENTILE TREND COMPARISON BY ONRC CATEGORY 2022/23

Source: Transport Insights 2022/23



Showing results by One Network Framework category below, we can see that Ruapehu has higher peaks in all categories.

FIGURE D.19: URBAN ROADS – 85TH PERCENTILE COMPARISON BY ONF CATEGORY 2022/23

Source: Transport Insights 2022/23

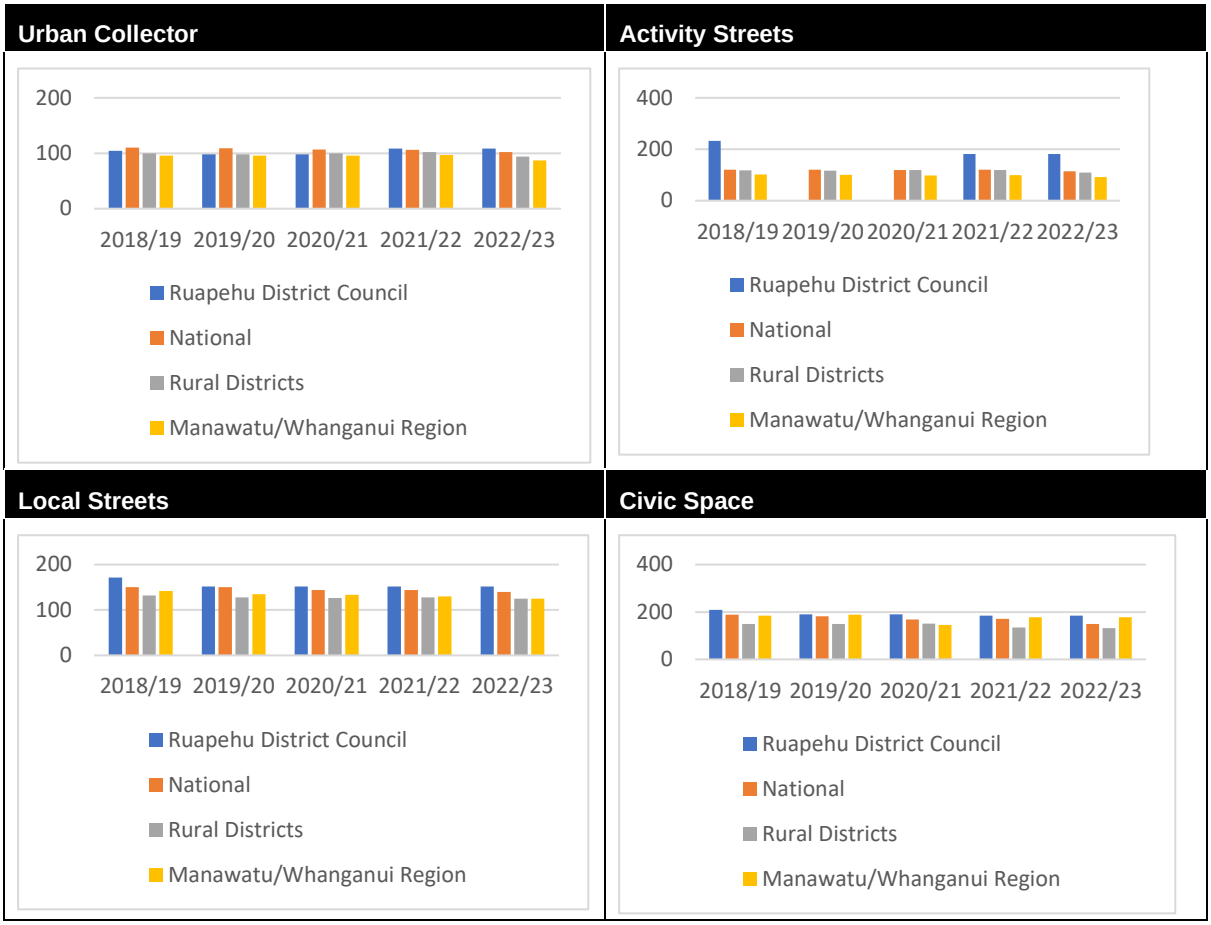
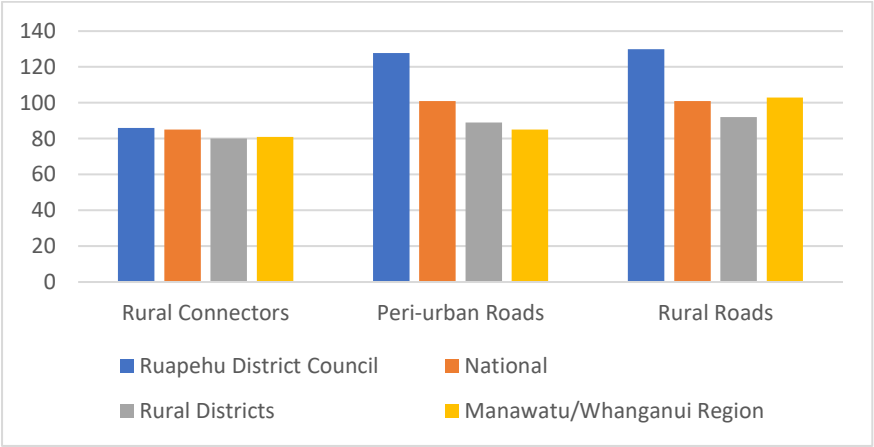


FIGURE D.20 RURAL ROADS - 85TH PERCENTILE COMPARISON BY ONF CATEGORY 2022/23

Source: Transport Insights 2022/23



D03.5.3 Performance

Understanding how a pavement performs, including the failure modes and their frequency and probability of occurrence, is critical to the prediction of future costs and is the basis of optimised renewal decision making.

2021/22 roughness results show that 27% of the network results' are poor or very poor. The quantity in 'Very Poor' has grown marginally and 'Very Good' has shrunken. Continued investment is required to arrest the trend. The focus has switched to achieving resurfacing targets to slow deterioration before rehabilitation is required.

Waka Kotahi KPIs - the agency requires a number of key pavement condition KPIs annually based on RAMM data and Territorial Local Authorities returns. These are: Surface Condition Index (SCI) and Pavement Integrity Index (PII) and Smooth Travel Exposure (STE) and they are described further below.

Surface Condition Index (SCI)

The Surface Condition Index (SCI) is a single index that describes the network surface condition and allows easy comparison of historical and future surface conditions. SCI values are calculated in RAMM based on visually measured condition defects.

The SCI is a "weighted sum" of the surface faults in sealed road surfaces. SCI combines alligator cracking scabbing, potholes, pothole patches and flushing. The lower the SCI value, the worse the condition of the pavement. SCI is used to trigger resurfacing or reseal treatments.

Note that the significant drop in SCI value in 2013/14 and 2014/15 involved new contractors undertaking the condition surveys and it is suspected that there was over-reporting of some failure types, such as surface flushing.

FIGURE D.21: SURFACE CONDITION INDEX – 100 - SCI

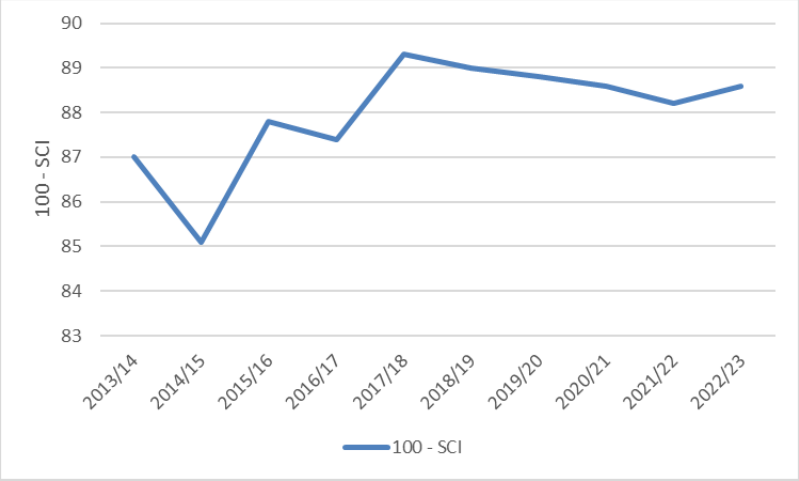
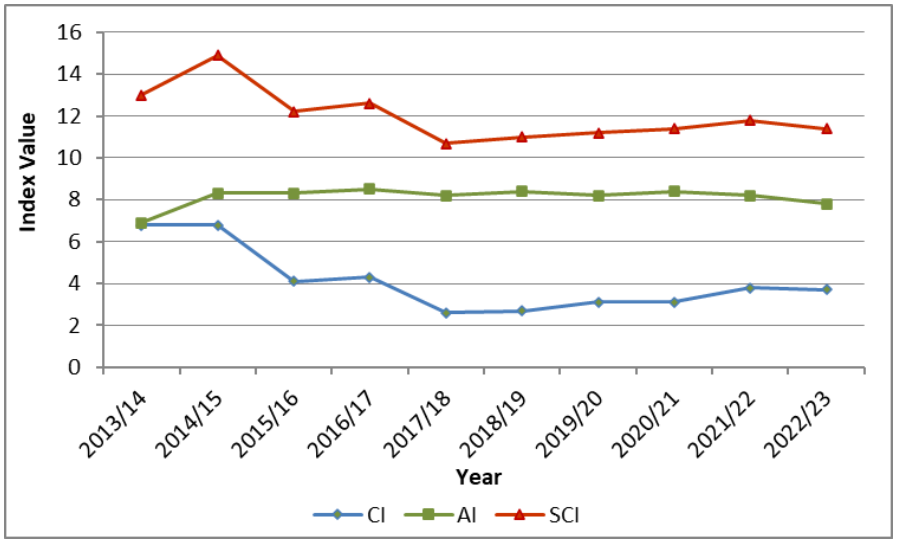


FIGURE D.22: SURFACE CONDITION INDEX VALUE



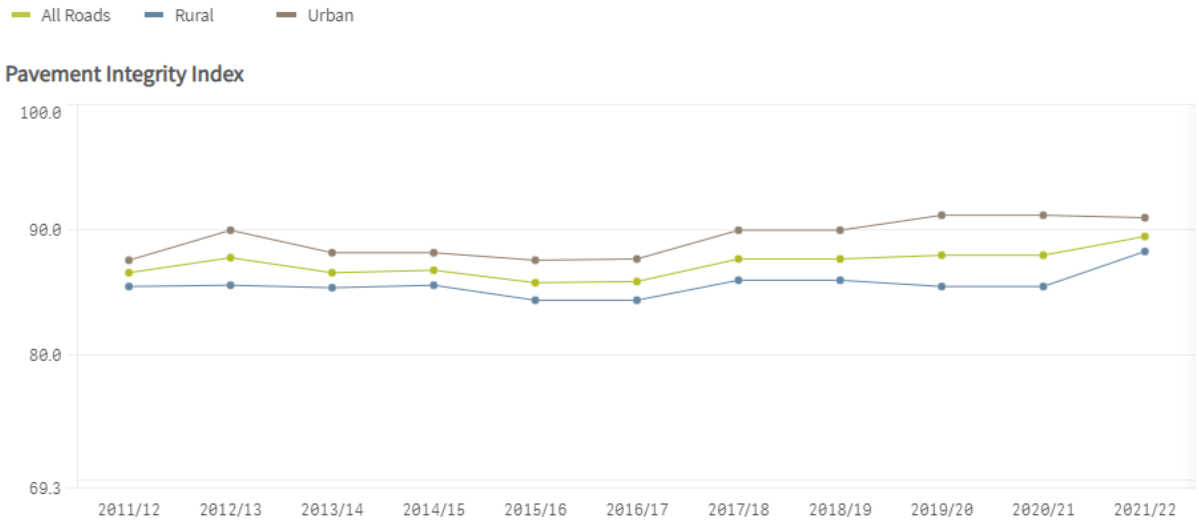
The index is commonly expressed as 100% - SCI to give consistency with other parameters where good is higher on the graph and bad is lower. This shows the gradual decline from 2017/18 is beginning to reverse in 2022/23. This measure is a long term measure and continued monitoring is required.

Pavement Integrity Index (PII)

The Pavement Integrity Index (PII) measures the health of the pavements and is generated from the RAMM condition data. It combines surface data (SCI) with rutting and shoving. The network average of the PII is reported for historical and future performance.

FIGURE D.23: PAVEMENT INTEGRITY INDEX – 100% - PII VALUE

Source: Waka Kotahi Funding and transport – dashboard and open data 2023



In the above graph, the higher the 100% - PII value, the greater the pavement integrity. This shows an increasing trend.

FIGURE D.24: PAVEMENT INTEGRITY INDEX

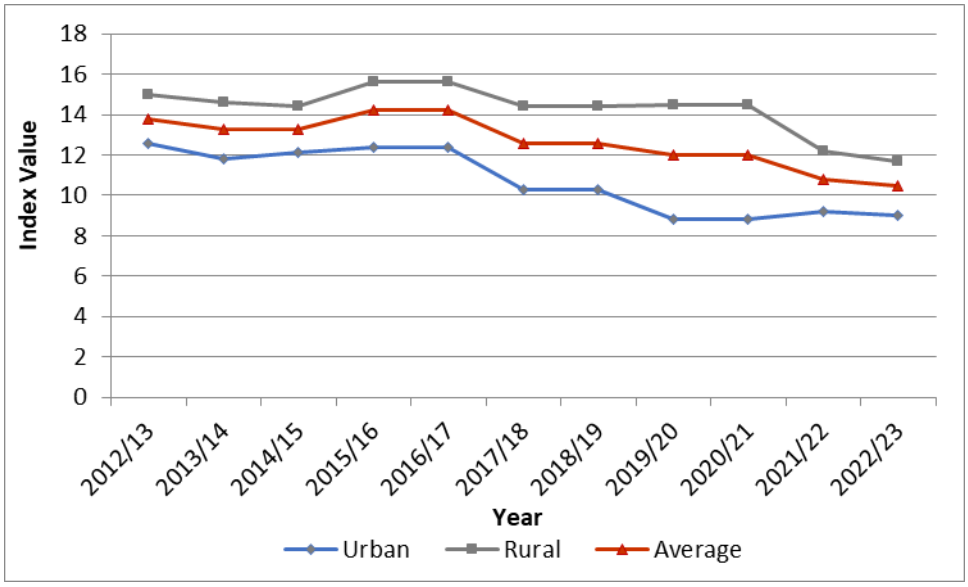
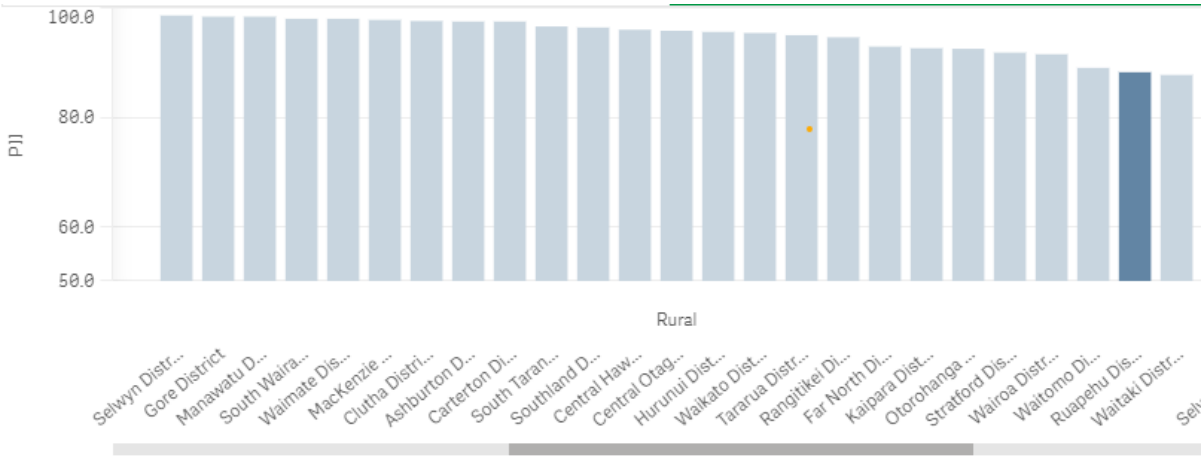


FIGURE D.25: PAVEMENT INTEGRITY INDEX (100% - PII) COMPARISON 2022/23

Source: Waka Kotahi Funding and transport – dashboard and open data 2023



Anything below 50 is not displayed on the chart above

Compared to the rural Districts, Ruapehu is at the lower end of the scale of those with a result above 50.

Smooth Travel Exposure (STE)

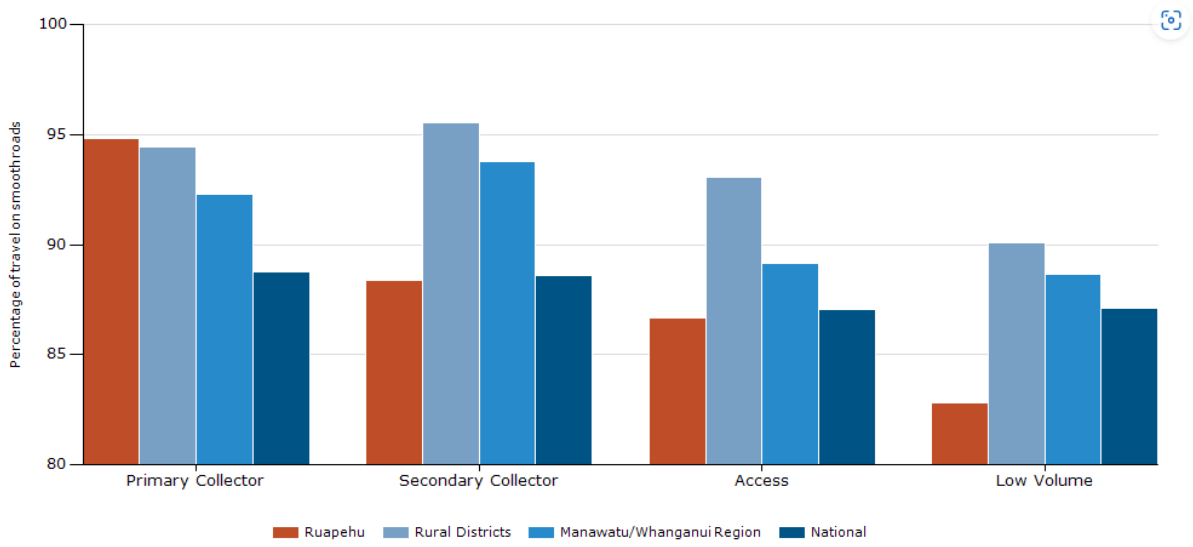
Smooth Travel Exposure (STE) is the proportion of vehicle kilometres travelled each year on roads smoother than a specified threshold. The higher the result, the more vehicles are travelling on smooth roads. STE affects the level of travel comfort experienced by the road use – ONRC CLoS of Amenity.

Ruapehu has a target that 87% of all vehicles kilometres travelled will be on smooth roads.

For the reviews, the target roughness is generally taken as 150 NAASRA. A roughness greater than 150 NAASRA usually indicates poor road condition where roughness becomes noticeable.

FIGURE D.26: 2022/23 SMOOTH TRAVEL EXPOSURE

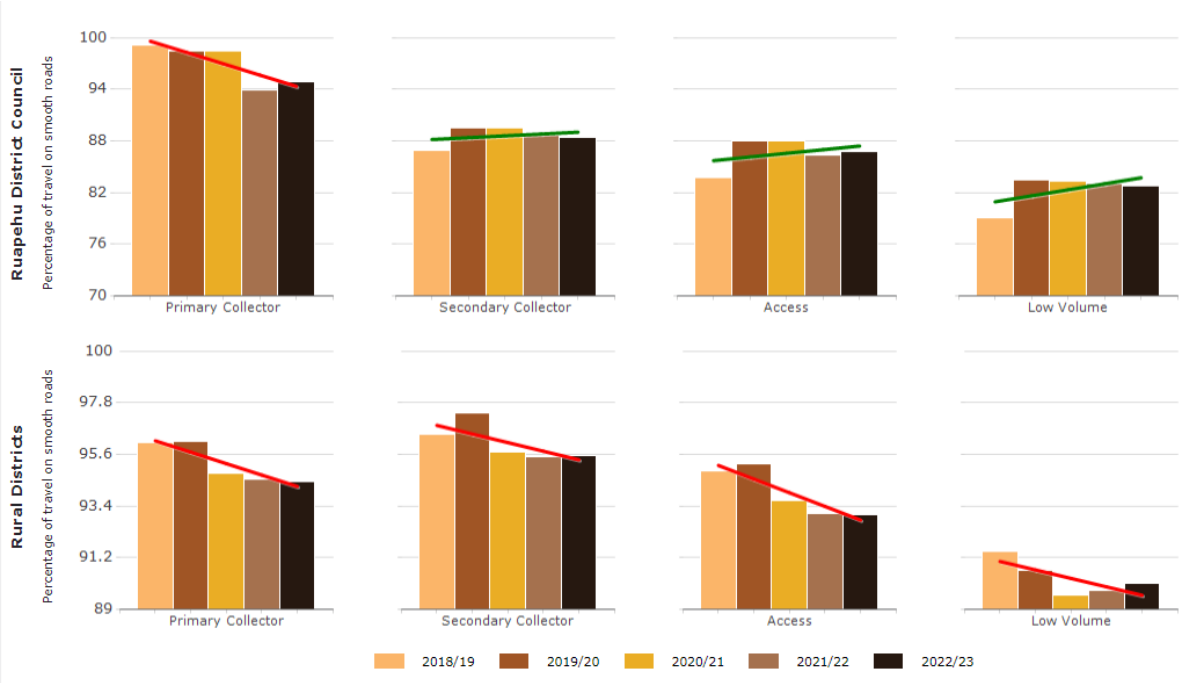
Source: Transport Insights 2022/23



Ruapehu performs well on Primary collector but is much lower for the other categories against the rural, regional and national results. However, the trend in these categories is improving, but declining in Primary collector. Rurally, districts are declining in all four hierarchies.

FIGURE D.27: 2022/23 SMOOTH TRAVEL EXPOSURE BY YEAR AND BENCHMARK

Source: Transport Insights 2022/23



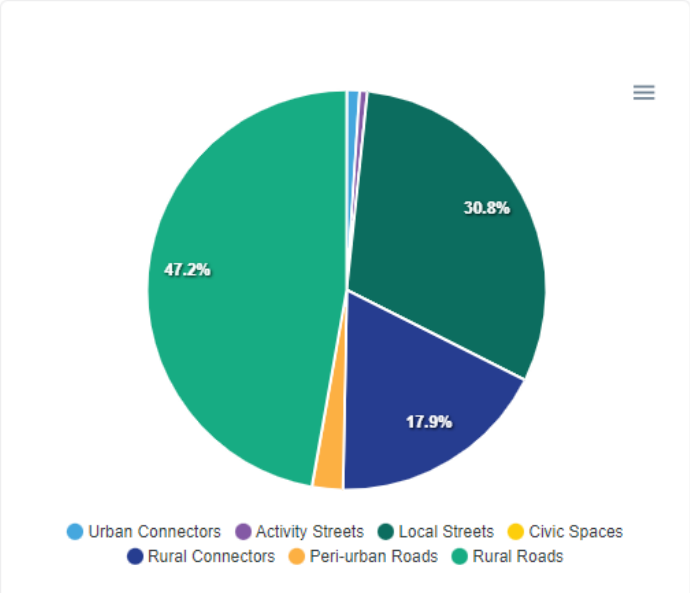
The graph below shows results by ONF street category. The trend arrow above each bar shows whether the trend is improving (green & up) or getting worse (red & down). More urban spaces, such as activity and local streets and civic spaces are more likely to be affected by service covers and different pavement types.

FIGURE D.28: 2022/23 SMOOTH TRAVEL EXPOSURE BY ONF CATEGORY

Source: Transport Insights 2022/23

FIGURE D.29: VKT % PER ONF STREET CATEGORY

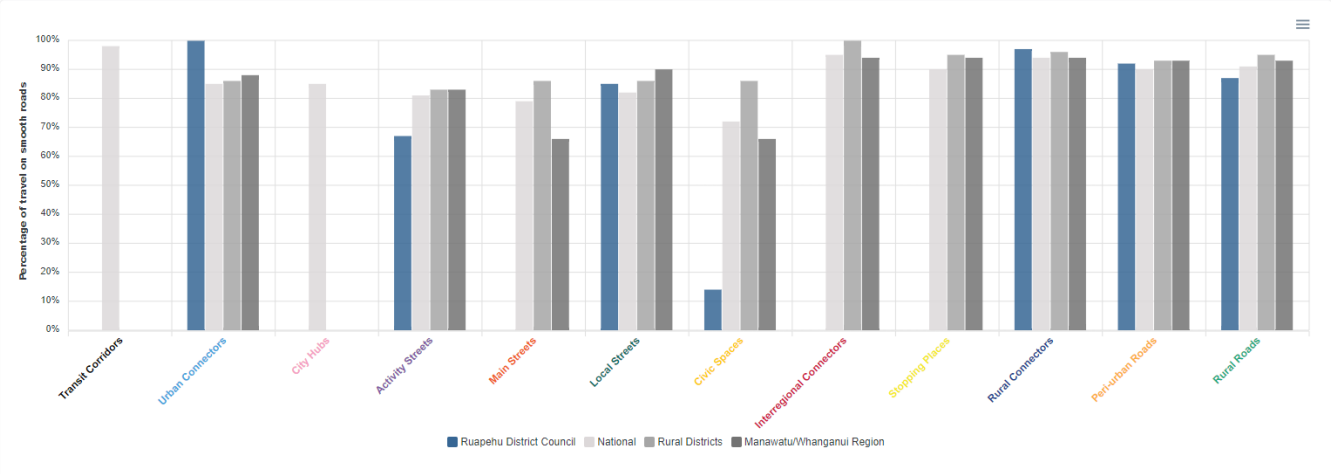
Source: Transport Insights 2022/23



This chart shows the percentage of Vehicle Kilometres Travelled (VKT) per ONF Street Category in the network.

FIGURE D.30: STE PER ONF CATEGORY BENCHMARK

Source: Transport Insights 2022/23



D03.6 Asset Management

D03.6.1 Standards

Maintenance Standards

The road maintenance standards and specifications are based on NZTA HM specifications (previously the Transit C Series) and have been modified over many years to ensure contractors deliver best value for money and fit for purpose solutions for the Ruapehu roads.

Full details and lists are included in the individual maintenance contracts.

Renewal and Development Standards

The required design parameters for renewal and project works, as well as vested new assets, are summarised in the table below:

- Standard NZS 4404:2010 Land Development and Subdivision Infrastructure, should be used for urban roads.
- Austroads engineering standards should be used for rural roads. This includes:
    - Road geometry
    - Pavement engineering
    - Safety management (relating to pavements).

TABLE D-12: ROAD PARAMETERS

Classification	Standard	Lane Width (m)	Total Shoulder Width (m) (each side)	Seal Width (m)	Carriageway Width (including shoulder)	Formation width (to back of water channels)	Design Speed	
							Flat or Rolling	Hilly
Access Low Volume	Minimum	2.50	0.5	5.0	6.0	8.0	Up to 70	Up to 50
Access Low Volume	Desirable	3.00	0.5	6.0	7.0	9.0	Up to 70	Up to 50
Access	Minimum	2.50	0.5	5.0	6.0	8.0	Up to 70	Up to 50
Access	Desirable	3.00	0.5	6.0	7.0	9.0	Up to 70	Up to 50

Classification	Standard	Lane Width (m)	Total Shoulder Width (m) (each side)	Seal Width (m)	Carriageway Width (including shoulder)	Formation width (to back of water channels)	Design Speed	
							Flat or Rolling	Hilly
Secondary Collector	Minimum	2.75	1.0	5.5	7.5	9.5	Up to 80	Up to 60
Secondary Collector	Desirable	3.25	1.0	6.5	8.5	10.5	Up to 80	Up to 60
Primary Collector	Minimum	3.00	1.0	6.0	8.0	10.0	Up to 100	Up to 70
Primary Collector	Desirable	3.50	1.0	7.0	9.0	11.0	Up to 100	Up to 70
Special Purpose Road (SPR)	Minimum	3.25	1.0	6.5	8.5	10.5	100	Up to 100
Special Purpose Road (SPR)	Desirable	3.75	1.0	7.5	9.5	11.5	100	Up to 100

D03.6.2 Strategies and Policies

Maintenance

While not formal, the maintenance contract specifications imply a significant number of strategies for the maintenance of the road pavements and surfaces.

There are accepted industry practices being followed for pavement maintenance strategies. These have not been documented specifically for Council.

Renewals

The focus will be on main spine and heavy transport routes of the district.

- Focus on achieving resurfacing targets.
- Review pre reseal repair work to confirm the use of mini rehabilitation to support longer reseal sections gaining full life.
- Identify other works required along the route of the renewals hence
    - optimising complete cost,
    - reducing disruption,
- Identify work being undertaken by 3 waters, utilities etc and plan to only undertake work once their planned work is completed.
- Forestry
    - Maintain flexibility to be able to react to forestry harvest roads.
    - Design for higher level of service for known forestry roads.
    - Condition information has shown a need to focus on road damage due to the forestry harvest.

Reseal strategies

Most reseals are chip seals. The following specific strategies are adopted, in addition to the general strategies discussed in the methods of renewal analysis section.

- Reseal pavements at intervals close to the maximum seal life cycles, unless earlier intervention is warranted by the condition of the pavement such as:
    - There is evidence of crack initiation from binder condition and stone loss
    - Lack of water proofing
    - Loss of texture resulting in loss of skid resistance.

- Identify the actual sections of carriageway treated each year and the treatment used from RAMM output. RAMM analyses average life data for each surfacing material, the volume and mix of traffic using the road and the current condition.
- Confirm and prioritise reseal works by undertaking on-site inspections of work needs identified in RAMM outputs (this is necessary due to limitations of RAMM outputs in identifying when earlier intervention is necessary or desirable as above).
- Investigate, and implement as appropriate, opportunities for further optimisation of maintenance activity by:
    - Improving forecasting of seal life based on AADT, seal type, subgrade strength and local factors.
    - Having greater vigilance on pavements which have passed their forecast seal life by several years and are still not showing signs of cracking (condition data frequency based on One Network Framework classification).
    - Improving performance-based contracting with a more appropriate performance evaluation of contractors, and using the results for improving the quality of future contractors.
- A 2017 Waka Kotahi Research report (RR 612) found that single coat seals can have a long seal life. As an improvement item, RDC will examine the achieved life of our current seals and our sealing strategy.

Unsubsidised Seal Extensions

Strategy | Council has a prioritised list of urban seal extensions with the eventual aim of sealing all urban roads. While the focus to date has been to complete the sealing of urban roads, some lifestyle block roads have higher traffic numbers and should be considered for the prioritised list.

Note that the term ‘urban’ does not fully align with NZTA definitions, which have moved from speed limit based to Stats NZ (which define most Council urban areas as rural). The list is prioritised for traffic density and housing.

- Urban roads are usually sealed for aesthetics.
- Rural roads are usually sealed for dust suppression, traction or shape (ie bridge approaches)

Dust is an issue on rural roads. The environmental concerns with dust exposure are being researched more nationally. Council will be monitoring this research and any subsequent funding apparatus that may be developed to support this research.

D03.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D03.6.4 Delivery

The pavement asset activities are delivered under the current Council contracts as outlined in the table below.

Activity Type	Activity	Delivery Method
Operations	Carriageway Cleaning - Rural	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Carriageway Cleaning - Urban	Parks and Reserves Contract
Maintenance	Pre-Reseal Pavement Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Sealed Crack Sealing	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Sealed Digouts	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Sealed Mill & Fill	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Sealed Pothole Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Sealed Stabilised Digouts	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Aggregate Replacement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Digouts	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Grading	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Pothole Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Adjusting Surface Covers	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Edge Break Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Shoulders Maintenance (including Water Channel)	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Unsealed Shoulders Maintenance (including Water Channel)	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Sealed Pavement Rehabilitation	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Sealed Resurfacing	Road Network Maintenance & Resurfacing 2022 to 2030
Renewals	Unsealed Heavy Metalling	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	New Roads - Vested	Developer
Development	Seal Extensions - Bridge approaches and Intersections (LCLR)	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Seal Extensions - New Carriage lengths	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Seal Widening - as part of Pavement Rehabilitation	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Seal Widening - pre Reseal repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

D03.7 Operations

D03.7.1 Activities

Operational activities for Pavements are:

- Carriageway cleaning (sweeping road at intersections and driveways) to remove gravel dragged onto the road surface

D03.7.2 Plans

Operational activities are undertaken on an as needed basis.

Work is identified by

- Customer calls to the service centre
- Routine inspections carried out by maintenance contractor.

D03.8 Maintenance

D03.8.1 Activities

Programmed Monthly

- Repairing failed pavements by digging out and replacing, or stabilising, the existing pavement (Programmed as identified by routine inspection)
- Repair of surface openings and minor surface levelling (Programmed as identified by routine inspection)
- Repair of surface defects on sealed roads (Programmed as identified (inspection or service request)
- Adjusting surface covers (Programmed as identified by routine inspection)
- Maintenance of unsealed shoulders (Programmed as identified by routine inspection)
- Application of running course on unsealed roads.

Reactive (Cyclic and Routine work)

- Grading and rolling of unsealed roads
- Repair of potholes on sealed and unsealed roads
- Temporary pavement failure repairs
- Repair of edge breaks (Programmed as identified by routine inspection)
- Repair of level crossing surfaces. Depending on the land ownership, level crossings are either owned by Council or Kiwirail. A list can be found in Ruapehu District Council Land Transport Bylaw. Kiwirail is responsible for programming and organising maintenance work.

Pre-reseal Repairs

Pre-reseal repairs are pavement repairs that are required prior to a site being resurfaced. These pavement repairs ensure that the full surface has an appropriate base for which it can achieve its full design life.

Desirable timeframe: Pre-reseal repairs shall be completed the year prior to the construction of the resurfacing works. This allows the underlying pavement work to settle and be accepted before the surface is laid. This is an aspirational goal for Ruapehu. Budget has historically only been sufficient for one season at a time so it has not been achieved yet. The funding request for 2024/27 includes an increase in pre-reseal repairs.

D03.8.2 Plans

The following applies to (non-routine) maintenance activities:

- Possible maintenance is prioritised as high if there is a significant risk to the safety of road users or the public or to the asset deteriorating rapidly and therefore losing significant value which is avoidable with appropriate maintenance work.
- Possible maintenance is prioritised as medium if it is likely that the area of distress may expand, or the method of repair changes, such that the cost of any repair will increase. It could be also considered that medium priority represents industry good practice for asset interventions.
- Customer complaints are also investigated and remedies are programmed.

Deferred Maintenance

There is some history of deferred maintenance over past years due to Council's inability to fully fund its maintenance and renewals obligations. The deferred work has been itemised and will be prioritised and addressed through pavement maintenance and renewals.

Council focus in the 21/24 block has been high priority repairs due to lack of budget. The newly introduced systematic routine inspections are building a picture of deferred work. They began in October 2022 and will provide a picture of the network. The 2024/27 budget request has increased to be able to start expanding our pre-reseal response and to be able to address medium priority work before it deteriorates further.

D03.9 Renewals

D03.9.1 Activities

Pavement renewal activities include:

- Sealed road resurfacing
- Sealed pavement rehabilitation
- Unsealed road metalling
- Unsealed road strengthening

D03.9.2 Plans

Methods of Renewals Analysis

Renewal needs for roads are indicated by high roughness, poor condition rating and the high cost of routine pavement maintenance. Methods of renewal analysis are summarised below:

- Age- based method
    - Each type of surface has an expected life based on the expected traffic loadings. This is then used to firstly create a remaining useful life profile, which helps provide a big picture overview of the asset base, as well as identifying the individual assets that have reached the end of their expected useful life.
    - Reaching the end of the expected life does not mean that the asset should be immediately replaced. This is a trigger to investigate further to identify if more life can be achieved in its current state or with some maintenance work or if it does indeed need replacing.

- Condition based method
    - RAMM contains a Treatment Selection Algorithm (TSA), which utilises the condition data and other road inventory data to make recommendations as to preferred treatments on the network. The outputs from the treatment selection are utilised at a network level and at an individual treatment section level. For interest: the 2023 TSA Recommendation is for 32.5 km reseal in budget, 214 km reseal next time, 225.4 km general maintenance, 1.8 km locking seal and 2.6 km 2nd coat seal.
    - At a network level the treatment selection summary report identifies the length of the network recommended for resealing in the current and following year and makes recommendations as to the length of the network to undergo more major treatments such as smoothing or strengthening. The treatment selection programme undertakes an economic analysis of the maintenance options for each road section in order to identify the most cost-effective treatment option based on the ongoing cost of maintenance and the unit costs of the various maintenance and renewal treatments.
    - The treatment summary report is a useful tool in assessing the effectiveness of the maintenance and renewal strategies being followed and is an indicator of the future maintenance needs of the network. The treatment selection outputs are also used to identify sections of road with various faults and make recommendations as to which specific road sections should be considered for resealing or rehabilitation. These outputs are used in the preparation of the annual resealing and rehabilitation programmes. The treatment selection programme is run annually following the updating of the RAMM database to reflect the physical work completed in the previous summer.
    - TSA is used in conjunction with visual inspections by a senior pavements engineer to determine the final annual pavement renewal programmes for sealed roads.
    - Another process utilised by some authorities is deterioration modelling using a software called dTIMS and a model developed by IDS (an industry group under IPWEA NZ). dTIMS is not considered to provide significant value for low volume networks such as Ruapehu District, when compared to the costs and effort to capture the necessary data, setup dTIMS and then run the different scenarios through the model.

Sealed Road Surfacing (Reseals)

The expected life of seals and reseals depends on traffic loading and pavement strength, and ranges from 7 to 16 years. On average, a seal life of 13 years is considered appropriate for the Ruapehu network. For the Council network, this equates to approximately an average of 37km per year to reseal, less 7km of pavements targeted for renewal under pavement rehabilitation activity, leaving an annual target of 30km.

The exception is the OMR where the life cycle is typically only seven years.

In selecting the most suitable surfacing material for each category of road the impact of that material on the total pavement life and the life cycle cost is taken into consideration. The following factors are considered during material selection:

- Traffic volume, percentage of Heavy Commercial Vehicles (HCV) and road geometry (eg, chipseal is inappropriate in high stress areas and highly trafficked roads in residential areas).
- The texture of the existing surface.
- The condition of the existing surface, for example, cracking, stone loss, flushing, etc.
- The need for waterproofing.
- The flexibility of the existing road formation (stiff surfacing coats will fail if they are applied to flexible pavements).
- The proximity of dwellings to the carriageway and the potential for noise nuisance and vibration, for example because of poor subgrade conditions or poor trench reinstatement.
- Safety and appearance.

Chip sealing will remain the predominant resurfacing type to be used in the future. Chip seals include single and two coat seals as well as specialist treatments such as Polymer Modified Bitumen (PMB), Stress Absorbing Membranes (SAML) and geotextile reinforced seals.

Specialist treatments may be used in high traffic stress areas, where the pavement is showing high distress levels such as cracking or where there is a history of premature failure of the surfacing. The initial chip seal treatment is specified by the contractor and approved by the consultant, according to NZTA P17:2012 Performance Based Specifications. Any variations to chip size and seal type are then agreed between Contractor, Engineer and Asset Manager.

- Texturising or void fill seals are used in areas exhibiting scabbing or flushing or as a pre-treatment to even out variations in surface textures for a pavement section.
- Two coat seals may be constructed by the “drylock” or “racked in” method, (a single layer of bitumen with two applications of aggregate, largest first followed by a smaller locking chip) or the “bi couche” method (two applications of bitumen, one prior to each aggregate application).
- First coat seals may be either a single coat grade 4 seal or a two coat grade 3/5.
- The first coat/second coat method remains the most economic life cycle option but there are some advantages in the two coat seal system. The use of the two coat seal is relatively resistant to damage from subsequent housing development or lack of initial traffic in urban subdivisions and tends to defer the requirements for second coating for the forward programme.
- The asphaltic surfacing, slurry seals and asphaltic concrete are used in moderate and high stress areas particularly in the urban areas and on the Ohakune Mountain Road. This asphaltic surfacing must be placed on sound pavements to achieve their design life and therefore cannot be used when the underlying pavement won’t support the flexible surface.

Sealed Pavement Rehabilitation

Pavement rehabilitation is carried out when this provides the minimum whole-of-life cost for the pavement, ie, intervention is indicated when the net present value (NPV) of the rehabilitation exceeds the do-minimum option. Waka Kotahi will provide funding assistance for rehabilitation based on this criterion.

Road pavements that are structurally sound but have an unacceptably rough surface may be rehabilitated by pavement smoothing. However, to obtain Waka Kotahi funding assistance for pavement smoothing, it is necessary to establish a nationally competitive Benefit/Cost ratio.

The required level of pavement rehabilitation will vary depending on;

- The condition profile of the carriageway.
- The level of ongoing maintenance demand.
- The differing economic lives of the materials used.
- The subgrade strength and type.
- The usage of the road.

Funding is dependant on obtaining a positive Net Present Value (NPV) for pavement rehabilitation works where the benefits are primarily maintenance savings to the Roading Controlling Authority.

For pavement reconstruction where the benefits are primarily to the road user in reduced roughness, vehicle operating costs or road safety, the existing pavement may be widened after improvements carried out to a maximum of 20%. The target roughness value for those works is <70 NAASRA.

When rehabilitating roads, all drainage deficiencies including substandard culverts are rectified and road widths are brought up to the appropriate road standard.

This means rehabilitation projects are a combination of reinstatement, or renewal, and growth (road widening). Analysis of cost has shown that this element represents 15% of the cost of a typical rehabilitation project.

Older pavements that are starting to fail, or become rough, where a complying Benefit/Cost cannot be achieved or current funding is not available, may be scheduled for:

- Resurfacing with a specified seal coat
- Partial smoothing
- Controlled deterioration where sufficient work is carried out to keep the road safe and usable until funding for rehabilitation can be secured.
- Reverting to unsealed

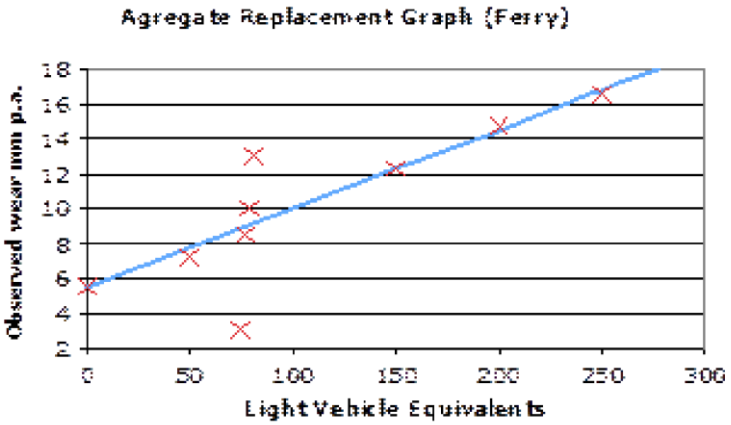
Waka Kotahi has traditionally adopted a strategy where the Benefit/Cost ratio is used as the main criteria to determine whether a road improvement or replacement project will be funded. However, the Land Transport Management Act 2003 requires consideration of a wider range of factors. The Benefit/Cost ratio is based upon:

- The benefit to the road user for reducing delays in the time to travel along a given route.
- Vehicle operating cost savings.
- Safety benefits.
- Intangible benefits including community dislocation, environmental issues (including noise and vibration) and other possible local, regional and national issues.

A Benefit/Cost of 1 or greater means that the benefits exceed the costs.

Unsealed Road Metalling

Unsealed roads lose their top surface of metal, known as the wearing course. This loss is because of traffic, grading and weather, mainly rainfall. The metal lost is replaced periodically as part of the renewals programme. Metalling takes place on programmes submitted by the contractor, generated from unsealed road inspections. The normal procedure is for the road to be graded, followed by application of an AP30 running course. The pavement generally consists of a running course surface (a sacrificial wearing course layer) and a load bearing base course layer below that. Annual aggregate replacement quantities are based on the empirical formula developed by Allan Ferry, a NZ renowned specialist in unsealed road maintenance. The Ferry formula, reproduced in graphical form here, suggests that the average aggregate consumption on the Ruapehu unsealed road network is 6.5mm/pa. With an unsealed road length of 854km, an average re-metalling width of 4.0m and an average traffic volume over the entire unsealed network of 22.5 vehicles per day, this equates to a total of 31,000m3 loose measure.



Metal strengthening has been used on an ad hoc basis to address areas with high traffic loading. Council is proposing to use a targeted programme in this AMP for some intra District routes, primarily those used for forest haulage.

Deferred Renewals

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

- Reseals | There is a backlog of reseals.
    - Council should be renewing approximately 30 km/year of surfacing per year but is only achieving an average of approximately 25 km/year over the past 5 years (* using 6m width).
    - Prioritisation of deferrals is based on RAMM TSA in conjunction with engineering judgement and network knowledge.
- Unsealed Metalling | The 5 year achievement average is 27,000 m^3, lower than target.

D03.10 Development

The development activity can significantly improve an existing asset or network as well as creating new assets.

Note that the renewals activity allows for replacements to have some minor improvements or significant improvements when it utilises current technology or standards.

Also note that Council receives new network and assets through the vesting process in accordance with the District Plan.

D03.10.1 Activities

Development activities, driven by growth or level of service enhancement include:

Seal widening

It is unlikely that roads within Ruapehu District identified for seal widening could be justified solely on road user benefits due to low traffic volumes. These roads will, however, be considered for widening in conjunction with rehabilitation due to failing conditions.

Seal extensions

Waka Kotahi funding criteria sets a high threshold for sealing unsealed roads.

Council will consider sealing roads provided they meet the funding criteria and subject to affordability and policy. The priority order in which works are carried out is based on traffic numbers and housing density.

Most seal extensions in the District are unsubsidised as they do not meet Waka Kotahi funding criteria.

TABLE D-13: PAVEMENT DEVELOPMENT PLAN

Development	Primary FIS	2024/25 ($)	2025/26 ($)	2026/27 ($)	2027/28+ ($)
Seal Extensions Unsubsidised	Growth	58,251	60,096	61,792	461,619

New road construction

If required, this is covered under Network (Section D02)

Corridor improvement works

If required, this is covered under Network (Section D02)

D03.10.2 Plans

Seal Widening

The following roads have been identified for seal widening due to the traffic loading, presence of heavy haulage or tourism:

- Ohakune Mountain Road – Council is progressively widening the sealed surface in conjunction with minor improvements
- Ruatiti Road – Council is progressively widening the sealed surface in conjunction with minor improvements and pavement rehabilitations
- Poro O Tarao Road and Ongarue Waimiha Road – Council is progressively widening the sealed surface in conjunction with minor improvements and pavement rehabilitations
- Taringamotu Road and Ngapuke Road – Council is progressively widening the sealed surface in conjunction with minor improvements and pavement rehabilitations

- Oio Road – Council is progressively widening the sealed surface in conjunction with minor improvements and pavement rehabilitations.

Seal Extensions

There are seal extensions planned for the 2024 to 2027 period. This is discussed further in Managing Growth and Demand (Section C01).

D03.11 Disposal Plan

There are many unformed 'paper roads' in the District, which are not maintained by Council. Council has adopted a report to facilitate the rationalisation of unformed roads.

Many sealed and unsealed rural roads service only one or two properties and have very low traffic volumes. Social and economic sustainability should be considered through applying optimised decision making (ODM) to which parts of the network are uneconomic and should or should not be reduced.

Network reduction can also be achieved by transferring management of very low volume unsealed rural no-exit roads to the adjacent landowners. The rise of carbon farming in the current period is anticipated to lower demand on some roads in the 2024/27 block. Each situation needs to be considered carefully and if the Council wants to proceed, then there is a formal process, including the involvement of Waka Kotahi NZ Transport Agency, to go through.

D03.12 Funding Request

Pavements can be funded by the following NZTA Work Categories:

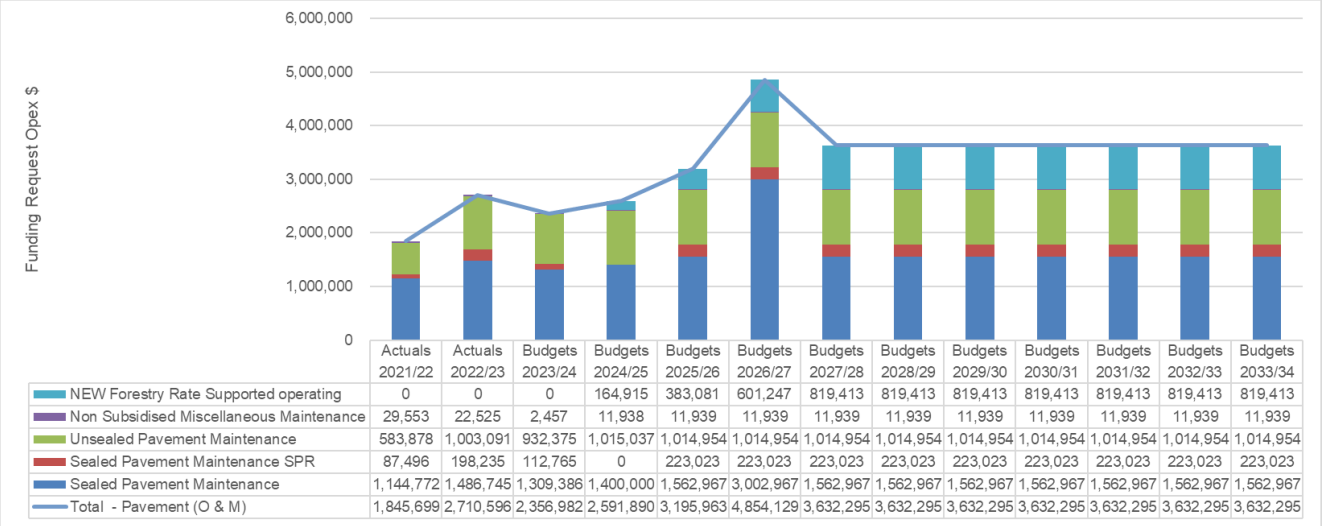
- WC 111: Sealed pavement maintenance
- WC 112: Unsealed road pavement maintenance
- WC 211: Unsealed road metalling
- WC 212: Sealed road resurfacing
- WC 214: Sealed road pavement rehabilitation

Additional funding is also requested via the Low cost low risk work category and is documented in Network (Section D02).

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars. Note that SPR Budgets were included in Local Road totals in Year one only.

FIGURE D.31: PAVEMENT HISTORICAL AND PROJECTED OPERATIONS & MAINTENANCE EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Opex	1,845,699	2,710,596	2,356,982	2,591,890	3,195,963	4,854,129	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	36,068,050

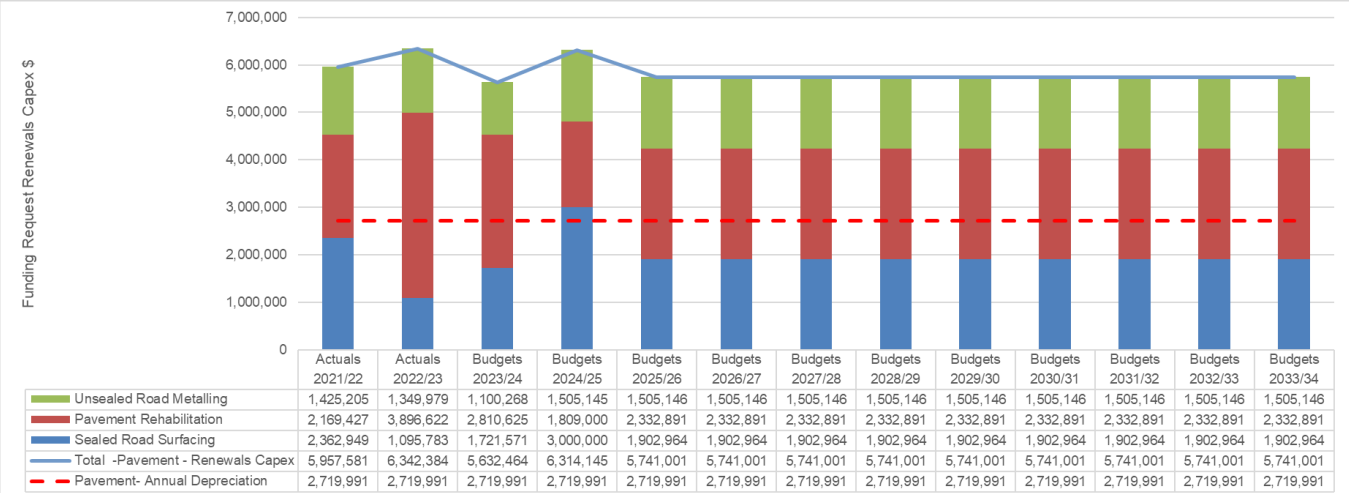


	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
NEW Forestry Rate Supported operating	0	0	0	164,915	383,081	601,247	819,413	819,413	819,413	819,413	819,413	819,413	819,413
Non Subsidised Miscellaneous Maintenance	29,553	22,525	2,457	11,938	11,939	11,939	11,939	11,939	11,939	11,939	11,939	11,939	11,939
Unsealed Pavement Maintenance	583,878	1,003,091	932,375	1,015,037	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954
Sealed Pavement Maintenance SPR	87,496	198,235	112,765	0	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023
Sealed Pavement Maintenance	1,144,772	1,486,745	1,309,386	1,400,000	1,562,967	3,002,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967
Total - Pavement (O & M)	1,845,699	2,710,596	2,356,982	2,591,890	3,195,963	4,854,129	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295

The proposed budgets allow for an increase in sealed maintenance to widen pre-reseal and priority repair response.

FIGURE D.32: PAVEMENT HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
Pavement Rehabilitation	2,169,427	3,896,622	2,810,625	1,809,000	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	22,805,019
Sealed Road Surfacing	2,362,949	1,095,783	1,721,571	3,000,000	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	20,126,676
Unsealed Road Metalling	1,425,205	1,349,979	1,100,268	1,505,145	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	15,051,458
Renewal Total	5,957,581	6,342,384	5,632,464	6,314,145	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	57,983,153

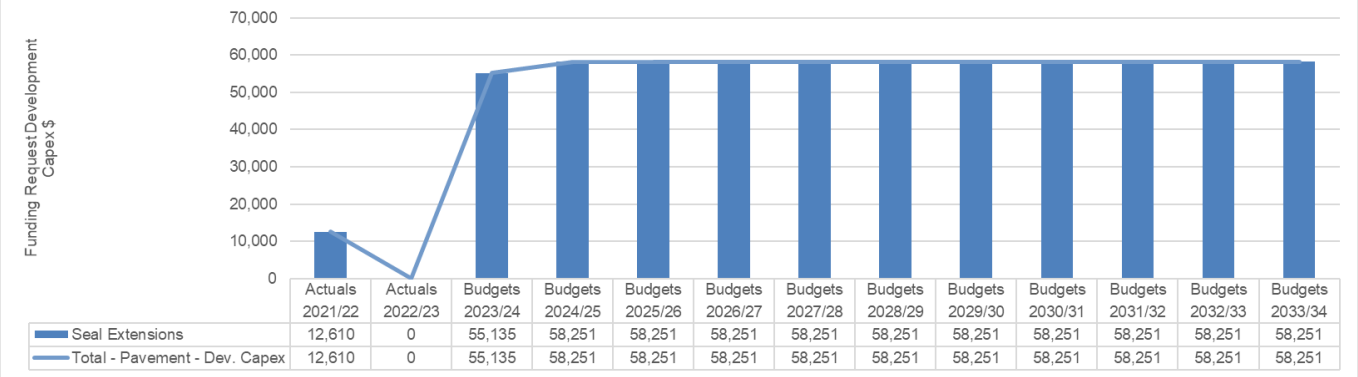


	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Unsealed Road Metalling	1,425,205	1,349,979	1,100,268	1,505,145	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146
Pavement Rehabilitation	2,169,427	3,896,622	2,810,625	1,809,000	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891
Sealed Road Surfacing	2,362,949	1,095,783	1,721,571	3,000,000	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964
Total -Pavement - Renewals Capex	5,957,581	6,342,384	5,632,464	6,314,145	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001
Pavement- Annual Depreciation	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991	2,719,991

Annual depreciation of $2.7M is well below the expected total pavement renewal costs of $5.8M. The next valuation needs to investigate this difference to identify where this difference is coming from.

FIGURE D.33: PAVEMENT HISTORICAL AND PROJECTED CAPITAL GROWTH WORKS EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Growth														
Seal Extensions Unsub	12,610	0	55,135	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	582,510
Growth Total	**12,610**	**0**	**55,135**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**582,510**

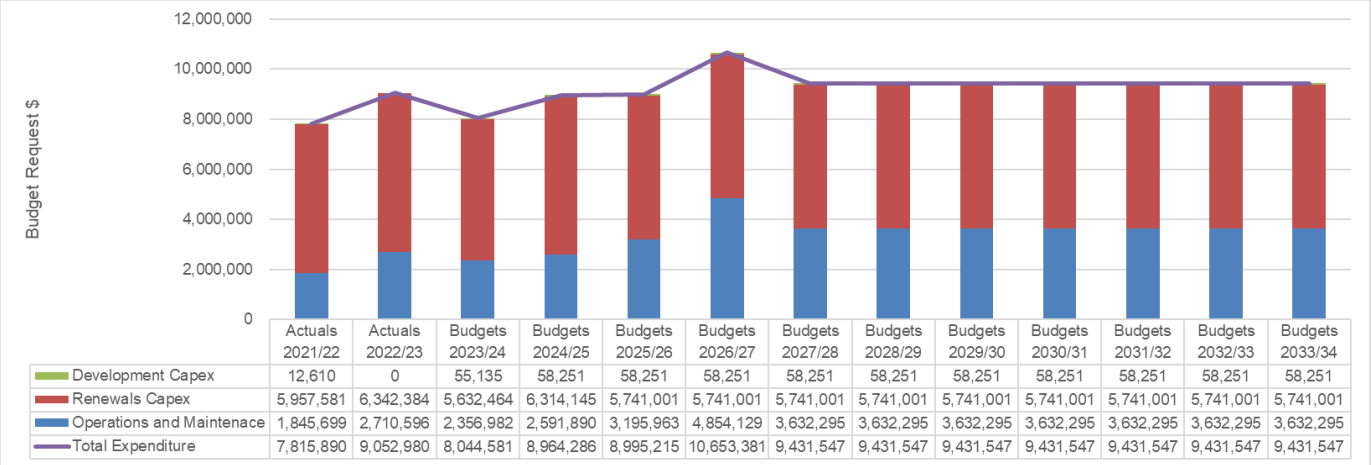


This budget reflects work directly under pavements work categories or unsubsidised work. There is additional pavement work budgeted under the low cost low risk work category which is outlined above but budgeted in Network (Section D02).

The figure below sets out the historical and projected combined expenditure for pavement projects and programmes.

FIGURE D.34: PAVEMENT HISTORICAL AND PROJECTED COMBINED EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Growth	12,610	0	55,135	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	582,510
Opex	1,845,699	2,710,596	2,356,982	2,591,890	3,195,963	4,854,129	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	36,068,050
Renewal	5,957,581	6,342,384	5,632,464	6,314,145	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	57,983,153
Grand Total	**7,815,890**	**9,052,980**	**8,044,581**	**8,964,286**	**8,995,215**	**10,653,381**	**9,431,547**	**9,431,547**	**9,431,547**	**9,431,547**	**9,431,547**	**9,431,547**	**9,431,547**	**94,633,712**



Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D04 ROAD STRUCTURES

D04.1 Purpose and Strategic Case Link

The purpose of road bridges and large culverts is:

> **Provide continuous all-weather roading over rivers, streams, railway lines and uneven terrain**

The purpose of retaining walls are:

> **To provide protection and support for road pavements**

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

Structures contribute to the Reliability, Resilience (whether key alternate routes have suitable structures for all traffic), Accessibility and Safety of the network.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	Adequate (not restricted) bridges allow for land to be harvested. They also allow heavy vehicles to safely navigate the network and on occasion allow alternative routes. Bridges with adequate loading capacity allow harvesting to happen efficiently.
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Bridges are a critical element of the network enabling travel between locations while retaining walls respond to historical ground movement problems and protect against future road closures due to rocks and dirt inundating the carriageway
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Well maintained bridges are critical to avoid any unexpected failures which have a high severity and consequence if this was to happen

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Well maintained bridges are less likely to suffer unexpected failures causing network restrictions or closures. They are also able to offer capacity for efficient freight movements.
Mobility – Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	Well maintained bridges are less likely to be damaged during during an emergency event leading to access restrictions and reduced network availability
Safety	How users experience the safety of the road	Well maintained bridges are critical to avoid any unexpected failures which have a high severity and consequence if this was to happen
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	This activity doesn't provide any significant contribution towards this customer level of service
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Structures provide a critical element to enable the networks to function and therefore deliver accessibility to the community and visitors

D04.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include

- Providing sustainable and resilient infrastructure
- Providing an affordable transportation network that meets the reasonable needs of the wider community
- Maintain network so that service capacity and integrity is not reduced

Structures provide for the ONRC customer service level of accessibility of the network.

D04.3 Assets to be Managed

D04.3.1 Asset Description

Road Structure assets managed under the Land Transport Activity include:

- bridges
- large culverts (note these are culverts with a cross-sectional area greater than 3.4m^2, small culverts are managed as Drainage)
- retaining walls
- minor structures (include footbridges and bluff safety netting)

Note that many retaining walls are part of the natural landscape including many not recorded in RAMM (Stone and Willow). These are not routinely managed or maintained.

Road Structures assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Bridges
    - All Bridge information
    - Major culverts sub asset breakdown
- Drainage – All major culvert information on quantities, age, RUL and valuations
- Retaining Walls – All information
- Minor Structures – All information

Note that asset data will be moved to new User Defined Tables (UDTs) in RAMM as part of the Asset Management Data Standard (AMDS) implementation process. The above RAMM table references will therefore be out of date once the AMDS implementation has been completed for Council by 2026.

Council owns:

- **258 structural bridges** -Bridges vary from high standard concrete structures to very low standard wooden structures with severe weight and capacity restrictions.
- **99 major culverts** - Culverts are drainage tunnels/structures under roads. Large culverts are defined as those with a waterway area of greater than or equal to 3.4m^2. They are treated as bridges.
- **1 pedestrian footbridge** - managed as a minor structure.
- **1 septic pad** – managed as a minor structure
- **286 retaining walls** - Retaining walls provide structural support for road pavements and footpaths, or for steep ground slopes adjacent to them. These walls are typically unreinforced rock walls and are considered to be natural embankments. There are also willow crib walls along river edges supporting the roads.
- **Dobbs Bluff Safety netting** - managed as a minor structure

The following tables provide a further breakdown of quantities by asset types and sub-types.

TABLE D-14: BRIDGES AND LARGE CULVERTS ASSET QUANTITIES

	Quantity		Urban / Rural		ONRC Classification			
Asset Type	Number	Metres	Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)
Bridges								
Bridge - Concrete	91	1,935	10	81	2	7	29	53
Bridge - Concrete/Steel Beam - Conc Deck	2	64	-	2	-	-	-	2
Bridge - Steel Beam - Concrete Deck	108	2,583	4	104	1	7	27	73
Bridge - Steel Beam - Steel Deck	1	32	-	1	-	-	-	1
Bridge - Steel Beam - Timber Deck	46	797	1	45	-	-	2	44
Bridge - Steel/Timber Beam - Timber Deck	2	43	-	2	-	-	-	2
Bridge - Timber	5	114	-	5	-	1	1	3
Bridge Total	**258**	**5,648**	**16**	**242**	**3**	**16**	**59**	**180**
Major Culverts								
Culvert - Concrete Box	35	435	12	23	1	3	10	21
Culvert - Concrete pipe	12	149	4	8	-	1	2	9
Culvert - Papa Drives	15	410	-	15	-	3	4	8
Culvert - Timber	3	61	1	2	-	-	-	3
Culvert - Other	3	60	-	3	-	1	-	2
Culvert - ARMCO	25	412	-	25	-	1	3	21
Bridge - Concrete	1	4	-	1	-	-	-	1
Not specified	5	106		5		1	2	2
Major Culverts total	**99**	**1,637**	**17**	**82**	**1**	**10**	**21**	**67**
Total	**357**	**7,285**	**33**	**324**	**4**	**26**	**80**	**247**

TABLE D-15: RETAINING WALL ASSET QUANTITIES

Asset Type	Quantity		Urban / Rural		ONRC Classification			
	Number	Metres	Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)
Retaining Walls								
Block	2	26	-	2	-	1	-	1
Concrete	9	239	2	7	-	1	3	4
Concrete and Steel	1	707	-	1	-	1	-	-
Earth	15	309	-	15	-	-	3	12
Galvanised Steel	7	282	1	6	1	2	4	-
Railway Iron and Sleeper	1	20	-	1	-	-	-	1
Steel	1	17	-	1	-	-	-	1
Steel and Wood	1	16	-	1	-	-	1	-
Stone	186	3,131	6	180	14	47	44	81
Timber	23	429	4	19	1	8	7	6
Willow Logs	1	33	-	1	-	-	1	-
Wood	-	-	-	-	-	-	-	-
Unknown	39	410	-	39	-	1	18	20
Total	**286**	**5,619**	**13**	**273**	**16**	**61**	**81**	**126**

The two retaining walls that are unclassified are on Kururau Road (SH 43) by the hospital. As this is not a local authority road there is no classification in Councils RAMM database. The concrete and steel length appears to be an outlier and will need to be checked.

TABLE D-16: OTHER STRUCTURES

Asset Type	Quantity		Urban / Rural		ONRC Classification			
	Number	Metres	Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)
Minor Structures								
Pedestrian Foot Bridge	1	53	1			1		
Septic Discharge Pad	1						1	
Bluff Safety Netting	1	150		1				1

D04.3.2 Asset Values

Road Structure assets form 26.1% ($147.9M) of the total Land Transport Activity value (Replacement cost) and 28.1% ($1.6M) of the annual depreciation.

Behind pavements, this is one of the larger asset groups in the Transportation network.

Further breakdown of the various asset types that form this group can be found in the tables below.

The Council's Land Transport assets have been valued as at 30 June 2023. As part of this process the following are calculated and shown in the tables below:

- RC = Replacement Cost
- DRC = Depreciated Replacement Cost
- AD = Annual Depreciation

Bridges and Major Culverts

TABLE D-17: VALUATION OF BRIDGES AND MAJOR CULVERTS

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Bridges					
Bridge - Concrete	202	4,431	103,127,856	51,188,590	3,109,030
Bridge - Steel	1	32	541,477	311,349	13,390
Bridge - Timber	54	955	19,574,422	2,395,314	849,314
Bridge Total	257	5,418	123,243,755	53,895,253	3,971,734
Major Culverts					
ARMCO	35	435.3	$3,212,990.33	$1,094,086.68	$44,753.69
Bridge - Concrete	12	149	$32,158.16	$15,275.12	$321.58
Concrete	15	410	$4,193,264.28	$1,717,240.21	$43,847.60
Other	3	61.1	$489,864.14	$116,964.95	$5,442.31
Timber	3	60	$500,370.81	$152,258.03	$7,148.15
Unknown	25	412	$482,670.32	$208,912.14	$5,214.44
Papa Drives	81	502,289	$2,881,096.09	$572,011.09	$28,717.35
Major Culverts Total	1637	1,637	11,792,414	3,876,748	135,445

Retaining Walls

TABLE D-18: VALUATION OF RETAINING WALLS

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Retaining Walls					
Block	2	26	35,344.97	31,147.75	479.73
Conc & Steel	1	10	1,135,055.47	963,851.27	12,964.60

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Concrete	9	239	386,170.56	280,465.54	4,890.02
Earth	15	309	769,288.60	657,880.86	8,740.10
Material Blank	39	410	601,935.53	512,935.49	8,293.85
Steel & Wood	1	16	5,997.93	0.00	60.56
Steel Galvanised	7	280	218,496.17	148,248.94	5,035.09
Timber	23	429	833,337.97	539,780.42	18,868.80
Timber Rails & Sleepers	1	20	32,131.79	0.00	324.44
Willow Log	1	108	53,017.45	28,275.98	1,299.46
Stone - with height value	182	12296	5,097,494.24	4,341,975.95	70,703.81
Stone - null height value	4	18	19,279.07	18,239.25	249.05
Steel	1	17	9,104.01	5,917.60	212.41
Total	**286**	**14,178**	**9,196,653**	**7,528,719**	**132,121**

TABLE D-19:- VALUATION OF OTHER STRUCTURES

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Minor Structures					
Pedestrian Foot Bridge	1	53	713,078	7,131	633,451
Septic Discharge Pad	1		1,016,123	40,645	524,997
Bluff Safety Netting	1	150	6,255	78	5,141
Total			**1,735,455**	**47,854**	**1,163,588**

D04.4 The Need for Investment

D04.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D04.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
Maintain level of service capacity	ARMCO not achieving expected life ARMCO culverts have a limited life of 50 years(1) , less than expected when originally designed and installed. This has usually been due to corrosion in the areas submerged with water and affects the circular culverts more than the multi-plate culverts (6/25 circular). Currently there are 25 steel culverts of which; ● 7 have been lined ● 2 don't require lining ● 14 not lined ● 2 unknown due to permanent high water and silt.	Programme approach	Where possible, this life may be extended by lining the invert with concrete. If the culvert has deformed then it should be replaced. The remaining are assessed as part of the structures inspection programme and need to be programmed for full replacement.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Funding for replacement of low traffic volume bridges While the Council has identified bridges that require strengthening or replacement on low volume roads it is difficult to justify and receive funding for these works. If these bridges aren't strengthened or replaced then users may receive a level of service lower than they need or expect.	Programme approach	Continue with the asset management strategy on managing the end-of-life phase of low-volume bridges to extract as much economic value from these assets. This includes ● frequency of inspections, ● Monitoring ● the use of restrictions. ● Structures component replacement ● Programme for low cost low risk replacement ● Accept reduced level of service Funding requests should prioritise renewals based on ● Condition (and hence risk) ● Freight load ● Traffic columns ● The availability of alternative routes.
Network safety and resilience – planning and targeted improvements	Bridge Restrictions 22 bridges currently have weight or speed restrictions applied to them. These provide a lower customer level of service than current design standard of supporting Class 1 vehicles. A list of restricted bridges can be found in Appendix G. Customers can't use bridges to undertake certain activities efficiently. This will often relate to agriculture, farming and forestry activities which have a higher economic activity value.	Policy approach	Improve register of restricted bridges to track; ● the management strategy, ● funding likelihood ● why an upgrade or replacement won't be sought.
Network safety and resilience – planning and targeted improvements	Bridge width Several bridges are narrow and restricted to one-lane only. Many of these bridges also have geometric alignment difficulties on approach. This leads to damage from large vehicles leading to a safety risk for other road users and an increase in maintenance needs.	Programme approach	Bridge damage is remediated as soon as recorded to limit safety risk. The alignment to the approach is being improved as space and budget allow. Bridge replacement design to meet key parameters in the bridge standards (section D04.5.1) this is also a requirement to attract subsidies. Note: this doesn't mean replacing automatically with two lanes.

Strategic Response	Key Issue	Response Type	Strategies to Address
Network safety and resilience – planning and targeted improvements	HPMV and 50Max trucks As 50Max trucks become more common place, there will be pressure to increase the capacity of the bridges on the network to be able to take these loads. We have a network that can take 50Max in some scenarios and have no plans for any further upgrades during the term of this plan.	Level of Service adjustment	Council has identified all the 50Max restricted bridges and will develop a strategy to consider freight volumes and prioritise improvements.
Advocacy and Relationships	Aging Bridge Stock As outlined in section D4.3.1 there are ● 26 Bridges and 11 Major Culverts at or near end life (37 total) ● Another 29 bridges and 13 major culverts with less than 30 years life remaining (42 total) ● 47 bridges and 25 major culverts with less than 40 years life remaining (72 total) Accumulatively 42% of bridges and major culverts could need replacement in the next 40 years. This level of rapid replacements will not be able to be funded by Council.	Policy approach	Council will proactively lobby government and industry groups that this is a national problem and funding ability needs to be addressed in the next 10 years prior to the bow wave of replacements hitting the forward works programmes.
Advocacy and Relationships	Forestry Slash During weather events forestry slash has washed off the hills, blocking drains and leading to flooding.	Policy approach	Work with the regional council, forestry owners and harvesters to make sure the slash is managed in a way that it cannot be washed into the waterways during weather events. NPS rules should help this decrease over time.
Advocacy and Relationships	Existing rail over bridges may be lower than current Rail operator height restrictions Rail protection and electrification requirements add significant cost to bridge renewal projects.	Policy approach	Council continues to work with Kiwirail to ensure renewals are fit for purpose at least cost.

Strategic Response	Key Issue	Response Type	Strategies to Address
Advocacy and Relationships	High frequency heavy loading Activities, like logging, can run for a relatively short period of time over bridges. The higher frequency and speed of the loaded trucks going over a bridge can cause damage such that it accelerates the maintenance and renewal needs when compared to the expected design life of the asset (for example, nuts being shaken loose and therefore need tightening more often)	Policy approach	Inspections need to monitor when this might be occurring on a bridge. Knowledge of harvest time and location is critical to be able to do this. Work with forestry organisations and Horizons to continue to build relationships and gain data of harvest timeframes and locations.

Note 1: The average useful life for ARMCO culverts has been assumed as 70 years in the 2017 valuation. This should be re-assessed in the next valuation.

D04.4.2 Key Risks

The following table provides the key risks in this activity.

Risk	Description	Assessment	Controls	Mitigation
Non-maintained bridges (including major culverts)	There are 24 identified bridges that serve single or multiple properties on unmaintained sections of the network. (These are not present in RAMM) • Spreadsheet available • Some have now been removed • Some upgraded by forestry • Ownership is uncertain These represent a liability for Council.		The Land Transport team maintains a list of these bridges and their issues and risks. These bridges have a structural inspection approximately every six years. The plan is to share the inspection results with the landowners. These bridges are detailed in Appendix G.	Council is seeking to dispose of these bridges whether through removal or transfer to the property owner. Establish ownership. Ensure inspections are carried out and risks assessed. Consider options on a case-by-case basis for: ● Retirement/ removal ● Maintain restrictions ● Renew/ replace (Council fully funded) Divest, sell to landowner to manage risk Further actions include developing a strategy to manage risk for unmaintained bridges.

Risk	Description	Assessment	Controls	Mitigation
Bridge collapse	Bridge collapse has been identified as a risk with high residual risk for Council.	High	Overweight permitting is fully assessed according to guidelines to limit the risk.	Mitigation measures identified as frequent inspections, maintenance, renewals and reporting.
Earthquakes	Council's assets are in a seismically active zone. A larger event could cause significant structures damage and therefore repair and replacement costs that the Council may not be able to afford.		After major earthquakes and flood events the bridges are inspected and work identified as appropriate.	All bridges have been screened seismic evaluations and this process has identified the bridges that may need to have a seismic assessment. Those requiring full assessment are undertaken as per "NZTA Bridge Manual" process for seismic assessments.

D04.4.3 Historical Commentary

Due to low traffic volumes on Councils roads projects to replace end of life bridges may not qualify for Waka Kotahi co-funding. Council will award the renewal project a very low priority if it does not qualify for Waka Kotahi co-funding. This means they will be unlikely to proceed, leaving a backlog of bridges requiring replacement. A bridge will go through a process where structural component replacement is exhausted, then weight and speed restrictions, before renewal is the least whole of life cost.

The definition of Class 1 vehicles has led to a possible change in loading on bridges as Class 1 vehicles are now allowed up to 46 tonnes on vehicles with an additional axle and longer length. This is not meant to increase risk to bridges designed to meet the previous class 1 limits. No Council bridges were restricted to 44 tonne.

Historical Expenditure

The process to obtain a resource consent for global bridge works has contributed to lower spending in the 2021/24 block, as consent has not yet been granted. Prior to that, maintenance expenditure has been consistent and renewal expenditure spiky. This has led to deferral and budgets being rediverted, something looking to be addressed in this block. A table showing previous 10 year expenditure is shown below.

Year	Maintenance	Structures Components Replacements	Bridge Renewal (216)
2013/14	21,826	321,909	
2014/15	71,638	404,844	
2015/16	111,442	829,704	
2016/17	144,270	339,776	

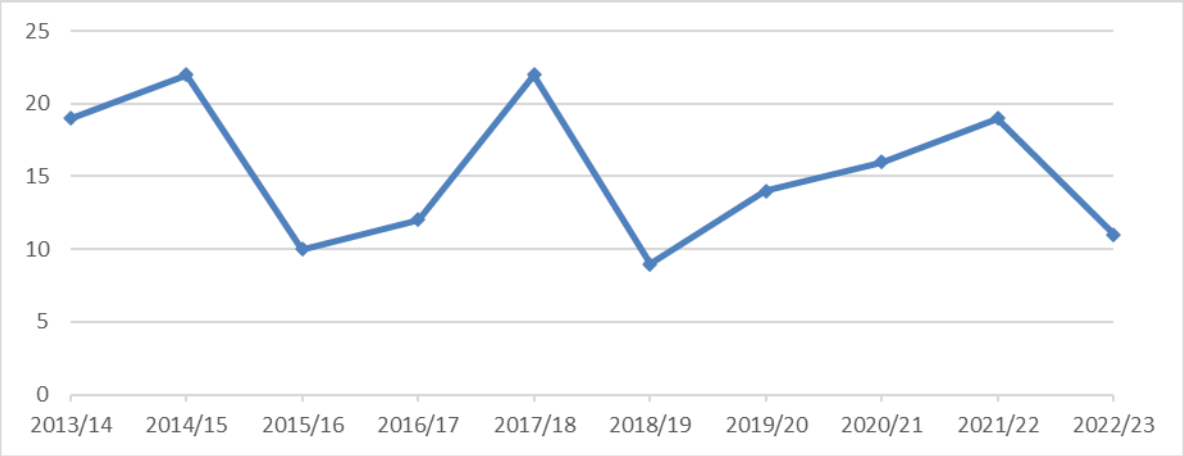
Year	Maintenance	Structures Components Replacements	Bridge Renewal (216)
2017/18	150,493	479,611	
2018/19	114,147	785,084	
2019/20	179,716	638,654	
2020/21	155,663	998,169	
2021/22	154,893	160,181	714,468
2022/23	41,949	155,088	1,459,346

D04.4.4 Levels of Service

Structures Calls

Calls relate to issues on bridges such as ponding, scouring, bridge deck issues, vehicles damaging bridges or bridges being too narrow. An increase in bridge maintenance is reflected in the downward trend in recent years.

FIGURE D.35: STRUCTURES CALLS



Significant LoS Change

An inaugural programme to paint steel components where it is the most economic option is proposed for the 2024/27 block. Painting will extend the life of the bridges and reduce ongoing maintenance costs. This is currently going through a Resource Consent process with Horizons Regional Council.

D04.5 Asset Performance

D04.5.1 Age Profile / Remaining Useful Life

Road Structures have the following age and remaining useful life (RUL) averages. In all cases, Total useful life (TUL) is the expected life for the asset type/ subtype combination. As age is available for all assets, the average age is a true reflection of this asset profile. RUL is calculated as

Average RUL= TUL - Average Age

Bridges and Major Culverts

TABLE D-20: BRIDGES AND MAJOR CULVERTS AVERAGE AGE AND RUL

Asset Type	Number	Metres	Total Useful Life	Average Age	Average Remaining Useful Life
Bridges					
Bridge - Concrete	91	1934.81	100	53	47
Bridge - Concrete/Steel Beam - Conc Deck	2	64	100	62	38
Bridge - Steel Beam - Concrete Deck	108	2582.83	100	57	43
Bridge - Steel Beam - Steel Deck	1	32	100	42	58
Bridge - Steel Beam - Timber Deck	46	797.3	70	62	8
Bridge - Steel/Timber Beam - Timber Deck	2	43	70	50	20
Bridge - Timber	5	113.5	70	78	0
TOTAL	258	5647.59	0	0	0
Major Culverts					
Culvert - Concrete Box	35	435.3	100	57	43
Culvert - Concrete pipe	12	149	100	55	45
Culvert - Papa Drives	15	410	100	62	38
Culvert - Timber	3	61.1	70	48	22
Culvert - Other	3	60	70	41	29
Culvert - ARMCO	25	412	70	47	23
Bridge – Concrete	1	4	n/a		
Major Culverts Total	**352**	**7,179**			

While the table above gives the impression that most bridges and major culverts still have some remaining useful lives, these are only averages. It does highlight that Timber Bridges are on average over the expected useful life and most likely there are some Steel Beam with Timber Deck bridges at or nearing end of life. As these are a major cost to renew further breakdowns of age profiles is shown below.

TABLE D-21: BRIDGES AGE PROFILE

Asset Type	Quantity		Total Useful Life	Age in Years (Each)								
	Number	Metres		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Bridges													

Asset Type	Quantity		Total Useful Life	Age in Years (Each)									
	Number	Metres		1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
Bridge - Concrete*	91	1935	100	3	2	5	17	10	20	18	3	11	2
Bridge - Concrete/Steel Beam - Conc Deck	2	64	100	-	-	-	-	-	1	1	-	-	-
Bridge - Steel Beam - Concrete Deck	108	2583	100	2	1	1	16	3	24	54	5	1	1
Bridge - Steel Beam - Steel Deck	1	32	100	-	-	-	-	1	-	-	-	-	-
Bridge - Steel Beam - Timber Deck	46	797	70	-	-	1	3	12	8	3	5	10	3
Bridge - Steel/Timber Beam - Timber Deck	2	43	70	-	-	-	-	2	-	-	-	-	-
Bridge - Timber	5	113.5	70	-	-	-	-	-	1	-	2	-	2
Nearing or at End of Life	**28**									3	7	10	8
Bridge Total	**258**	**5,648**	**610**	**5**	**4**	**7**	**36**	**28**	**54**	**76**	**15**	**22**	**8**
Major Culverts													
Culvert - Concrete Box	35	435	100	1	3	-	3	4	1	8	10	2	-
Culvert - Concrete pipe	12	149	100	-	1	-	-	1	4	6	-	-	-
Culvert - Papa Drives	15	410	100	1	-	-	1	-	-	1	7	-	-
Culvert - Timber	3	61	70	-	-	-	-	2	1	-	-	-	-
Culvert - Other	3	60	70	-	-	-	-	1	-	-	-	-	-
Culvert - ARMCO	25	412	70	-	-	1	8	6	5	4	-	-	-
Nearing or at End of Life	**4**									4	-	-	-
Major Culverts Total	**99**	**1,637**	**510**	**2**	**4**	**1**	**12**	**14**	**11**	**19**	**17**	**2**	**-**
Total	**357**	**7,285**		**7**	**8**	**8**	**48**	**42**	**65**	**95**	**32**	**24**	**8**

* One bridge age unknown

The shaded areas above highlight the 4 bridges within 10 years of their expected useful life and 20 older than expected. There are four ARMCO major culverts of age 69 years. It should be noted that the ages of 15 Bridges and 29 Major Culverts are estimates.

FIGURE D.36: BRIDGES AGE PROFILE BY TYPE

Source: AMP Tool V1.1 ex RAMM

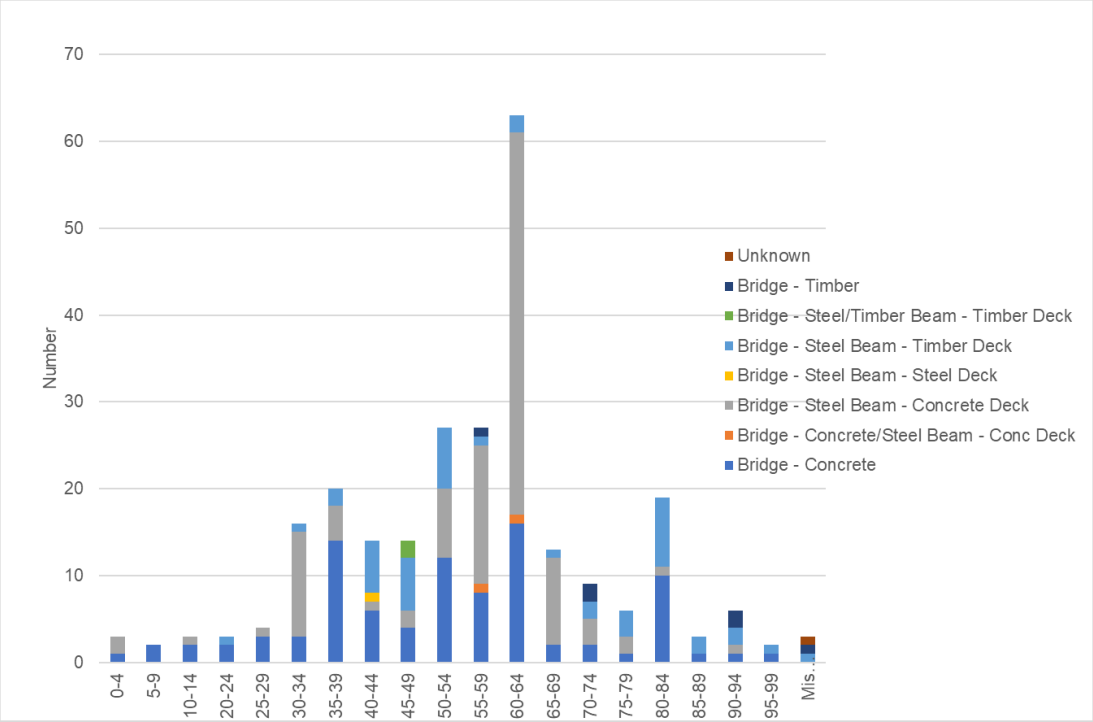
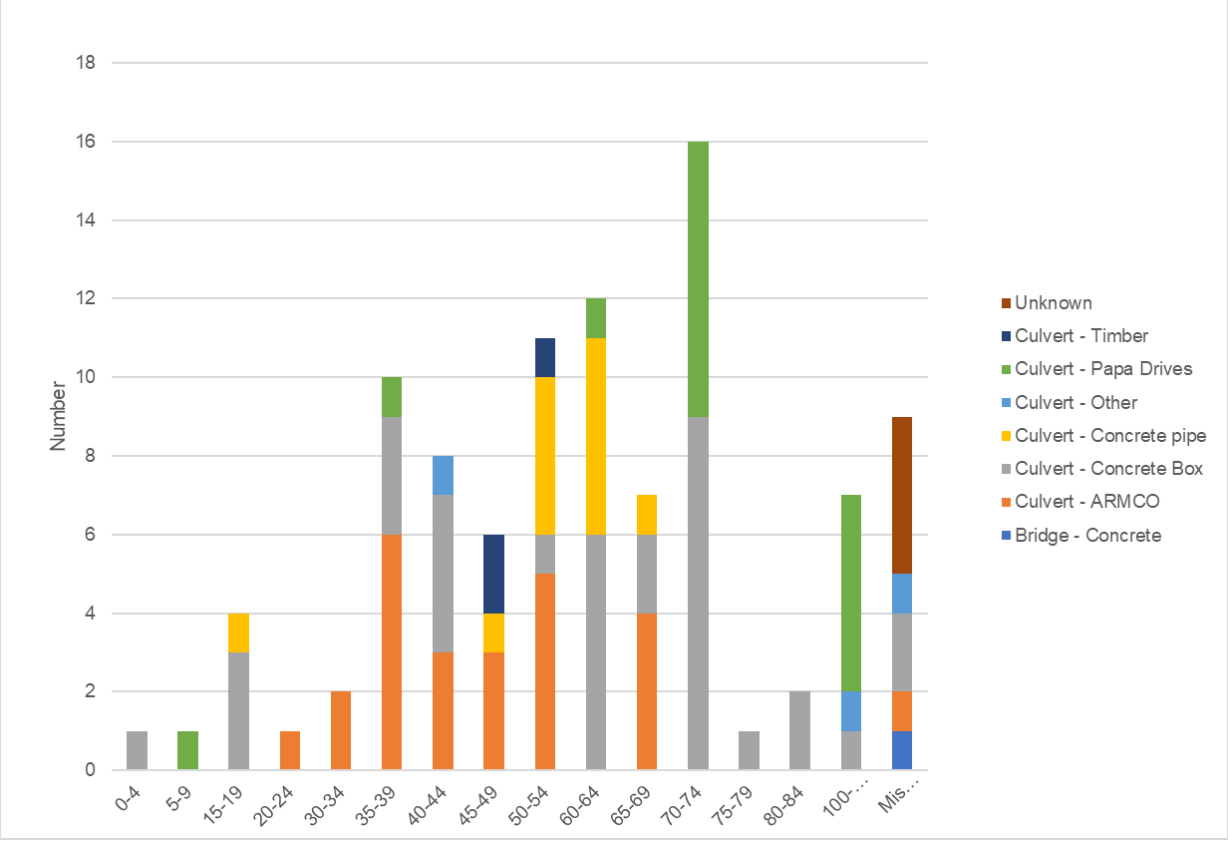


FIGURE D.37: MAJOR CULVERT AGE PROFILE BY TYPE

Source: AMP Tool V1.1 ex RAMM



Retaining Walls

TABLE D-22: RETAINING WALLS AVERAGE AGE AND RUL

Asset Type	Number	Metres	Total Useful Life	Average Age	Average Remaining Useful Life
Retaining Walls					
Block	2	26	100	9	91
Concrete	9	239	100	37	63
Concrete and Steel	1	707	100	15	85
Earth	15	309	80	13	67
Galvanised Steel	7	282	80	13	67
Railway Iron and Sleeper	1	20	50	73	-
Steel	1	17	50	17	33
Steel and Wood	1	16	50	54	-
Stone	186	3,131	50	11	39
Timber	19	429	50	21	29
Willow Logs	1	33	50	23	27
Unknown	39	410	-	14	-
Total	**286**	26	100	9	91

* It should be noted that one stone retaining wall did not have a known age. This was excluded in the calculation of the average age and average RUL shown above.

From the table above it can be seen that there are two retaining walls where the average age is greater than the total useful life. In order to understand the detailed picture an age profile is shown below.

TABLE D-23: RETAINING WALL AGE PROFILE

Asset Type	Quantity		Total Useful Life	Age in Years (Each)*										
	Number	Metres		1-5	6-10	11-15	16-20	21-25	26-50	51-55	56-65	66-70	71-80	>80
Retaining Walls														
Block	2	26	100	-	2	-	-	-	-	-	-	-	-	-
Concrete	9	239	100	-	-	2	1	3	-	-	-	-	-	-
Concrete and Steel	1	707	100	-	-	1	-	-	-	-	-	-	-	-
Earth	15	309	80	-	-	14	1	-	-	-	-	-	-	-
Galvanised Steel	7	282	80	-	1	5	-	1	-	-	-	-	-	-
Railway Iron and Sleeper	1	20	50	-	-	-	-	-	-	-	-	-	-	-
Steel	1	17	50	-	-	-	1	-	-	-	-	-	-	-
Steel and Wood	1	16	50	-	-	-	-	-	-	-	-	-	-	1
Stone	186	3,131	50	21	83	49	23	6	-	-	-	-	-	-
Timber	23	429	50	-	-	12	6	2	1	-	-	-	-	-
Willow Logs	1	33	50	-	-	-	-	1	-	-	-	-	-	-
Unknown	39	410	-	-	25	6	7	-	-	-	-	-	-	-
Nearing or at End of Life	**8**											-	-	1
Total	**286**	**5,619**		**21**	**111**	**89**	**39**	**13**	**1**	**-**	**-**	**-**	**-**	**1**

*note years ages without retaining walls condensed

As noted in section D4.2.3 there is a lack of historical information of rock walls so this may not show the complete picture. There are two retaining walls older than their expected life. There is a need to both confirm that these still exist without improvements since the construction date in RAMM, and to have the condition reviewed.

D04.5.2 Condition

Bridges and Major Culverts

Bridges have been inspected/rated on site after each inspection is conducted. To confirm the condition rating, a formula was applied based on 40 elements rated in the bridge inspection report to calculate the condition rating of the bridge structure. This condition rating is based on a 1 to 5 rating to give an indication of the overall status of the bridge. These ratings are then uploaded into RAMM and have been used to generate the information below.

The method of assigning a rating to each bridge was implemented in 2020, so the number of bridges with an unknown condition below indicates those still to undergo the process. These will be addressed during the next round of inspections.

FIGURE D.38: BRIDGE CONDITION PROFILE

Source: GHD Max.Asset Structures

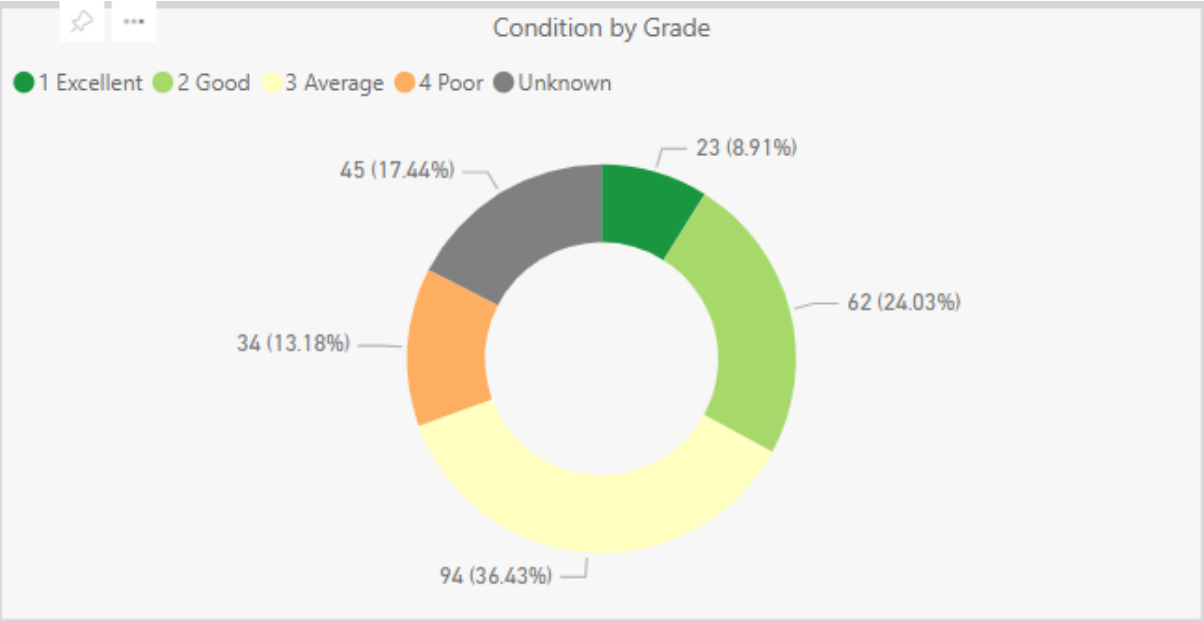


FIGURE D.39: BRIDGE CONDITION PROFILE BY TYPE

Source: GHD Max.Asset Structures

Major Culverts

A rating system (the same as for the bridge's condition rating) was implemented from 2021/2022 for large culvert conditions and is managed in RAMM. Unknowns indicate that the culverts have not been assigned a new rating in the new system yet. This is being progressively addressed as the condition inspections are due.

The table and figure below show the current priority for repair information available.

FIGURE D.40: MAJOR CULVERT CONDITION PROFILE

Source: GHD Max.Asset Structures

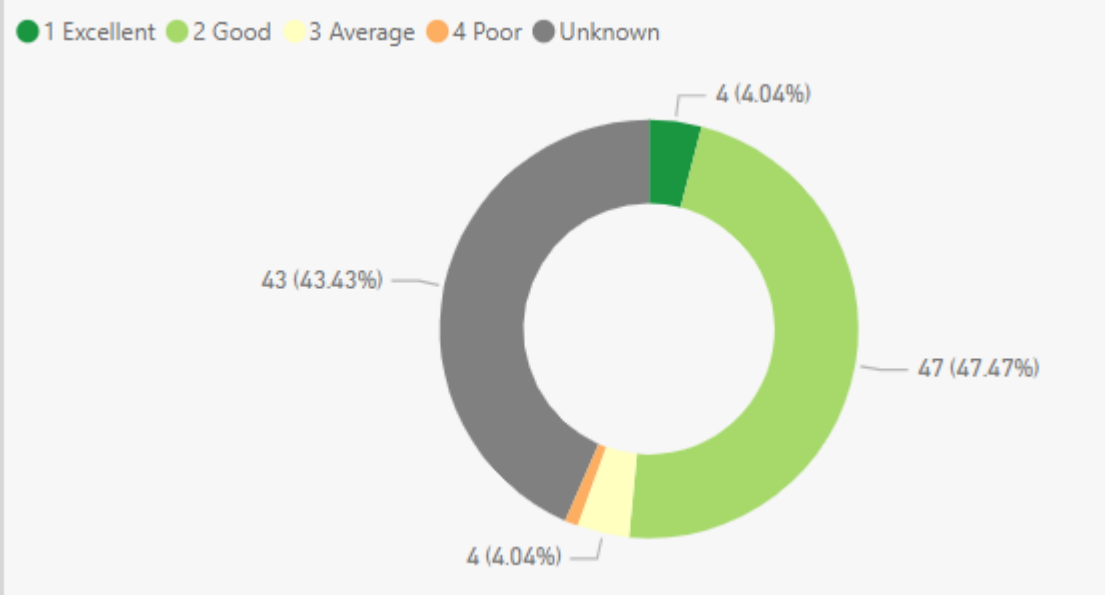
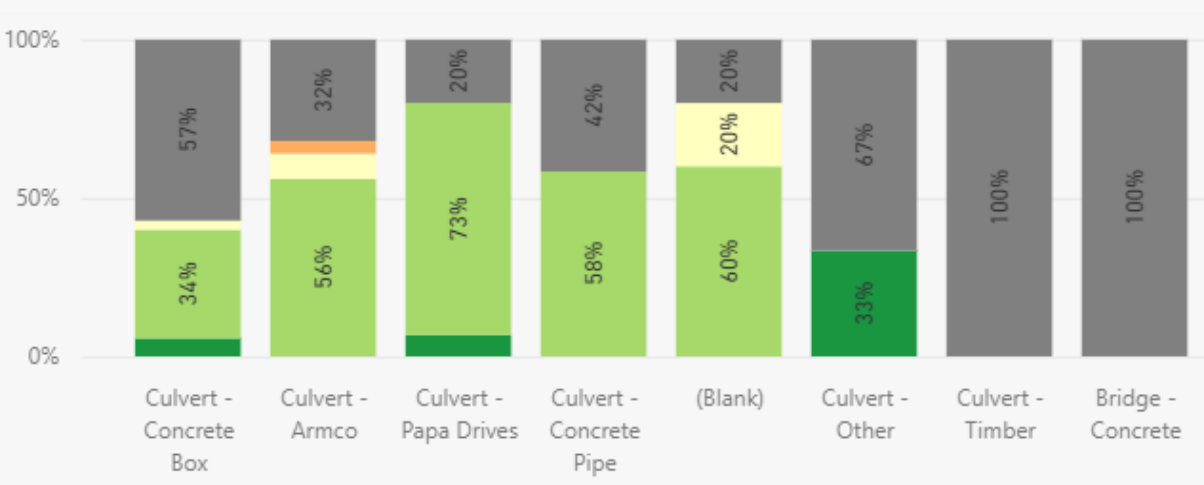


FIGURE D.41: MAJOR CULVERT CONDITION PROFILE BY TYPE

Source: GHD Max.Asset Structures



Retaining Walls

Retaining walls assets in RAMM have no meaningful condition data due to the age of any that are even rated. Most of these are rock walls and timber retaining walls so are managed as they need repair.

Minor Structures

Pedestrian footbridges are included under the road infrastructure bridge inspection program. General inspections are completed on a 2 yearly bridge inspection cycle and Principal inspections on a 6 yearly cycle, resulting in a list of required works to be undertaken.

Dobbs Bluff Netting requires specialised equipment to be installed to access it. It is inspected and repaired by a specialist company every two years.

D04.5.3 Performance

Bridges and Major Culverts

Many of the district's bridges meet the standard to which they were designed and are still performing well within this.

Changing land usage or increased vehicle capacities can lead to a bridge not meeting the customers desired levels of service. Examples are

- Suspension bridges (including height restriction)
- 50MAX Restrictions

Restrictions can leave customers with loss of service.

Retaining Walls

Apart from a few concrete retaining walls that are performing well, this is not relevant for much of this asset type.

Minor Structures

Not relevant for this asset type.

D04.6 Asset Management

D04.6.1 Standards

Inspections are undertaken in accordance with “Bridges and Other Highway Structures: Inspection Policy” (NZTA 2017) and use the NZTA-based inspection forms (S6).

Bridges are inspected and assessed for faults using 40 different criteria to determine the overall condition of the bridge asset in accordance with the Transit New Zealand Bridge Inspection and Maintenance Manual and the NZTA bridge inspection policy. Items requiring remedial work are categorised relative to the severity and extent, being attributed to either a routine maintenance item or to structural defects that may compromise the structural integrity of the bridge.

Weight and Speed Restrictions

A structural assessment of these bridges occurs biennially to determine deterioration and the load carrying capacities relative to the maximum permitted loads which are determined in the Transit New Zealand Bridge Manual as 100% Class 1.

- A 100% Class 1 heavy vehicle represents the maximum legal load for heavy vehicles of various axle configurations. The structural assessment and weight restriction of an existing bridge includes safety factors with the intention of not unduly over-stressing the structure.
- A vehicle exceeding the weight restriction on a bridge may over-stress the bridge but not necessarily cause failure. Repetitive over-stressing of the bridge structure will, however, ultimately lead to failure.

D04.6.2 Strategies and Policies

Bridge renewals are critical to maintain the overall integrity and access across the network. Council has timber bridges that are reaching the end of their design life and a number of other bridges and large culverts will also require renewal over this period. This is a key focus.

Renewal work is managed through a stepped process, where structural component replacement is used where the component can be replaced, then speed and weight restrictions are used to reduce the load and stress on the bridge, then renewal if capacity and condition can not be managed by the previous methods.

D04.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D04.6.4 Delivery

The structures assets activities are delivered under the current council contracts as outlined in the table below.

Activity Type	Activity	Delivery Method
Operations	Bridge - BMP Cleaning	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Bridge - Cleaning	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Bridge - Sweeping	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Bridge - Vegetation Control	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Retaining Walls - Inspections	Professional Services Contract
Maintenance	Bridge - Railing Replacement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Drainage Maintenance	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Rail Painting	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Railing Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Safety Features	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Structure Painting	New Contracts
Maintenance	Bridge - Urgent Work	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Bridge - Watercourse Alignment	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Dobbs Bluff Netting - Inspect and Repair	Procured as required
Renewals	Bridge - Renewal	Capital Bridge Repairs Contract
Renewals	Bridge - Structural Component Replacement	Capital Bridge Repairs Contract

Inspections are carried out under the Professional services contract and further detail is in section D12.

D04.7 Operations

D04.7.1 Activities

Operational Activities for Bridges

- Cleaning
- Vegetation Control
- Sweeping
- Cleaning BMP
- Urgent work - all immediate response urgent work on bridges and culverts for whatever reason, eg vehicle damage to a bridge.

D04.7.2 Plan

Roadmen undertake bridge and major culvert operational activities as part of their routine patrols.

D04.8 Maintenance

D04.8.1 Activities

Routine maintenance of the bridge structure and safety features of the bridge, including weight and speed restriction signs and all reflective safety aids on the bridge structure ends. Maintenance includes:

- Repairing/ replacing damaged components, e.g. handrails and guardrails
- Maintaining drainage
- Watercourse alignment
- Painting railings
- Structural painting

D04.8.2 Plan

Maintenance programmes are prepared from the schedules of defects identified during the inspections. Repair treatments and priorities are determined by considering the impact on:

- Public safety (top priority).
- Traffic movement.
- Future costs if the work is not done.

Patrolmen undertake some maintenance activities as part of their routine patrols.

Deferred Maintenance

There is a significant backlog of routine maintenance ranging from bridge structural painting to upgrading under strength structural components. This is now being addressed through an increase in budgets. The programme is currently being assessed for resource consent conditions and is subject to Regional Council approval of the works in rivers.

D04.9 Renewals

D04.9.1 Activities

Weight restrictions and freight need are taken into account when justifying replacements economically.

The overall objective is to steadily renew assets considering the following:

- The age profile
- The condition profile
- The level of on-going maintenance
- The economic lives of the materials used
- Financial and customer risks

Renewals are reviewed regularly, with any deferred work re-prioritised alongside new renewal projects and a revised programme established where required.

Bridges require ongoing maintenance and renewal to help ensure that they continue to perform and meet their design life expectancy. However, this does not increase the design life, as all components weaken with age. Therefore, it becomes necessary to programme bridges for replacement and renewal based on their condition. See Asset performance section for more details.

Council has increased its structural component expenditure in this AMP period to address deferred works.

D04.9.2 Plan

There are no bridge renewals programmed for 2024-2027.

Deferred Renewals

These works were deferred from the previous programme, largely due to the ongoing consenting process. They have been incorporated into this programme of works.

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

Council is reviewing its structures deferred renewals alongside its component replacement programme as many of its structures are not economic to replace.

D04.10 Development Works

The development activity can significantly improve an existing asset or network as well as creating new assets.

Note that the renewals activity allows for replacements to have some minor improvements or significant improvements when it utilises current technology or standards.

Also note that Council can sometimes receive a new structure or asset through the vesting process in accordance with the District Plan.

D04.10.1 Activities

The replacement and upgrading of structures to meet current needs and expectations.

D04.10.2 Plan

No road structures development works are planned between 2024/25 and 2026/27.

Both the Matahiwi Track Suspension bridge and the development of a stock truck effluent disposal site in Taumarunui have been pushed out to 2027/28.

There is the possibility that additional structures will be vested from a subdivision. The condition of vesting will be that they meet an agreed specification before Council receives ownership.

D04.11 Disposal Plan

Council has 24 bridges on the unmaintained sections of the network. These bridges represent a risk to council and need careful management. Council prefers to transfer ownership and risk to those receiving benefit from the bridge. Where Council cannot find a willing owner, then removal is Council's preferred option. Where there is no public benefit Council should not spend public money to maintain the bridge. Council will develop a disposal plan to transfer ownership and risk to another party or to remove the bridge physically. There are likely to be more bridges than Council is aware of.

The bridges that Council are aware of are listed in Appendix G.

D04.12 Funding Request

Road Structures can be funded by the following NZTA Work Categories:

- WC 114: Structures maintenance
- WC 215: Structures component replacements
- WC 216: Bridge and structure renewals
- WC 322: Replacement of bridges and structures
- WC 323: New roads
- WC 324: Road improvements (for new structures)
- WC 357: Resilience improvements

Additional funding is also requested via the Low cost low risk work category and is documented in the Networks Lifecycle section (D02).

There are financial implications to upgrading weight and speed restricted bridges. In most situations it will mean the renewal or upgrading of the structure. Funding may be available from NZTA if the financial analysis meets NZTA’s requirements. Funding is allowed for in this plan under the Structural Component replacement category.

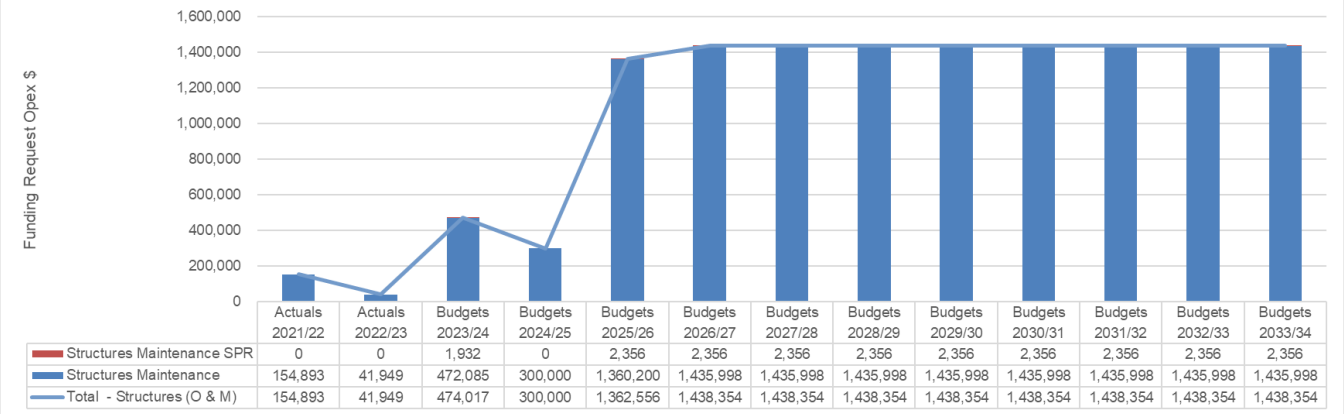
Land owner contribution is a possibility to raising the priority or type of the bridge works.

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District’s Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars. Note that SPR Budgets were included in Local Road budgets in Year one only.

FIGURE D.42: STRUCTURE HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Direct Cost														
Structures Maintenance	154,893	41,949	472,085	300,000	1,360,200	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	13,148,181
Structures Maintenance SPR	0	0	1,932	0	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	21,204
Direct Cost To	154,893	41,949	474,017	300,000	1,362,556	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	13,169,385
Grand Total	**154,893**	**41,949**	**474,017**	**300,000**	**1,362,556**	**1,438,354**	**1,438,354**	**1,438,354**	**1,438,354**	**1,438,354**	**1,438,354**	**1,438,354**	**1,438,354**	**13,169,385**

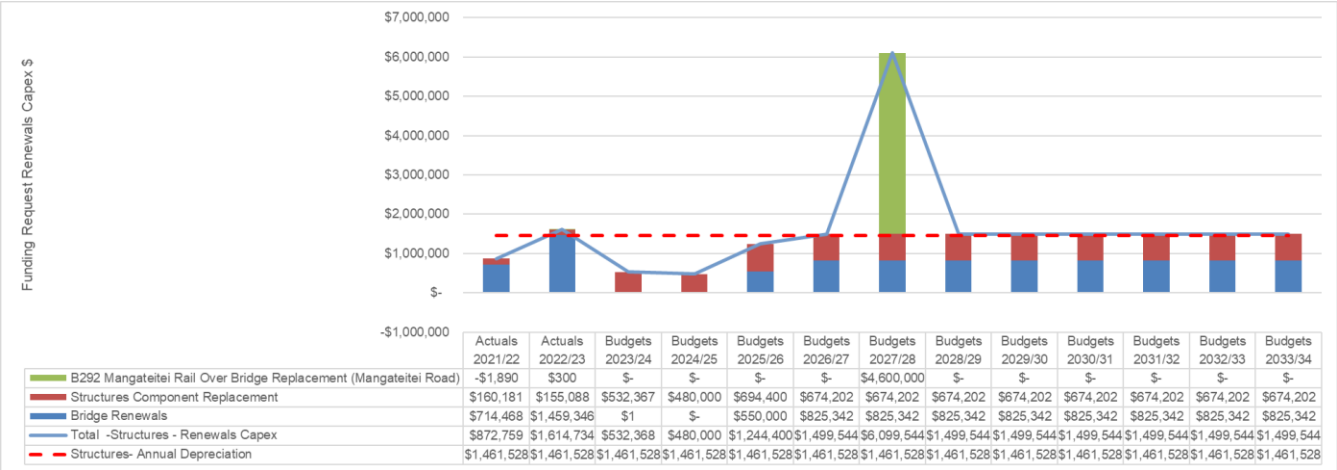


	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Structures Maintenance SPR	0	0	1,932	0	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356
Structures Maintenance	154,893	41,949	472,085	300,000	1,360,200	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998
Total - Structures (O & M)	154,893	41,949	474,017	300,000	1,362,556	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354

There is a significant increase in structures operations and maintenance budget due to the inclusion of a bridge painting programme for the first time. This was deferred from 2021/24 due to both budget and consent issues.

FIGURE D.43: STRUCTURES HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $

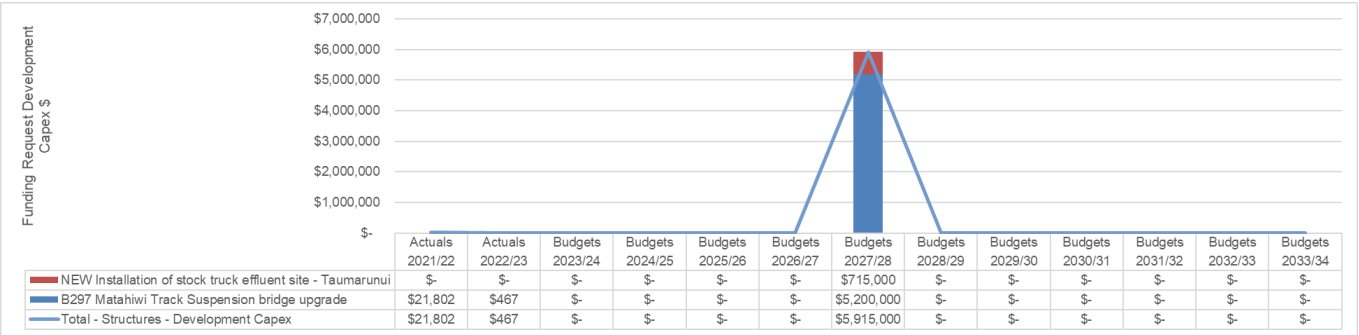
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
B292 Mangateitei Rail Over Bridge Replacement (Mangateitei Road)	-1,890	300	0	0	0	0	4,600,000	0	0	0	0	0	0	4,600,000
Bridge Renewals	714,468	1,459,346	1	0	550,000	825,342	825,342	825,342	825,342	825,342	825,342	825,342	825,342	7,152,736
Structures Components Replacements	160,181	155,088	532,367	480,000	694,400	674,202	674,202	674,202	674,202	674,202	674,202	674,202	674,202	6,568,013
Renewal Total	872,759	1,614,734	532,368	480,000	1,244,400	1,499,544	6,099,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	18,320,749



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
B292 Mangateitei Rail Over Bridge Replacement (Mangateitei Road)	-$1,890	$300	$-	$-	$-	$-	$4,600,000	$-	$-	$-	$-	$-	$-
Structures Component Replacement	$160,181	$155,088	$532,367	$480,000	$694,400	$674,202	$674,202	$674,202	$674,202	$674,202	$674,202	$674,202	$674,202
Bridge Renewals	$714,468	$1,459,346	$1	$-	$550,000	$825,342	$825,342	$825,342	$825,342	$825,342	$825,342	$825,342	$825,342
Total -Structures - Renewals Capex	$872,759	$1,614,734	$532,368	$480,000	$1,244,400	$1,499,544	$6,099,544	$1,499,544	$1,499,544	$1,499,544	$1,499,544	$1,499,544	$1,499,544
Structures- Annual Depreciation	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528	$1,461,528

FIGURE D.44: STRUCTURES HISTORICAL AND PROJECTED CAPITAL LEVEL OF SERVICE WORKS EXPENDITURE $

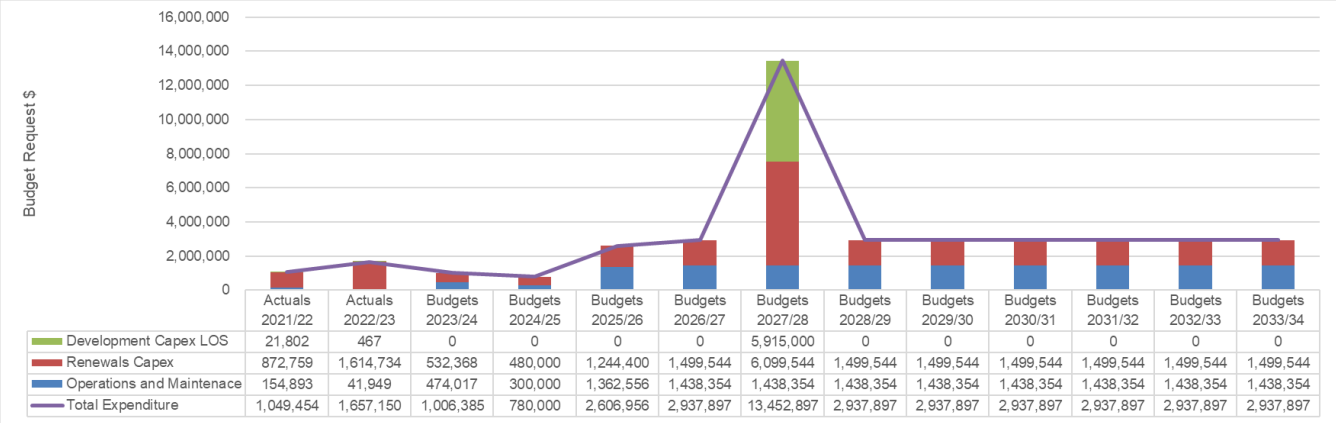
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
LOS														
B297 Matahiwi Track Suspension bridge upgrade	21,802	467	0	0	0	0	5,200,000	0	0	0	0	0	0	5,200,000
NEW Installation of stock truck effluent site - Taumarunui	0	0	0	0	0	0	715,000	0	0	0	0	0	0	715,000
LOS Total	**21,802**	**467**	**0**	**0**	**0**	**0**	**5,915,000**	**0**	**0**	**0**	**0**	**0**	**0**	**5,915,000**
Grand Total	**21,802**	**467**	**0**	**0**	**0**	**0**	**5,915,000**	**0**	**0**	**0**	**0**	**0**	**0**	**5,915,000**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
NEW Installation of stock truck effluent site - Taumarunui	$-	$-	$-	$-	$-	$-	$715,000	$-	$-	$-	$-	$-	$-
B297 Matahiwi Track Suspension bridge upgrade	$21,802	$467	$-	$-	$-	$-	$5,200,000	$-	$-	$-	$-	$-	$-
Total - Structures - Development Capex	$21,802	$467	$-	$-	$-	$-	$5,915,000	$-	$-	$-	$-	$-	$-

FIGURE D.45: STRUCTURES HISTORICAL AND PROJECTED COMBINED EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
LOS	21,802	467	0	0	0	0	5,915,000	0	0	0	0	0	0	5,915,000
Opex	154,893	41,949	474,017	300,000	1,362,556	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	13,169,385
Renewal	872,759	1,614,734	532,368	480,000	1,244,400	1,499,544	6,099,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	18,320,749
Grand Total	**1,049,454**	**1,657,150**	**1,006,385**	**780,000**	**2,606,956**	**2,937,897**	**13,452,897**	**2,937,897**	**2,937,897**	**2,937,897**	**2,937,897**	**2,937,897**	**2,937,897**	**37,405,134**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Development Capex LOS	21,802	467	0	0	0	0	5,915,000	0	0	0	0	0	0
Renewals Capex	872,759	1,614,734	532,368	480,000	1,244,400	1,499,544	6,099,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544
Operations and Maintenace	154,893	41,949	474,017	300,000	1,362,556	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354
Total Expenditure	1,049,454	1,657,150	1,006,385	780,000	2,606,956	2,937,897	13,452,897	2,937,897	2,937,897	2,937,897	2,937,897	2,937,897	2,937,897

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D05 DRAINAGE

D05.1 Purpose and Strategic Case Link

The purpose of the drainage activity is:

Support the movement of water away from the road network to provide protection to the integrity of the road pavements, assets, property and to provide a safe travel experience.

Support the safe use of the road network during rain events and to provide protection to road pavements and property from flooding

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	Active forestry sites and mining result in the deforestation of areas that can lead to landslips or forestry slash that can impact on the ability of the drainage system to cope with high water flow events.
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Drainage reduces the likelihood of short term inundation and potential damage to the network during rain events and hence maintains the road users ability to travel as required.
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	The District's steep topography makes it prone to slip damage and washouts. Drainage infrastructure is essential for reducing the network's vulnerability to flood damage.
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Drainage reduces the likelihood of short term inundation and potential damage to the network during rain events and hence maintains the road users ability to travel as required.

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Drainage reduces the likelihood of short term inundation and potential damage to the network during rain events and hence maintains the road users ability to travel as required.
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	Adequate drainage reduces the damage to the network, reducing the time and effort to restore any damage after a weather event
Safety	How users experience the safety of the road	Adequate Drainage reduces the flooding during a weather event, improving the safety of road users who have to travel during the event. Adequate Drainage reduces damage to the network during a weather event, hence maintaining safer roads for road users immediately after an event.
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Adequate Drainage reduces damage to the network during a weather event, hence maintaining ride comfort of road users. Drainage Operational activities of sweeping and cleaning maintain the cleanliness of the District
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Adequate Drainage reduces the damage to the network during rain events and hence maintains the road users availability to travel to all parts of the district. Noting that there are portions of the district with either no alternative access, or long detours for access.

D05.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include

- Providing sustainable and resilient infrastructure
- Maintain network so that service capacity and integrity is not reduced

D05.3 Assets to be Managed

D05.3.1 Asset Description

Drainage assets managed under the Land Transport Activity include:

- Minor Culverts
- Open Drains
- Sumps
- Kerb & Channels

Note that culverts, with a cross-sectional area greater than 3.4m^2, are called ‘major culverts’, and are managed as bridges under Road Structures.

Note most of the catchpits, sumps, manholes and soak pits are urban drainage and as such are managed under the Stormwater Activity with a small number in rural areas maintained under the Land Transport Activity.

Drainage assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Drainage - culverts and point drainage assets
- Surface Water Channel

Note that asset data will be moved to new User Defined Tables (UDTs) in RAMM as part of the Asset Management Data Standard (AMDS) implementation process. The above RAMM table references will therefore be out of date once the AMDS implementation has been completed for Council in 2026.

TABLE D-24: DRAINAGE ASSET QUANTITIES

Asset Type	Quantity		Urban / Rural		ONRC Classification				
	Number	Metres	Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)	No ONRC Class Assigned (Each)
Minor Culverts									
Total - Culvert	8,646	91,999	250	8,396	82	409	2,024	6,130	0
Total - Side Culvert	110	1,006	36	74	0	15	30	65	0
Total Culverts	**8,756**	**93,006**	**286**	**8,470**	**82**	**424**	**2,054**	**6,195**	**0**
Other Drainage									
Catchpit type 1	80		72	8	2	15	28	35	0
Catchpit type 2	21		19	2	0	1	9	11	0
Debris catching grid	7		0	7	6	0	1	0	0
Drop Chamber	368		4	364	1	37	164	166	0
Flume down batter	21		0	21	0	1	7	13	0
Manhole	78		36	42	1	7	27	43	0
Manhole Sump	3		2	1	0	0	0	3	0
Other	4		3	1	0	1	1	2	0
Scour Protection	9		0	9	0	3	6	0	0
Side drain	251		56	195	0	11	47	193	0
Soak pit	8		6	2	0	0	0	8	0
SOCK	2		0	2	0	0	2	0	0
Subsoil drain	53		1	52	0	8	36	9	0
Sump	570		553	17	6	101	128	323	12
Total Other Drainage	**1,475**		**752**	**723**	**16**	**185**	**456**	**806**	**12**
Total Drainage	**10,231**		**1,038**	**9,193**	**98**	**609**	**2,510**	**7,001**	**12**

TABLE D-25: SURFACE WATER CHANNEL ASSET QUANTITIES

Asset Type	Quantity		Urban / Rural		ONRC Classification				
	Number	Metres	Urban (Each)	Rural (Each)	Primary Collector (Each)	Second-ary Collector (Each)	Access (Each)	Low Volume (Each)	No ONRC Class Assigned (Each)
Kerb and Channel									
Dished Channel (Concrete)	48	3,589	34	14	11	11	15	10	1
Kerb & Channel (Concrete)	749	108,284	733	16	10	138	195	361	45
Kerb & Dished Channel (Concrete)	1	175	0	1	1	0	0	0	0
Kerb Only (Concrete)	67	4,039	66	1	2	6	15	43	1
Mountable Kerb & Channel (Concrete)	127	17,655	111	16	3	14	30	71	9
Mountable Kerb Only (Concrete)	3	46	3	0	0	1	2	0	0
Other Type	1	35	0	1	0	0	0	1	0
SWC (Deep, >200 Below Seal Edge)	833	577,646	108	725	7	87	315	424	0
SWC (Shallow, <200 Below Seal Edge)	1,181	813,057	104	1,077	11	44	256	867	2
Total Kerb and Channel	**3,010**	**1,524,526**	**1,159**	**1,851**	**45**	**301**	**828**	**1,777**	**58**

Assets shown as no ONRC class assigned are Council owned assets on road carriageways not owned by council. Currently only Council owned carriageways have an ONRC classification.

D05.3.2 Asset Values

Drainage assets form 12.7% ($71.8M) of the total Land Transport Activity value (Replacement cost) and 16% ($0.9M) of the annual depreciation.

The Council's Land Transport assets have been valued as at 30 June 2023. As part of this process the following are calculated and shown in the tables below:

- RC = Replacement Cost
- DRC = Depreciated Replacement Cost
- AD = Annual Depreciation

TABLE D-26: DRAINAGE ASSET VALUES

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Minor Culverts					
Culvert	8,646	91,999	34,778,207	15,084,410	436,770
Side Culvert	110	1,006	0	0	0
Total Culverts	**8,756**	**93,006**	**34,778,207**	**15,084,410**	**436,770**
Other Drainage					
Catchpit type 1	80		8,869	5,986	111
Catchpit type 2	21		0	0	0
Debris catching grid	7		14,483	5,769	724
Drop Chamber	368		0	0	0
Flume down batter	21		12,944	9,211	185
Manhole	78		0	0	0
Manhole Sump	3		0	0	0
Other	4		5,009	2,820	63
Scour Protection	9		0	0	0
Side drain	251		690,762	238,826	8,635
Soak pit	8		10,018	7,928	125
SOCK	2		726	169	48
Subsoil drain	53		168,712	137,661	2,109
Sump	570		713,799	276,679	8,922
Total Other Drainage	**1,475**	**0**	**1,625,322**	**685,049**	**20,922**
Total Drainage	**10,231**	**93,006**	**36,403,529**	**15,769,459**	**457,692**

TABLE D-27: KERB AND CHANNEL ASSET VALUES

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Kerb and Channel					
Dished Channel (Concrete)	48	3,589	779,158	382,153	9,739
Kerb & Channel (Concrete)	749	108,284	27,914,863	10,594,851	348,936
Kerb & Dished Channel (Concrete)	1	175	37,036	30,246	463
Kerb Only (Concrete)	67	4,039	480,601	169,015	6,008

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Mountable Kerb & Channel (Concrete)	127	17,655	4,565,178	2,432,773	57,065
Mountable Kerb Only (Concrete)	3	46	5,474	4,185	68
Other Type	1	35	4,165	1,432	52
SWC (Deep, >200 Below Seal Edge)	833	577,646	3,657,349	1,277,245	45,717
SWC (Shallow, <200 Below Seal Edge)	1,181	813,057	5,145,280	1,773,179	64,316
Total	**3,010**	**1,524,526**	**42,589,104**	**16,665,079**	**532,364**

D05.4 The Need for Investment

D05.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D07.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
Maintain level of service capacity	Armco Culverts Armco culverts are rusting out at the bottom before achieving their expected life.	Programme approach	Maintenance activity to line culvert to increase life. Replace on as required basis.
Network safety and resilience – planning and targeted improvements	Undersize Culverts When a culvert is undersized it becomes more easily blocked due to ● Metal which travels off unsealed roads ● Sticks and debris blocking entrances or becoming jammed in the pipe Currently 42 % of Culverts are less than or equal the 375mm min diameter desired.	Level of service adjustment	Increase culvert capacity during renewals using current best practices and standards.

Strategic Response	Key Issue	Response Type	Strategies to Address
Network safety and resilience – planning and targeted improvements	Insufficient Culverts on hill country The distance between culverts on rural roads is too large reducing the ability to drain water away from the road. This leads to damage by scouring drainage channels and undermining road pavements.	Level of service adjustment	Decrease distance between culverts during renewals
Network safety and resilience – planning and targeted improvements	Deep drains adjacent to road edge Deep drains adjacent to the road edge are a safety issue, by creating shy lines pushing vehicles closer to the center line or increasing crash damage if entered into. Even if these are not initially deep or close to the road edge scarring can open the drain during weather events.	Level of service adjustment	Continue with programme initiated during the 2018/21 AMP of cleaning and reprofiling road side drains
Network safety and resilience – planning and targeted improvements	Climate change Drainage is expected to need to carry more water per weather event due to global warming due to higher intensity rainfall events and increasing frequency on saturated ground.	Level of service adjustment	Renewed structures to consider increased rainfall or more heavy intensity events due to global warming.
Network safety and resilience – planning and targeted improvements	Fish passages Fish passage is required for all wet culverts. Including the need to retro fit those meeting the criteria	Level of service adjustment	Identify all culverts needing retrofitting for fish passage.
Network safety and resilience – planning and targeted improvements	Culvert network aging Butt joints on older culverts are separating, leading to the end pipe of a culvert falling off. When this happens a full culvert replacement is often the best course of action. As their location is unknown until failure, this leads to the need for unplanned work and prioritising renewal programmes.	Programme approach	The type of butt joint culverts that are failing are no longer constructed. Current pipes are manufactured as socket joints with rubber rings. This issue should decrease over time.

Strategic Response	Key Issue	Response Type	Strategies to Address
Advocacy and Relationships	Lack of drainage on adjacent land in the flat river valleys Council maintains drainage on the road corridor, if there is no drainage on adjacent land the road becomes ● flooded during weather event ● Due to silting the corridor is often below the adjacent land so acts as a drain during flooding damaging the pavement	Policy approach	Need to work with adjacent land owners to provide a channel to drain the road corridor. Research what compliance enforcement can be undertaken. (Land Drainage Act 1908)
Advocacy and Relationships	Forestry Slash During weather events forestry slash has washed off the hills, blocking drains and leading to flooding.	Policy approach	Work with the Regional Council, forestry owners and harvesters to make sure the slash is managed in a way that it cannot be washed into the waterways during weather events. NPS rules should help this decrease over time.
Advocacy and Relationships	Forestry slash During weather events forestry slash has washed off the hills, blocking drains and leading to flooding.	Policy approach	Work with the Regional Council, forestry owners and harvesters to make sure the slash is managed in a way that it cannot be washed into the waterways during weather events.

D05.5 Asset Performance

D05.5.1 Historical Commentary

Council currently has a culvert network which in some cases is undersized and or lacks capacity. Council aims to bring the minimum culvert size across the district up to 375mm as a minimum as renewals are undertaken. This will increase the resilience of the network to the steadily increasing higher intensity rainfall events, by increasing the culvert capacity by approximately 175%. This assumption is based on the fact that 80% of the culverts less than 375mm have a diameter of 225mm.

Below is a breakdown of the current culvert sizes on the network.

Note: Where Culvert owner is Local Authority, drain type is Culvert, side culvert, outlet culvert, side drain (not natural ground)

TABLE D-28: CULVERTS BY SIZE

Culvert Diameter	Quantity (No)	Length (metres)
X <= 370mm	3,624	34,356
370mm < X <= 450mm	3,939	42,307
450mm < X <= 600mm	431	5,676
600mm < X <= 1000mm	421	6,040
1000mm < X <= 2000mm	343	4,958
2000mm < X	71	1,234
Total	**8,829**	**94,571**

ARMCO culverts have not been achieving their expected life due to the nature of local soils.

TABLE D-29: CULVERTS BY TYPE BY MATERIAL

Asset Type	Quantity	
Culvert Material	**Number**	**Metres**
Culvert		
Aluminium	126	1,255
Armco	259	3,037
Asbestos cement	71	729
Concrete	8,021	85,239
Earthenware	63	546
H Density Polyethyl	30	511
HELCOR STEEL PIPES	5	64
Natural Ground	62	1,094
Other	10	112
Poly Vinyl Chloride	42	570
Steel	14	125
Timber construction	10	120
Total - Culvert	**8,713**	**93,403**
Culvert Material	**Number**	**Metres**
Culvert side		
Concrete	106	870.8
H Density Polyethyl	5	127.6
Poly Vinyl Chloride	2	61
Steel	3	21.5
Total - Side Culvert	**116**	**1,080.9**
Total	**8,828**	**94,483.9**

It is noted that differences in the quantities in these two tables is a result of a missing culvert material type and diameter.

Improvements have systematically been made to surface water drainage over the last ten years through regular cleaning and re-profiling programmes of deep water channels located close to road carriageways. This, where possible, increases the distance to the road edge and reduces the depth of the channel. This improves safety as there is less likelihood of vehicles entering the channel or the road being undermined during weather events.

Council reinstated a water channel reprofiling programme in 2018 to systematically clean and reprofile all deep drains close to the road edge, while also handling emergencies as needed. This has had good results but was not able to be kept going due to higher budget priorities. It remains a programme Council would like to reinstate, as the network geology and topography make it vulnerable to water related weather events.

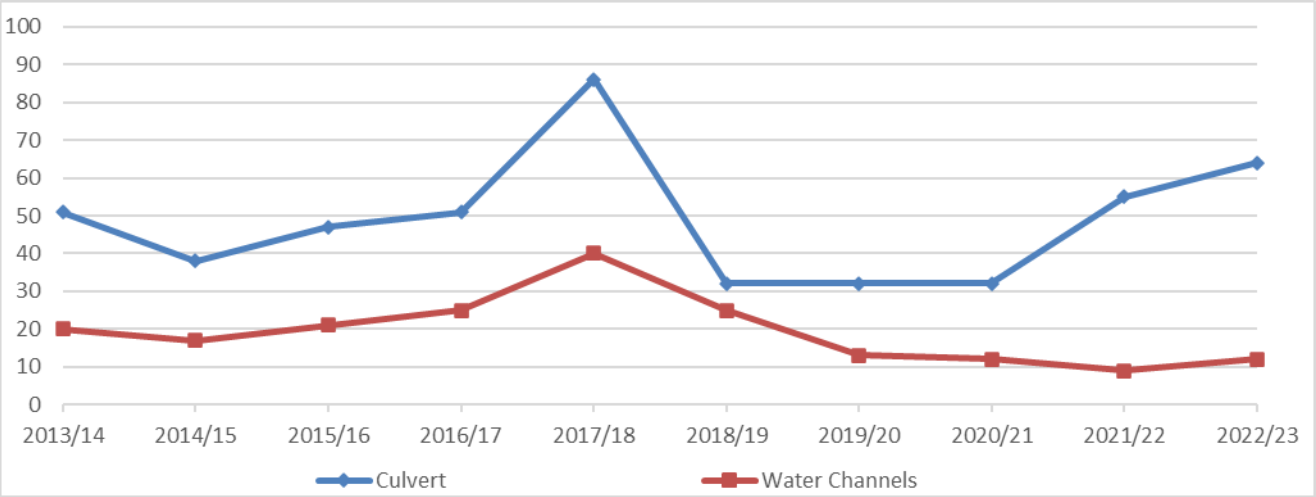
A systematic culvert flushing programme began in the 2021/24 block, combined with an increased focus on routine inlet and outlet maintenance. This continues in the 2022 Road Maintenance Contract. Council saw a drop in emergency event damage in the corresponding time period.

D05.5.2 Levels of Service

Service Calls

Calls relate to both maintenance and infrastructure issues. A culvert inspection programme informs forward work.

FIGURE D.46: DRAINAGE SERVICE CALLS



SIGNIFICANT LOS CHANGE

No significant change has been made by Council to drainage based LoS in recent history. However, climate change resilience and increased NIWA rainfall data has impacted on culvert size requirements. Fish passages are another level of service change required by the Regional Council.

D05.5.3 Asset Performance

D05.5.4 Age Profile / Remaining Useful LIfe (RUL)

The tables below show the average age and remaining useful life(RUL) of each asset type.

It should be noted that where an asset doesn't have a construction date its RUL is calculated initially using a default date defined in the valuation module for the assets valuation rule. As noted in section D5.3.3, construction date completeness is a data accuracy issue.

Due to the lack of age information the following calculation has been used

Average Age = Total Useful Life - Average RUL

TABLE D-30: CULVERTS BY TYPE BY MATERIAL: DRAINAGE ASSET AGE INFORMATION

Asset Type	Number	Metres	Total Useful Life	Average Age	Average RUL
Minor Culverts					
Culvert	8,646	91,999	80	42	38
Side Culvert	110	1,006	80	19	61
Total Culverts	**8,756**	**93,006**			
Other Drainage					
Catchpit type 1	80		80	14	66
Catchpit type 2	21		80	28	52
Debris catching grid	7		20	10	10

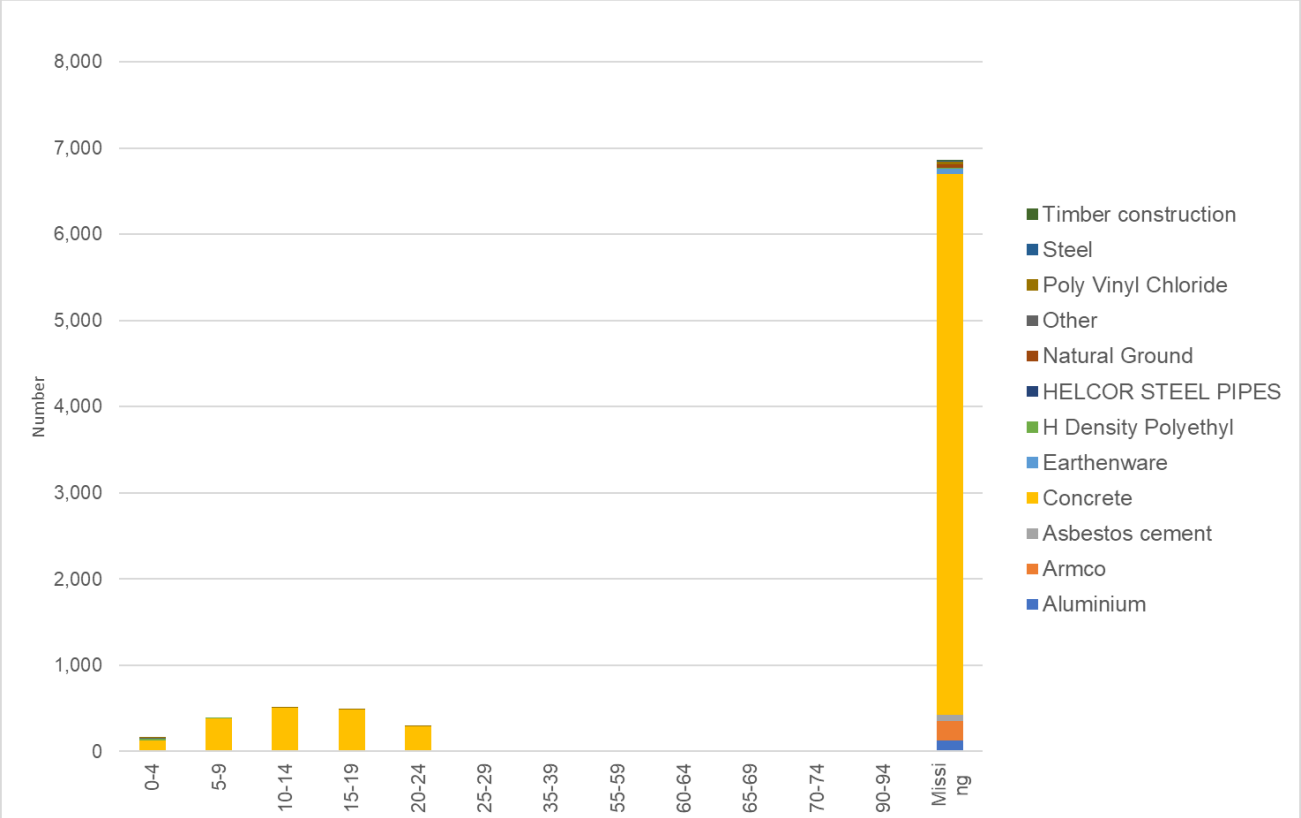
Asset Type	Number	Metres	Total Useful Life	Average Age	Average RUL
Drop Chamber	368		80	38	42
Flume down batter	21		70	21	49
Manhole	78		80	29	51
Manhole Sump	3		80	38	42
Other	4		80	32	48
Scour Protection	9		80	13	67
Side drain	251		80	49	31
Soak pit	8		80	14	66
SOCK	2		15	9	6
Subsoil drain	53		80	13	67
Sump	570		80	47	33
Total Other Drainage	**1,475**	**0**			

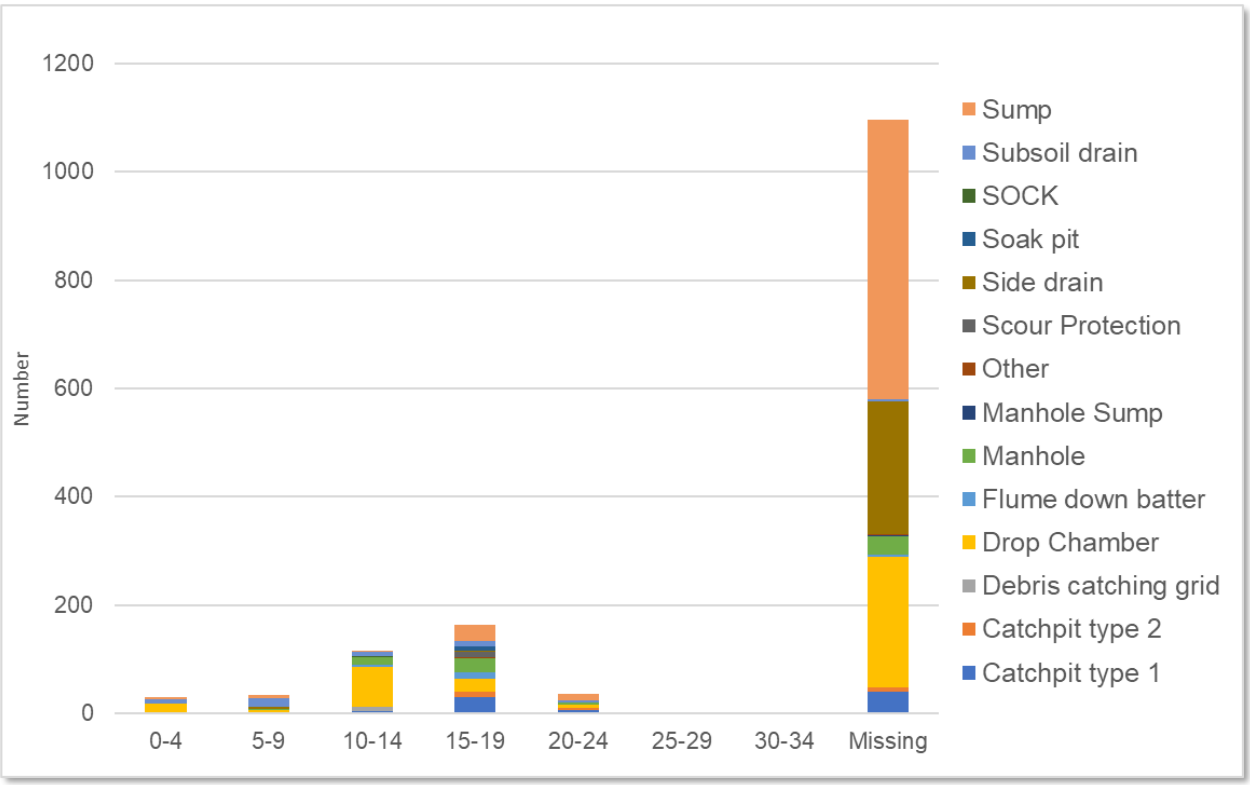
TABLE D-31: SURFACE WATER CHANNEL ASSET AGE INFORMATION

Asset Type	Number	Metres	Total Useful LIfe	Average Age	Average RUL
Kerb and Channel					
Dished Channel (Concrete)	48	3,589	80	37	43
Kerb & Channel (Concrete)	749	108,284	80	46	34
Kerb & Dished Channel (Concrete)	1	175	80	13	67
Kerb Only (Concrete)	67	4,039	80	50	30
Mountable Kerb & Channel (Concrete)	127	17,655	80	39	41
Mountable Kerb Only (Concrete)	3	46	80	17	63
Other Type	1	35	80	50	30
SWC (Deep, >200 Below Seal Edge)	833	577,646	80	48	32
SWC (Shallow, <200 Below Seal Edge)	1,181	813,057	80	49	31
Total	**3,010**	**1,524,526**			

The graphs below show the average age of assets.

FIGURE D.47: CULVERT AGE PROFILES





There is a lot of missing age data. This will be investigated through our Improvement Plan.

The profiles indicate that of the known ages, most asset types have a reasonable profile with none showing a limited average RUL. However, the amount of missing data indicates a degree of uncertainty.

D05.5.5 Condition

While the condition of minor culverts is known to some extent, there is no formal condition rating taking place for other drainage assets and surface water channels. Drainage inspections record condition ratings into RAMM based on the maintenance condition. New culverts are entered with a rating of excellent. The figure below shows the current condition rating profile in RAMM; it indicates that 29% of culverts have an unknown condition rating. This is being addressed through the two yearly drainage inspection programme in the 2022 District Road Maintenance Contract.

FIGURE D.48: MINOR CULVERT CONDITION PROFILE

Source: GHD MAX Asset Management ex RAMM

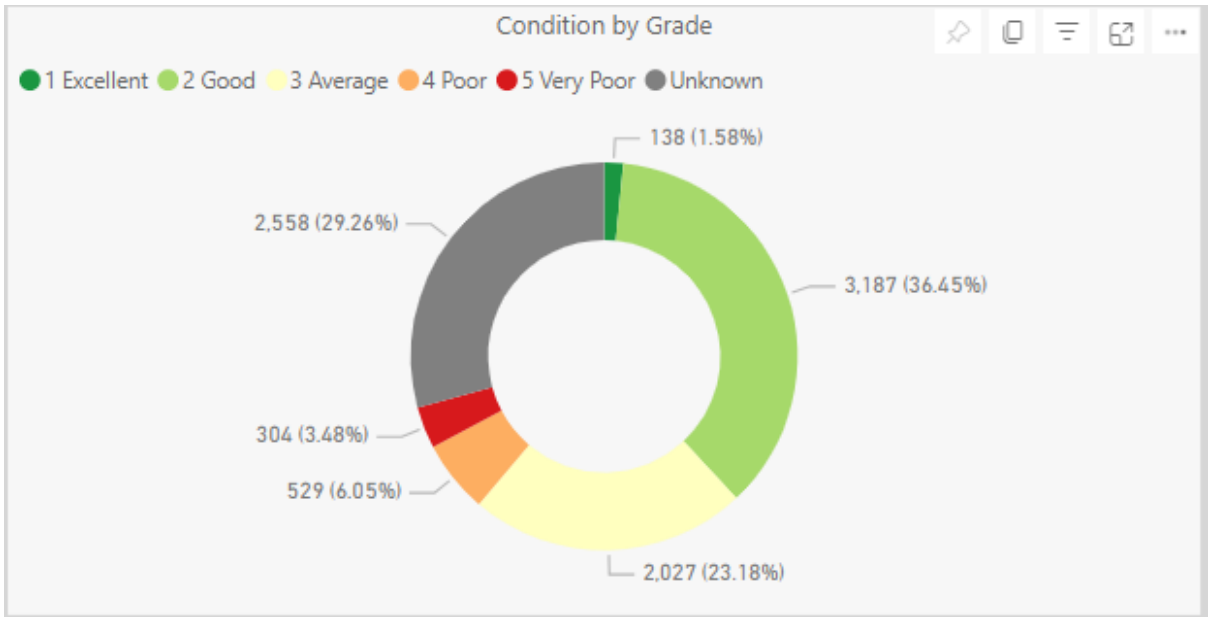
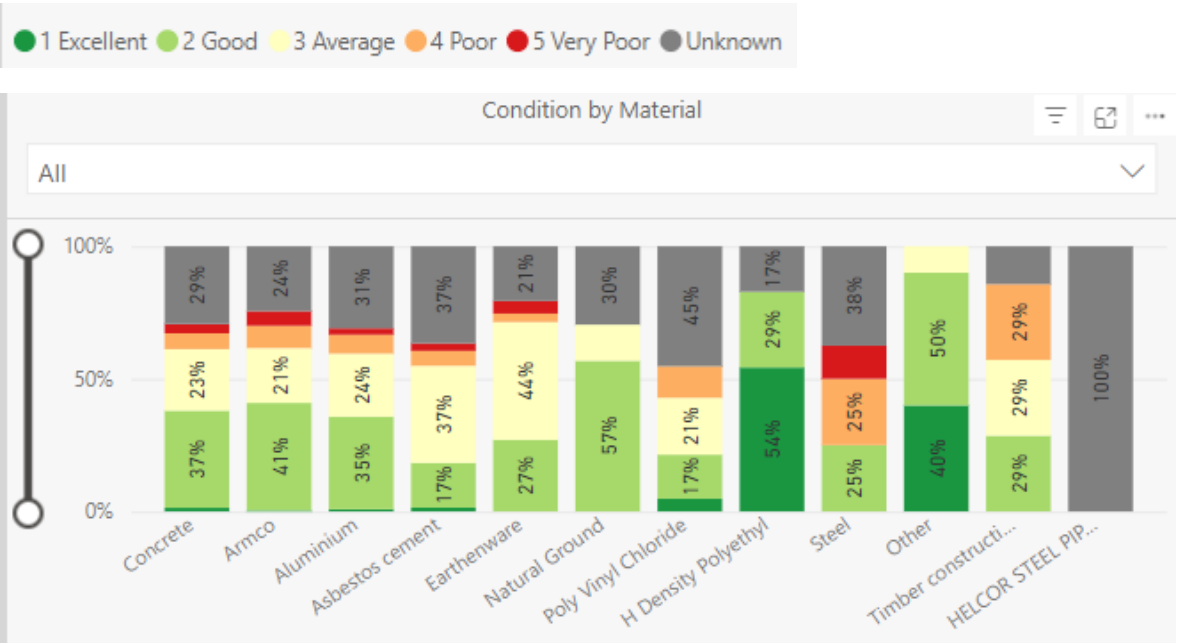


FIGURE D.49 CONDITION PROFILE OF MINOR CULVERTS BY MATERIAL

Source: GHD MAX Asset Management ex RAMM



D05.5.6 Performance

Culverts within the district generally have performed well and cope with flows during minor rain events. Blockages of the smaller culverts are typically caused by sticks and leaves during autumn and road gravel migration during heavy rain events. Some of the poor condition culverts are due to pipe segments being misaligned, however, the culvert barrels are clear of obstruction and provide a free flow of water during the rain events.

Armco and Helcor steel pipe performance has been poor within the district, as the chemical makeup of the soils reacts with the metal accelerating corrosion. In some areas, the bottom of the pipe has rusted out in the wetted flow area within 10 years of installation, causing undermining and washouts of the outlets.

In the flatter river valleys and market gardening areas, the outlet drainage channels through private farmland have not been maintained by the owner or filled in over time, leading to the culverts not being able to perform their drainage function during heavy inflows.

D05.6 Asset Management

D05.6.1 Standards

Council standard for small culverts is currently a minimum diameter of 375mm under roads, 300mm under driveways with 90m between Culverts.

Horizons Regional Council expectation for new culvert diameter is that the culvert will cope with an Average Exceedance Probability (AEP) of 50% (2 year flood) flowing full and without overflowing the road in a 5% AEP (20 year flood).

D05.6.2 Strategies and Policies

Council has determined the following strategies to manage the drainage activity:

- Culverts of at least 375mm will be used for all renewals and new developments.
- Deep drains and undersized culverts are systematically replaced in conjunction with pavement renewals.
- Priority for the replacement of kerb and channel and cesspits is given to road sections in conjunction with other renewal programmes, such as resurfacing and pavement rehabilitation
- A dedicated machine has been procured to reprofile surface water channels focusing on a proactive programme deep channels close to the carriageway edge as this is a safety issue.
- The water channels on unsealed rural roads shall be reprofiled as part of the grading component of the road maintenance contract.

Horizon Regional Council requires resource consents for drainage.

Culvert Renewals do not require consent if they are

- 300mm - 1200mm in diameter
- less than 20m in total length
- less than 2.0m of fill height over the culvert
- provide 50% AEP when flowing full.

D05.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

Drains and drainage appliances lose their effectiveness over time due to vegetation growth, silt, scour etc thus putting the network at risk from high rainfall events increasing the risk of interruption of transport services and potentially increasing cost to the businesses in the area by lowering productivity

D05.6.4 Delivery

The drainage asset activities are delivered under the current Council contracts as outlined in the table below

Activity Type	Activity	Delivery Method
Operations	Drainage - Kerb and Channel sweeping (urban areas)	Parks and Reserves Contract
Operations	Drainage - Vegetation control (urban areas)	Parks and Reserves Contract
Operations	Drainage - Catchpit cleaning (urban areas)	Water and Stormwater Maintenance Contractor
Operations	Drainage - Removal of detritus in water channels	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Drainage - Spaying of water channels (rural areas)	Vegetation Control Contract
Operations	Drainage - Culvert inspection	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Drainage - Culvert Maintenance	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

Activity Type	Activity	Delivery Method
Maintenance	Drainage - Cleaning roadside water channels	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Drainage - Forming cut-out drains	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Drainage - Reshaping cut-out drains	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Drainage - Reshaping roadside water channels	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Drainage - Culvert Renewal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Drainage - Inlet/outlet extension	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Drainage - Catchpit Renewal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Drainage - Kerb and Channel Renewal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Drainage - Culverts - Vested	Developer
Development	Drainage - Kerb and Channel - New with Footpath Development	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Drainage - Kerb and Channel - New with pavement rehabilitation	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

D05.7 Operations

D05.7.1 Activities

Operational activities for drainage undertaken by road transport contractors are;

- Removal of detritus from water channels
- Spraying of rural water channels
- Culvert maintenance and condition inspection

D05.7.2 Plan

Contractors undertake detritus removal from water channel and culvert inspections as part of their routine patrols.

Spraying of rural water channels is programmed by the vegetation control contract and undertaken at least twice a year, with an additional run programmed if required.

D05.8 Maintenance

D05.8.1 Activities

Maintenance activities for drainage are;

- Cleaning and reshaping roadside water channels. This programme is proposed to increase in 24/27.
- Reshaping cut-out drains
- Culvert maintenance
- Forming cut-out drains

D05.8.2 Plan

Contractors undertake culvert maintenance and the forming of cut-out drains as part of their routine patrol.

Cleaning and reshaping of water channels is managed by the Road Network Maintenance & Resurfacing 2022 to 2030 contractor.

Deferred Maintenance

There is no deferred maintenance at this time. However, as the inaugural dedicated drainage inspection takes place in the new maintenance contract, it is anticipated that a backlog of work will be identified.

D05.8.3 D05.8 Renewals

D05.8.4 Activities

Renewals activities for drainage are

- Culvert renewal
- Inlet/outlet extension
- Kerb and channel renewal
- Catchpit renewal

D05.8.5 Plan

Reactive renewals are programmed as needed;

- due to culvert collapse,
- undersized culverts leading scouring or other damage

Proactive renewals are programmed as follows:

- Culvert, Kerb and channel renewals are programmed to support the reseals and pavement rehabilitation programmes, as well as those identified with poor or very poor condition.

Catchment calculations and cognisance of fish passage requirements mean renewals often result in increased diameters.

Catchpit renewals are programmed as part of kerb and channel renewal programme.

Deferred Renewals

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

No deferred renewals are currently expected for this activity, however the culvert inspection programme under the new Road Maintenance contract will inform this more completely as it is carried out.

D05.9 Development

The development activity can significantly improve an existing asset or network as well as creating new assets.

Unsubsidised kerb and channel development is carried out when kerb is no longer working and there is no associated renewal work at that location.

Note that the renewals activity allows for replacements to have some minor improvements or significant improvements when it is utilising current technology or standards.

No development activity is planned between 2024/25 and 2026/27.

Also note that Council will receive new network assets through the vesting process in accordance with the District Plan.

D05.9.1 Activities

Development works are generally initiated through triggers such as growth, Levels of Service, regulatory, operational efficiency, or vested (gifted) through subdivisions.

Culverts located on road sections up for pavement rehabilitation or sealed road surfacing are assessed for condition and extended or replaced prior to the renewal of the pavement.

The kerb and channel development budget (unsubsidised) is used for amenity and drainage improvements in urban areas. This budget allows the Land Transport team to work with communities proactively. Sites and works are identified during the delivery year, noting that the scale of budget and works doesn't support longer term planning.

D05.9.2 Plan

There are no subsidised drainage development works planned for the 2024/27 block.

The unsubsidised development will follow the footpath development to support new footpaths.

D05.10 Disposal Plan

There are no assets to be disposed of, outside of renewal works, at this time.

D05.11 Funding Request

Road drainage can be funded by the following NZTA Work Categories:

- WC 113: Routine drainage maintenance
- WC 213: Drainage renewals

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars. Note that SPR

Maintenance Budgets were included in Local Road budgets in 2024 but kept separate for the remaining 9 years. In capital, they are combined with Local Road budgets.

FIGURE D.50 :DRAINAGE HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Direct Cost														
Kerb & Channel Maint (P&R)	62,297	72,343	67,825	90,000	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	1,212,282
Routine Drainage Maintenance	1,253,962	610,528	928,800	900,000	1,009,945	1,329,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	10,309,505
Routine Drainage Maintenance SPR	36,842	28,307	49,803	0	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	175,878
Street Cleaning Maintenance	45,634	25,528	46,889	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	319,803
Direct Cost Total	**1,398,735**	**736,706**	**1,093,317**	**1,021,980**	**1,186,165**	**1,506,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**12,017,469**
Grand Total	**1,398,735**	**736,706**	**1,093,317**	**1,021,980**	**1,186,165**	**1,506,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**1,186,165**	**12,017,469**

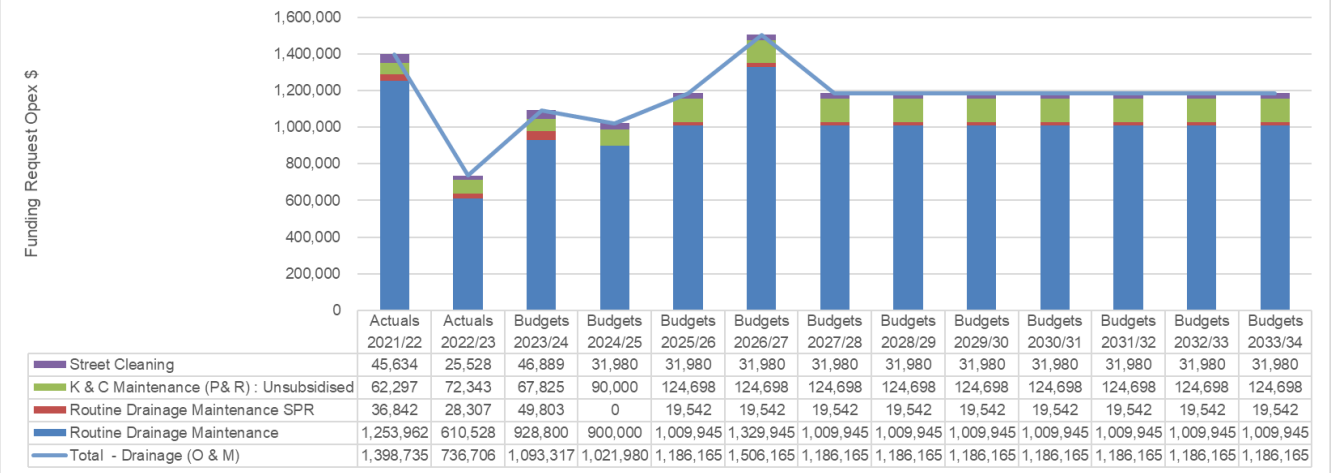
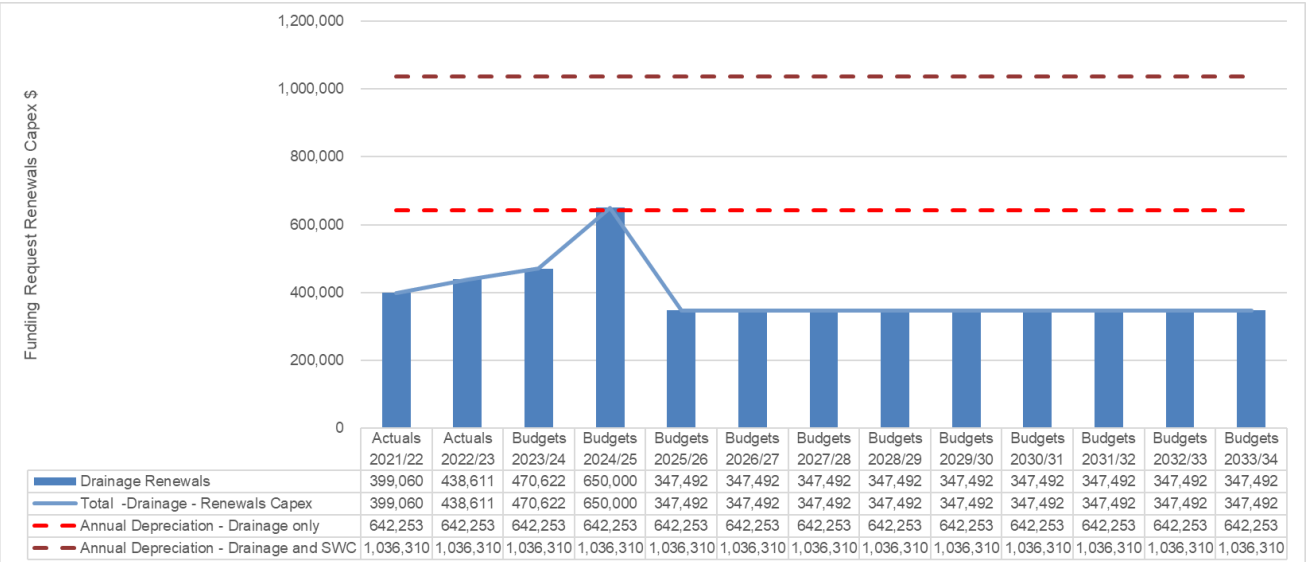


FIGURE D.51: DRAINAGE HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $

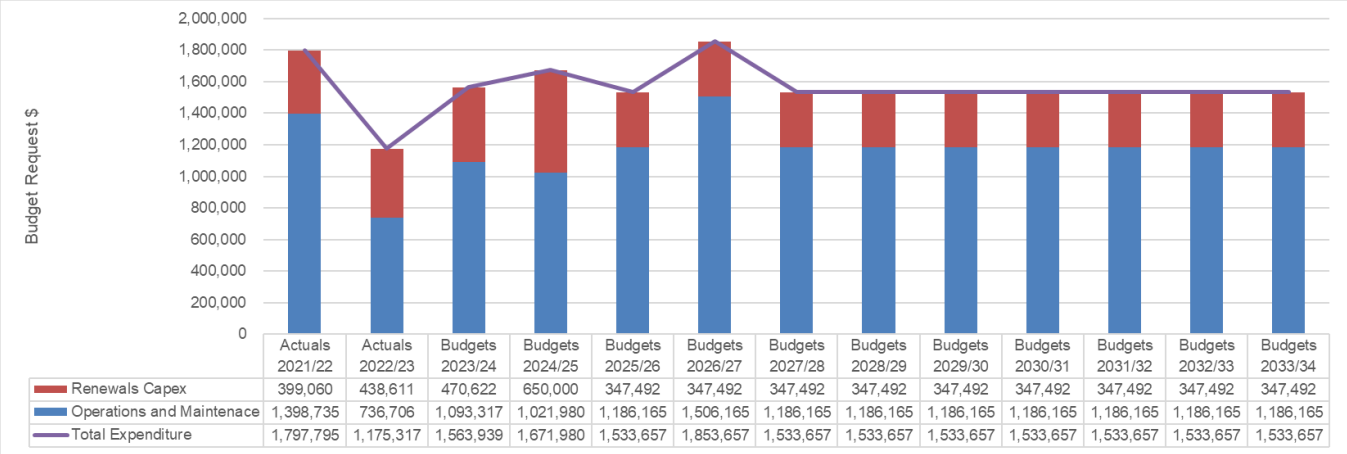
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
Drainage Renewals	399,060	438,611	470,622	650,000	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	3,777,428
Renewal Total	**399,060**	**438,611**	**470,622**	**650,000**	**347,492**	**347,492**	**347,492**	**347,492**	**347,492**	**347,492**	**347,492**	**347,492**	**347,492**	**3,777,428**



The annual depreciation for all drainage asset type is shown above, along with the depreciation for culverts and other drainage assets (not surface water channels). It can be seen that the drainage renewals is below the drainage depreciation. This needs investigation in the Improvement Plan. Currently there is no plan for surface water channel renewals.

FIGURE D.52: DRAINAGE HISTORICAL AND PROJECTED COMBINED EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Opex	1,398,735	736,706	1,093,317	1,021,980	1,186,165	1,506,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	12,017,469
Renewal	399,060	438,611	470,622	650,000	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	3,777,428
Grand Total	**1,797,795**	**1,175,317**	**1,563,939**	**1,671,980**	**1,533,657**	**1,853,657**	**1,533,657**	**1,533,657**	**1,533,657**	**1,533,657**	**1,533,657**	**1,533,657**	**1,533,657**	**15,794,897**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Renewals Capex	399,060	438,611	470,622	650,000	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492
Operations and Maintenace	1,398,735	736,706	1,093,317	1,021,980	1,186,165	1,506,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165
Total Expenditure	1,797,795	1,175,317	1,563,939	1,671,980	1,533,657	1,853,657	1,533,657	1,533,657	1,533,657	1,533,657	1,533,657	1,533,657	1,533,657

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D06 TRAFFIC SERVICES

D06.1 Purpose and Strategic Case Link

The purpose of traffic service assets is:

Support the safe use of the road network by all road users

Many traffic service assets support not just road users but also the community using walking and cycling within the road and path corridors.

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	This activity doesn't provide any significant contribution towards addressing this problem
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Traffic Services allow the network users to travel safely to their destination. All of traffic services levels of services are set out in regulations and design guides
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Traffic Services assets aid the safe and orderly movement of traffic and indicate road use restrictions

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Adequate traffic services (eg: lighting and signs) improves the safety outcomes on the network, therefore reducing network restrictions or closures
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	This activity doesn't provide any significant contribution towards this customer level of service
Safety	How users experience the safety of the road	To aid the safe and orderly movement of traffic and indicate road use restrictions
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	This activity doesn't provide any significant contribution towards this customer level of service
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Destination signage provides guidance to how to reach places

D06.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include:

- Managing the network with a strong focus on safety
- Providing an affordable transportation network that meets the reasonable needs of the wider community

They relate to Accessibility ONRC customer service level**.**

D06.3 Assets to be Managed

D06.3.1 Asset Description

Traffic Services assets managed under the Land Transport Activity include:

- Street lighting
- Road signs

- Road markings
- Traffic controls:
    - Traffic Islands
    - Speed Humps
    - Railings (including barriers)
    - Edge Marker Posts
    - Crossings

Street Lighting

Street Light assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Street light poles
- Street light brackets
- Street light lights
- Street light rating - for condition of poles, brackets and lights.

Note that asset data will be moved to new User Defined Tables (UDTs) in RAMM as part of the Asset Management Data Standard (AMDS) implementation process. The above RAMM table references will therefore be out of date once the AMDS implementation has been completed in 2026 for Council.

The map below shows that location of the network Council manages. Most of the street lighting is provided in urban areas, with Taumarunui being the largest. Rural lighting is provided in the vicinity of major intersections (called flag lighting).

FIGURE D.53: LOCATION OF STREET LIGHTING NETWORK

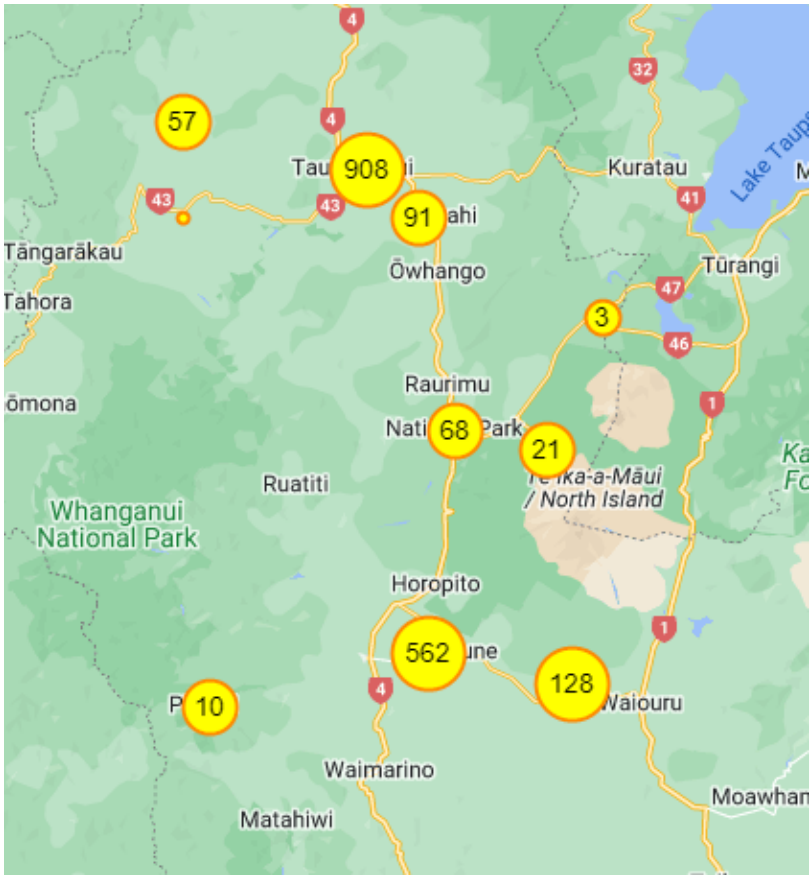


TABLE D-32: STREET LIGHTS QUANTITIES

Asset Type	Number	Urban / Rural		ONRC Classification			
		Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)
Street Lights							
Poles	551	548	3	11	181	127	229
Brackets	1,485	125	160	0	22	33	228
Lights	1,497	1,433	64	16	281	288	744
Total	**3,533**	**2,106**	**227**	**27**	**484**	**448**	**1,201**

Ownership

As can be seen above Council owns substantially fewer poles that lights and, while there can be more than one light per pole, this is mainly due to;

- Where a pole solely supports a streetlight or other Council infrastructure it is the property of Council.
- Where poles also support overhead wire utility services, they may be the property of the utility company.
    - Power authority (either The Lines Company (north) or Powerco (south east and south west))
    - Phone lines - Chorus.

Waka Kotahi NZ Transport Agency Street Lighting

Council manages maintenance and renewal of State Highway lights on behalf of Waka Kotahi in a Memorandum of Understanding. Costs are therefore incurred by the Council for this work and recovered from Waka Kotahi.

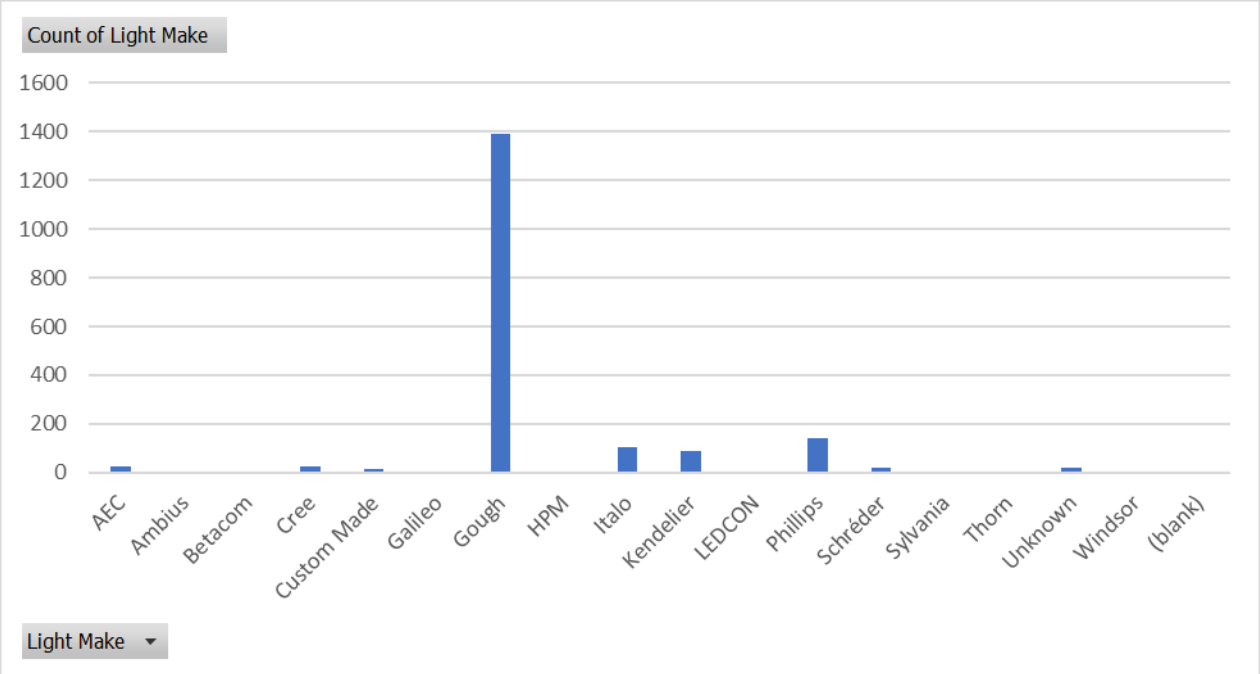
TABLE D-33: BREAKDOWN OF STREET LIGHT ASSET OWNERSHIP

Owner	Poles	Bracket	Light
Council Transport	687	1,503	1,503
Council Other	49	51	51
NZTA	227	267	267
DOC	16		
Utility	847	2	2
Other	2	22	22
Total	**1,849**	**1,849**	**1,849**

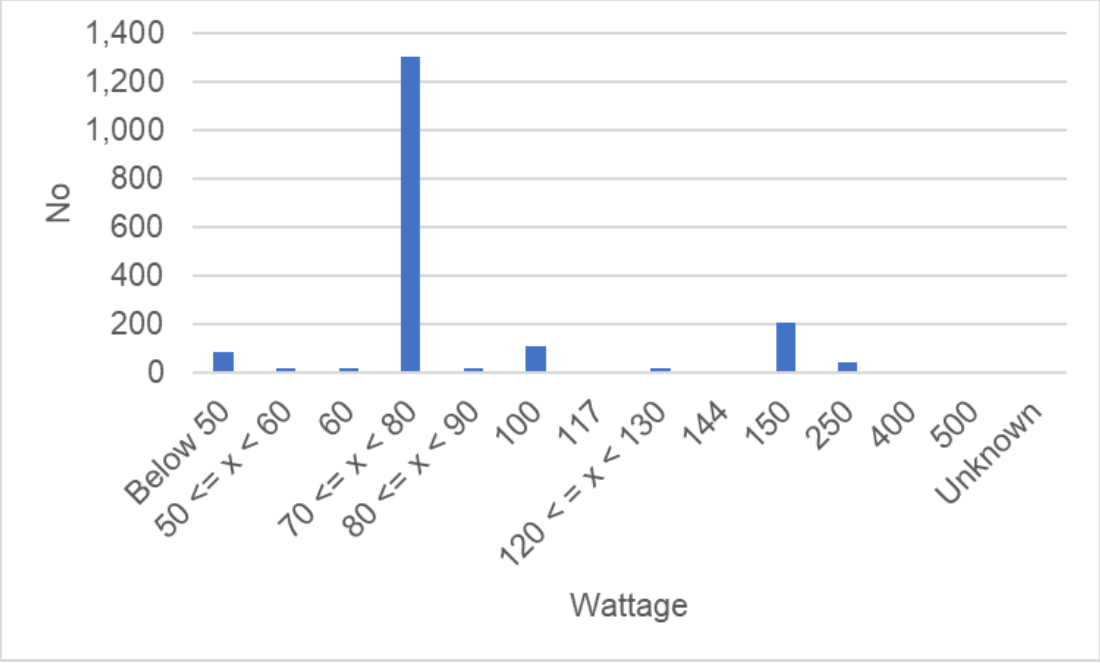
The following graphs show the breakdown of lantern types and the breakdown of power ratings. While 70W lanterns still predominate, the switch to LED will lead to a change over time.

FIGURE D.54: STREET LIGHTING ASSET BREAKDOWN

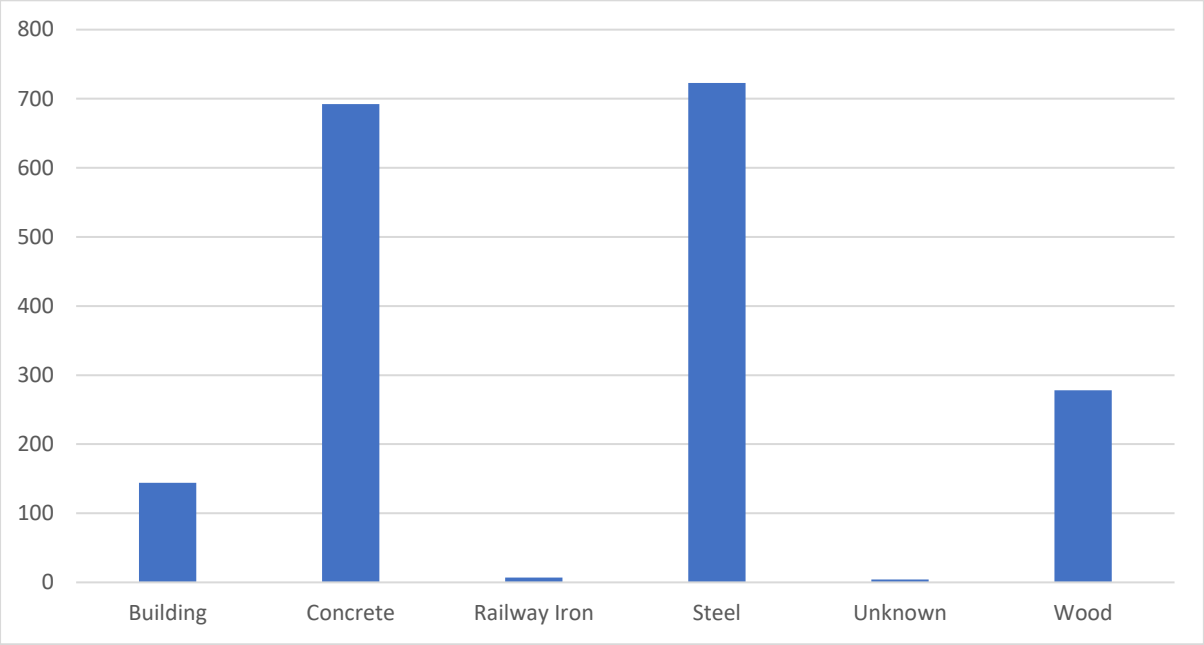
Lantern Types



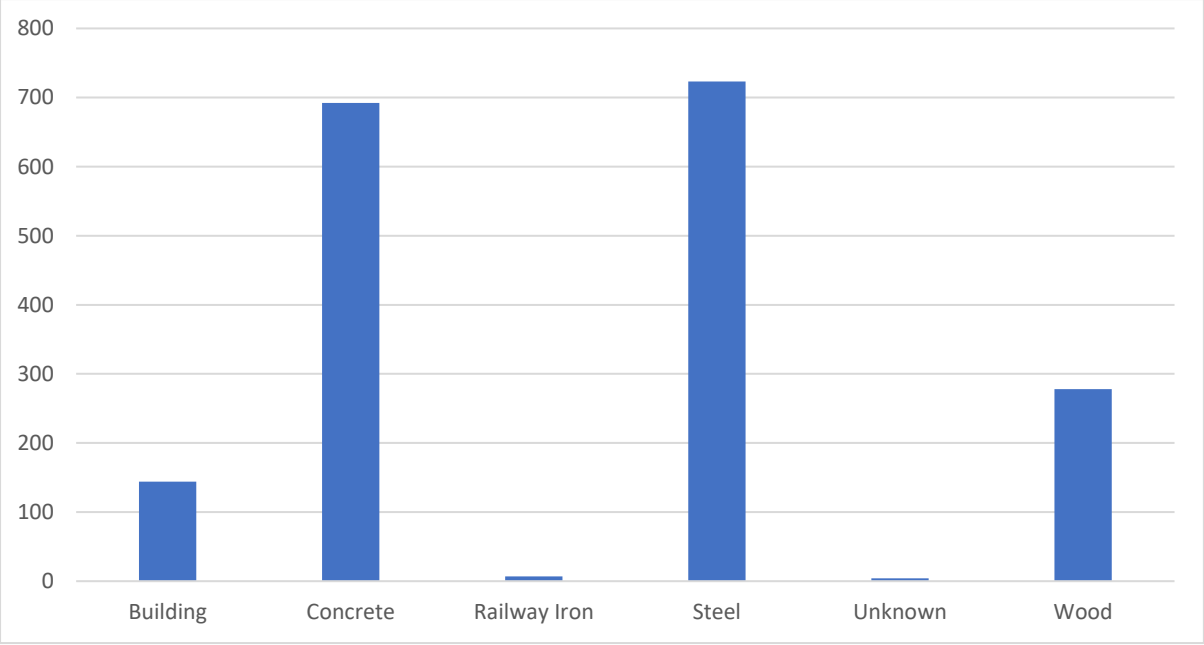
Lantern Power Rating



Pole Make



Pole Material



Road Signs

Road Signs assets are managed in the following RAMM tables, and the following information is sourced directly from these table:

- Signs

Council owns and manages 5,666 road signs.

The following table summarises the road signs managed by Council, although there is low confidence in this information as signs were not routinely added to RAMM for a period of time. Hence Council is reliant on Inspectors to report poor quality or missing signage. This

has been written into the District Road Maintenance and Resealing contract. Council is intending to undertake an inventory check to review RAMM to actual inventory.

TABLE D-34: ASSET INFORMATION - ROAD SIGNS (GENERALLY ALUMINUM SUBSTRATE)

Asset Type	Number	Urban / Rural*		ONRC Classification				
		Urban (Each)	Rural (Each)	Primary Collector (Each)	Secondary Collector (Each)	Access (Each)	Low Volume (Each)	No ONRC Class Assigned (Each)
Regulatory signs which road users are required to obey								
Markings	1,397	473	897	27	124	442	774	30
Regulatory Heavy Vehicle	67	2	63	0	3	11	51	2
Regulatory Parking	98	84	13	10	45	19	19	5
Regulatory Total	**1,562**	**559**	**973**	**37**	**172**	**472**	**844**	**37**
Warning and Hazard								
Hazard Markings	1,363	98	1,246	41	98	419	786	19
Permanent Warning	1,308	236	1,068	72	134	618	479	5
Warning Miscellaneous	11	5	6	2	3	2	4	0
Warning Total	**2,682**	**339**	**2,320**	**115**	**235**	**1,039**	**1,269**	**24**
Information								
Guide	28	11	17	4	2	8	14	0
Information General	152	64	75	4	13	49	71	15
Information Miscellaneous	26	14	12	5	3	7	11	0
Information signs	1,074	547	489	32	136	312	536	57
Local Authority	4	2	2	0	2	2	0	0
Miscellaneous	30	9	18	7	3	7	10	3
Motorist Services	13	10	3	0	4	5	2	2
Tourist	93	49	44	0	14	30	46	3
Unknown	2	0	2	0	0	0	2	0
Information Total	**1,422**	**706**	**662**	**52**	**177**	**420**	**692**	**80**
Total	**5,666**	**1,604**	**3,955**	**204**	**584**	**1,931**	**2,805**	**141**

*Note there are 107 signs where urban/rural has not been determined.

Road Markings

Road Markings assets are managed in the following RAMM table, and the following information is sourced directly from these tables:

- Markings

Council owns and manages 2,607 (number) road markings.

TABLE D-35: ASSET INFORMATION ROAD MARKINGS

Asset Type	Description	Quantity
Road markings and raised pavement markers	Intersection markings: • Centre lines/edge lines/lane lines. • Lane arrows. • Wait lines/continuity lines. • Cycle lanes. • Border lines/diagonal lines. • Stop lines. • Give way lines. Other such as: • Bus stop • Fire hydrant • Parking spaces / disabled parking • Pedestrian crossing • No overtaking • Flush medians • Painted shoulders	2,607 no

Traffic Controls

Traffic Control assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Railings
- Islands
- Traffic Facilities for;
  - Speed Humps
  - Edge Marker Posts
- Crossings

A summary of Councils Traffic Controls can be seen in the table below

TABLE D-36: RAILINGS Quantities

Asset Type	Quantity		Urban / Rural		ONRC Classification				
	Number	Metres	Urban (m)	Rural (m)	Primary Collector (m)	Secondary Collector (m)	Access (M)	Low Volume (m)	No ONRC Class Assigned
Railings									
Barrier	23	517	14	477	0	61	80	350	26
Barrier Cable Terminal unit	4	12	0	12	0	0	12	0	0
Bridge Rail	21	356	8	296	0	0	106	198	52
Guard rail	162	4,255	348	3,907	1,794	245	1,564	652	0
Hand rail	85	1,891	83	1,745	20	124	511	1,173	63
Sight rail	835	7,460	687	6,759	27	822	2,213	4,384	14
Steel Tube and Post	20	304	75	229	25	0	36	243	0

Asset Type	Quantity		Urban / Rural		ONRC Classification				
	Number	Metres	Urban (m)	Rural (m)	Primary Collector (m)	Secondary Collector (m)	Access (M)	Low Volume (m)	No ONRC Class Assigned
barrier									
Timber	21	338	3	335	0	72	49	217	0
W Section Guard rail	106	4,004	246	3,758	1,580	170	1,236	1,018	0
Total	**1,277**	**19,137**	**1,464**	**17,518**	**3,446**	**1,494**	**5,807**	**8,235**	**155**

The 155m of railing with no ONRC cannot be linked to the network so are also missing from the urban/rural split.

The remainder of the traffic control assets are listed below.

TABLE D-37: ASSET INFORMATION – TRAFFIC CONTROLS

Asset Type	Description	Unit	Quantity
Traffic Islands	Median	Each	1
	Rotary	Each	1
	Splitter	Each	19
	Throat	Each	10
	Islands Total		**31**
Edge Marker Posts			**74**
Speed humps			**5**
Crossings			**443**

D06.3.2 Asset Values

Traffic Services assets form 2.7% ($15.1M) of the total Land Transport Activity value (Replacement cost) and 4.7% ($0.26M) of the annual depreciation.

Due to the short average useful lives of traffic services assets compared to other asset groups it should be noted that the proportion of the Land Transport Activities annual depreciation is much higher than the Replacement cost.

The Council's Land Transport assets have been valued as at 30 June 2023. As part of this process the following are calculated and shown in the tables below:

- RC = Replacement Cost
- DRC = Depreciated Replacement Cost
- AD = Annual Depreciation

Street Lighting

Street lighting assets form 0.9% ($5.2M) of the total Land Transport Activity value (Replacement cost) and 2.6% ($0.1M) of the annual depreciation.

TABLE D-38: STREET LIGHT REPLACEMENT COST AND ANNUAL DEPRECIATION

Asset Type	Number	RC ($)	DRC ($)	AD ($)
Street Lights				
Poles	756	2,365,092	571,001,	91,490
Brackets	1533	1,749,524	242,993	66,679

Asset Type	Number	RC ($)	DRC ($)	AD ($)
Lights	1545	862,756	423,602	41,321,
Total		**4,977,372**	**666,595**	**158,169**

Road Signs

Road sign assets form 0.3% ($1.5M) of the total Land Transport Activity value (Replacement cost) and 0.5% ($0.03M) of the annual depreciation.

TABLE D-39: SIGNS REPLACEMENT COST AND ANNUAL DEPRECIATION

Asset Type	Number	RC ($)	DRC ($)	AD ($)
Guide	28	8,801	142	1,125
Hazard Markings	1363	291,471	2,657	28,361
Information General	152	59,837	1,491	10,866
Information Miscellaneous	26	7,061	265	1,467
Information signs	1074	428,353	9,120	58,959
Local Authority	4	0	0	0
Miscellaneous	30	8,071	41	557
Motorist Services	13	5,745	177	1,093
Permanent Warning	1308	334,970	7,008	43,088
Regulatory General	1397	276,544	4,277	30,852
Regulatory Heavy Vehicle	67	22,538	429	2,812
Regulatory Parking	98	16,685	351	2,195
Tourist	93	31,939	1,324	5,922
Unknown	2	0	0	0
Warning Miscellaneous	11	3,738	116	514
Grand Total	**5666**	**1,495,753**	**27,399**	**187,810**

Road Markings

Road marking assets are not depreciated annually.

Traffic Controls

Traffic control assets form 1.5% ($8.5M) of the total Land Transport Activity value (Replacement cost) and 1.6% ($0.1M) of the annual depreciation.

TABLE D-40: TRAFFIC CONTROLS REPLACEMENT COST AND ANNUAL DEPRECIATION

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Railings					
Barrier	23	517	$132,368.06	$2,579.51	$25,903.99
Barrier Cable Terminal unit	4	12	$3,563.83	$80.09	$80.09
Bridge Rail	21	356	$156,007.16	$3,337.26	$38,711.10

Asset Type	Number	Metres	RC ($)	DRC ($)	AD ($)
Guard rail	162	4255	$485,593.15	$12,004.58	$72,599.96
Hand rail	85	1891	$426,278.54	$9,742.27	$34,863.88
Sight rail	835	7460	$645,557.07	$17,577.50	$212,398.44
Steel Tube and Post barrier	20	304	$66,849.29	$1,502.23	$1,502.23
Timber	21	338	$41,729.52	$944.47	$1,281.89
Barrier	23	4004	$874,378.67	$19,779.95	$26,489.35
Railings - Total	**1,194**	**19,137**	**2,832,326**	**413,831**	**67,548**
Other Traffic Controls					
Islands	32		402,680	173,787	5,369
Speed Humps	5		5,247	1,049	350
Edge Mark Posts	1,340		32,738	2,293	2,049
Crossings	450		3,567,743	484,525	47,570
Other Traffic Controls-Total	**3,654**		**7,936,833**	**1,302,813**	**109,609**

D06.4 The Need for Investment

Council considers that it has a basic approach to traffic services investment and has identified areas for improvement.

D06.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D06.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we provide Activity specific Level of Service
Maintain level of service capacity	Sodium Components The ability to support Sodium assets is decreasing due to lack available components	Level of Service adjustment	Replace with LED by sections. Usable replaced component will be retained for adhoc replacement due to failure
Network safety and resilience – planning and targeted improvements	Lighting Distances Currently lighting not at standard distances. As council makes use of poles owned by others in the main.	Level of Service adjustment	Where budget allows, additional lighting to infill large gaps to improve the quality of lighting provided. Line capacity may be an issue. Where new lighting is being installed the design will meet the required standard.

Strategic Response	Key Issue	Response Type	Strategies to Address
Network safety and resilience – planning and targeted improvements	Lighting Asset Loss As poles are replaced by the owner Council lighting assets are sometimes discarded or broken. As poles are replaced by their owner these may not allow 'like for like' reinstatement of lighting.	Level of Service adjustment	Work with asset owners to get prior knowledge of their replacement programmes to manage council retrieving the assets again.
Network safety and resilience – planning and targeted improvements	Guard Rails There are areas where guardrails should be installed	Programme approach	Installation of cheaper sight rails will improve safety at an affordable price until guard rails can be funded
Network safety and resilience – planning and targeted improvements	Curve warning inconsistent The presence of curve warning signage is inconsistent across routes	Policy approach	Strategy to be developed to target route consistency as funds permit.
Network safety and resilience – planning and targeted improvements	Delineation inconsistent Inconsistent delineation across the network.	Programme approach	Implement delineation strategy based on ONRC.
Value for money	Changing to LED LED (light emitting diode) road lighting offers several benefits compared to HPS (high pressure sodium) lighting, including reduced energy and maintenance costs, and better light quality leading to increased public safety. (1)	Level of Service adjustment	Council has developed an LED strategy which considers LED application both for new and renewal of existing installations, based on the lowest whole of life cost. Lines charges are mostly fixed and would not lower due to switching to LED. This has detracted from the least whole of life cost.
Value for money	Data in RAMM Lack of railings and signs information in RAMM. After an initial big data capture exercise during RAMM setup no new asset information was entered for approximately 15 years	Policy approach	New and replacement assets captured into RAMM ongoing. Take a sample of roads and compare assets on road and compare with RAMM to get a level of confidence.
Targeted Improvements for active modes (e.g. Walking, cycling, mobility, micro-mobility)	Kerb Crossing Upgrades Crossings need to be upgraded to meet mobility standards	Level of Service adjustment	Improve during footpath and kerb and channel renewals.

Note 1: From NZTA and EECA joint statement 10 July 2014 entitled "Information about LED road lighting".

D06.4.2 Historical Commentary

Due to a previous lantern and gear replacement programme, sodium lanterns are now the predominant type.

This will change again over time as the LED replacement programme is underway.

Any new lighting installed by Council since 2015 has been LED lights.

Under the current contract signs, railings and EMPs are maintained via through routine 'as of right' work.

A focus on painting railings and bridges has been implemented to maintain a "cared for" aesthetic.

Vehicle Crossings are often the responsibility of the adjacent landowner and should be to Council standards, this is not always the case.

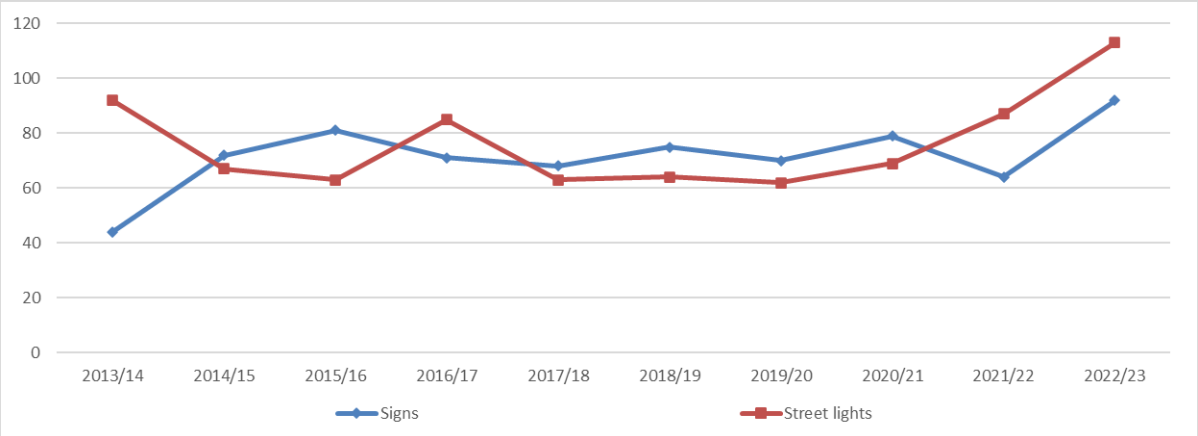
Railway level crossings include many of the assets described as traffic services. There are 23 level crossings in the district. Council is responsible for the warning signage on the approaches to these on local roads (with Waka Kotahi on state highways). The level crossing devices (barriers, lights etc) are maintained by KiwiRail. KiwiRail maintains the crossing devices and bills council who then claims the cost from Waka Kotahi at council base rates.

D06.4.3 Levels of Service

Service Calls

Traffic service calls are broken down into signs and streetlights.

FIGURE D.55: TRAFFIC SERVICES CALLS



Sign calls range between issues with broken or missing signs, to requests for additional signage, both roading and commercial fingerboards. Sign vandalism tends to increase in winter in tourist areas such as Ohakune.

Many streetlight calls relate to circuit faults, which are power supply related, outside the Streetlight maintenance contract. Both call types have arisen and this needs analysis.

Significant Los Change

LED replacement will improve colour vision at night and reduce light scatter (pollution) improving night sky.

D06.5 Asset Performance

D06.5.1 Asset Age / Remaining Useful Life

The tables below show the average age and remaining useful life (RUL) of each asset type.

It should be noted that where an asset doesn't have a construction date, its RUL is calculated initially using a default date defined in the valuation module for the assets valuation rule.

Due to the lack of age information the following calculation has been used:

Average Age = Total Useful Life - Average RUL

Street Lighting

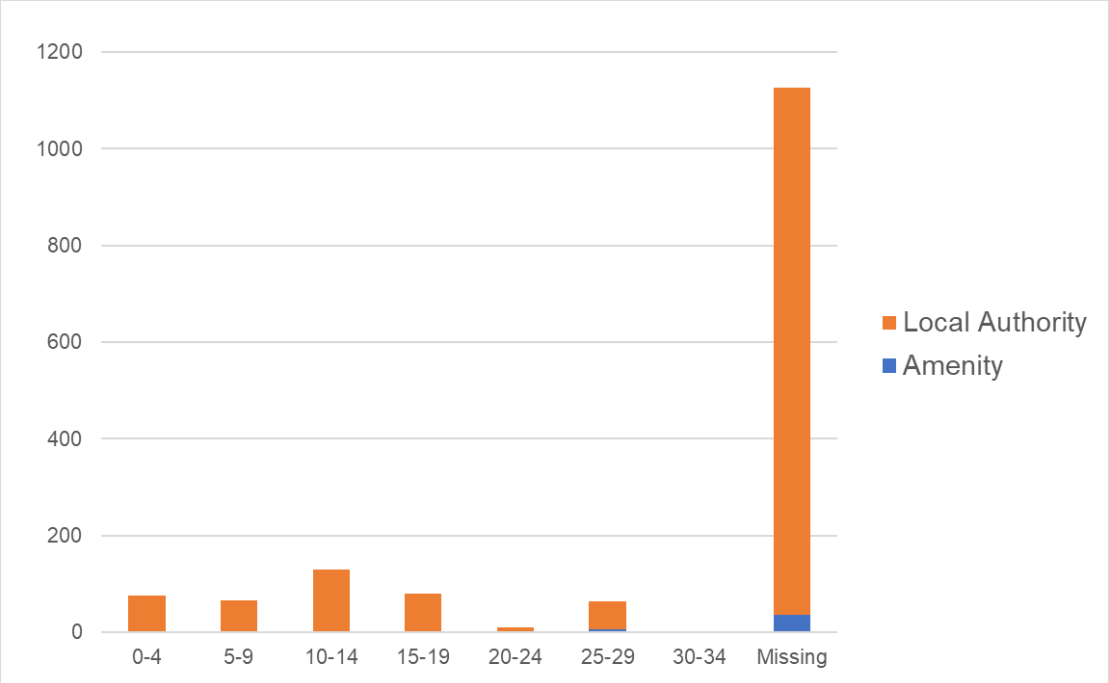
The following age and remaining useful life details are for Council Traffic Activity owned assets only.

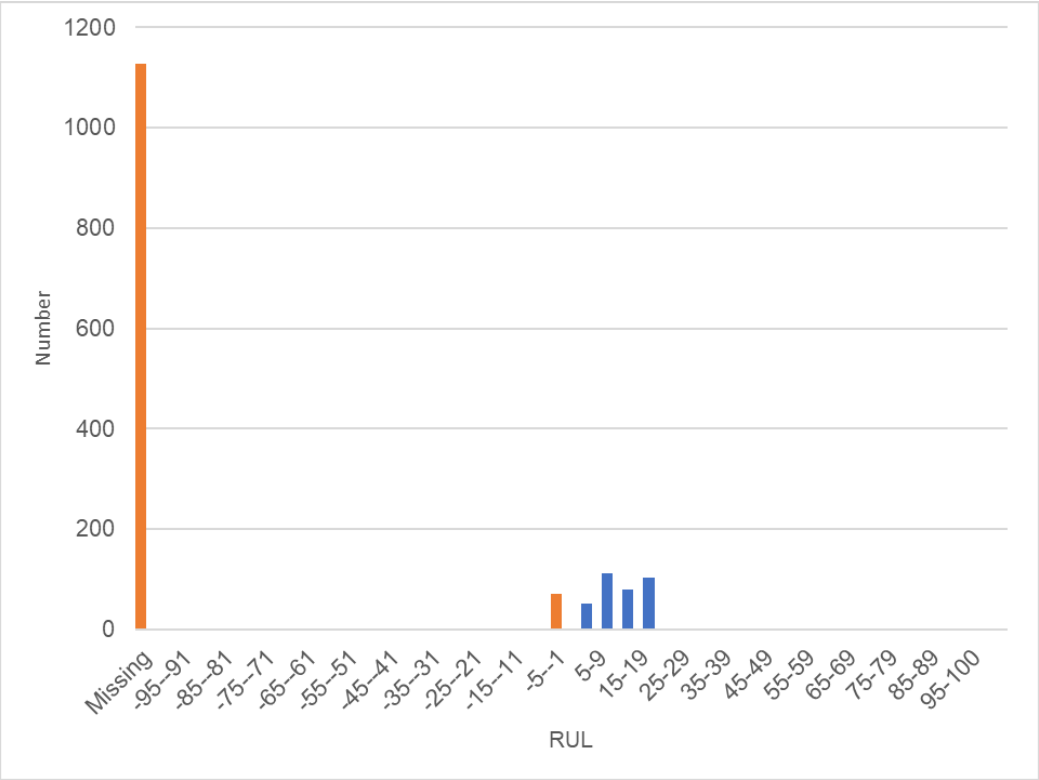
TABLE D-41: STREET LIGHTS ASSET AGE INFORMATION

Asset Type	Total Useful Life	Average Life
Poles	25	12
Brackets	25	10
Lights	20	13

With only 28% of these assets having a known installation date, the information is estimated only. The graph compares the average age with the average remaining useful life for streetlights.

FIGURE D.56: ASSET AGE - STREETLIGHTS





Based on the Remaining useful life (RUL), 80% of streetlight poles need to be replaced in the next 5 years. However, only 33% are owned by Council. See ownership RUL below.

TABLE D-42: REMAINING USEFUL LIFE OF STREETLIGHT POLES BY POLE OWNER

Pole Owner	0-5	6-10	11-15	16-20	21-25	Unknown	Total
Council Transport	451	46	66	61	57	25	706
Council Other	44			3	3		50
NZTA	161	9	18	15	23	1	227
Utility	810	1	14	15	5	2	847
Other						2	2
Total	**1,466**	**56**	**98**	**94**	**88**	**30**	**1,832**

Road Signs

The age of road signs is not well documented with the table below indicating that the majority of Councils road signs are nearing the end of their useful life.

TABLE D-43: Signs Asset Age Information

Useful Life		
Description	**TUL**	**Avg Life**
Hazard Markings	10	8
Other	10	8
Permanent Warning	10	9
Tourist	10	7
Information	10	9
Regulatory	10	9
Grand Total	**10**	**9**

Signs are maintained by patrolmen. Inspectors log when a sign requires replacement based on condition.

Road Markings

As almost all markings are repainted annually, there are no age details to report.

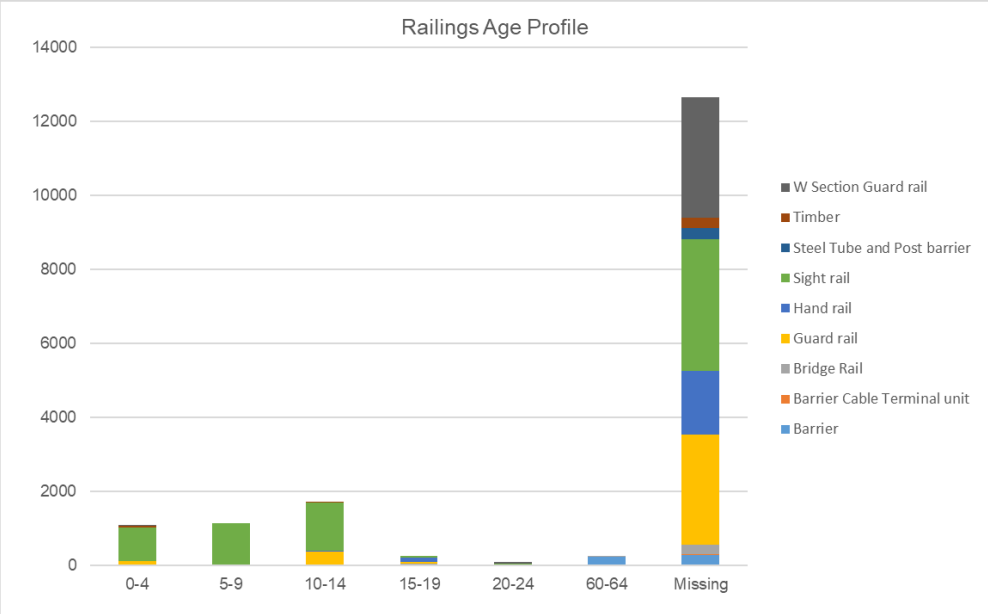
Traffic Controls

The age of traffic controls has only been documented here for railings. Most railings are missing data on their ages. The Average RUL indicates that many are coming or have passed the end of their expected life. This information needs to be verified as an improvement item.

TABLE D-44: RAILING ASSET AGE INFORMATION

Useful Life		
Description	**TUL**	**Avg Life**
Barrier	30	50
Bridge Rail	30	29
Guard rail	30	10
Hand rail	30	12
Sight rail	30	9
Timber	30	4
W Section Guard rail	30	8
Grand Total	**30**	**13**

FIGURE D.57: RAILING AGE PROFILE



D06.5.2 D06.4.2 Condition

Street Lighting

The rating data on streetlights is gathered annually by the streetlight contractor and is stored in the RAMM Contractor module.

FIGURE D.58: STREET LIGHTING CONDITION RATINGS – BRACKETS

Source: GHD Max Asset ex RAMM

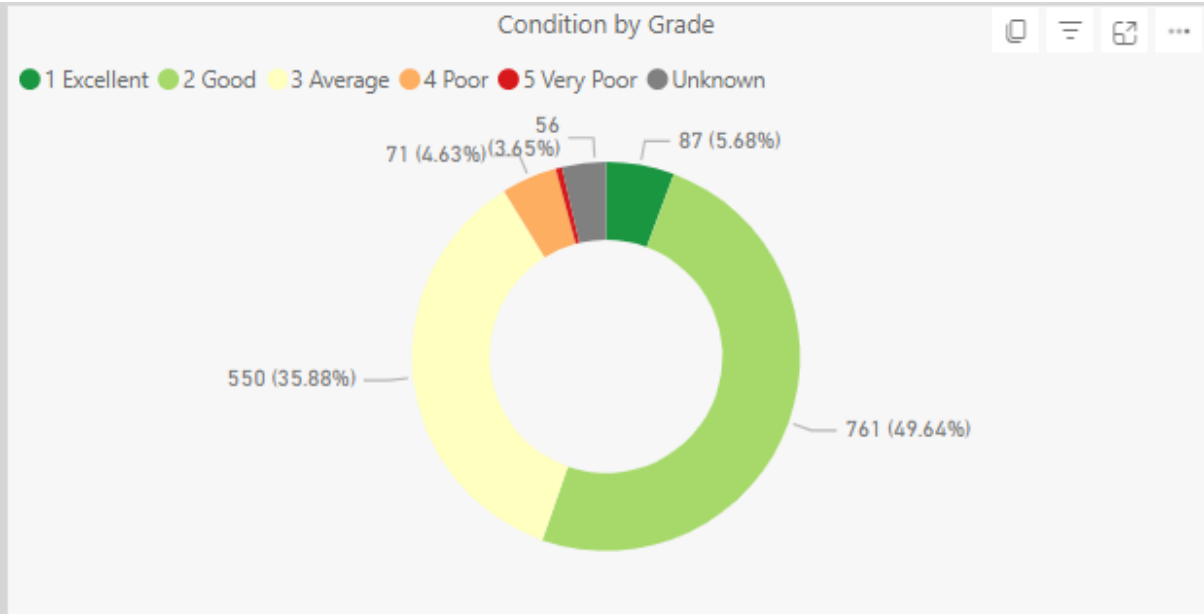


FIGURE D.59: STREET LIGHTING CONDITION RATINGS – LIGHTS

Source: GHD Max Asset ex RAMM

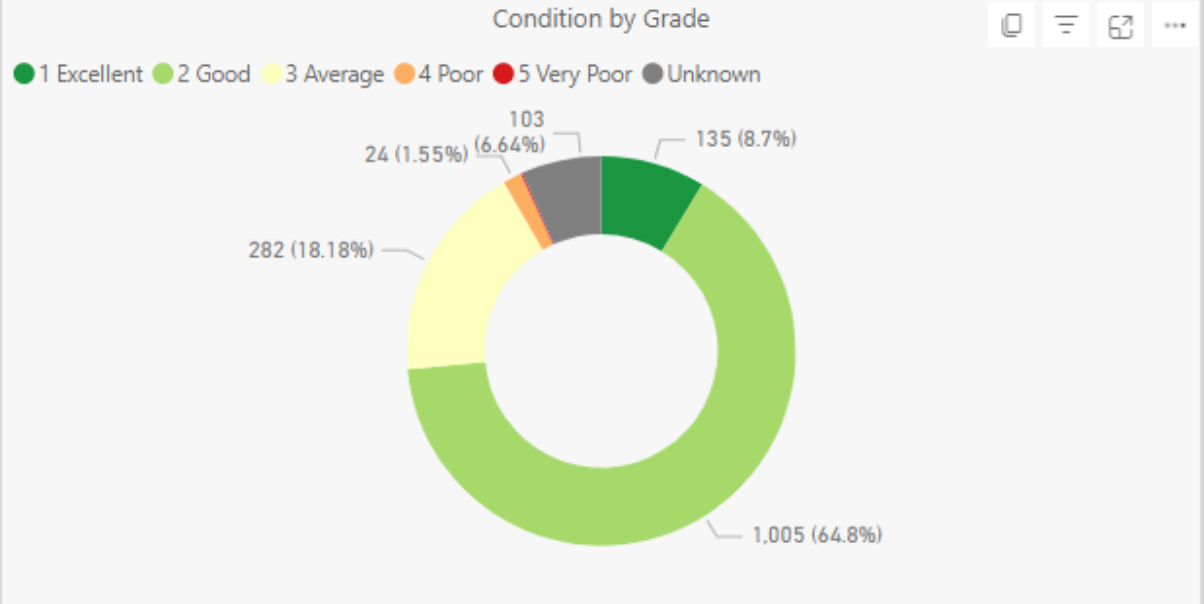
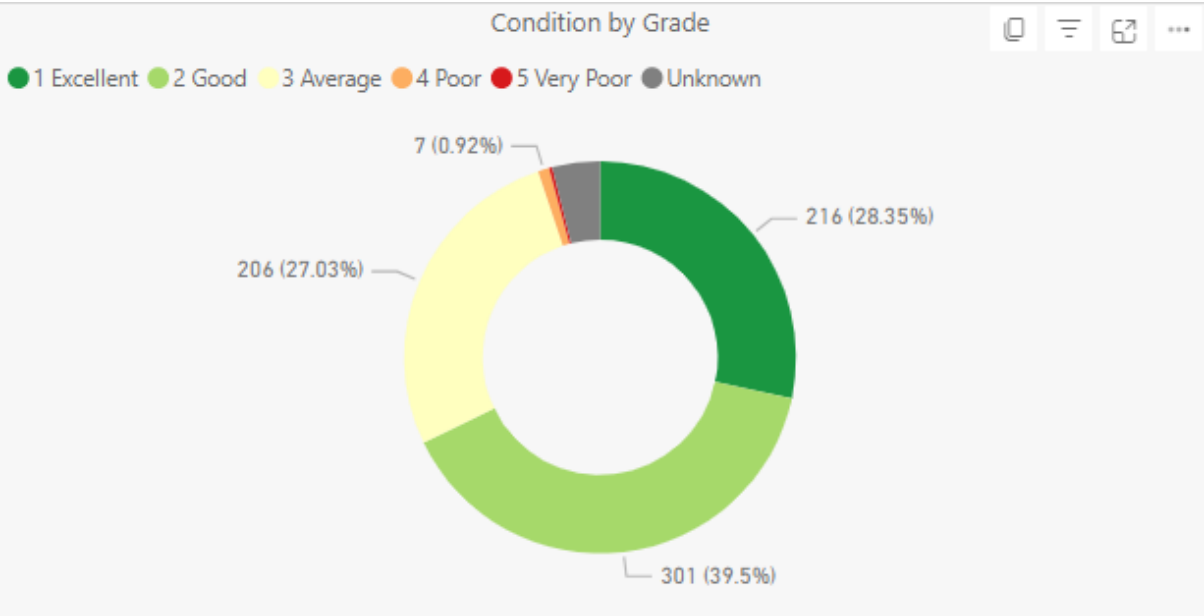


FIGURE D.60: STREET LIGHTING CONDITION RATINGS – LIGHTS

Source: GHD Max Asset ex RAMM



Road Signs

Road inspectors report any damage to road signs, but no formal condition information is held.

Road Markings

As road markings are repainted annually, there is no need to condition rate them.

Traffic Controls

Road inspectors report any damage to railings, but no formal condition information.

EMP's are either picked up by Inspectors or managed by the roadmen, replacing as they need.

D06.5.3 Performance

Currently there are no performance measures being managed for traffic services.

D06.6 Asset Management

D06.6.1 Standards

Street Lighting

- All completely new streetlights shall be LED.
- The design standard for new works is AS/NZS 1158 and this is a requirement of the Council's Engineering Code of Practice for subdivisional development.
- Electrical safety statutes, regulations and codes of practice apply to any works on the street lighting activity.

Road Signs

- New Zealand Transport Agency
    - Manual of traffic signs and markings (MOTSAM)
    - Road and Traffic Standards Series (RTS Series)

Pavement Marking

Council has developed a delineation standard based on RTS5. This standard sets out the criteria and standard for markings. The following are requirements of the standard;

- all lines will be remarked annually
- all rural sealed roads over 5.1m wide with over 50 vehicles per day will have centre lines. A recent comparison in RAMM of roadmarkings to carriageway sealed roads produced the following result.
  There are 69% of all rural sealed roads over 5.1m wide with over 50 ADT with centerlines of some sort (percentage by length). Centerlines are defined as road marking type of:
    - Centreline 100mm 3 x 7
    - Centreline 100mm continuous
    - Flush Median
    - Intersection Continuity Lines (150mm 1 x 3)
    - No Overtaking 100mm continuous
    - No Overtaking advance 100mm 13 x 7
    - No Stopping Line (yellow) 100mm 1 x 1

  (The level of accuracy of this information will need to be confirmed)

Traffic Controls

Standards for traffic controls can be found in the

- New Zealand Transport Agency
    - Road and Traffic Standards Series (RTS Series)

Vehicle crossing

Most vehicle crossings are installed and maintained by the adjacent property owner. These must be to council standards.

D06.6.2 Strategies and Policies

The level of service of signage installed on roads is related to the road ONRC i.e. collector roads will have more than access roads. A strategy of ensuring the level of service is consistent for a route has also been implemented.

Street lighting renewals, are undertaken as part of improvements to the road corridor as a whole.

Where traffic services are damaged by 3rd parties, reparation can be sought, but often they are repaired or replaced when identified on site, from within existing budgets.

D06.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

- Lighting, line marking and signs deteriorate over time increasing the accident risk to road users if they are absent.

D06.6.4 Delivery

The traffic services assets activities are delivered under the current council contracts as outlined in the table below

TABLE D-45: TRAFFIC SERVICES ACTIVITY DELIVERY

Activity Type	Activity	Delivery Method
Operations	Streetlight - Call out response	Streetlight Maintenance Contract
Operations	Streetlight - Condition Inspection	Streetlight Maintenance Contract
Operations	Streetlight - Power	Lines Companies (Two across district)
Operations	Road Signs - Cleaning	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Road Signs - Graffiti Removal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Road Signs - Reinstatement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Road Signs - Straightening	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Railings - Cleaning	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Railings - Graffiti Removal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Railings - Reinstatement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Railings - Straightening	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Islands - Operations	Parks and Reserves Contract
Operations	Crossings - Operations	Parks and Reserves Contract

Activity Type	Activity	Delivery Method
Operations	EMP - Cleaning	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	EMP - Graffiti Removal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	EMP - Reinstatement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	EMP - Straighten	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Streetlight - Bulk Bulb Replacement	Streetlight Maintenance Contract
Maintenance	Streetlight - Component Replacement	Streetlight Maintenance Contract
Maintenance	Road Signs - Post Painting	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Road Signs - Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Road Markings - Annual Repaint	District Roadmarking Contract
Maintenance	Road Markings - Disabled Parks (blue) biannual repaint	District Roadmarking Contract
Maintenance	Road Markings - Raised Reflective Pavement Markers - Renewal	District Roadmarking Contract
Maintenance	Railings - Painting	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Islands - Kerb Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Streetlight - Pole Replacement (non Council Asset)	Asset Owner
Renewals	Streetlight - Replacement (pole and fitting)	Streetlight Maintenance Contract
Renewals	Streetlight - Sectional Replacement with LED	Streetlight Maintenance Contract
Renewals	Road Signs - Replacement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Level Crossing Device Upgrades	KiwiRail Appointed Contractor
Development	Streetlight - Design	Procured as required
Development	Streetlight - Extension of Lighting Network	Streetlight Maintenance Contract
Development	Streetlight - Upgrading LoS	Streetlight Maintenance Contract
Development	Streetlight - Vested	Developer
Development	Road Signs - Additional motorist information and service signs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Road Signs - Vested	Developer
Development	Road Markings - Vested	Developer
Maintenance	Railings - Renewals	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Railings - Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Islands - Edge Painting	District Roadmarking Contract
Maintenance	Crossings - Repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	EMP - Replacement	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Street Flags - Installation and Removal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Street Flags - Replacement flags and Cross Arms	Procured as required

Processes and methods currently employed are described in the maintenance, renewals and capital works sections that follow and include:

- Routine inspections.
- Repair/replacement of faulty/failed components within specified timeframes.
- Identification, prioritisation and programming of improvements and ordered works.
- Clear reporting requirements based on KPIs.

Streetlights

The design work for major works is referred to lighting suppliers. Their proposals are then reviewed and site checked by the installation contractor and Council staff.

The maintenance of streetlights for Council is undertaken by the street lighting maintenance contractor.

Annual Inspections are undertaken to inform the current state of street lighting. Maintenance programmes are developed from the schedules of defects identified during the inspections. Repair options and priorities are determined by considering the impact on:

- Public safety (top priority).
- Traffic movement.
- Future costs if the work is not done.

Assets are replaced when:

- This is more economic than repair of faulty or damaged assets.
- Faulty or damaged lanterns cannot be repaired because of obsolescence or replacement parts being unobtainable.
- The existing asset does not meet current design/safety standards.

Road Signs

Road signs are managed under the Road Network Maintenance & Resurfacing 2022 to 2030 contract and most activities are undertaken by the roadmen.

Maintenance will be undertaken under the existing Roading Maintenance term contract.

Obsolete, damaged, sub-standard and non-conforming signs identified during routine inspections will be programmed for replacement according to the following priority:

- Public safety
- Traffic volumes
- Convenience of road users

Where there is a hazard, maintenance will be undertaken to the timeframes summarised below:

- All regulatory signs 24 hours
- All other signs 4 weeks
- Marker posts 8 weeks
- Emergency Works 24 hours

Road Markings

Road marking is undertaken by the road marking contractor, with all markings remarked annually between December and May.

Traffic controls

Islands, speed humps and crossings in urban areas are cleaned and generally maintained by Parks and Reserves Contractor as part of the urban landscape. Maintenance and renewal take place under the Sealed Pavement Maintenance contract.

Edge marker posts and railings are maintained under the Road Network Maintenance & Resurfacing 2022 to 2030 contract.

D06.7 Operations

D06.7.1 Activities

Street Lighting

Operations are for activities include:

- Inspections
- Call out to faulty lights

Operational costs also include power costs.

- There are several energy providers in the District. A formal Electricity Supply Contract is in place with Meridian.

It is expected that power costs will be reduced due to the LED replacement programme, however the majority of the lines charges are fixed charges, rather than being tied to wattage use.

Road Signs

Operations activities include:

- Cleaning
- graffiti removal
- straightening
- reinstatement

Road Marking

There are no operational activities directly related to road markings

Traffic Controls

Operations for railings and EMP activities include:

- Cleaning
- Graffiti removal
- Straightening
- Reinstatement

Islands and Crossings have no operational costs for the transport activity as these are undertaken by the Parks and Reserves activity.

D06.7.2 Plan

Street lighting inspections and road marking are planned on an annual basis.

Street light call out is on ‘as needed’ when reported by service request to the call centre.

All other activity is undertaken by the road contractor as part of their routine patrols.

D06.8 Maintenance

D06.8.1 Activities

Street Lighting

Maintenance activities include:

- Planned bulk bulb replacement and structural defects.
- Repairing/replacing damaged or unsound components, e.g. lanterns, control gear, poles.
- Lamps other than LED are replaced on a cyclic four year bulk replacement programme that has significantly reduced customer calls relating to light outages.
- Shear base retorquing

There is an expectation of reduced maintenance needs due to the LED replacement programme.

Road Signs

Maintenance activities include:

- Repairs to damaged signage
- Post painting

Road Markings

Maintenance activities include the annual repainting of:

- centrelines,
- edge lines,
- no-passing line,
- intersection controls
- parking controls
- Pedestrian crossings.

Disabled park symbols are painted annually and biennially for the symbols and blue paint.

Reflective Raised Pavement Markers are renewed as replacements are needed.

Traffic Controls

Maintenance activities include:

- Island edge painting
- Island kerb repairs

- Repairs to damaged rails
- Painting of railings
- EMP replacement
- Crossing repairs

D06.8.2 Plan

Street lighting

- Bulb replacements as needed, with an expectation of approximately 400 per year.

Road signs

- Ongoing as part of road contractor duties. Faults logged by inspectors.

Road markings

- Annual painting plan

Traffic Controls

- Ongoing as part of roadmans duties

Deferred Maintenance

The street lighting stock is being gradually improved within available budgets.

D06.9 Renewals

D06.9.1 Activities

Street Lighting

Renewal works generally involve

- The replacement of the lantern or individual components (lamps are replaced under maintenance)
- Pole replacement
- Replacement of blocks of streetlights with LED's on a like for like basis (i.e. no additional poles or lights)

Road Marking

There is no renewal programme for Road Marking as remarking is done annually under operations and maintenance. On this basis all markings is considered an OPEX activity.

Currently Council is not using any long-life markings that need to be managed as an asset and therefore would need a renewals programme.

Road Signs

Renewal needs are identified from the condition assessment and general knowledge of signs as identified by road inspectors.

Assets are replaced when:

- The existing asset does not meet current design/safety standards.

- Budgets permit.

Traffic Controls

Island renewal is undertaken as part of pavement renewal

Railings are renewed on an ad hoc basis, as the need is identified by the road inspectors.

EMPs are managed by the maintenance programme

Crossings renewal is undertaken as part of the footpath maintenance programme

D06.9.2 Plan

Streetlight renewal are programmed as needed with works prioritised according to:

- Public safety
- Benefit/ cost savings available, eg, power efficiencies
- The required level of renewal will depend on
    - The age profile of streetlights.
    - The condition profile of streetlights.
    - The level of ongoing maintenance.
    - The economic lives of the materials and components used.

All other traffic service assets are renewed on an ‘as needed’ basis when identified by roadmen or requests for service to the call centre.

Deferred Renewals

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset’s ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

No deferred renewals are currently expected for this activity.

D06.10 Development

D06.10.1 Activities

Street Lighting

Streetlights are acquired or upgraded by:

- Extensions constructed by Council where no streetlights previously existed.
- Taking over new streetlights installed with subdivisional development (constructed at the developer’s expense).
- Upgrading work to improve the lighting levels of service provided
- In association with the street upgrading programme.
- Minor safety works.
- In association with power under-grounding work.

Lighting on major roads will be upgraded progressively where existing standards are less than desirable.

Lighting in residential streets which have obsolete or fluorescent fittings will be upgraded. Any other lighting upgrading will be undertaken when carrying out street improvements.

Road signs

There is no road sign development planned in 2024/27, other than taking over new signs installed with subdivisional development (constructed at the developer's expense).

Road markings

Taking over new markings installed with subdivisional development (constructed at the developer's expense).

Traffic Controls

Taking over new controls installed with subdivisional development (constructed at the developer's expense).

D06.10.2 Plan

Street Lighting

There are no street light improvements planned in the ten year period.

New subdivision assets may be vested from Developer, but they are privately funded.

D06.11 Disposal Plan

Disposal activity for streetlights is limited to lanterns, controls and poles, which have been replaced with new components. Components, which can be used as spare parts, are retained in storage by the contractor or credit is given to Council.

Other surplus assets have no commercial value and are disposed of at District Landfills or transfer stations.

D06.12 Funding Request

Traffic Services can be funded by the following NZTA Work Categories:

- WC 122: Traffic services maintenance
- WC 222: Traffic services renewals

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars. Power supply is included within the maintenance activities for 2023/24 and 2024/25.

FIGURE D.61: TRAFFIC SERVICES HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Direct Cost														
Amenity and Under verandah lights Unsub	3,697	3,199	14,734	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	74,921
Traffic Services Maintenance	1,137,972	615,917	487,110	784,999	931,028	785,000	785,000	785,000	785,000	785,000	785,000	785,000	785,000	7,996,025
Traffic Services Maintenance SPR	37,622	38,426	39,873	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	360,500
Direct Cost Total	**1,179,291**	**657,542**	**541,717**	**828,541**	**974,570**	**828,542**	**828,542**	**828,542**	**828,542**	**828,542**	**828,542**	**828,542**	**828,542**	**8,431,446**

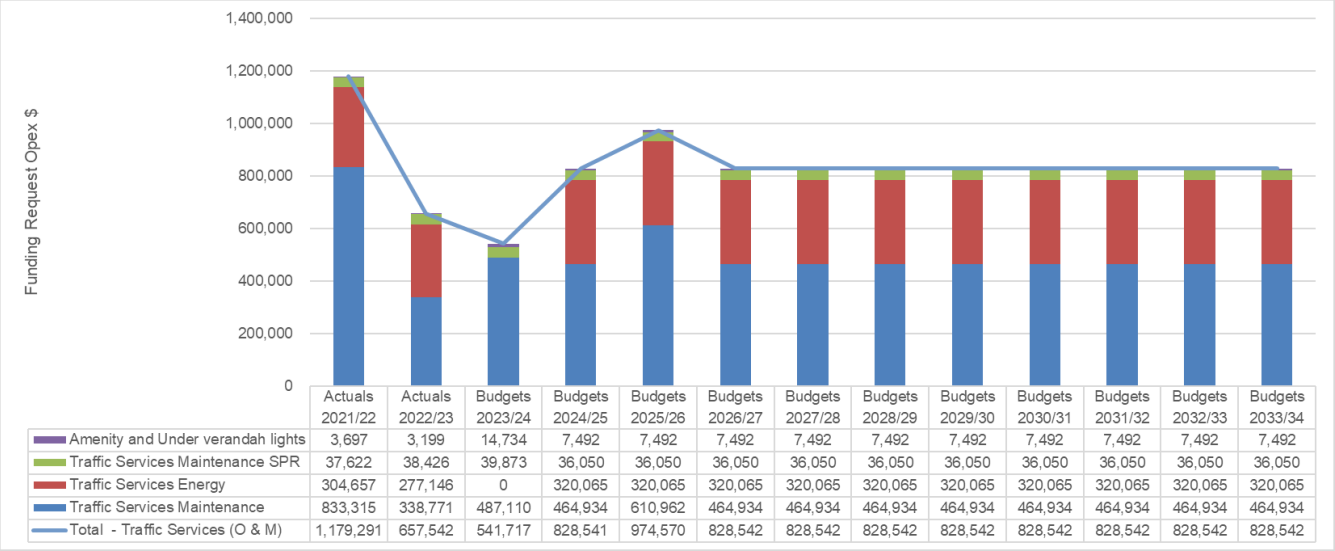
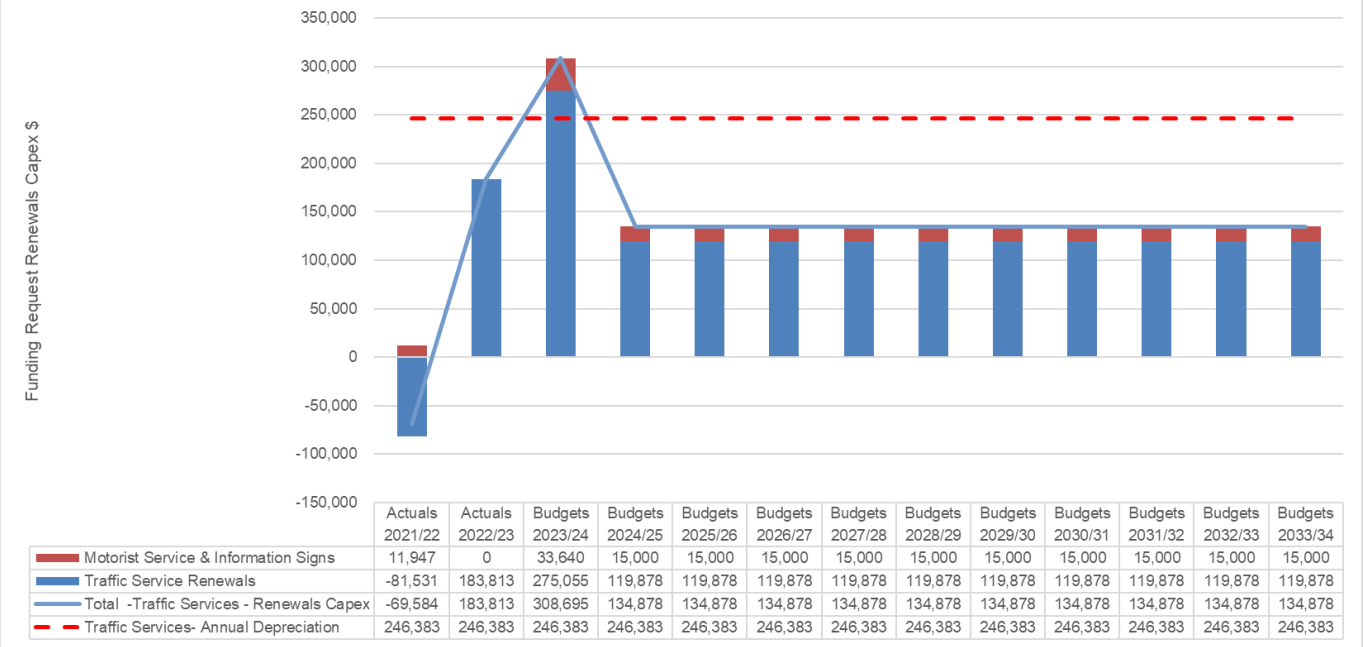


FIGURE D.62: TRAFFIC SERVICES HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
Motorist Service & Information Signs Unsub	11,947	0	33,640	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000
Traffic Services Renewals	-81,531	183,813	275,055	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	1,198,780
Renewal Total	**-69,584**	**183,813**	**308,695**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**1,348,780**
Grand Total	**-69,584**	**183,813**	**308,695**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**134,878**	**1,348,780**



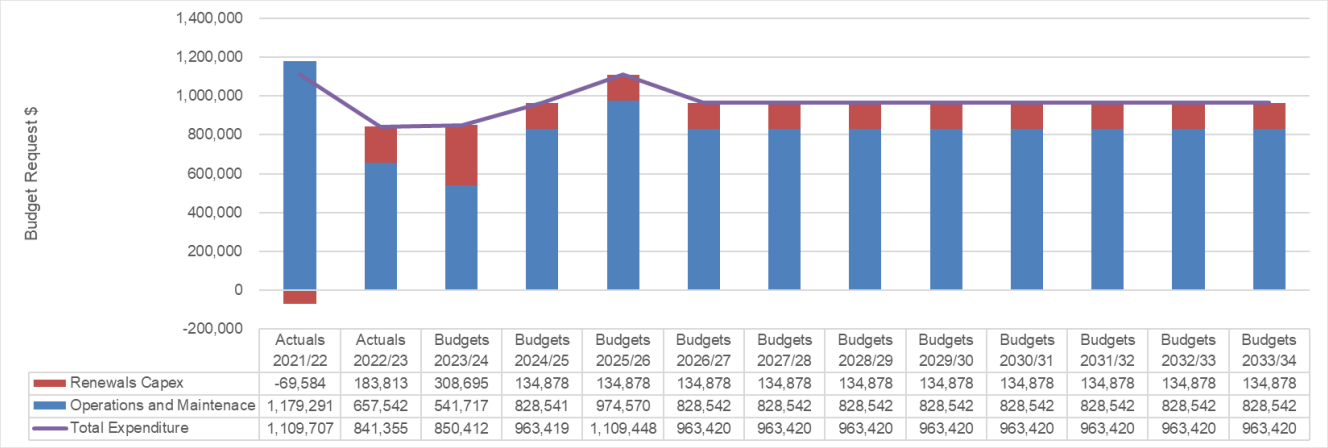
	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Motorist Service & Information Signs	11,947	0	33,640	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Traffic Service Renewals	-81,531	183,813	275,055	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878
Total -Traffic Services - Renewals Capex	-69,584	183,813	308,695	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878
Traffic Services- Annual Depreciation	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383	246,383

Note: 2021/22 Actual is showing a negative in renewals. This needs investigation.

FIGURE D.63: TRAFFIC SERVICES HISTORICAL AND PROJECTED COMBINED EXPENDITURE $

The figure below sets out the historical and projected combined expenditure for traffic services projects and programmes.

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Opex	1,179,291	657,542	541,717	828,541	974,570	828,542	828,542	828,542	828,542	828,542	828,542	828,542	828,542	8,431,446
Renewal	-69,584	183,813	308,695	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	1,348,780
Grand Total	**1,109,707**	**841,355**	**850,412**	**963,419**	**1,109,448**	**963,420**	**963,420**	**963,420**	**963,420**	**963,420**	**963,420**	**963,420**	**963,420**	**9,780,226**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Renewals Capex	-69,584	183,813	308,695	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878
Operations and Maintenace	1,179,291	657,542	541,717	828,541	974,570	828,542	828,542	828,542	828,542	828,542	828,542	828,542	828,542
Total Expenditure	1,109,707	841,355	850,412	963,419	1,109,448	963,420	963,420	963,420	963,420	963,420	963,420	963,420	963,420

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D07 ACTIVE MODES & PUBLIC TRANSPORT FACILITIES

D07.1 Purpose and Strategic Case Link

The purpose of cycleways is to:

Provide recreational opportunities for cyclists along the Ruapehu Great Bike Rides

The Ruapehu cycleways are a part of the New Zealand Cycle Trail network of Great Rides.

The purpose of bus shelters is to:

Provide shelter from all weathers for school or public transport users

Bus shelters are provided by Council for the benefit of children waiting for school buses, Park and Ride users and people waiting for the InterCity buses.

Note that there are currently no local regular public bus services operating in the Ruapehu District.

The purpose of footpaths is to:

Provide a safe, convenient and defined means for pedestrian movement alongside and linking roadways and public space

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	This activity doesn't provide any significant contribution towards addressing this problem.
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Footpaths provide a key service to the community and visitors by providing a safe and comfortable means to walk around mostly the urban areas. The Great Rides contribute to the community by providing further recreational activities as well as attracting tourists that have a positive impact on the local economy. Bus shelters are provided to help make

	Problem Description	Activity Contribution
		the experience of waiting for buses more comfortable and therefore encourage more people to use public transport or school buses.
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem.
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Providing footpaths for use, removes the need for people to use the road carriageway to walk on. This significantly decreases the risk of pedestrians being involved in accidents and being injured.

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	This activity doesn't provide any significant contribution towards this customer level of service
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	This activity doesn't provide any significant contribution towards this customer level of service
Safety	How users experience the safety of the road	Providing footpaths for use, removes the need for people to use the road carriageway to walk on. This significantly decreases the risk of pedestrians being involved in accidents and being injured.
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Footpaths are the fundamental asset that enables the path network to deliver an adequate level of service to the community and visitors. As they are also used for recreation they also contribute to health and wellbeing outcomes. Bus shelters are provided to help make the experience of waiting for buses more comfortable

Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Footpaths provide some accessibility to recreational areas that are not available via the road network. On Road sections provide accessibility between sections of mainly DoC off road Great Rides sections.

D07.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include

- Providing sustainable and resilient infrastructure
- Providing an affordable transportation network that meets the reasonable needs of the wider community

D07.3 Assets to be Managed

D07.3.1 Asset Description - Footpaths

Footpath assets managed under the Land Transport Activity include:

- Footpaths
- Crossings

Footpath assets are managed in the following RAMM tables, and the following information is sourced directly from these tables:

- Footpaths (footpath table)

Note that asset data will be moved to new User Defined Tables (UDTs) in RAMM as part of the Asset Management Data Standard (AMDS) implementation process. The above RAMM table references will therefore be out of date once the AMDS implementation has been completed for Council.

Council manages a total of 70 km of footpaths in urban areas, with more than 90% concrete or asphaltic concrete.

There are additional footpaths owned by Council managed by Recreation and Community Facilities which are part of the pedestrian network.

TABLE D-46: FOOTPATH QUANTITIES BY URBAN/ RURAL AND ONRC

	Quantity		Urban / Rural		ONRC Classification				
Footpath Material	Number	Metres	Urban (m)	Rural (m)	Primary Collector (m)	Second-ary Collector (m)	Access (m)	Low Volume (m)	No ONRC Class Assigned (m)
Asphaltic concrete (black)	51	4,552	15,945	4,552	0	0	1,681	1,236	1,236
Concrete	517	60,520	86,469	58,231	2,289	272	11,389	14,354	28,220

Footpath Material	Quantity		Urban / Rural		ONRC Classification				
	Number	Metres	Urban (m)	Rural (m)	Primary Collector (m)	Second-ary Collector (m)	Access (m)	Low Volume (m)	No ONRC Class Assigned (m)
Interlock Block with AC infill	5	524	1,477	524	0	0	0	0	0
Interlocking blocks	28	1,489	4,585	1,489	0	23	0	288	288
Metal	12	1,644	2,246	1,636	8	50	539	610	445
Paving Panels	2	282	846	282	0	0	111	171	0
Paving Stones	1	44	88	44	0	0	44	0	0
Seal	9	905	2,889	875	30	0	488	49	0
Wooden	1	37	44	37	0	0	0	0	37
Unknown	7	520	0	490	30	0	14	114	392
Total	**633**	**70,517**	**114,589**	**68,160**	**2,357**	**345**	**14,266**	**16,822**	**30,618**

D07.3.2 Asset Values - Footpaths

Footpath assets form 2.4% ($13.7 M) of the total Land Transport Activity (Replacement cost) and 3.6% ($0.2M) of the annual depreciation.

The Council's Land Transport assets have been valued as at 30 June 2023. As part of this process the following are calculated and shown in the tables below:

- RC = Replacement Cost
- DRC = Depreciated Replacement Cost
- AD = Annual Depreciation

TABLE D-47: FOOTPATHS REPLACEMENT COST AND ANNUAL DEPRECIATION

Footpath Material	Number	Metres	RC ($)	DRC ($)	AD ($)
Asphaltic concrete (black)	51	4,552	2,309,675	536,362	80,706
Concrete	517	60,520	9,981,382	6,428,105	124,767
Interlock Block with AC infill	5	524	267,378	154,471	4,456
Interlocking blocks	28	1,489	829,990	406,529	13,833
Metal	12	1,644	69,411	7,659	2,936
Paving Panels	2	282	100,214	42,090	4,009
Paving Stones	1	44	10,424	4,969	417
Seal	9	905	157,827	16,960	5,450

Footpath Material	Number	Metres	RC ($)	DRC ($)	AD ($)
Wooden	1	37	23,453	8,365	938
Unknown	7	520	87,504	55,601	3,351
Total	**633**	**70,517**	**13,837,258**	**7,661,111**	**240,863**

7 footpaths have unknown as their surface type. This will be added to the Improvement Plan to address.

D07.3.3 Asset Description – Great Rides Cycleways

Two Great rides are located within the Ruapehu being the Timber Trail from Pureora to Ongarue and the Mountains to Sea Cycle Trail from Ohakune to Whanganui. Each trail has large off road sections of trail, linked with low volume local roads. The Cycling Awareness Strategy has identified the on road cycle routes and seeks to minimise risk by raising awareness, engineering and education initiatives.

Cycleways assets managed under the Land Transport Activity include:

- Cycleways (managed as footpath records)

The on-road sections of the cycleway are managed by Council under the Land Transport Activity.

Off road sections are managed by the organisation that maintains the section. Council (Land Transport) actively manages off-road trail forming:

- 15.4 km of Fishers Track between National Park Village and Retaruke Valley and
- Depot Road (5.75 km)

Asset data for the cycleway pavements is limited. The land which is paper road under the cycleways has been identified and has been valued as part of the valuation exercise.

The cycleways are part of the National Cycleway. The location, ownership and responsibility for the cycleways is a complex mix of formed road, paper road and off-road with a mix of Council or Department of Conservation (DOC) responsibility. It is important to note that there are adjoining sections outside the District. A table showing the maintenance of sections is attached in Appendix F.

D07.3.4 Asset Values – Great Rides Cycleways

On-road sections of the cycleway are not included as separate assets but are included in the road maintenance and renewals sections as part of the road network.

Depreciation on sections of trail managed by DOC are not provided for in this plan, as they are a visitor asset owned by DOC. This assumes the assets created over the road reserve are owned by DOC.

Off-road sections managed by Council are included in this plan. Tracks are audited yearly and then if required, maintained by that track's appointed contractor.

D07.3.5 Asset Description – Bus Shelters

Bus Shelters are managed by transport for Council as they are on the road corridor, with transport arranging any installation works. Open Spaces carries out operational works.

Information on Bus Shelters is not maintained in RAMM.

There are 24 bus shelters, these are provided for the following reasons:

- 21 - School bus shelters
- 3 - Taumarunui Intercity bus passengers
- 1 - Park and Ride (National Park)

Note that bus shelters are usually made up of a concrete pad and the shelter then attached to the concrete pad.

D07.3.6 Asset Values – Bus Shelters

The Bus Shelters are assets owned by Land Transport.

The bus shelters do not form a significant component of the total assets and to date have not been included in the valuation of the transportation assets.

D07.4 Need for Investment

D07.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Footpaths

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D07.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
Advocacy and Relationships	Changing land use and activities Land use change to more urban or increase in an activity (eg: tourists) increases the need for footpaths to be provided.	Policy approach	Developers to provide the necessary footpaths to support new types of land use or activities through RMA process. Run a New Footpaths programme to fill any other gaps in need. Work with Community spatial plans and Community Boards to identify areas for development.

Strategic Response	Key Issue	Response Type	Strategies to Address
Advocacy and Relationships	Vehicle damage to footpaths Heavy vehicles using the berms, or because of building activities on the adjacent property, cause damage to footpaths leading an increase to maintenance needs.	Policy approach	Reactive maintenance. Reactive and proactive renewals when the extent of damage larger Bond taken for certain specific activities (eg: house moving) to cover for risks of asset damage.
Maintain level of service capacity	Damage from tree roots Tree roots displace footpath slabs. Damage can occur suddenly because of seasonal growth spurts in trees and some tree species such as liquid amber and flowering cherry have a particularly shallow root system that causes the most problems. The trees that cause damage could be situated either on adjacent private land or within the road corridor	Programme and Policy approach	Repair damage and where approved by the tree owner, the tree is also cut and removed to prevent future damage.
Targeted Improvements for active modes (eg Walking , cycling, mobility, micro-mobility)	Kerb crossings Majority of pram crossings are not compliant with current standards	Programme and Policy approach	Create a pram crossing maintenance renewals programme. Design for compliance during footpath renewal.
Targeted Improvements for active modes (eg Walking , cycling, mobility, micro-mobility)	Tactile pavement markers at crossing points No tactile pavement markers to support pedestrian crossings	Level of Service adjustment	New and renewed pram crossing may have tactile pavers included

Great Rides Cycleways

Strategic Response	Key Issue	Response	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is as documented in the D07.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in - Levels of Service we Provide (Section C04) Activity specific Level of Service
Network safety and resilience – planning and targeted improvements	Safety for users While cyclists on off road sections are away from traffic, the use of on road sections though low	Investigation approach	Will ensure cycling trends are monitored and action taken to raise cyclist and motorist awareness of new use trends on rural roads.

Strategic Response	Key Issue	Response	Strategies to Address
	volume roads requires safety monitoring		
Advocacy and Relationships	Level of Service The overall vision for level of service on the trail can lack clarity.	Policy approach	Council funds maintenance to the existing service level. Improvements would require capital funding and investment from external providers.

Bus Shelters

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D09.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service We Provide Activity specific Level of Service needs to be developed. School bus shelters have been historically provided by Council.
Maintain level of service capacity	Vandalism Shelters are damage and tagged with graffiti	Policy approach	When shelters are renewed, they are replaced with standard vandal and graffiti resistant structures
Targeted Improvements for active modes (eg Walking , cycling, mobility, micro-mobility)	Demographic changes As the shelters are currently for school children. Population density and bus shelter requirements are continually changing	Level of Service adjustment Investigation approach	Council will evaluate future needs based on population density and consider replacing the bus shelters over time with uniform relocatable structures that can be easily moved as dictated by demand.
Value for money	Shelter Ownership Currently there is no clear ownership of bus shelters to any activity leading to the lack of planning.	Policy approach	During this AMP period, an appropriate strategy and / or policy will be prepared including defining each activities roles and responsibilities.
Targeted Improvements for active modes (eg Walking , cycling, mobility, micro-mobility)	No long term planning New shelters are placed reactive to need and there is not a clear understanding of longer term need or policy on the level of service that the Council is willing to fund.	Investigation approach	During this AMP period, an appropriate strategy and / or policy will be prepared

D07.4.2 Key Risks

The following table provides the key risks in these activities:

Footpaths

Risk	Description	Assessment	Controls	Mitigation
New Footpaths Funding	Currently New Footpaths require a Walking and Cycling strategy to be eligible for funding. However as it is a nationally contested fund there is a high chance that none or limited footpaths will be funded.		Highlight the risks to Council.	Promote, when appropriate, Councils to fully fund new footpaths.

Bus Shelters

Risk	Description	Assessment	Controls	Mitigation
Public Transport Services Created	Any start-up of public bus services may create an unexpected demand for bus shelters beyond the current funding level.	Low	Partnership opportunities to be investigated to support investment for PT infrastructure.	Usually PT bus shelters are provided by the regional authority funding the service, or the PT operator.

D07.4.3 Historical Commentary

Footpaths

- Prior to July 2018 footpaths were not a subsidised activity by NZ Transport Agency.
- Up until 2015 funding for footpath maintenance and renewals was restricted. From July 2015 Council started to budget spending the footpath depreciation amount.
- To date Council has self funded footpath extensions to a low value allowing small development with a safety focus to go ahead.

Great Rides Cycleways

Council considers that it has a very basic approach to cycleways investment and has identified areas for improvement by completing regular NZCT Trail Warrant of Fitness inspections.

Investment in cycleway assets is required because:

- The purpose of cycle trails in Ruapehu is to provide a recreational cycling facility as a part of the New Zealand Cycle Trail network of Great Rides that meets NZCT Trail Design Guidelines.

Council funds maintenance of the on road sections.

The Ministry of Business Innovation and Employment (MBIE) currently provides a contestable fund for improving the Great Ride and to address emergency events.

Processes and methods currently employed are described in the maintenance, renewals and capital works sections that follow and include:

- On-road cycleway sections are maintained in conjunction with routine road maintenance and renewals.
- Off-road Council sections are audited annually with identified works programmed or carried out.
- Responsibilities for off-road sections have been assigned to various stakeholders as outlined in table above and in more detail in Appendix F.

Bus Shelters

Bus shelters are provided to help make the experience of waiting for buses more comfortable. Their primary purpose is to provide shelter from inclement weather for school children waiting for their school buses.

The Taumarunui Intercity and Park and Ride at National Park shelters are a recent initiative. While Transport arranged for these shelters to be installed outside of the transport budget, the understanding is that they are Reserves and Facilities assets. They are not currently valued as Transport assets.

Both Intercity and Park and Ride shelters will need expanding if funding allows. There are also additional Park and Ride facilities discussed in the Facility Roads and Carparks lifecycle (Section D10) which may require shelters.

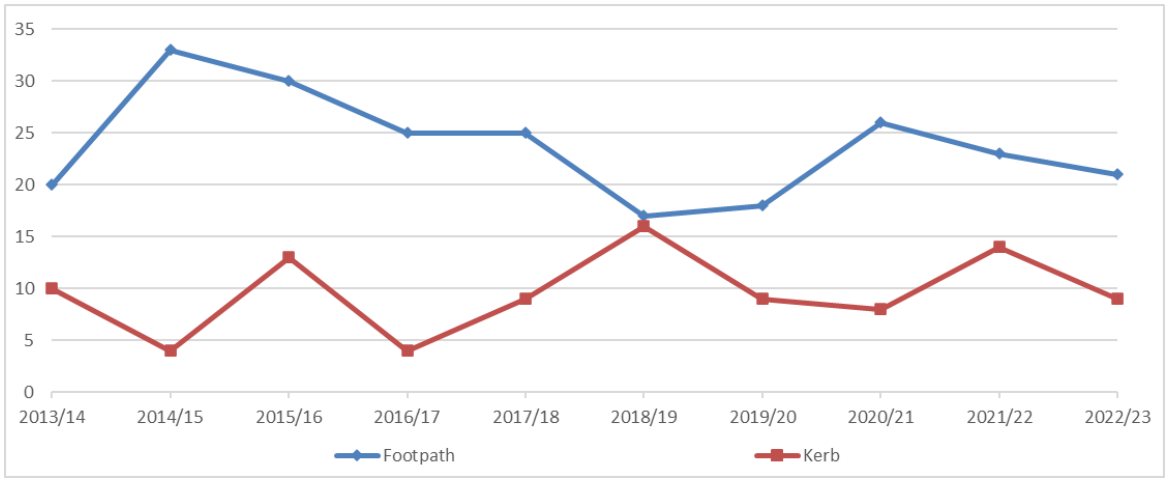
D07.4.4 Levels of Service

Footpaths

Service Calls

The service calls for Footpaths are shown below.

FIGURE D.64: FOOTPATH SERVICE CALLS



Footpath calls cover issues such as trip hazards, slippery surfaces, slips and broken paths. The footpath renewal budget was increased in 2015, enabling significant renewal work to be carried out.

Customer Satisfaction

Customer satisfaction survey results indicate that:

- 76% of residents are satisfied or very satisfied with the provision of footpaths.
- Dissatisfied residents (12%) reasons include lack of footpaths, poor condition (uneven, potholes, rough, broken), lack of maintenance or needing upgrading. The increase in renewal expenditure in the last 3 years has shown in the results where the overall very satisfied/satisfied category had a slight increase over previous years.

Significant LoS Change

This AMP continues to support the improvements to the footpaths Levels of Service by renewals generally increasing footpath width to 1.5m and providing pram crossings to meet the latest mobility standards.

Great Rides Cycleways

The Level of service required by the Great Rides which these cycleways contribute to is split between

- On road sections as per pavements section
- Off road council sections - New Zealand Great Ride trail standards
- Off road sections - DoC defines the expected LoS

Bus Shelters

None currently defined. The strategy and / or policy, being prepared during this AMP period, will need to address the levels of service that the Council wants to adopt, formalise and fund.

Significant LoS Change

No significant change has been made to bus shelter requirements based LoS in recent history.

D07.5 Asset Performance

D07.5.1 Age Profile / RUL

Footpaths

The age information of about 40% of the Council footpath assets is known. This is because they were constructed or renewed following Council's use of the RAMM system and the requirement to record the asset data in this system. The age information for the other 60% is unknown.

It should be noted that where an asset doesn't have a construction date its RUL is calculated initially using a default date defined in the valuation module for the assets valuation rule.

Due to the lack of age information the following calculation has been used

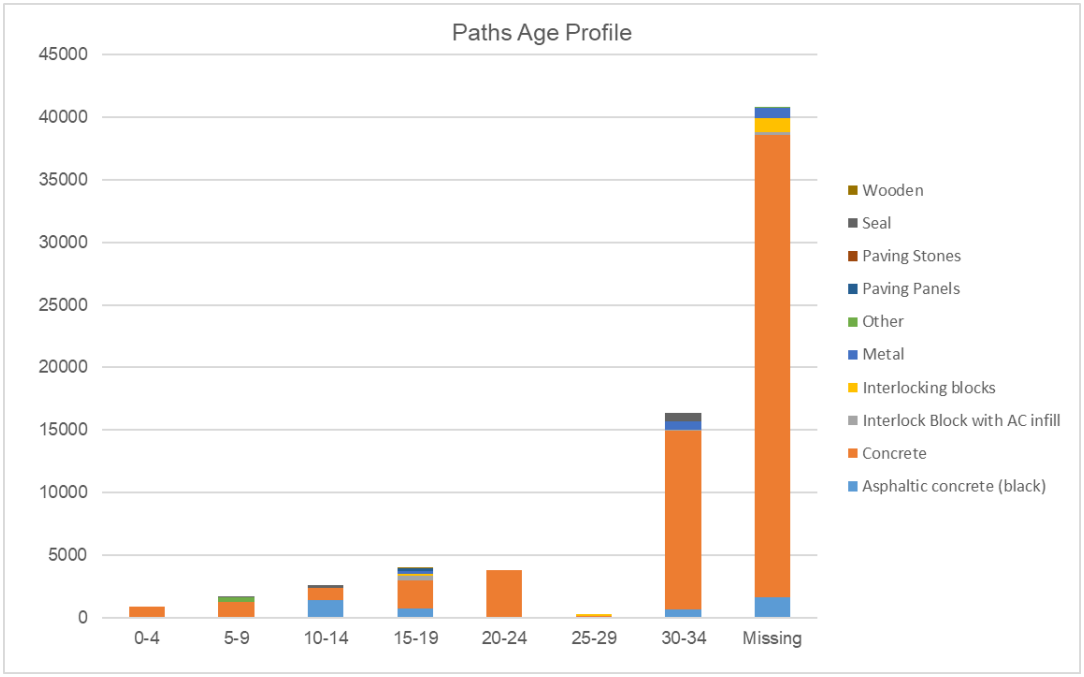
Average Age = Total Useful Life - Average RUL

TABLE D-48: FOOTPATH AGE AND RUL

Useful Life		
Description	**TUL**	**Avg Life**
Asphaltic concrete (black)	25	20
Concrete	80	19
Interlock Block with AC infill	60	25
Interlocking blocks	60	24
Metal	20	27
Other	25	6
Paving Panels	25	15
Paving Stones	25	14
Seal	20	24
Wooden	25	17
Grand Total	**55**	**20**

The table above indicates that Metal and Chip Sealed footpaths are nearing the end of their useful lives with AC also beginning to need a review.

FIGURE D.65: FOOTPATHS – AGE (METRES)



Great Rides Cycleways

Both Cycle Trails were completed in 2013 and continue to meet Grade 2 and 3 trail specifications as part of the New Zealand Great Ride trail standards.

Bus Shelters

There is currently no bus shelter information available on:

- Age
- Remaining Useful Life

D07.5.2 Condition

Footpaths

Footpath Condition rating is managed outside of RAMM, and currently includes both Transport assets and some managed on behalf of other Council Activities. It will be migrated into RAMM.

Condition Methodology

The condition of all footpaths was measured in 2022 and regularly recorded through previous maintenance contracts. Council's footpath condition rating system uses three criteria to prioritise repair or replacement needs:

- Displacement (safety against tripping).
- Cracked and settled.
- Discretionary (based on other factors such as usage, ponding potential, width etc).

The main reasons for deterioration are (in order):

- Tree root damage.
- Vehicle damage.
- Disintegration from natural weathering (age).
- Inadequate reinstatement by service authorities and unauthorised street openings.

Footpath Condition Rating

- Data collected over the 2015 – 18 period has enabled a baseline to be established. The rating method has been revised since the 2015 AMP to reflect the methodology used.
- Defects include;
    - Trip hazards ≤ 10mm for seal or concrete surface
    - Trip hazard ≤ 4mm for cobble surface
    - Scabbing / Depression / Potholes / Cracking
    - Loose or Missing cobbles
    - If Footpath width is not ≥ 1.2m in compliance with Accessibility Standard - NZS4121: 2001 Design for access and mobility: Buildings and Associated facilities
    - Pram Crossings present if required and compliant
    - Pram crossings compliant with accessibility standards (eg ramp steepness not greater than 1 in 12)

TABLE D-49: FOOTPATH CONDITION RATING

Score	Description
0	Brand new. Footpath is in perfect condition
1	Very good condition – no visible defects
2	Good condition – only very minor defects visible
3	Average condition – a number of defects are visible, but it is still quite serviceable
4	Below average condition – quite a few obvious defects are visible
5	Poor condition – significant percentage of footpath exhibiting severe cracking and other defects
6	Very poor condition – totally unsuitable for pedestrian use

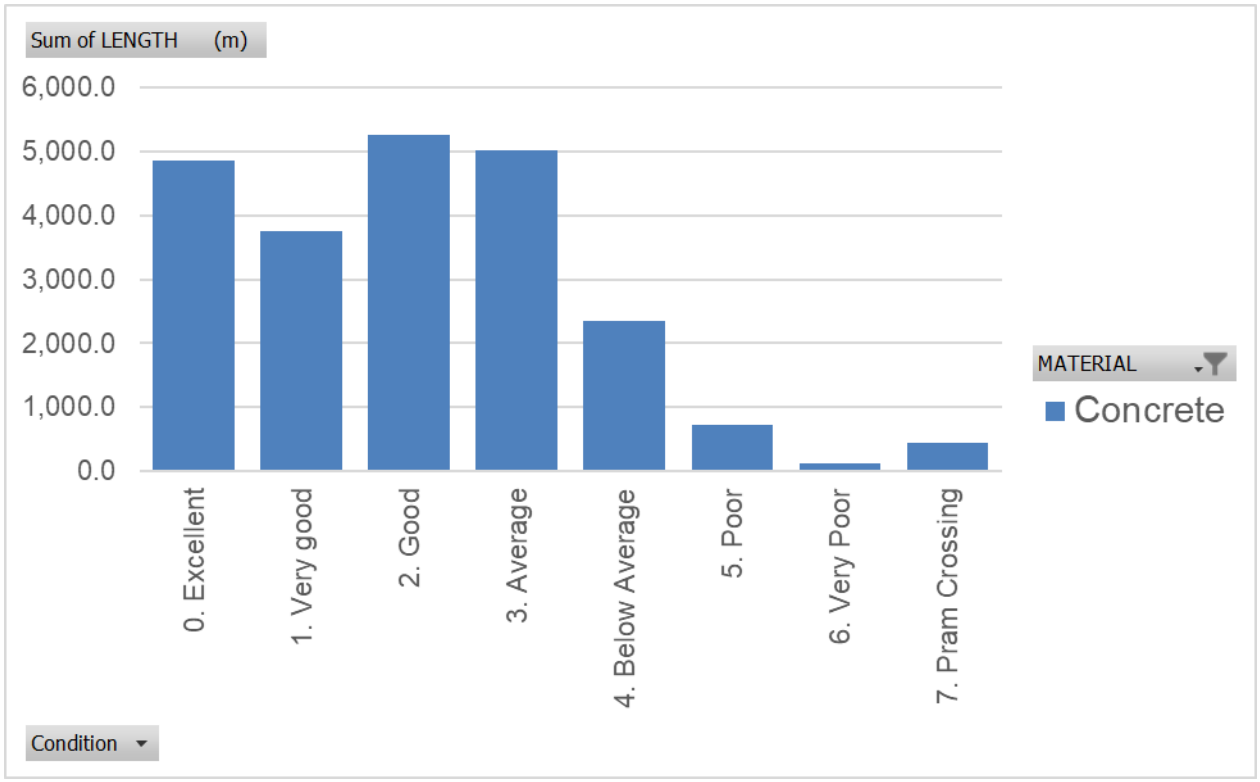
Condition Summary

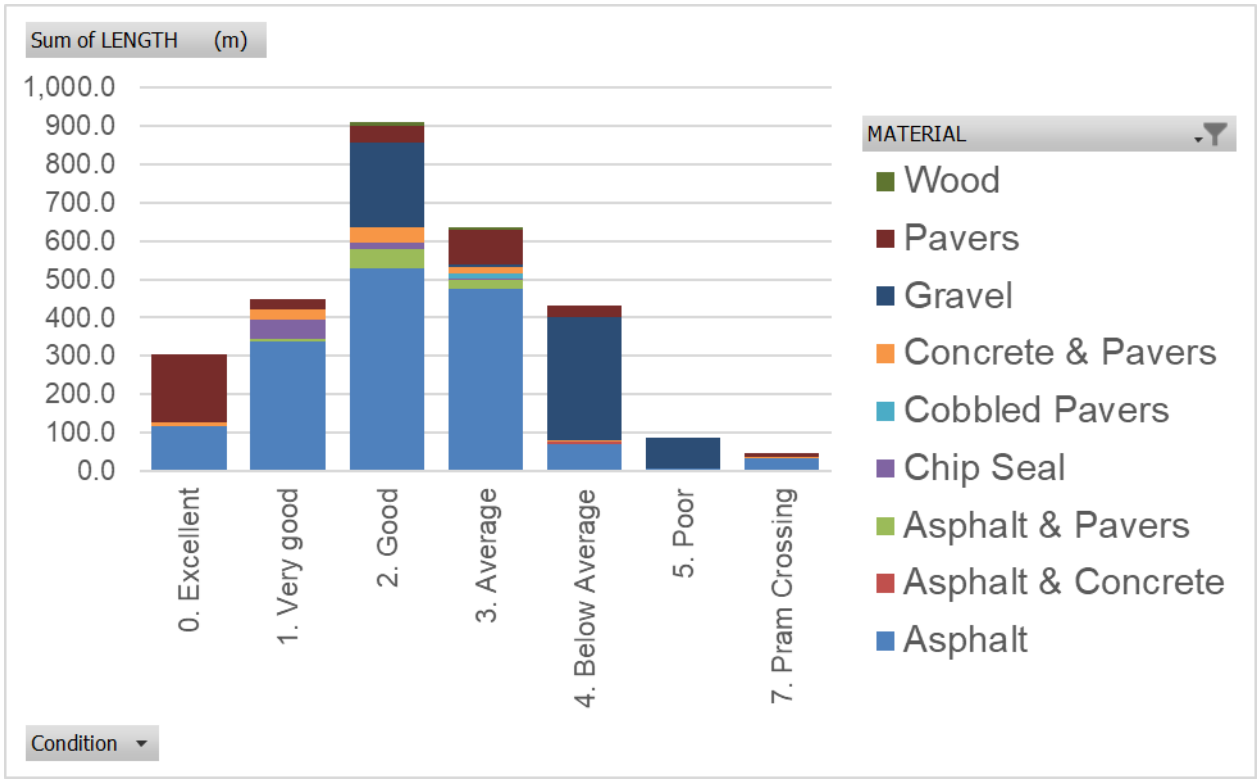
In general, the footpath condition is good. See summary below. The footpath condition rating carried out in 2022 has since been found to have some discrepancies in the length of rated footpaths. This information is being used below and will be flagged for improvement in the AMIP.

TABLE D-50: 2022 FOOTPATH CONDITION BY SURFACE MATERIAL

Footpath Material	Condition (m)						
	Excellent	Very Good	Good	Average	Below Average	Poor	Very Poor
Asphalt	115.9	336.8	572.2	475.5	69	5	
Asphalt & Concrete				1.1	6.2		
Asphalt & Pavers		6.5	52.2	23.5			
Chip Seal		52.8	15	3			
Cobbled Pavers			0.5	12.9			
Concrete	4,780.7	3,753.9	5,254.9	5,010.7	2,355.2	715.4	115
Concrete and Pavers	11.6	24.2	39.9	14.4	5		
Gravel			221	8	321.2	82	
Pavers	108	27.6	43.3	89.4	31.5		
Wood			9.4	8.4			
Total	**5,016**	**4,201.8**	**6,163.4**	**5,646.9**	**2,788.1**	**802.4**	**115**

FIGURE D.66: FOOTPATH CONDITION BY SURFACE MATERIAL





Pram crossing rating means there is a pram crossing required or the existing crossing doesn't meet standard.

Great Rides Cycleways

Condition assessments for on-road cycleways are undertaken as part of pavement inspections.

The condition assessment of the off-road cycle trail section maintained by Council is done following notification of problems or by the Trail Warrant of Fitness system.

Condition assessment results (Trail Warrant of Fitness) and service requests are recorded with remedial works undertaken as a transport activity.

DOC has responsibility for condition assessment and maintenance for trails constructed by them, regardless of their paper road status.

Bus Shelters

There is currently no bus shelter information available on condition.

D07.5.3 Performance

Footpaths

Some sub-divisional roading works which have been completed in the past have proved to be of poor quality construction, and there is an ongoing problem of tree root damage and lifting of slabs. Interlocking blocks and pavers inherently require higher maintenance but have the advantage of being “reusable” and can be uplifted and relayed to access or lay services. Interlocking blocks are generally confined to the highly trafficked retail areas.

Changes to specifications over time have led to several footpath widths and pram crossing types, which are now substandard based on the latest NZS specifications.

Great Rides Cycleways

Not currently applicable.

Bus Shelters

There is currently no bus shelter information available on performance.

D07.6 Asset Management

D07.6.1 Standards

Footpaths

Footpaths and pram crossing shall be built or renewed to the requirements set out in the following standards:

- NZS 4404:2010 Land Development and Subdivision Infrastructure
- NZS 4121:2001 Design for access and mobility - Buildings and associated facilities
- NZTA RTS 14 Guidelines for facilities for blind and vision impaired pedestrians

Great Rides Cycleways

The cycleways must meet the following standards:

- New Zealand Great Ride trail standards for the appropriate grades https://nzcycletrail.com/

Bus Shelters

Bus shelters shall be in conformance with the Building Code.

D07.6.2 Strategies and Policies

Footpaths

Council will continue to encourage developers to provide cycling and walking facilities, with good connections to existing facilities at the development boundaries. The connectivity aspect is to ensure that linkages are provided between road networks as well as other public areas and facilities such as reserves, car parks, swimming pools, etc, thereby providing a viable alternative transport route for the community. By providing attractive and ideally more direct routes, walking and cycling transportation may be attractive.

The identification, commencement and completion of a few feature projects are ideal opportunities for Council to demonstrate commitment to the promotion of walking and cycling in the District.

Safety inspections will have sufficient focus on connectivity improvements.

Local Government Act 1974: 331 Footpaths and channels - requires pram crossing to be provided as works are being undertaken in the area. Pram crossings shall be provided that are wheelchair and mobility scooter accessible.

A policy for footpath development is in place. When requested the extension of footpaths will be considered where the vehicular traffic flow is more than 300 vehicles per day and number of dwellings or business premises exceeds 7.5 per 100m.

The emphasis is on addressing high-use areas to and from areas such as:

- Marae
- Schools
- Community housing
- Retirement rest homes
- Central business districts (CBD)

Ruapehu District Council takes a roading bond for resource consents issued for building relocations and constructions. Currently no roading bond (footpath deposit) is taken for minor alterations and other building works.

The other significant issue is vehicle damage either from heavy vehicles using the berms or because of building activities on the adjacent property. To address the damage from building activities, Ruapehu District Council takes a roading bond for resource consents issued for building relocations and constructions.

This deposit is refunded to the applicant at the completion of the building works if no damage to the footpath or berm has occurred or if the applicant has, as part of the process, repaired the footpath to a standard acceptable to the Team Leader Land Transport. If there is damage to the footpath or berm the Council retains the deposit until either the applicant

repairs the damage or repairs are carried out by Council at the applicant's cost and any residual money refunded.

Great Rides Cycleways

The Trail Warrant of Fitness informs the maintenance cycle trail maintenance activity however the majority of off road trail sections are through DOC Estate and funding is expected to be from their budgets.

Governance and Operations are provided by Ruapehu District Council in partnership with DOC and Whanganui District Council.

Bus Shelters

To date the installation of bus shelters has been reactive. A strategy will be developed during this AMP period. A policy may be developed, in conjunction with the strategy development.

D07.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D07.6.4 Delivery

Footpaths

The footpath asset activities are delivered under the current council contracts as outlined in the table below.

Activity Type	Activity	Delivery Method
Operations	Footpath - Litter removal	Parks and Reserves Contract
Operations	Footpath - Sweeping	Parks and Reserves Contract
Operations	Footpath - Vegetation removal	Parks and Reserves Contract
Operations	Footpath - Vegetation spraying	Parks and Reserves Contract
Maintenance	Footpath - Addressing ponding issues	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Levelling uneven surfaces (<20m)	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Lip grinding	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Pothole repairs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Raised service covers	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Replace broken pavers	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Crossing - Maintenance	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Footpath - Slab replacements	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Renewals	Crossing - Renewals	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

Renewals	Footpath - Renewals	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Footpath - New	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Footpath - Vested	Developer
Development	Crossing - New	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Crossing - New	Adjacent Land Owner
Development	Crossing - Vested	Developer

The maintenance contractors also receive and investigate complaints on footpath condition whilst Council's in-house team liaises with building consents and relocations to approve the location and construction of vehicle crossings.

Great Rides Cycleways

Governance and Operations are provided by Ruapehu District Council in partnership with DOC and Whanganui District Council.

On road sections within Council boundaries are managed as part of the road.

The two off-road sections managed by Council, namely Fishers Track and Depot Road are delivered under the current council contracts as outlined in the table below.

TABLE D-51: CYCLEWAY ACTIVITY DELIVERY

Activity Type	Activity	Delivery Method
Operations	Cycleway - Vegetation Clearance	Vegetation Control Contract
Operations	Cycleway - Slip Clearance	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Cycleway - Structures Inspection	Professional Services Contract
Maintenance	Cycleway - Culvert Maintenance	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Cycleway - Reshape Surface	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Cycleway - Aggregate Application	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Cycleway - Trail Marker Pegs	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Maintenance	Cycleway - Structures Maintenance	Procured as required

Bus Shelters

The Bus Shelter assets activities are delivered under the current council contracts as outlined in the table below.

Table - Bus Shelters Activity Delivery

Activity Type	Activity	Delivery Method
Operations	Bus Shelter - Cleaning	Parks and Reserves Contract
Operations	Bus Shelter - Graffiti Removal	Parks and Reserves Contract
Operations	Bus Shelter - Weed Spraying	Parks and Reserves Contract

Activity Type	Activity	Delivery Method
Maintenance	Bus Shelter - Minor repairs	Parks and Reserves Contract
Maintenance	Bus Shelter - Component replacements (eg: glass panel or a seat)	Parks and Reserves Contract
Maintenance	Bus Shelter - Lighting maintenance	Parks and Reserves Contract
Maintenance	Bus Shelter - Relocation	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Bus Shelter - Installation - concrete pad	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Development	Bus Shelter - Design and build	Procured as required

D07.7 Operations

D07.7.1 Activities

Footpaths

Operational Activities include;

- Spraying of vegetation on footpath edges and cracks
- Sweeping
- Litter removal
- Keep free of vegetation

Note that intervention levels, when appropriate, are defined in maintenance contracts.

Great Rides Cycleways

Operational activities for on road sections are managed as part of the operational activities for roading. See Pavements (Section D03).

Operational activities for Off-road sections managed by Council are included in this plan, being.

- Annual vegetation clearance
- Slip Clearance
- Structures inspections

Bus Shelters

Operations activities for Bus Shelters are:

- Cleaning
- Graffiti Removal
- Weed spraying

D07.7.2 Plan

Footpaths

There is an outcomes based contract that ensures the specified level of service is maintained.

Great Rides Cycleways

The operations activity for vegetation clearance is planned as required.

The Structures inspections are included in the general structure inspection programme as discussed in Structures (Section D04).

Slip Clearance is undertaken as required when reported via customer call centre.

Bus Shelters

Operational activities are undertaken on an as needed basis.

Work is identified by customer calls as well as by the Parks & Reserves contractors.

D07.8 Maintenance

D07.8.1 Activities

Footpaths

Maintenance activities include:

- Slab replacements
- Pothole repairs
- Raised service covers
- Addressing ponding issues
- Levelling short lengths of uneven surfaces (<20m)
- Replace broken pavers
- Lip grinding

Note that intervention levels, when appropriate, are defined in maintenance contracts.

Great Rides Cycleways

Maintenance activities on the on-road sections will be undertaken as part of asset management activities for roading. See Pavements (Section D03).

Maintenance activities on the Off road sections managed by Council include:-

- The use of a small digger to;
    - clear slips,
    - culverts maintenance
    - reshape surface
    - apply aggregate where needed
- Trail marker pegs maintenance.
- Structures maintenance

Bus Shelters

Maintenance Activities for Bus Shelters are

- Minor repairs
- Component replacements (eg: glass panel or a seat)
- Lighting maintenance
- Relocating bus shelters

D07.8.2 Plan

Footpaths

Work is identified through using the outputs of the footpath condition inspections as set out in Section D12 Network and Asset Management.

Urgent safety repairs are undertaken as a priority and are carried out as a first priority for the use of the available funding.

Deferred Maintenance

Currently there is no deferred maintenance for footpaths.

Great Rides Cycleways

Maintenance is programmed because of inspection or request via the customer call centre.

Deferred Maintenance

Currently there is no deferred maintenance for footpaths.

Bus Shelters

Maintenance activities are undertaken on an as needed basis.

Work is identified by customer calls as well as by the Parks & Reserves contractors.

Deferred Maintenance

There is no deferred maintenance identified at this time.

D07.9 Renewals

D07.9.1 Activities

Footpaths

Footpath renewals are defined as the replacement of continuous sections exceeding 20m in length and can include major upgrading works.

Renewal activities include:

- Overlaying of the existing surface with a similar material
- Removing the existing surfacing and laying new surface
- Full reconstruction (including upgrades)

Deferred Renewals

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

There are no deferred renewals currently.

Great Rides Cycleways

There are no identified renewal works to be undertaken over the next ten years on Council's sections.

Bus Shelters

With the majority of bus shelters being relatively new and in reasonable condition, there are no renewals programmed during the 3-years of this AMP. There is a reactive renewal budget to respond to issues.

Deferred Renewals

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

No deferred renewals are currently expected for this activity.

D07.9.2 Plan

Footpaths

The required level of renewal will vary depending on:

- The age profile of footpaths.
- The condition profile of footpaths.
- The characteristics of the adjacent footpath network.
- Proximity to trees.
- The level of ongoing maintenance demand.
- The differing economic lives of the materials used.

Great Rides Cycleways

Not applicable

Bus Shelters

Not applicable

D07.10 Development

The development activity can significantly improve an existing asset or network as well as creating new assets.

Note that the renewals activity allows for replacements to have some minor improvements or significant improvements when it utilising current technology or standards.

Also note that Council will receive new network assets through the vesting process in accordance with the District Plan.

D07.10.1 Activities

Footpaths

Development activities include:

- New footpaths constructed by Council
- Vested assets (usually from subdivisions)

TABLE D-52: NEW FOOTPATHS PRIORITISATION AND DELIVERY PROCESS

Step 1: Inputs	Step 2: Prioritisation	Step 3: Forward Works Programme	Step 4: Works Delivery
Requests are received (including ad-hoc and through Annual Plan process) Gaps are identified in current footpath network	Community Board Liaison; the following are taken into consideration Standards and Policies listed in the above sections ● Safety ● Development and changing land use ● Vehicular Traffic levels ● Availability of nearby amenities (eg: lighting)	Programme of possible works is maintained Funding approvals	Design Construction MSQA Asset Handover

Cycleways

Great Rides

The plan is for the Mountains to Sea Great Ride to extend the Te Hangaruru section from Pōkakā to National Park.

Additionally, a hub is proposed at Horopito hall, to provide toilet facilities, parking and possibly food opportunities. This is a natural staging area.

An Interpretive signage project has also been included to provide information for riders about the cycleway. This will enhance the experience.

All these projects are conditional on applying for and receiving external funding. While these are not funded by Council there may be additional Operational, Maintenance and Renewal costs associated with them in the future.

Other

Work continues to develop a cycleway between Ohakune to Raetihi. It began during the previous AMP and will be developed mostly on old rail reserve. There is no development planned in 2024/25 – 2026/27.

Bus Shelters

While there are no specific shelters programmed, it is expected that some new shelters will be required as and when a strong need arises.

Based on historical needs, this plan budgets for one new shelter per year.

D07.10.2 Plan

Footpaths

Footpath development is undertaken under the unsubsidised work category. The details for the footpath development programme are shown in the table below.

Footpath development in the future may be subsidised once Council has a "Walking and Cycling Strategy" allowing for development to be escalated forward.

Great Rides Cycleways

Not applicable

Bus Shelters

Not applicable

D07.11 Disposal Plan

No assets are planned to be disposed of at this time.

While there are no bus shelters planned for disposal at this time it is possible that some could be removed (and not replaced) if they fall into disrepair and the demand for use has reduced to the point where the bus shelter is no longer required.

D07.12 Funding Request

Footpaths

Footpaths can be funded by the following NZTA Work Categories:

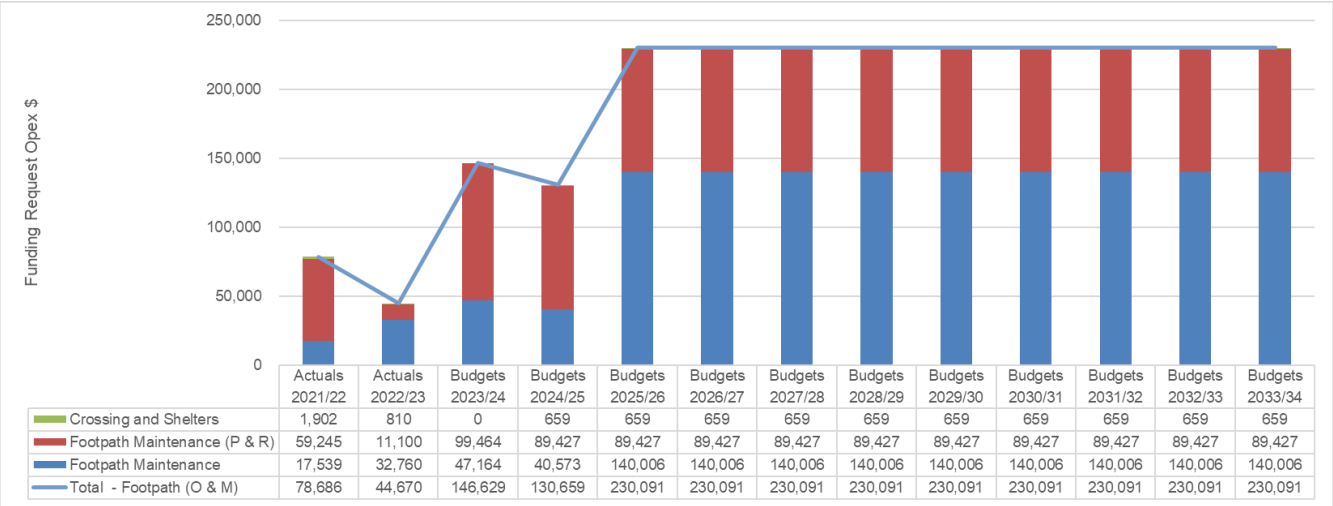
- WC 125: Footpath maintenance
- WC 215: Footpath renewals

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.67: FOOTPATHS HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

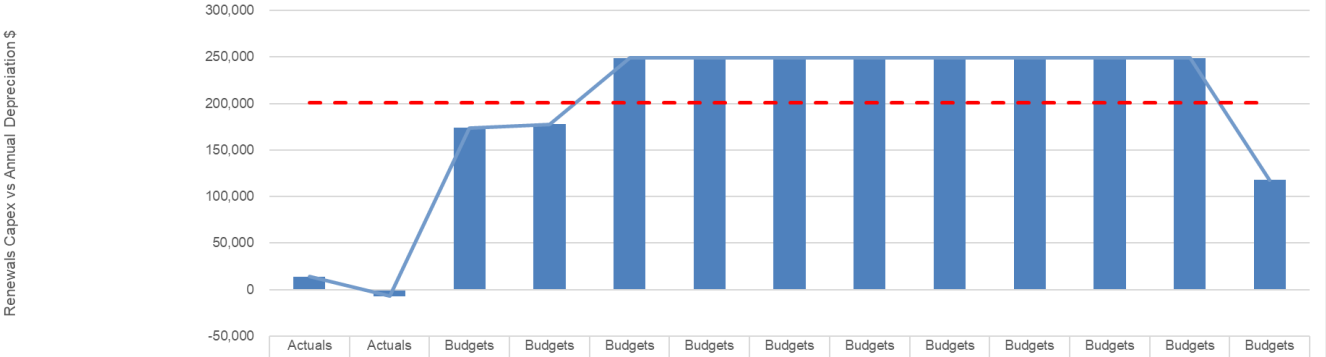
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Direct Cost														
Crossing and shelters Unsub	1,902	810	0	659	659	659	659	659	659	659	659	659	659	6,588
Footpath Maintenance	76,784	43,860	146,629	130,000	229,432	229,432	229,432	229,432	229,432	229,432	229,432	229,432	229,432	2,194,889
Direct Cost To	**78,686**	**44,670**	**146,629**	**130,659**	**230,091**	**230,091**	**230,091**	**230,091**	**230,091**	**230,091**	**230,091**	**230,091**	**230,091**	**2,201,477**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Crossing and Shelters	1,902	810	0	659	659	659	659	659	659	659	659	659	659
Footpath Maintenance (P & R)	59,245	11,100	99,464	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427
Footpath Maintenance	17,539	32,760	47,164	40,573	140,006	140,006	140,006	140,006	140,006	140,006	140,006	140,006	140,006
Total - Footpath (O & M)	78,686	44,670	146,629	130,659	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091

FIGURE D.68: FOOTPATHS HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Renewal														
Footpath Renewals	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679	2,285,451
Renewal Total	**13,757**	**-6,976**	**173,913**	**177,679**	**248,762**	**248,762**	**248,762**	**248,762**	**248,762**	**248,762**	**248,762**	**248,762**	**117,679**	**2,285,451**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Footpath Renewals	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679
Total -Footpath - Renewals Capex	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679
Footpath- Annual Depreciation	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213	201,213

The level of footpath renewals is shown to be aligned with the current annual depreciation. Footpath renewals are funded under the footpath maintenance work category above.

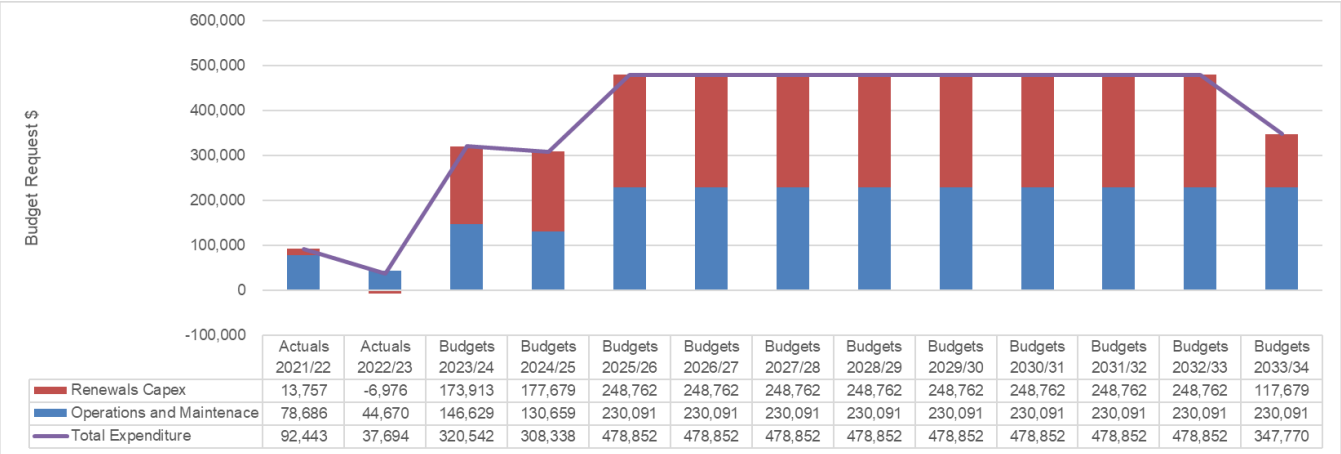
New Assets Funding

- Council is able to access funding from NZTA to undertake specific 'Low Cost Low Risk' projects that help to ensure a safe cycling or walking environment. This funding is at present limited to projects of no more than $2M, of which NZTA will fund at base rates. Council is required to produce a walking and cycling strategy in order to access these funds.
- Large sections of new cycle lanes or footpaths will not be funded through Council's minor safety budget. Council will prioritise for treatment those areas that have historical crash issues or where potential hazards (eg, on-road parking, narrow roads, high traffic volumes or speeds) are identified on routes that Council is promoting. Council will work with NZTA to ensure consistency of service between State Highways and Council Roads.

The figure below sets out the historical and projected combined expenditure for footpaths projects and programmes.

FIGURE D.69: FOOTPATHS HISTORICAL AND PROJECTED COMBINED EXPENDITURES $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Opex	78,686	44,670	146,629	130,659	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	2,201,477
Renewal	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679	2,285,451
Grand Total	**92,443**	**37,694**	**320,542**	**308,338**	**478,852**	**478,852**	**478,852**	**478,852**	**478,852**	**478,852**	**478,852**	**478,852**	**347,770**	**4,486,928**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Renewals Capex	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679
Operations and Maintenace	78,686	44,670	146,629	130,659	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091
Total Expenditure	92,443	37,694	320,542	308,338	478,852	478,852	478,852	478,852	478,852	478,852	478,852	478,852	347,770

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

Great Rides Cycleways

On road cycleway funding is included in the Pavements lifecycle (section D03)

Off road cycleway funding is currently unsubsidised.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.70: CYCLEWAY HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

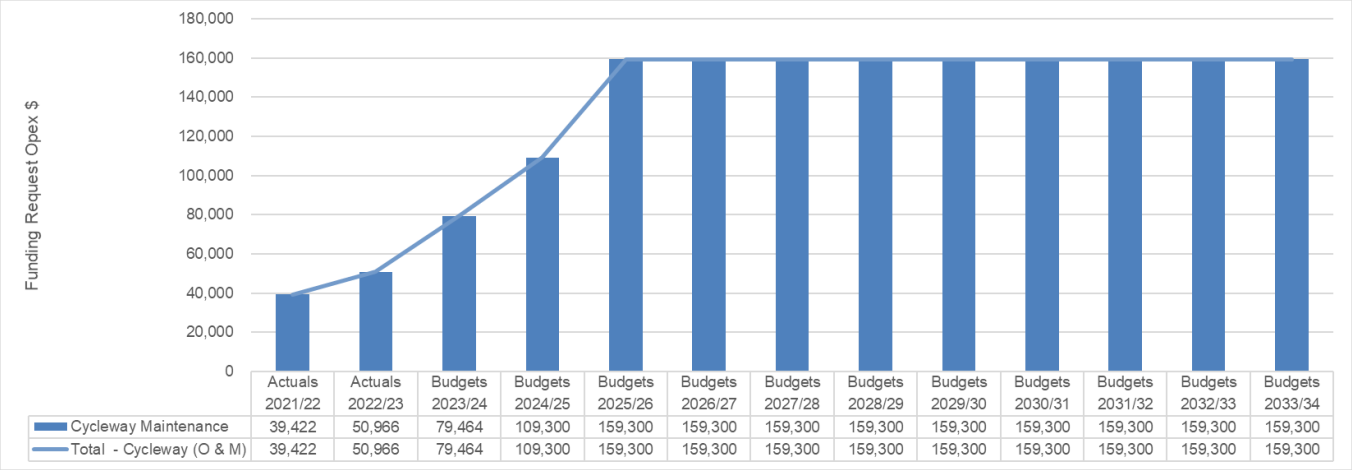
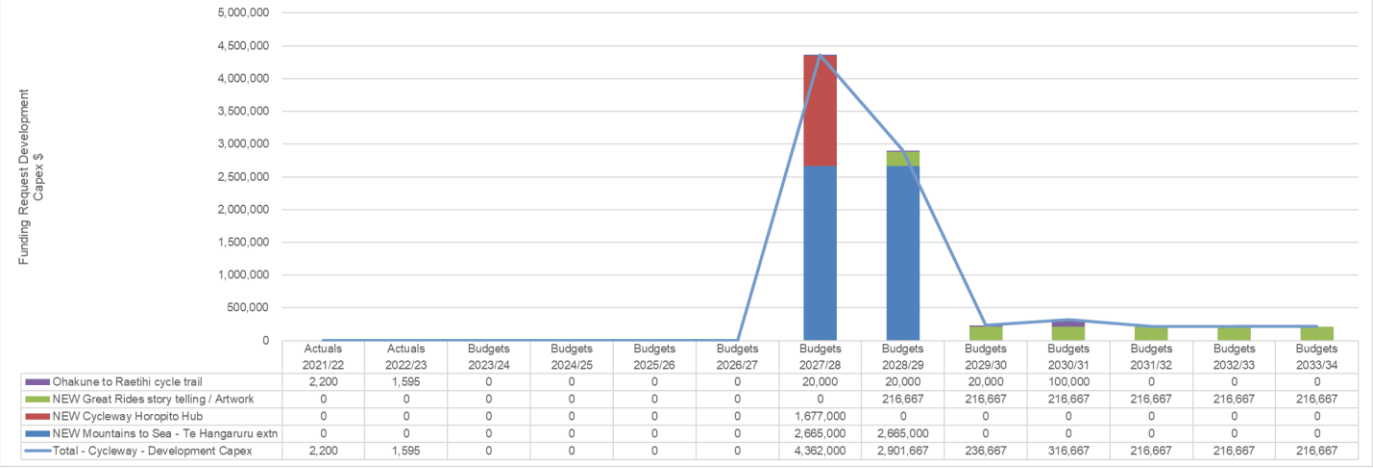


FIGURE D.71: CYCLEWAY HISTORICAL AND PROJECTED DEVELOPMENT EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
LOS														
NEW Cycleway Horopito Hub	0	0	0	0	0	0	1,677,000	0	0	0	0	0	0	1,677,000
NEW Great Rides story telling / Artwork	0	0	0	0	0	0	0	216,667	216,667	216,667	216,667	216,667	216,667	1,300,000
NEW Mountains to Sea - Te Hangaruru extn	0	0	0	0	0	0	2,665,000	2,665,000	0	0	0	0	0	5,330,000
Ohakune to Raetihi cycle trail	2,200	1,595	0	0	0	0	20,000	20,000	20,000	100,000	0	0	0	160,000
LOS Total	**2,200**	**1,595**	**0**	**0**	**0**	**0**	**4,362,000**	**2,901,667**	**236,667**	**316,667**	**216,667**	**216,667**	**216,667**	**8,467,000**



Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

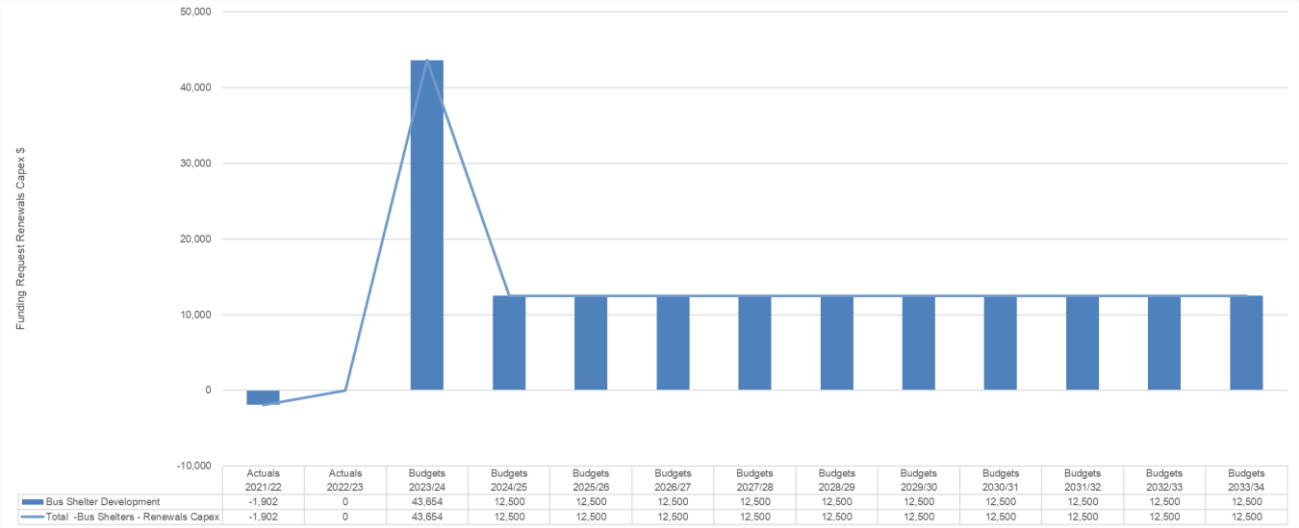
Bus Shelters

Bus Shelters are not currently funded by NZTA Work Categories.

Council has identified the following programmes for 2024/34 to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.72: BUS SHELTERS HISTORICAL AND PROJECTED CAPITAL DEVELOPMENT EXPENDITURE $



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Bus Shelter Development	-1,902	0	43,654	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
Total -Bus Shelters - Renewals Capex	-1,902	0	43,654	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500

There is no historical and projected operational or capital renewals expenditure component of bus shelters projects and programmes.

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D08 FACILITY ROADS AND CARPARKS

D08.1 Purpose and Strategic Case Link

The purpose of facility roads is:

Provide drivable access to commercial, recreational and parking areas

The purpose of carparks is:

To ensure the adequate supply of car parking for residents and visitors (both able and disabled) to commercial, recreational and business areas

Facility road and Carpark assets are road types and designated areas and not individual assets in their own rights. As such the following assets are part of providing facility roads and carparks:

- Pavements
- Signs
- Barriers
- Markings
- Street lighting

Facility roads cover access roads to community facilities, providing public access to Council owned and maintained facilities such as cemeteries, camping grounds, flats, transfer stations and Contractor access to facilities like sewage treatment plants. These roads are generally not on road reserve.

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	This activity doesn't provide any significant contribution towards addressing this problem
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Providing access roads to commercial facilities and activity areas, as well carparks, is an expected service from the community and therefore supports their needs and wellbeing
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem

	Problem Description	Activity Contribution
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	This activity doesn't provide any significant contribution towards addressing this problem

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	This activity doesn't provide any significant contribution towards this customer level of service
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	This activity doesn't provide any significant contribution towards this customer level of service
Safety	How users experience the safety of the road	This activity doesn't provide any significant contribution towards this customer level of service
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Provide end of journey access to council and other facilities
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	This activity doesn't provide any significant contribution towards this customer level of service

D08.2 Benefits of Investing

By investing in this asset, the investment objectives we hope to achieve include

- Providing sustainable and resilient infrastructure
- Maintain network so that service capacity and integrity is not reduced

D08.3 Assets to be Managed

D08.3.1 Asset Description

Land Transport maintains 13 sealed car parking areas for off-street parking as well as 10 gravelled areas providing parking for facilities such as sports clubs.

Land Transport maintains 33 facility roads, covering a length of 7 km.

The finished surfaces vary between asphalt, seal, pavers and gravel surfaces.

This section covers the pavement and surface needs of facility roads and off street carparks only, as:

- On street carparking is provided for as part of the pavement section
- Other assets (ie signs and streetlights) are managed in the section specific to the activity

Currently Facility Roads and Carparks are not managed as a whole in RAMM.

Facility Roads

Council manages approximately seven kilometres of facility roads.

TABLE D-53: FACILITY ROADS BY LOCATION AND SURFACE MATERIAL

Ward	Facility Roads - Surface Material (metres)				Total
	Concrete	Gravel	Hotmix	Seal	
National Park	35	1,141			**1,176**
Ohura		470		61	**531**
Taumarunui	24	710		1,730	**2,464**
Waimarino		2,460		440	**2,900**
Total	60	4,781		2,231	7,071

FIGURE D.73: FACILITY ROADS LENGTHS BY LOCATION

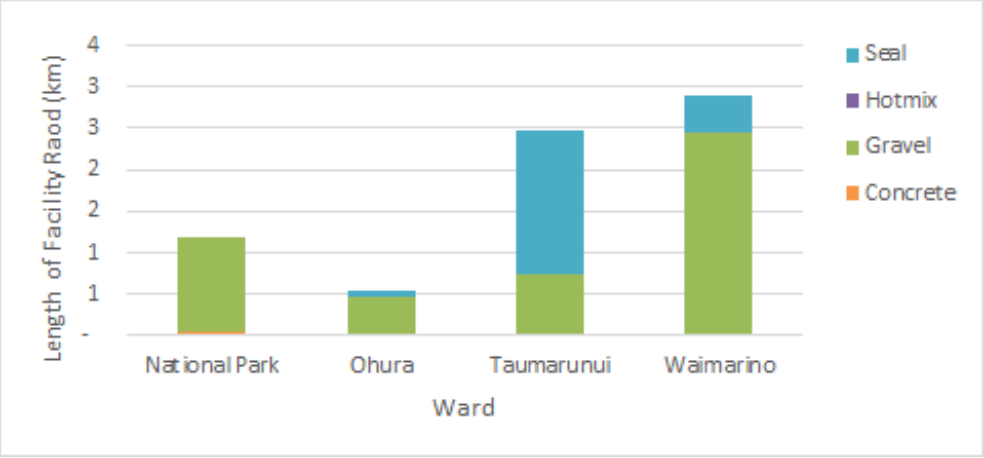


TABLE D-54: FACILITY ROADS SURFACE MATERIALS

Surface	Length Known	Number	Length (m)
Concrete	Yes	2	60
Gravel	Yes	20	4,781
	No	1	-
Hotmix	No	1	-
Seal	Yes	9	2,231
Total		**23**	**7,071**

Carparks

There are 23 Off Street Carparks mainly in the town centres with the majority in Taumarunui. While the area of all carparks is not known they cover approximately 14,500m2.

TABLE D-55: CARPARK ASSETS BY LOCATION

Ward	Carpark Surface (number)					Total
	Asphalt	Cobble	Gravel	Hotmix	Seal	
National Park			2		1	**3**
Ohura					1	**1**
Taumarunui	2	1	6		7	**16**
Waimarino			2	1		**3**
Total	**2**	**1**	**10**	**1**	**9**	**23**

FIGURE D.74: NUMBER OF CARPARKS BY WARD

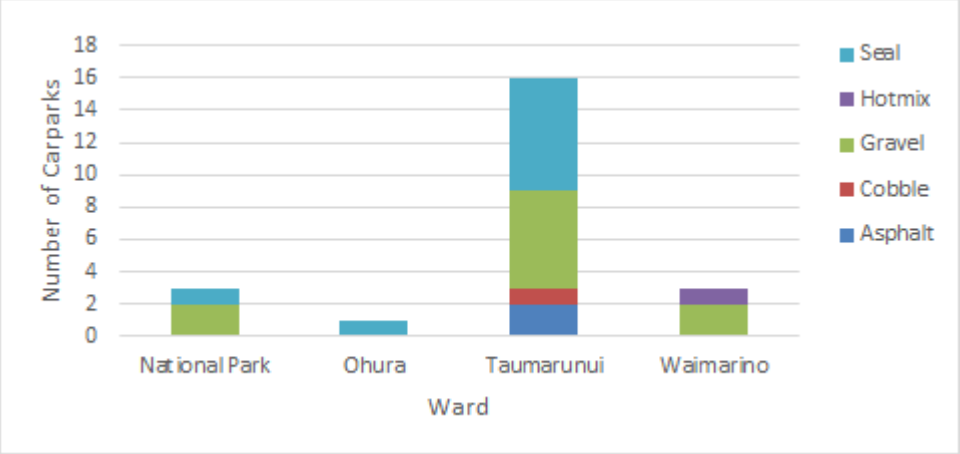


TABLE D-56: CARPARK ASSETS SURFACE MATERIAL BY AREA

Surface	Area Known	Number	Area (m2)
Asphalt	Yes	2	1,610
Cobble	Yes	1	200
Gravel	Yes	4	4,556
	No	6	-
Hotmix	Yes	1	1,400
Seal	Yes	7	6,692
	No	2	-
Total		**23**	**14,458**

D08.3.2 Asset Values

Assets in the road corridor are covered in the pavement section. Assets managed by the roading activity for other Council activities will be covered in appropriate activity documents.

D08.4 The Need for Investment

D08.4.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D07.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Level of Service needs to be developed.
Maintain level of service capacity	Inadequate historical funding Inadequate historical maintenance and renewals funding	Programme approach	Addressed in Activity Management Plan budgets

Strategic Response	Key Issue	Response Type	Strategies to Address
Value for money	Lack of clarity on ownership. Lack of clarity on asset ownership has resulted in lack of budgeting, asset management and delivery.	Policy approach	Land Transport to proactively champion maintenance and renewal, as the Council experts in pavements and road assets, that they take on the role of asset management and delivery ownership for these assets. Ownership of Improvement planning needs agreement. In addition, an agreement is needed on whether the asset ownership should sit with Land Transport or the separate Departments that the asset supports. Note that the Asset Owner is responsible for the valuation and budgeting for operations, maintenance and renewals.
Value for money	Lack of asset management processes being applied. The lack of clarity on ownership has meant that asset management processes have been ad hoc and therefore not ensuring consistent CLoS have been achieved.	Policy approach	Clarify ownership and the proper practices be documented in the appropriate AMP and delivery.
Advocacy & Relationships	Lack of new or upgrade activities when a major change to facilities. New facilities are built or have a major upgrade but the associated access or carpark are not adequately provided or upgraded. This is leading to the limited renewals budgets being expected to cover new assets or upgrades.	Policy approach	These need to be addressed as part of the facility project and therefore not part of Land Transport. Land Transport to advocate that this be addressed during Council projects.

D08.4.2 Historical Commentary

Historically, renewal funding was not allowed for until 2012/13. A renewals regime needs to be developed for this asset to quantify work required and ensure renewals are carried out in a timely manner.

A lack of clear ownership has meant improvement planning has been reactive and matched to budget rather than need.

D08.4.3 Levels of Service

SERVICE CALLS

Service calls for facility roads and carparks are included in Pavement call type.

D08.5 Asset Performance

D08.5.1 Age Profile / RUL

There is limited information on the age of facility road and carpark assets.

D08.5.2 Condition

There is no existing condition rating information. RAMM condition rating is not considered to be necessary due to the small size of many of the assets. The sealed parking areas vary from poor to excellent condition, largely correlating with age.

D08.5.3 Performance

Currently there is no performance information available for facility roads and carparks.

D08.6 Asset Management

D08.6.1 Standards

Facility Roads and Carparks should be developed to meet the relevant standards outlined in the pavements sections.

D08.6.2 Strategies and Policies

Roading is positioning itself to offer guidance to other activities developing assets as to the correct facility roads and carparks to provide and the long term budgetary needs to maintain these services.

D08.6.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D08.6.4 Delivery

The Land Transport contracts are used to deliver operations, maintenance and renewal works on carparks and facility roads.

Routine works are done as instructed works so that costs can be tracked.

D08.7 Operations

D08.7.1 Activities

Refer to the Pavements Section for a list of activities.

D08.7.2 Plan

Operational activities are carried out on a needs basis when requested.

D08.8 Maintenance

D08.8.1 Activities

Refer to the Pavements Section for a list of activities.

D08.8.2 Plan

These items are priced, prioritised and programmed. Repairs are carried out based on priority or from information received from Council's Request for Service system.

Deferred Maintenance

Anecdotal evidence suggests that there is a significant maintenance backlog for facility roads and carparks. This will need to be addressed over a number of years but will also depend on whether an accelerated renewals programme can be funded and delivered.

D08.9 Renewals

D08.9.1 Activities

Refer to the Pavements Section for a list of activities.

D08.9.2 D10.8.2 Plan

Existing car parks that need resurfacing have been identified. These will be addressed as funding is available.

DEFERRED RENEWALS

When renewal works are deferred, the impact of the deferral on economic efficiencies and the asset's ability to achieve or contribute to the required service and safety standards will need to be assessed. Although the deferral of some renewal works may not impact significantly on the short-term operation of the assets, repeated deferral will create a liability in the longer term.

Anecdotal evidence suggests that there is a significant renewals backlog for facility roads and carparks. This will need to be addressed over a longer period than this AMP to bring it back to a condition where maintenance and renewal levels are normalised again.

D08.10 Development

New facility roads and carparks will most likely be partnerships between Council and the landowners. In this AMP, investigation and design funding is included for two potential sites

- a Park and Ride in Ohakune and
- a truck parking facility in Waiouru

to address safety, damage to Council assets and congestion concerns. Both would require partnership funding.

No budget has been allocated for facility road improvements.

D08.11 Disposal Plan

There are no assets to be disposed of at this time.

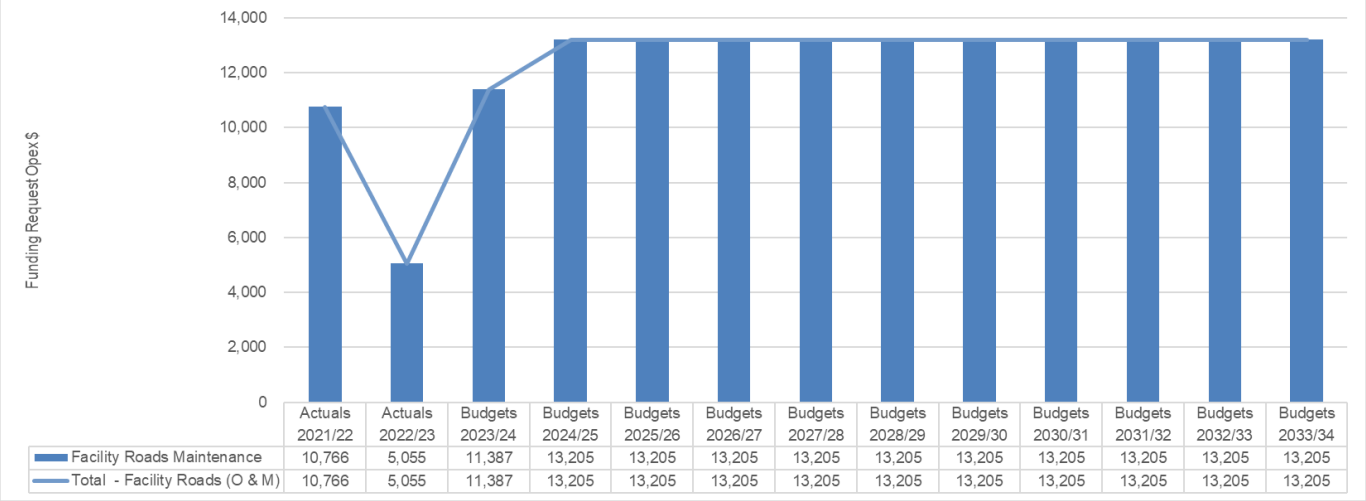
D08.12 Funding Request

Facility Roads and Carparks are not currently funded by NZTA Work Categories.

Council has identified the following programmes for 2024/25, which is indicative of the next 10 years to address the challenges faced by the transport network and deliver the District's Strategy and Investment Outcomes.

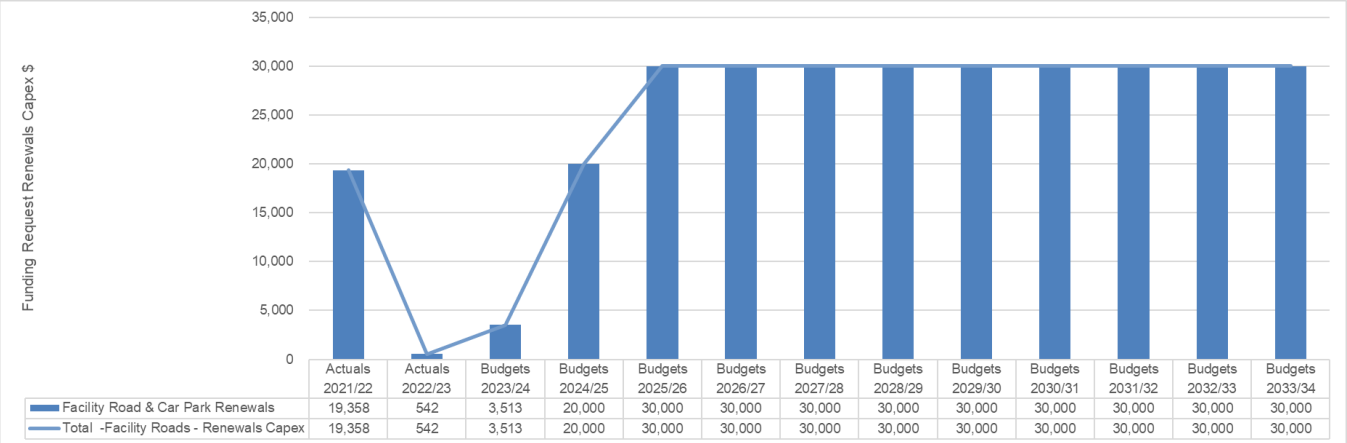
The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.75: FACILITY ROADS AND CARPARKS HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Facility Roads Maintenance	10,766	5,055	11,387	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205
Total - Facility Roads (O & M)	10,766	5,055	11,387	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205

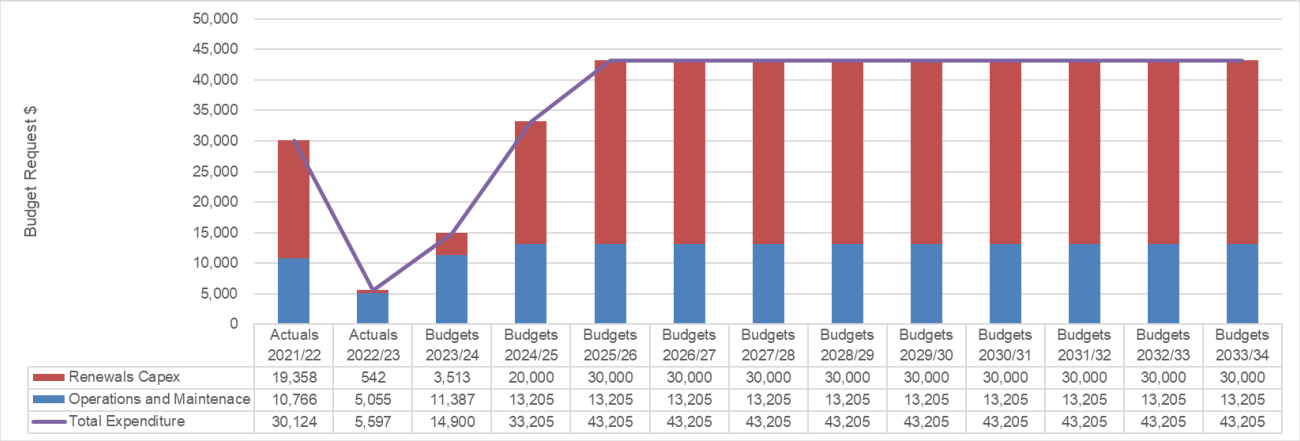
FIGURE D.76: FACILITY ROADS AND CARPARKS HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE $



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Facility Road & Car Park Renewals	19,358	542	3,513	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Total -Facility Roads - Renewals Capex	19,358	542	3,513	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000

FIGURE D.77: FACILITY ROADS AND CARPARKS HISTORICAL AND PROJECTED COMBINED EXPENDITURE $

Row Labe	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of 10 Year Request Total
Opex	10,766	5,055	11,387	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	132,050
Renew al	19,358	542	3,513	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	290,000
Grand Total	**30,124**	**5,597**	**14,900**	**33,205**	**43,205**	**43,205**	**43,205**	**43,205**	**43,205**	**43,205**	**43,205**	**43,205**	**43,205**	**422,050**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Renewals Capex	19,358	542	3,513	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Operations and Maintenace	10,766	5,055	11,387	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205
Total Expenditure	30,124	5,597	14,900	33,205	43,205	43,205	43,205	43,205	43,205	43,205	43,205	43,205	43,205

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D09 ENVIRONMENTAL SERVICES

D09.1 Purpose & Strategic Case Link

The purpose of environmental services is:

Provide activities that manage the environment for the safety of road and pathway users as well as protecting environmental outcomes

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	This activity doesn't provide any significant contribution towards addressing this problem
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Management of vegetation and litter meets the expectation of a clean and tidy network to travel through
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	This activity doesn't provide any significant contribution towards addressing this problem
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Management of roadside vegetation can improve, - lines of sight - reduce icing in winter - reduce fire risk All improving road user safety

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	This activity doesn't provide any significant contribution towards this customer level of service
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	This activity doesn't provide any significant contribution towards this customer level of service
Safety	How users experience the safety of the road	Management of roadside vegetation can improve, - lines of sight - reduce icing in winter - reduce fire risk All improving road user safety
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Management of vegetation and litter meets the expectation of a clean and tidy landscape to travel through
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	This activity doesn't provide any significant contribution towards this customer level of service

D09.2 Activities to be Managed

This section is purely operational based activities and as such there are no assets to be managed

Environmental Services activities carried out to deliver Land Transport include:

- Environmental Maintenance – maintaining the roadside vegetation and berms to keep the sightline window clear, maintaining free flow of water along roadside water channels, drains and culvert inlet and outlets.
- Plant Pest maintenance – to target plant pest species in the roadside corridor and keep the sightline window clear.

- Litter and Refuse – maintaining the roadside shoulders and berms clear of litter, refuse and fly tipping to maintain its visual amenity.
- Snow, ice and gritting – maintaining sealed surfaces clear of snow and ice for vehicular traction together with gritting, which is also undertaken in hot weather conditions to control bleeding and melting bitumen.

D09.3 The Need for Investment

D09.3.1 Known Needs and Issues

The following table provides the key needs and issues that support investment in this activity, along with their strategies to address them.

Strategic Response	Key Issue	Response Type	Strategies to Address
Maintain level of service capacity	Assets to fulfil their purpose Assets to fulfil their purpose in accordance with agreed Levels of Service.	Programme approach	Purpose is documented in the D011.1 Overview and Strategic Case Link. Transport Activity Level of Service is documented in Section C04 - Levels of Service we Provide Activity specific Level of Service
Network safety and resilience – planning and targeted improvements	Weather causing unseasonal growth	Policy approach	Vegetation control contract terms are measure and value to allow a more flexible approach
Network safety and resilience – planning and targeted improvements	Unseasonal growth leads to loss of lines of sight	Policy approach	Vegetation control contract terms are measure and value to allow a more flexible approach
Network safety and resilience – planning and targeted improvements	Weather causing fire risk Dry weather can increase fire risk especially where there is uncontrolled vegetation	Policy approach	Mowing can be deferred in times of high fire risk Vegetation control contract terms are measure and value to allow a more flexible approach
Network safety and resilience – planning and targeted improvements	Ice on Roads Ice represents a safety issue	Programme approach Level of Service adjustments	Daylight cuttings to minimise shaded areas and routine gritting. OMR : Calcium Magnesium Acetate ice control operations are undertaken to address this issue.
Advocacy and Relationships	Plant Pests Council is required to address plant pests on road corridors. The need exceeds community affordability.	Policy approach	Target plant pests on Council's plant pest strategy. Work in conjunction with Horizons Regional Council and land owners where we can, to spread our budget further.

D09.3.2 Key Risks

The following table provides the key risks in these activities:

Risk	Description	Assessment	Controls	Mitigation
Hazardous trees	Hazardous trees represent a safely risk on the network Potentially hazardous tree work exceeds budget availability		Record and monitor hazardous tree complaints; remove trees posing a safety risk as budget allows	Apply for funding from other parties and Government departments.

D09.3.3 Historical Activity Commentary

Vegetation control can be a high complaint area depending on the growing season. While we have consistently achieved our target mowing rounds, the peak growing period is difficult for contractors to get ahead of, resulting in a number of complaints annually.

Wet weather or high fire risk seasons also affect mowing delivery.

Trees on the roadside are a safety concern and exceed budget affordability to remove. Trees reported through service requests are monitored and removed if they pose an immediate danger.

D09.3.4 Levels of Service

Service Calls

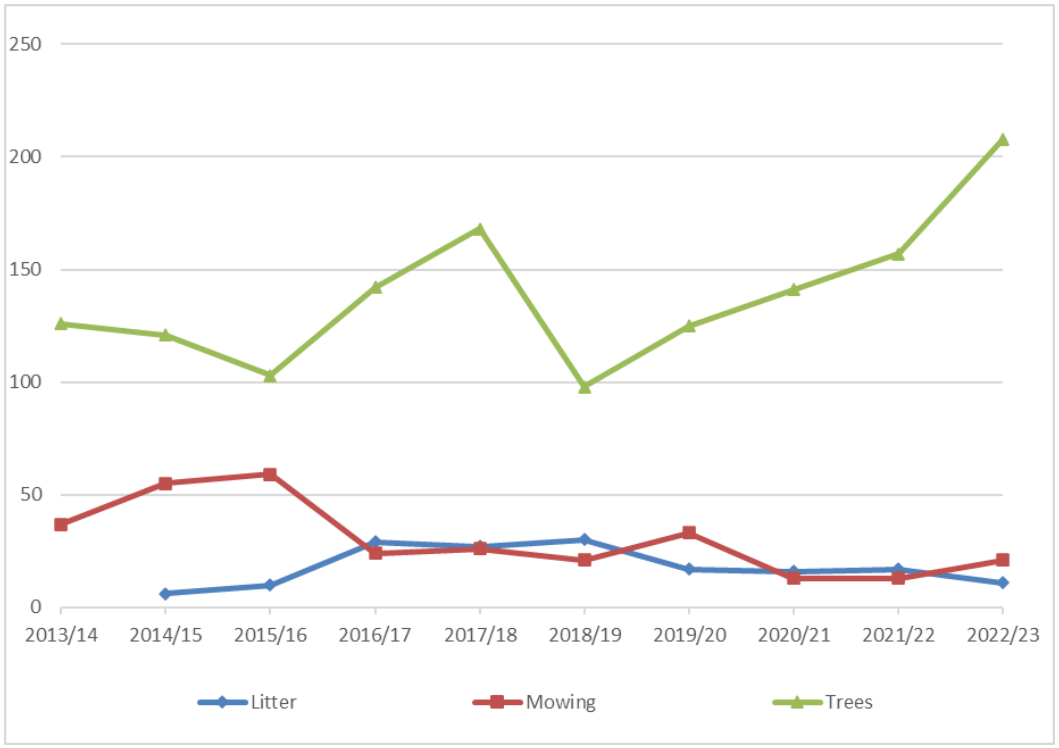
Vegetation calls relate to both Amenity and Safety ONRC customer service levels. The category is made up of mowing, low overhanging branches and hazardous trees.

Trees on road reserve are becoming a significant issue on the network as they age and grow. Council addresses this as the environmental maintenance budget allows, removing trees that pose significant hazards. Tree calls rose significantly in 2022/23. Analysis shows that a lot of calls are for trees down and the calls are consistently through the year rather than from one wind event.

Mowing is done to keep the vegetation window clear and to provide sightlines. Mowing calls spike when growth conditions take off (e.g. warm, wet summer). The current mowing contract is measure and value to give the contractor a greater degree of flexibility around timing. An approach change in 2016/17 to target known problem areas, has helped to lower call numbers.

Litter calls began being recorded in 2014/15. The calls relate to roadside rubbish, offensive dumping or waste near the road and fly tipping.

FIGURE D.78: VEGETATION SERVICE CALLS



Significant LoS Change

There are no planned LoS changes.

D09.4 Asset Performance

This section is purely operational based activities and as such there are no assets for performance to be measures

D09.5 Asset Management

D09.5.1 Standards

None noted at this time for Environment Service

D09.5.2 Strategies and Policies

Non noted at this time for Environment Service

D09.5.3 Risk Management

The key activity and specific asset risks are identified in the “Known Needs, Issues and Risks” section above.

The overall approach to risk and criticality can be found in Managing Risk (Section C02).

D09.5.4 Delivery

The Transport activity manages the environment in the rural area the activities include by use of the following contracts

Activity Type	Activity	Delivery Method
Operations	Environment - Mowing Berm	Vegetation Control Contract
Operations	Environment - Mowing Arm	Vegetation Control Contract
Operations	Environment - Weed Spraying	Plant Pest Control Contract
Operations	Environment - High cut saw blade work	Vegetation Control Contract
Operations	Environment - Pest Plant Removal	Plant Pest Control Contract
Operations	Environment - Litter removal (urban areas)	Parks and Reserves Contract
Operations	Environment - Litter removal (rural areas)	Council Staff
Operations	Environment - Hazardous Tree monitoring	Professional Services Contract
Operations	Environment - Hazardous Tree Removal	Vegetation Control Contract
Operations	Environment - Ice Gritting	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Environment - Grit Removal	Road Network Maintenance & Resurfacing 2022 to 2030 Contract
Operations	Environment - Calcium Magnesium Acetate Ice Control	Procured as required
Operations	Environment - Snow Clearing	Road Network Maintenance & Resurfacing 2022 to 2030 Contract

D09.6 Operational

D09.6.1 Activities

Vegetation control is carried out on the rural roadside network. Vegetation control includes:

- arm mowing
- berm mowing
- saw blades to remove high vegetation within the window
- tree removal
- road side and plant pest spraying

Ice/Snow Management

- Ice gritting
- Snow clearing
- Grit removal
- Calcium Magnesium Acetate Ice control

D09.6.2 Plan

These activities are managed on an as needed basis.

D09.7 Maintenance

There are no maintenance works associated with these services

D09.8 Renewal Plan

There are no renewal works associated with these services

D09.9 Development Plan

There are no development works associated with these services

D09.10 Disposal Plan

There are no assets to be disposed of.

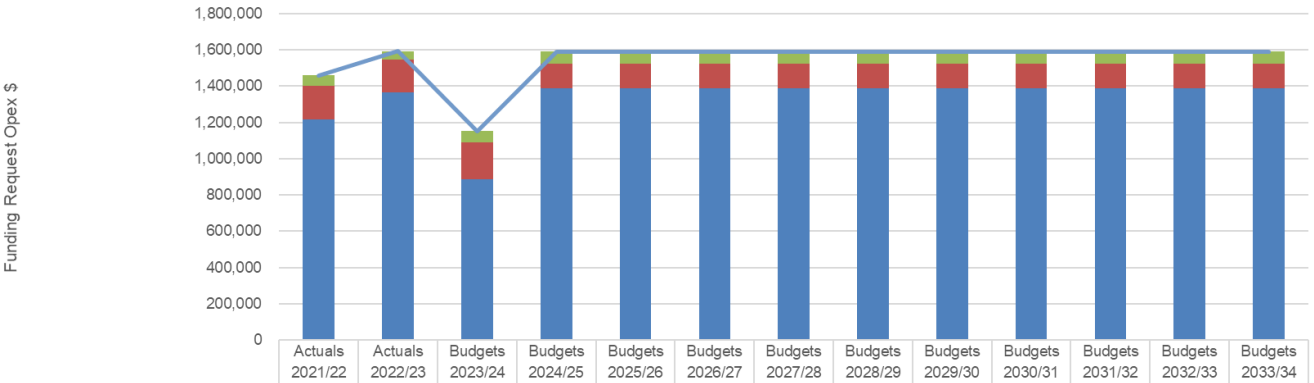
D09.11 Funding Request

Environmental Services can be funded by the following NZTA Work Categories:

- WC 121: Environment maintenance

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars.

FIGURE D.79: ENVIRONMENTAL SERVICES AND EMERGENCY WORKS HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Plant Pests	58,534	44,349	60,407	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522
Environmental Maintenance SPR	185,652	180,485	206,400	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649
Environmental Maintenance	1,214,852	1,367,247	885,818	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042
Total - Environment (O & M)	1,459,038	1,592,081	1,152,625	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213

There is no further funding request since there are no other work types associated with this activity.

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

D10 NETWORK AND ASSET MANAGEMENT

D10.1 Purpose and Strategic Case Link

The purpose of network and asset management is:

Provide professional services that support and lead the way that the transport networks are operated, maintained, renewed and improved

Link to Strategic Case Problem Statements

The following table highlights how this activity supports addressing the problems identified in the Strategic Business Case.

	Problem Description	Activity Contribution
Forestry & Land Use	Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs	Liaison with forestry companies and landowners to gain a better understanding of likely activity and the roads that could be affected ONF classification and District Plan reviews can be used to support the right use in the right area. Use of the road (eg speed management, restrictions, permissions) work to limit inadequate use and potential deterioration.
Needs & Expectations	The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network	Network and asset management is at the core of balancing the management of the assets and risk to meet the needs and expectations of the customers
Climate, Topography & Geology	The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network	Activities and procurement to acknowledge these challenges and include measures and incentives to improve the situation for the ratepayers and network users
Safety	Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries	Management of safety information and issues supports the development of safety programmes. Investigations into crashes also allows lessons to be learnt and improvements to be made.

Link to Key ONRC Customer Level of Service (LoS)

The following table highlights how this activity contributes to improving the Key ONRC Customer LoS.

	Customer Level of Service Description	Activity Contribution
Mobility - Reliability	Travel time reliability – the consistency of travel times that road users can expect	Good asset management, safety management and transport planning supports network reliability
Mobility - Resilience	The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided	Good asset management and transport planning supports network resilience
Safety	How users experience the safety of the road	Management of safety information and issues supports the development of safety programmes. Investigations into crashes also allows lessons to be learnt and improvements to be made.
Amenity	The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment (e.g. cleanliness, comfort/convenience, security) that impact on the travel experience of road users in the road corridor	Good asset management provides an appropriate level of ride comfort as well ensuring all assets and vegetation maintained to the right condition.
Accessibility	The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity	Network planning allows for accessibility objectives to be met

D10.2 Activities to be Managed

This section covers the key Land Transport business activities in place to assist Council in delivering Asset Management and Land Transport services, including:

- Asset Management
    - Asset Management Planning
    - Asset Inspections
    - Network Condition surveys
    - Asset Information Management (RAMM)
- Safety Management
    - Network Safety Inspections
    - Minor safety Programme
    - Crash Investigations
- Forward Work Programmes Management
    - Asset Renewals
    - Asset Improvements

    - New Networks
- Network Controls
    - Corridor Access Requests
    - Temporary Traffic Management
    - Customer and Stakeholder Management
    - Overweight and Over dimension Permitting
- Bridge Management
    - Restrictions
- Traffic Counting and Estimations
- Contracts
    - Procurement
    - Contract Administration
    - Contract Supervision, Auditing and Inspections
- Financial Management

D10.3 Asset Management

D10.3.1 Maintenance Programme Development and Management

Maintenance is primarily divided into three types of work:

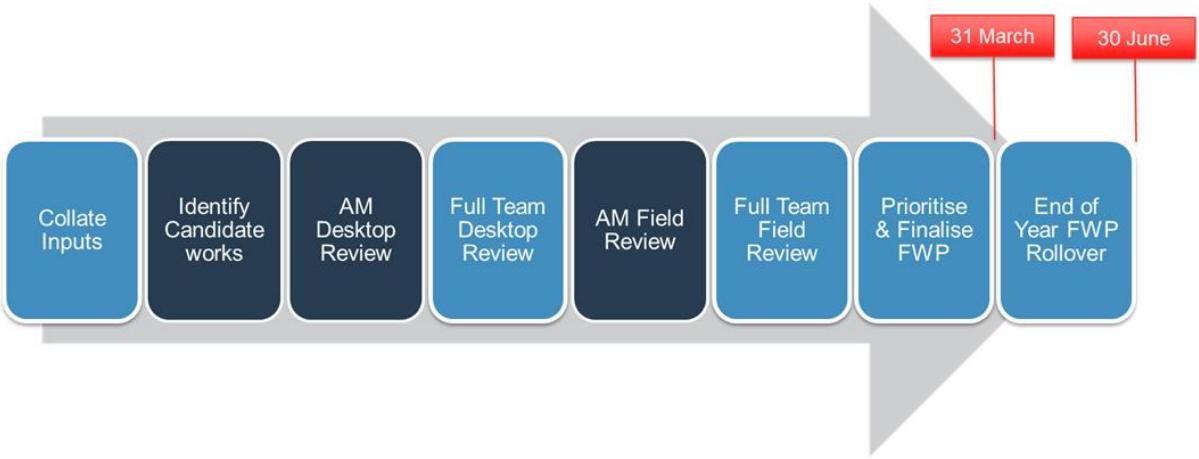
- Routine | Work of a minor nature where the contract provides approval to undertake the work with no further approvals required from Council
- Cyclic | Work to be undertaken on a set frequency
- Emergency | work that is in reaction to an unexpected event where there is a need to make the sit or network safe as soon as possible and therefore there is no time to seek prior approval for the works
- Programmed | Work that is to be submitted as part of a monthly works programme, in alignment with budget expectations, and approved by Council prior to work commencing

The maintenance programme is therefore made up of programmed work and follows the following steps.

D10.3.2 Renewals Programme Development and Management

The following predominantly applies to pavement and surfacing renewals as these are the most significant of works and the most sophisticated work identification process. Other assets broadly follow a similar process but often with some level of simplification.

The overall process to prepare the renewals programme is as follows:



The following indicates what is involved with collating inputs:

Pavement and Surfacing Treatment Selection Process

Council uses the Treatment Selection Algorithm (TSA) in RAMM to assist with identification of potential work sites. This includes the use of historical data when identifying possible sites for resurfacing.

As such an emphasis is sometimes placed upon seal age and remaining life; although seal age should be an input to the selection process, seal condition is the actual driver for resurfacing priorities.

Decisions are made that focus on the immediate need to ensure that the required level of service is maintained. Field validation is used to refine the programme.

The RAMM database is annually updated to enable forward work programmes to be developed, both via the Treatment Selection process, and inspection of the network asset. These programmes provide analysis, prediction and costing of major pavement capital works such as reseals and sealed road pavement rehabilitations, in addition to other works such as kerb and channel and footpaths.

Steps include:

- Seal age data is an input.

- RAMM TSA analysis to provide candidate sites.
- Reconciliation is made with the previous FWP.
- Known high or low priority sites are identified by RDC network managers, together with their contractors and network consultants.
- Joint workshop and drive overs between RDC AM, their contractors and consultants to challenge and validate the candidate sites.
- Forecast of backlog.

D10.4 Asset Condition and Performance Monitoring

D10.4.1 Asset Inspections

Road Structures

Inspection activities include:

- Annual routine surveillance bridge and culvert inspections.
- General bridge inspections undertaken by a bridge inspector biannually on all bridges.
- Six yearly principal bridge and culvert inspections undertaken by a structural engineer on all non-restricted bridges.
- Special inspections on all restricted bridges every two years and after specific events such as earthquakes, severe floods, instances of overloading or service requests.

Superficial condition assessments are undertaken in accordance with “Bridges and Other Highway Structures: Inspection Policy” (NZTA 2017) and use the NZTA-based inspection forms. The inspections identify any obvious defect which may affect the safety of road users, defects to the bridge structure, or anything else requiring urgent attention, such as:

- Impact damage from vehicles, especially to guardrails and handrails.
- Build-up of flood debris.
- Adequacy of sign and road marking.
- Erosion damage.
- Deck drainage function.
- Approach settlement and condition of road surface.
- Expansion joint function.
- General and detailed condition inspections are undertaken in accordance with Transit’s ‘Bridge Inspection and Maintenance Manual’, taking into account such factors as structural integrity, defects, safety and appearance. A Microsoft Excel spreadsheet is used to compile physical attributes and condition records.

Bridges, culverts, and retaining structures will be inspected regularly (see D12 Network and Asset Management) and preventative maintenance work undertaken to:

- Prevent failure of the bridge.
- Protect the investment in the asset by extending the life of the structure.
- Minimise repair costs.

Weight and Speed Restrictions

A structural assessment of bridges occurs biennially to determine deterioration and the load carrying capacities relative to the maximum permitted loads which are determined in the Transit New Zealand Bridge Manual as 100% Class 1.

- A 100% Class 1 heavy vehicle represents the maximum legal load for heavy vehicles of various axle configurations.
- The structural assessment and weight restriction of an existing bridge includes safety factors with the intention of not unduly over-stressing the structure.
- A vehicle exceeding the weight restriction on a bridge may over-stress the bridge but not necessarily cause failure. Repetitive over-stressing of the bridge structure will, however, ultimately lead to increased deterioration or failure.

Streetlights

Asset condition are monitored by undertaking the following planned inspections:

- Inspections of lighting on the network are carried out on a monthly cycle.
- Faulty, accident damaged or vandalised lanterns, lamps, control gear columns and associated equipment will be repaired on demand and within the specified response timeframes and providing an immediate response to hazards.

The rating data on streetlights is gathered annually by the streetlight contractor and is stored in the RAMM Contractor module.

Road Signs

The condition of signs and road marking are assessed visually against the relevant NZTA Standards in routine inspections undertaken by the Contractor, with the results reported to Council.

Signs are inspected at a minimum on monthly intervals during routine inspections. If there are issues requiring maintenance or replacement outside of the inspectors' activities a dispatch will be generated. There is no measure of sign condition updated in RAMM.

Footpaths

The visual condition rating of Footpaths is undertaken every two years. The results are populated into a spreadsheet and then used to support the identification of maintenance and renewals work.

Road Markings

Not monitored

Kerb crossings

Are inspected for non-compliance as part of the next footpath condition inspection.

Culverts

Culverts inspections are undertaken by the contractors, focusing on blockages and its ability to work properly during a rain event.

D10.4.2 Network Condition Monitoring

Bi-annual roughness and condition ratings of sealed roads is undertaken.

Pavement condition is measured via the RAMM Rating and Roughness Survey whereby all sealed roads are assessed every two years. Physical faults are continuously recorded on the carriageway to capture trend data.

Pavement condition surveys should be carried out two-yearly for all sealed roads and annually for roads carrying >2,000 vehicles per day. As Ruapehu has so few roads that carry over 2,000 vehicles per day, these sections are also carried out two-yearly. The network is broken into treatment lengths.

Roughness surveys are carried out in even years. In 2000 & 2002, Beca Carter Hollings & Ferner undertook the survey. From 2004 to 2006, ARRB Road Info Ltd conducted it. Since 2008, Shaw's Consulting Services Ltd have undertaken it.

The rating surveys record the following information:

- Shoving (shear failure)
- Edge break
- Rutting
- Potholes/pothole repair
- Scabbing
- Flushing
- Alligator cracking

Council is moving to the monitoring regime identified in the Consistent Condition Data Collection work programme.

D10.4.3 Maintenance Inspections

Council's road maintenance contract is inspection led, with staff required to have significant experience in road fault data collection for their area of responsibility.

All faults identified during routine inspections are assigned a severity priority level as per agreed intervention levels defined in the relevant Maintenance Contract Level of Service Specifications, which is overseen by the Network Management Consultant.

Faults identified by one contractor that relate to a different contract are passed on to the relevant contract.

D10.5 Operations

D10.5.1 Contract Management

See relevant parts of Delivering the Programme (Section B04).

D10.5.2 Customer Service Requests

Customer service requests are entered into Origen Ozone Request for Service System (RFS) that records the details of the call. This information is then forwarded in real time to the Contractors.

Contractors provide progress reports on each request received. These are recorded against the RFS until the job is completed and closed off. This information allows for information to be provided to the caller, along with monitoring of response times.

D10.6 Asset Information Management

Note that corporate systems are covered in Part 1 of the AMP. This includes Finance and Customer Service Request systems.

Council's current systems being used for asset information management are described below. The Council is satisfied that the current systems are more than adequate for its business needs and is focused on making better use of the available functionalities as well as centralising more information into its 'single source of the truth'.

D10.6.1 RAMM Information Management

The Council uses RAMM for its primary management of all data that supports asset and maintenance management. This is in support of managing business operations and supporting the management of all asset life cycles.

Information currently being managed in RAMM, includes:

- Network details
- Network condition
- Asset details
- Asset condition
- Asset value
- Maintenance Cost history
- Maintenance Work Orders (dispatches)
- Forward Works Programme
- Traffic Counting
- Traffic Estimates

An asset management system is a combination of processes, data and software applied to provide the essential outputs for effective asset management. Council utilises a number of these aspects for the effective management of their assets.

The primary support system Council has to manage the assets is RAMM.

- Council uses the RAMM system to manage information on the assets
- The RAMM system contains a schedule of all roads in the network and information on carriageway widths, surfacing types and ages, pavement composition, traffic volumes and loadings and road condition data. Information on structures such as drainage facilities, footpaths, bridges, streetlights and signs are also stored on the RAMM system.

D10.6.2 RAMM Modules

In addition to managing data RAMM also provides several modules and functions that Council utilises to asset with the management of their activities and optimise the asset management outcomes. These include:

- RAMM Asset Management
    - RAMM Map
    - RAMM Network Management
    - RAMM Pavement Management
    - RAMM Valuation
    - RAMM Work Selection
    - RAMM Treatment Selection Algorithm (TSA)
    - ONF Management
    - NZTA Annual Reporting
- RAMM Works Management (previously RAMM Contractor)

- RAMM Field Management (RAMM Mobile)

D10.6.3 GHD MAX Products

To complement Council's investment in RAMM, they have invested in the use of the following GHD MAX Products. Any data created by these products are stored and managed within the Council's RAMM database.

MAX.quality | Automated RAMM product focused on data quality, monthly trend reporting and notifications to get the right information to the right person to trigger business actions

MAX.maintenance | Automated RAMM product focused on dispatch data quality, activity reporting, performance management, notifications and financial management

MAX.dashboard | Microsoft PowerBI based product that visualises the automated trend reporting from other products as well as deep dive analysis of some other RAMM datasets.

MAX.structures | Council is a development partner in this RAMM based product to manage all data relating to road structures, from inspection programming and results through to automated algorithms for dispatching of maintenance work and identifying potential renewals work.

D10.6.4 Other Datasets

In addition to data being managed in RAMM the Council has built up a library of additional data which supplements the information in RAMM.

This is generally held in spreadsheets and will be migrated into RAMM where appropriate.

D10.7 Funding Request

Network and Asset Management can be funded by the following NZTA Work Categories:

WC 151: Network and asset management

WC 003: Activity management planning

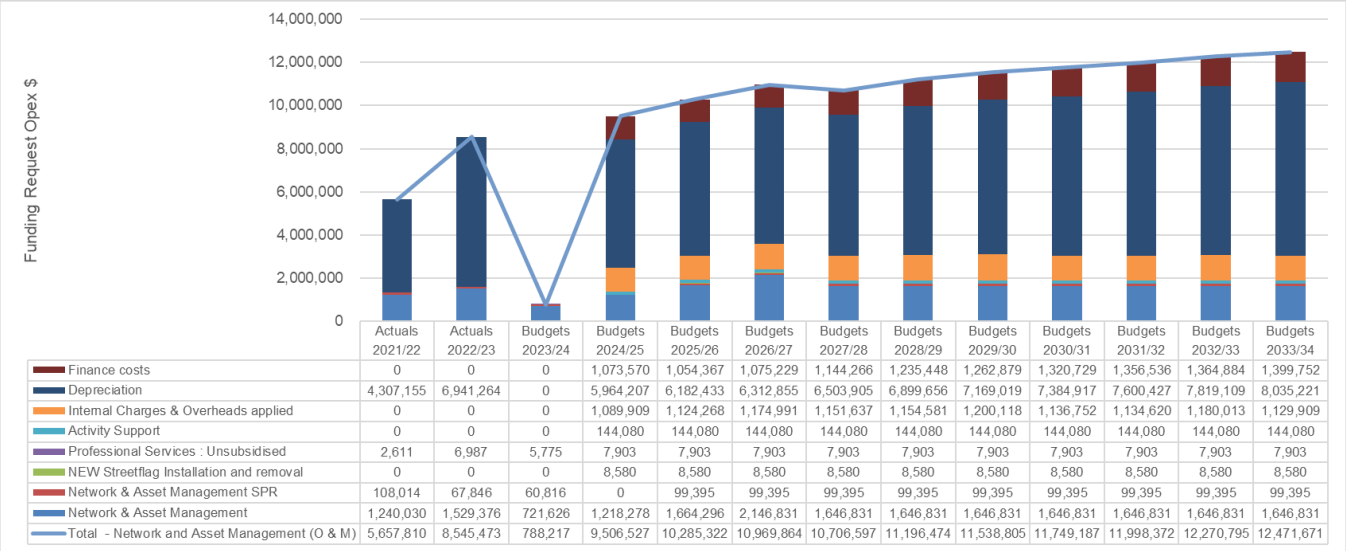
Council's effort to manage our budgets means that we incorporate Activity management planning into our standard Network and asset management budget rather than apply for additional funding.

Note that design and contract supervision for projects is managed and funded as part of the project and not under network and asset management.

The figures below set out the historical actual expenditure and 2023/24 budget in actual dollars and the future draft budget figures in terms of 2024/25 base dollars. Figures include Direct costs, depreciation, finance costs and Internal charges and overhead applied. Note that SPR Maintenance Budgets were included in Local Road budgets in 2024 but kept separate for the remaining 9 years. Also note that it would appear that historical budgets for 2023/24 don't include the same costs as forecast years.

FIGURE D.80: ASSET MANAGEMENT PRACTICES HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE $

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Opex														
Cost of Funds														
Professional Services Unsub	0	0	0	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752	12,287,660
Cost of Funds Total	**0**	**0**	**0**	**1,073,570**	**1,054,367**	**1,075,229**	**1,144,266**	**1,235,448**	**1,262,879**	**1,320,729**	**1,356,536**	**1,364,884**	**1,399,752**	**12,287,660**
Depreciation														
Network & Asset Management	4,307,155	6,941,264	0	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221	69,871,749
Depreciation Total	**4,307,155**	**6,941,264**	**0**	**5,964,207**	**6,182,433**	**6,312,855**	**6,503,905**	**6,899,656**	**7,169,019**	**7,384,917**	**7,600,427**	**7,819,109**	**8,035,221**	**69,871,749**
Direct Cost														
Network & Asset Management	1,240,030	1,529,376	721,626	1,218,278	1,664,296	2,146,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	16,557,224
Network & Asset Management SPR	108,014	67,846	60,816	0	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395	894,551
NEW Streetflag Installation and removal	0	0	0	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	85,800
Personnel	0	0	0	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	1,440,800
Professional Services Unsub	2,611	6,987	5,775	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	79,034
Direct Cost Total	**1,350,655**	**1,604,209**	**788,217**	**1,378,841**	**1,924,254**	**2,406,789**	**1,906,789**	**1,906,789**	**1,906,789**	**1,906,789**	**1,906,789**	**1,906,789**	**1,906,789**	**19,057,409**
Internal Costs														
Personnel	0	0	0	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909	11,476,798
Internal Costs Total	**0**	**0**	**0**	**1,089,909**	**1,124,268**	**1,174,991**	**1,151,637**	**1,154,581**	**1,200,118**	**1,136,752**	**1,134,620**	**1,180,013**	**1,129,909**	**11,476,798**
Opex Total	**5,657,810**	**8,545,473**	**788,217**	**9,506,527**	**10,285,322**	**10,969,864**	**10,706,597**	**11,196,474**	**11,538,805**	**11,749,187**	**11,998,372**	**12,270,795**	**12,471,671**	**112,693,616**
Grand Total	**5,657,810**	**8,545,473**	**788,217**	**9,506,527**	**10,285,322**	**10,969,864**	**10,706,597**	**11,196,474**	**11,538,805**	**11,749,187**	**11,998,372**	**12,270,795**	**12,471,671**	**112,693,616**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Finance costs	0	0	0	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752
Depreciation	4,307,155	6,941,264	0	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221
Internal Charges & Overheads applied	0	0	0	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909
Activity Support	0	0	0	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080
Professional Services : Unsubsidised	2,611	6,987	5,775	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903
NEW Streetflag Installation and removal	0	0	0	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580
Network & Asset Management SPR	108,014	67,846	60,816	0	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395
Network & Asset Management	1,240,030	1,529,376	721,626	1,218,278	1,664,296	2,146,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831
Total - Network and Asset Management (O & M)	5,657,810	8,545,473	788,217	9,506,527	10,285,322	10,969,864	10,706,597	11,196,474	11,538,805	11,749,187	11,998,372	12,270,795	12,471,671

There is no further funding request since there are no other work types associated with this activity.

Finances (Section E) and Appendix B provide more detail on the funding sources for these programmes and projects.

E Finances

E01 FINANCIAL MANAGEMENT

E01.1 Introduction

More detailed financial costs have been obtained for the first three years of the ten year period as more accuracy can be ensured for these short term projections. It is more difficult to predict the local and global influences on cost over the later part of the ten year period

The adopted programmes and budgets, and the implications of any changes made from the proposed AMP are identified within Appendix A. These changes and implications will then be a key input into subsequent plan updates.

In between these three yearly reviews, Council conducts an Annual Plan (AP) process, which allows for significant amendments to the three year plan to be considered. The AP also undergoes a public consultation process and Council adopts amendments to the LTP close to 30 June for each of the two AP years. This AMP is updated to reflect any changes to the ten year plan by updating Appendix A.

E01.2 Accounting Standards

Financial Reporting

For financial reporting purposes, the Transport activity combines with the overall District Council requirements to comply with generally accepted accounting practice in accordance with s111 of the Local Government Act 2002.

Asset Valuation

Transportation asset valuations are carried out in accordance with the New Zealand International Accounting Standard 16 (NZIAS16) and New Zealand Infrastructure Asset Valuation and Depreciation Guidelines Edition 2.0, 2006 (from IPWEA / NAMS).

E01.3 Revenue and Financing Policy

The Local Government Act 2002 requires the adoption of policies that outline how operating and capital expenditure for each activity will be funded. This is detailed in the Revenue and Financing Policy, which is included in the Council's LTP. The policy identifies:

- The community outcomes to which the activity primarily contributes.
- The distribution of benefits between the community as a whole, any identifiable part of the community, and individuals.
- The costs and benefits, including consequences for transparency and accountability, of funding the activity distinctly from other activities.

E01.4 Land Transport Funding

Funding for the roading network and related activities is provided through;

- Rates collected by Council
- Development contributions paid to Council
- Other funding sources (eg: debt funding for Council major capital projects or fees)

- NZTA funding (subsidy based on the Funding Assistance Rate (FAR)
- All of Government special support programmes, for example:
    - Provisional Growth Fund (PGF)
    - CERF

Notes:

- Rates funding for roading is received from the District Land Transport Rate Capital Value, being that portion of the roading budget not funded by NZTA subsidy.
- Work that does not qualify for NZTA funding is unsubsidised. This includes maintenance and renewal of footpaths, seal extensions and facility roads and car parks.
- Council is developing the Long Term Plan 2024/34 in parallel. Programmes from the AMP are fed into the Plan. Affordability is considered during the process. Any changes that are required in this process to address affordability will be reflected in Appendix A.

E01.4.1 Development Contributions

The procedure for setting Development Contributions is outlined in the Development Contribution Policy.

Through the application of its Development Contributions Policy, the Council seeks to obtain contributions to fund infrastructure required due to district growth. The proceeds from development contributions will be applied to growth related capital works within the roading, water and wastewater activities.

The value of the Land Transport Development Contributions is determined under the Development Contributions Policy and is updated through Council from time-to-time. Note that development contributions received each year will not necessarily match development expenditure.

There are growth driven projects in the Land Transport Activity projects over the next 10 years, therefore development contributions will be received.

E01.4.2 NZTA Funding

Conditions of Funding

In order to receive investment assistance from NZTA, Council must ensure that

- Any project meets one or more of the objectives of the Land Transport Management Act (LTMA)
- Reflect the priorities and guidance setout in the Government Policy Statement (GPS)
- Aligned to the NZTA Planning & Investment Knowledge Base
- Show how capital projects in the LTP contribute to the purpose of the LTMA (in accordance with Schedule 1 Clause 4 of the LTMA)

The purpose of the LTMA is to contribute to the aim of achieving an integrated, safe, responsive and sustainable land transport system.

The five objectives of the LTMA are to:

- Assist economic development.
- Assist safety and personal security.

- Improve access and mobility.
- Protect and promote public health.
- Ensure environmental sustainability.

Projects which can be shown to be economically justified are given preference in determining which are to be undertaken.

NZ Transport Agency Funding Assistance

The NZ Transport Agency funding assistance applies to agreed activities on all local roads in the Ruapehu District. There are different funding assistance rates (FAR) for Special Purpose Roads and Emergency Works.

The following table shows the subsidy rates for 2024/27 onwards:

Table - NZTA Subsidy Funding Assistance Rates (FAR)

Local Roads & Emergency Works Base Rate	Emergency Works Elevated Rate	Special Purpose Road
75%	75%	75%

Special Purpose Road (SPR)

Council has one SPR - Ohakune Mountain Road, located in the Tongariro National Park.

There are no surrounding rate payers. It is currently funded at 100% FAR; however, this will transition to the standard Council FAR rate from 2024/25 onwards.

Emergency Works

Emergency works for qualifying events on local roads are funded at the base FAR rate until costs go 10% above the organisation's road maintenance and renewal programme in one year, in which case they are funded at base FAR plus 20%, up to a maximum of 95%.

A qualifying event is as per the definition and criteria setout in NZTA Planning & Investment - WC 141: Emergency Works

It is an event where an approved organisation incurs significant expenditure in responding to out of the ordinary, short duration, natural events unusual for the particular area.

Kiwirail Level Crossings

As Kiwirail are not an Approved Organisation (AO), they claim the costs from Council, at the Councils base rate funding. Level crossing warning device maintenance is in the order of $15 – $20K per annum.

Maintenance and renewal obligations are outlined in Railways Act 2005. Crossings are either road over rail or rail over road. Kiwirail assesses the crossing needs and has a requirement to supply this information to Council in order to be able to budget for this work.

Unsubsidised Activities

The unsubsidised component of the roading programme is funded by Council, as per the Revenue and Finance policy.

E01.4.3 National Land Transport Fund (NLTF)

The National Land Transport Fund receives revenue from Road User Charges, part of Motor Vehicle Registration and Licensing fees and fuel excise duty on petrol, LPG and CNG. This fund is distributed by the NZTA in line with the Government Policy Statement (GPS) to Road Controlling and Passenger Transport Authorities, the Police, Rail and Maritime Authorities.

E01.5 Financial Assumptions

The following provides a list of some key assumptions used during the preparation of the financial plan and summaries:

- Inflation (when used) has been forecasted using BERL Local Government Cost indices from October 2022

E02 FINANCIAL SUMMARY

Asset management planning translates the physical aspects of planned operational, maintenance, renewal and development works into financial terms.

The 10 year Forecast Funding Impact Statement can be found in the Council Long Term Plan (LTP).

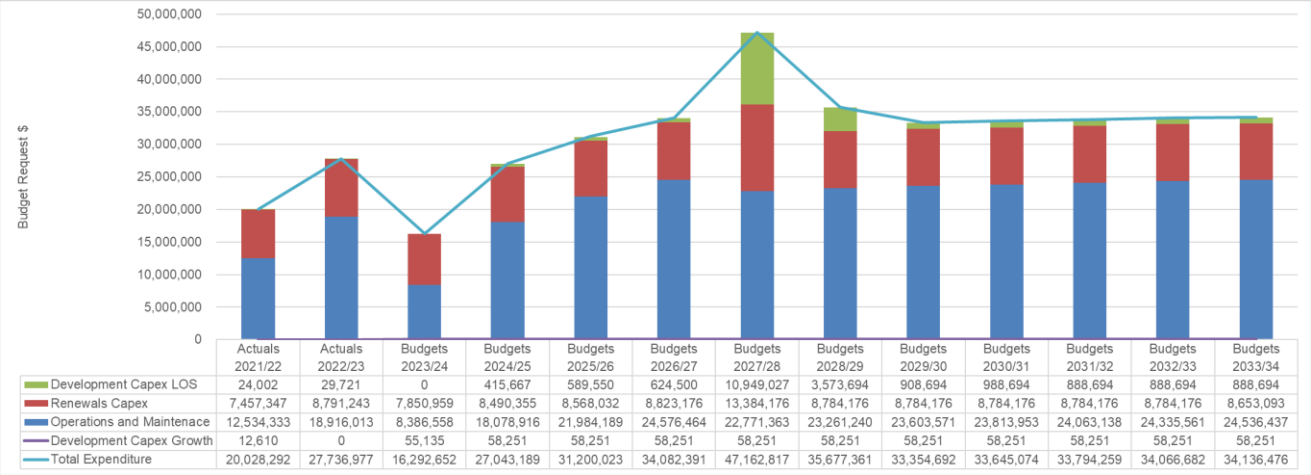
The following figure provides the overall actual expenditures and approved budget, for the three years prior to this AMP, and the 10 year draft proposed budget for operations and maintenance, capital expenditure and combined for the land transport activity.

The three years prior to the AMP are provided as actual dollars and the future draft budget budgets in terms of base dollars set as the first year of the AMP.

Figures include Direct costs, depreciation, finance costs and Internal charges and overhead applied.

FIGURE E.1: OVERALL ACTUAL AND BUDGET EXPENDITURE FOR ALL ASSET GROUPS AND ALL EXPENDITURE TYPES

Row Labels	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Growth												
Capital	55,135	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	582,510
Growth Total	**55,135**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**582,510**
LOS												
Capital	0	415,667	589,550	624,500	10,949,027	3,573,694	908,694	988,694	888,694	888,694	888,694	20,715,906
LOS Total	**0**	**415,667**	**589,550**	**624,500**	**10,949,027**	**3,573,694**	**908,694**	**988,694**	**888,694**	**888,694**	**888,694**	**20,715,906**
Opex												
Cost of Funds	0	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752	12,287,660
Depreciation	0	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221	69,871,749
Direct Cost	8,386,558	9,951,230	13,623,121	16,013,389	13,971,555	13,971,555	13,971,555	13,971,555	13,971,555	13,971,555	13,971,555	137,388,629
Internal Costs	0	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909	11,476,798
Opex Total	**8,386,558**	**18,078,916**	**21,984,189**	**24,576,464**	**22,771,363**	**23,261,240**	**23,603,571**	**23,813,953**	**24,063,138**	**24,335,561**	**24,536,437**	**231,024,836**
Renewal												
Capital	7,850,959	8,490,355	8,568,032	8,823,176	13,384,176	8,784,176	8,784,176	8,784,176	8,784,176	8,784,176	8,653,093	91,839,713
Renewal Total	**7,850,959**	**8,490,355**	**8,568,032**	**8,823,176**	**13,384,176**	**8,784,176**	**8,784,176**	**8,784,176**	**8,784,176**	**8,784,176**	**8,653,093**	**91,839,713**
Grand Total	**16,292,652**	**27,043,189**	**31,200,023**	**34,082,391**	**47,162,817**	**35,677,361**	**33,354,692**	**33,645,074**	**33,794,259**	**34,066,682**	**34,136,476**	**344,162,965**



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Development Capex LOS	24,002	29,721	0	415,667	589,550	624,500	10,949,027	3,573,694	908,694	988,694	888,694	888,694	888,694
Renewals Capex	7,457,347	8,791,243	7,850,959	8,490,355	8,568,032	8,823,176	13,384,176	8,784,176	8,784,176	8,784,176	8,784,176	8,784,176	8,653,093
Operations and Maintenace	12,534,333	18,916,013	8,386,558	18,078,916	21,984,189	24,576,464	22,771,363	23,261,240	23,603,571	23,813,953	24,063,138	24,335,561	24,536,437
Development Capex Growth	12,610	0	55,135	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251
Total Expenditure	20,028,292	27,736,977	16,292,652	27,043,189	31,200,023	34,082,391	47,162,817	35,677,361	33,354,692	33,645,074	33,794,259	34,066,682	34,136,476

Changes that are made because of the consultation process will be documented in Appendix A.

Analysis of changes between 2021/24 and 2024/27 can be found in B03 Programmes and Alternatives.

A detailed budget can be found in Appendix B.

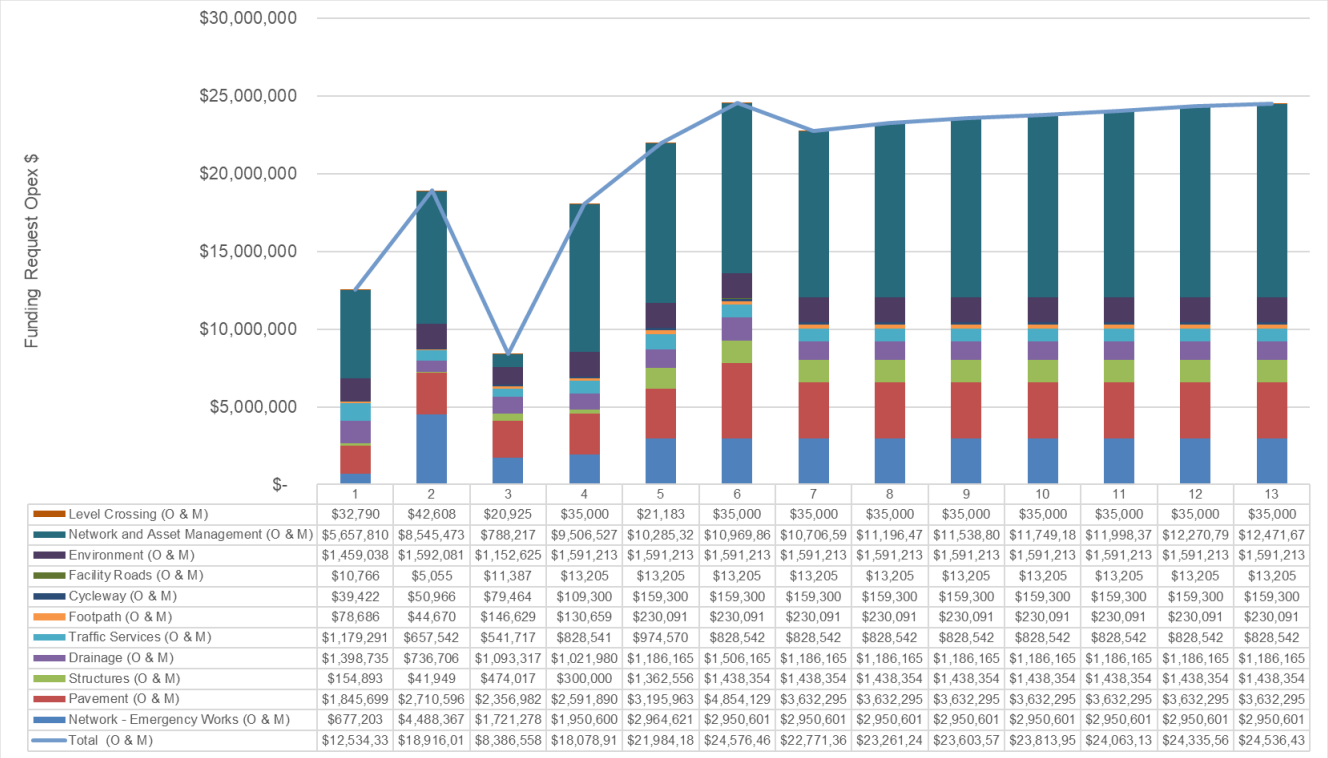
E02.1 Operations and Maintenance

E02.1.1 Financial Summary

The figure below provides a summary of the Operations and Maintenance actual and budget forecasts per asset group as discussed in the previous sections. The graph includes Direct costs, depreciation, finance costs and Internal charges and overhead applied.

FIGURE E.2: COMBINED HISTORICAL AND PROJECTED OPERATIONS AND MAINTENANCE EXPENDITURE FOR ALL ASSET GROUPS

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Cost of Funds														
Network and Asset Managem	0	0	0	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752	12,287,660
Cost of Funds Total	**0**	**0**	**0**	**1,073,570**	**1,054,367**	**1,075,229**	**1,144,266**	**1,235,448**	**1,262,879**	**1,320,729**	**1,356,536**	**1,364,884**	**1,399,752**	**12,287,660**
Depreciation														
Network and Asset Managem	4,307,155	6,941,264	0	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221	69,871,749
Depreciation Total	**4,307,155**	**6,941,264**	**0**	**5,964,207**	**6,182,433**	**6,312,855**	**6,503,905**	**6,899,656**	**7,169,019**	**7,384,917**	**7,600,427**	**7,819,109**	**8,035,221**	**69,871,749**
Direct Cost														
Cycleway	39,422	50,966	79,464	109,300	159,300	159,300	159,300	159,300	159,300	159,300	159,300	159,300	159,300	1,543,000
Drainage	1,398,735	736,706	1,093,317	1,021,980	1,186,165	1,506,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	1,186,165	12,017,469
Environment	1,459,038	1,592,081	1,152,625	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	1,591,213	15,912,129
Facility Roads	10,766	5,055	11,387	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	132,050
Footpath	78,686	44,670	146,629	130,659	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	230,091	2,201,477
Level Crossing	32,790	42,608	20,925	35,000	21,183	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	336,183
Network - Emergency Works	677,203	4,488,367	1,721,278	1,950,600	2,964,621	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	2,950,601	28,520,029
Network and Asset Managem	1,350,655	1,604,209	788,217	1,378,841	1,924,254	2,406,789	1,906,789	1,906,789	1,906,789	1,906,789	1,906,789	1,906,789	1,906,789	19,057,409
Pavement	1,845,699	2,710,596	2,356,982	2,591,890	3,195,963	4,854,129	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	3,632,295	36,068,050
Structures	154,893	41,949	474,017	300,000	1,362,556	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	1,438,354	13,169,385
Traffic Services	1,179,291	657,542	541,717	828,541	974,570	828,542	828,542	828,542	828,542	828,542	828,542	828,542	828,542	8,431,446
Direct Cost Total	**8,227,178**	**11,974,749**	**8,386,558**	**9,951,230**	**13,623,121**	**16,013,389**	**13,971,555**	**13,971,555**	**13,971,555**	**13,971,555**	**13,971,555**	**13,971,555**	**13,971,555**	**137,388,629**
Internal Costs														
Network and Asset Managem	0	0	0	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909	11,476,798
Internal Costs Total	**0**	**0**	**0**	**1,089,909**	**1,124,268**	**1,174,991**	**1,151,637**	**1,154,581**	**1,200,118**	**1,136,752**	**1,134,620**	**1,180,013**	**1,129,909**	**11,476,798**
Grand Total	**12,534,333**	**18,916,013**	**8,386,558**	**18,078,916**	**21,984,189**	**24,576,464**	**22,771,363**	**23,261,240**	**23,603,571**	**23,813,953**	**24,063,138**	**24,335,561**	**24,536,437**	**231,024,836**



	1	2	3	4	5	6	7	8	9	10	11	12	13
Level Crossing (O & M)	$32,790	$42,608	$20,925	$35,000	$21,183	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000	$35,000
Network and Asset Management (O & M)	$5,657,810	$8,545,473	$788,217	$9,506,527	$10,285,32	$10,969,86	$10,706,59	$11,196,47	$11,538,80	$11,749,18	$11,998,37	$12,270,79	$12,471,67
Environment (O & M)	$1,459,038	$1,592,081	$1,152,625	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213	$1,591,213
Facility Roads (O & M)	$10,766	$5,055	$11,387	$13,205	$13,205	$13,205	$13,205	$13,205	$13,205	$13,205	$13,205	$13,205	$13,205
Cycleway (O & M)	$39,422	$50,966	$79,464	$109,300	$159,300	$159,300	$159,300	$159,300	$159,300	$159,300	$159,300	$159,300	$159,300
Footpath (O & M)	$78,686	$44,670	$146,629	$130,659	$230,091	$230,091	$230,091	$230,091	$230,091	$230,091	$230,091	$230,091	$230,091
Traffic Services (O & M)	$1,179,291	$657,542	$541,717	$828,541	$974,570	$828,542	$828,542	$828,542	$828,542	$828,542	$828,542	$828,542	$828,542
Drainage (O & M)	$1,398,735	$736,706	$1,093,317	$1,021,980	$1,186,165	$1,506,165	$1,186,165	$1,186,165	$1,186,165	$1,186,165	$1,186,165	$1,186,165	$1,186,165
Structures (O & M)	$154,893	$41,949	$474,017	$300,000	$1,362,556	$1,438,354	$1,438,354	$1,438,354	$1,438,354	$1,438,354	$1,438,354	$1,438,354	$1,438,354
Pavement (O & M)	$1,845,699	$2,710,596	$2,356,982	$2,591,890	$3,195,963	$4,854,129	$3,632,295	$3,632,295	$3,632,295	$3,632,295	$3,632,295	$3,632,295	$3,632,295
Network - Emergency Works (O & M)	$677,203	$4,488,367	$1,721,278	$1,950,600	$2,964,621	$2,950,601	$2,950,601	$2,950,601	$2,950,601	$2,950,601	$2,950,601	$2,950,601	$2,950,601
Total (O & M)	$12,534,33	$18,916,01	$8,386,558	$18,078,91	$21,984,18	$24,576,46	$22,771,36	$23,261,24	$23,603,57	$23,813,95	$24,063,13	$24,335,56	$24,536,43

E02.1.2 Maintenance Deferrals

Maintenance deferrals (if any) are detailed in the Life Cycle Management sections.

E02.2 Capital Renewals, LOS and Growth

E02.2.1 Financial Summary

The figure below provides a summary of the capital (renewal, level of service and growth works) actual and budget forecasts per asset group as discussed in the previous sections.

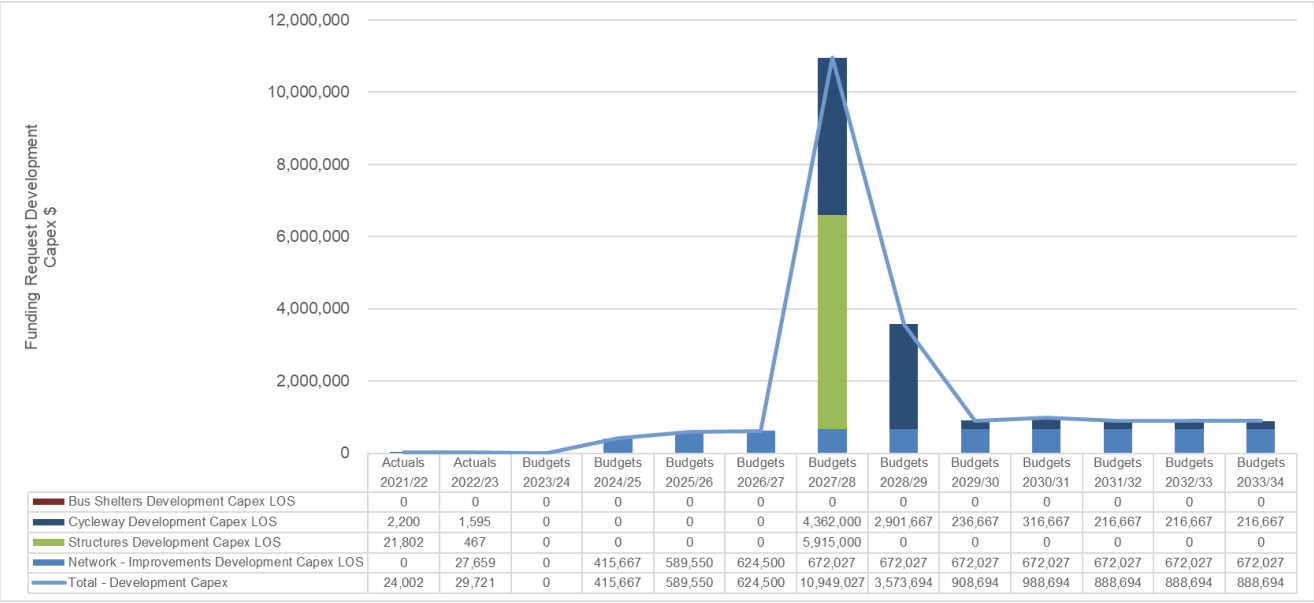
FIGURE E.3: COMBINED HISTORICAL AND PROJECTED CAPITAL RENEWAL EXPENDITURE FOR ALL ASSET GROUPS

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Renewal														
Bus Shelters	-1,902	0	43,654	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	125,000
Drainage	399,060	438,611	470,622	650,000	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	3,777,428
Facility Roads	19,358	542	3,513	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	290,000
Footpath	13,757	-6,976	173,913	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679	2,285,451
Network - Improvements	266,318	218,135	685,730	701,153	809,000	809,000	770,000	770,000	770,000	770,000	770,000	770,000	770,000	7,709,153
Pavement	5,957,581	6,342,384	5,632,464	6,314,145	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	5,741,001	57,983,153
Structures	872,759	1,614,734	532,368	480,000	1,244,400	1,499,544	6,099,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	1,499,544	18,320,749
Traffic Services	-69,584	183,813	308,695	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	134,878	1,348,780
Renewal Total	7,457,347	8,791,243	7,850,959	8,490,355	8,568,032	8,823,176	13,384,176	8,784,176	8,784,176	8,784,176	8,784,176	8,784,176	8,653,093	91,839,713

	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Facility Roads - Renewals Capex	$19,358	$542	$3,513	$20,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
Footpath - Renewals Capex	$13,757	-$6,976	$173,913	$177,679	$248,762	$248,762	$248,762	$248,762	$248,762	$248,762	$248,762	$248,762	$117,679
Traffic Services - Renewals Capex	-$69,584	$183,813	$308,695	$134,878	$134,878	$134,878	$134,878	$134,878	$134,878	$134,878	$134,878	$134,878	$134,878
Drainage - Renewals Capex	$399,060	$438,611	$470,622	$650,000	$347,492	$347,492	$347,492	$347,492	$347,492	$347,492	$347,492	$347,492	$347,492
Structures - Renewals Capex	$872,759	$1,614,73	$532,368	$480,000	$1,244,40	$1,499,54	$6,099,54	$1,499,54	$1,499,54	$1,499,54	$1,499,54	$1,499,54	$1,499,54
Pavement - Renewals Capex	$5,957,58	$6,342,38	$5,632,46	$6,314,14	$5,741,00	$5,741,00	$5,741,00	$5,741,00	$5,741,00	$5,741,00	$5,741,00	$5,741,00	$5,741,00
Network - Improvements - Renewals Capex	$266,318	$218,135	$685,730	$701,153	$809,000	$809,000	$770,000	$770,000	$770,000	$770,000	$770,000	$770,000	$770,000
Total - Renewals Capex	$7,457,34	$8,791,24	$7,850,95	$8,490,35	$8,568,03	$8,823,17	$13,384,1	$8,784,17	$8,784,17	$8,784,17	$8,784,17	$8,784,17	$8,653,09

FIGURE E.4: COMBINED HISTORICAL AND PROJECTED CAPITAL DEVELOPMENT LOS WORKS EXPENDITURE FOR ALL ASSET GROUPS

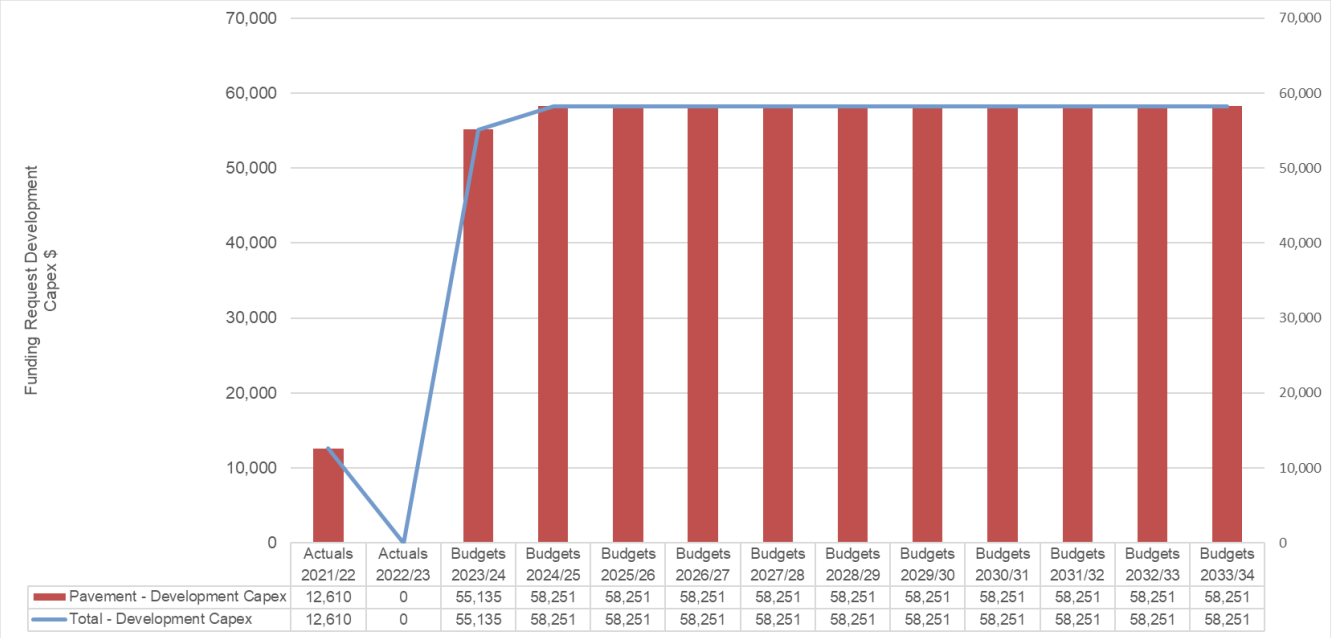
Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
LOS														
Cycleway	2,200	1,595	0	0	0	0	4,362,000	2,901,667	236,667	316,667	216,667	216,667	216,667	8,467,000
Network - Improvements	0	27,659	0	415,667	589,550	624,500	672,027	672,027	672,027	672,027	672,027	672,027	672,027	6,333,906
Structures	21,802	467	0	0	0	0	5,915,000	0	0	0	0	0	0	5,915,000
LOS Total	24,002	29,721	0	415,667	589,550	624,500	10,949,027	3,573,694	908,694	988,694	888,694	888,694	888,694	20,715,906



	Actuals 2021/22	Actuals 2022/23	Budgets 2023/24	Budgets 2024/25	Budgets 2025/26	Budgets 2026/27	Budgets 2027/28	Budgets 2028/29	Budgets 2029/30	Budgets 2030/31	Budgets 2031/32	Budgets 2032/33	Budgets 2033/34
Bus Shelters Development Capex LOS	0	0	0	0	0	0	0	0	0	0	0	0	0
Cycleway Development Capex LOS	2,200	1,595	0	0	0	0	4,362,000	2,901,667	236,667	316,667	216,667	216,667	216,667
Structures Development Capex LOS	21,802	467	0	0	0	0	5,915,000	0	0	0	0	0	0
Network - Improvements Development Capex LOS	0	27,659	0	415,667	589,550	624,500	672,027	672,027	672,027	672,027	672,027	672,027	672,027
Total - Development Capex	24,002	29,721	0	415,667	589,550	624,500	10,949,027	3,573,694	908,694	988,694	888,694	888,694	888,694

FIGURE E.5: COMBINED HISTORICAL AND PROJECTED CAPITAL DEVELOPMENT GROWTH WORKS EXPENDITURE FOR ALL ASSET GROUPS

Row Labels	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24 Budget	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Growth														
Pavement	12,610	0	55,135	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	582,510
Growth Total	**12,610**	**0**	**55,135**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**58,251**	**582,510**



E02.2.2 Renewal Deferrals

Renewal deferrals (if any) are detailed in the Life Cycle Management sections.

E03 ASSET VALUATION

Statutory financial reporting requirements require Council to revalue its fixed assets at least once every 5 years, or in any year where there has been a significant movement in asset values. It is normal practice to undertake a valuation update in the intervening years.

A full valuation report was produced as part of the 2023 valuation and provides details of the process, valuation results, assumptions and any areas for improvement.

An asset valuation is to be used for asset management (calculating long term asset renewal projections), identifying loss of service potential (depreciation) and for financial reporting purposes.

TABLE E-1: VALUATION TERMINOLOGY

Terminology	General Meaning
Gross Replacement cost (GRC)	The cost of constructing a new fixed asset using the present day technology, and maintaining the original service potential.
Replacement cost (RC)	The cost of the modern equivalent asset that would be used to replicate the existing asset. The asset cost is 'optimised' down to allow for surplus capacity or technical obsolescence.
Depreciated Replacement Cost (DRC)	The replacement cost after deducting the wear of an asset to reflect the remaining useful life of the asset. Calculated on the gross replacement cost of modern equivalent assets (MEA). Calculated as Replacement Cost x (RUL / Expected Life)
Annual Depreciation (AD)	Annual depreciation is the rate of depreciation per year and is the optimised replacement cost divided by the estimated useful life. Calculated as Optimised Replacement Cost / Expected Life
Remaining Useful Life (RUL)	Defined as the Asset Expected Life – Asset Ages as at the valuation date
Expected Life	The life that the asset is expected to fulfil its purpose / function satisfactorily Calculated as Remaining Useful Life (RUL) + Current Age

E03.1 Valuation as at 30 June 2023

The transport assets have been valued by GHD for Ruapehu District Council. The following table shows the key valuation outputs per asset group.

FIGURE E.6: 2023 VALUATION SUMMARY PER ASSET GROUP

Asset Type	Component	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation Cost
Bridge	Bridge (Culvert)	$13,062,075.40	$4,541,238.73	$128,240.51
Bridge	Bridge (Deck)	$129,243,757.23	$53,895,254.56	$1,345,071.42
Crossing	Crossing	$4,575,009.21	$406,489.97	$61,000.12
Drainage	Drainage	$41,071,667.54	$17,313,017.95	$514,012.11
Footpath	Footpath	$13,852,432.80	$7,513,097.62	$201,212.92
Island	Island	$402,680.77	$173,787.68	$5,369.08
Minor Structure	Minor Structure	$1,753,156.91	$1,127,114.71	$48,341.98
Railing	Railing	$3,629,879.97	$513,630.85	$25,467.64

Asset Type	Component	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation Cost
Retaining Wall	Retaining Wall	$9,196,653.77	$7,528,719.06	$116,456.58
SW Channel	SW Channel	$31,524,591.11	$11,848,563.38	$394,057.39
Sign	Sign	$1,489,367.51	$187,394.86	$26,808.62
Street Light	Street Light (Bracket)	$2,025,416.11	$205,161.29	$14,346.70
Street Light	Street Light (Light)	$613,423.73	$281,082.82	$25,385.87
Street Light	Street Light (Pole)	$2,611,492.15	$529,467.23	$39,208.96
Traffic Facility	Traffic Facility	$62,784.80	$743.40	$454.96
Treatment Length	BC Rural Seal Access	$18,508,014.82	$12,248,838.04	$185,080.15
Treatment Length	BC Rural Seal Access LV	$3,707,658.37	$2,070,431.71	$37,076.58
Treatment Length	BC Rural Seal P&S Collector	$8,426,951.50	$5,486,109.44	$84,269.52
Treatment Length	BC Rural Unsealed	$38,422,438.74	$28,340,582.39	$384,224.39
Treatment Length	BC Urban Seal Access	$2,318,349.48	$1,105,189.21	$23,183.49
Treatment Length	BC Urban Seal Access LV	$5,428,631.61	$2,595,521.76	$54,286.32
Treatment Length	BC Urban Seal P&S Collector	$1,989,246.27	$923,454.79	$19,892.46
Treatment Length	BC Urban Unsealed	$302,181.95	$213,275.55	$3,021.82
Treatment Length	Formation Rural	$107,268,748.63	$107,268,748.63	$0.00
Treatment Length	Formation Urban	$14,235,977.08	$14,235,977.08	$0.00
Treatment Length	SB Rural Seal Access	$22,888,672.82	$15,138,582.27	$228,886.73
Treatment Length	SB Rural Seal Access LV	$3,755,744.31	$2,096,281.11	$37,557.44
Treatment Length	SB Rural Seal P&S Collector	$9,990,541.45	$6,512,875.66	$99,905.41
Treatment Length	SB Rural Unsealed	$42,654,225.19	$42,654,225.19	$0.00
Treatment Length	SB Urban Seal Access	$2,563,608.66	$1,222,107.65	$25,636.09
Treatment Length	SB Urban Seal Access LV	$4,716,586.96	$2,255,081.02	$47,165.87
Treatment Length	SB Urban Seal P&S Collector	$2,199,689.48	$1,021,147.46	$21,996.89
Treatment Length	SB Urban Unsealed	$348,447.19	$348,447.19	$0.00
Treatment Length	Surface Structure	$33,473,821.70	$12,451,359.56	$1,467,807.78
Totals		**$578,313,925.23**	**$364,252,999.85**	**$5,665,425.80**
Treatment Length	Land Under Roads	$43,124,461.00	$43,124,461.00	$0.00
Total Including Land Under Roads		**$621,438,386.23**	**$407,377,460.85**	**$5,665,425.80**

Please refer to the individual Asset Class Lifecycle Management Sections for further valuation figures and breakdowns.

E03.1.1 Useful Lives

The expected lives used in the valuation are based on previous valuations and are within the ranges specified in the NZ Infrastructure Valuation and Depreciation Guidelines.

A condition and/or performance based Remaining Useful Lives (RUL) calculation has not been used for this valuation. This is because the type of condition and performance data required to support a valuation is not available within the asset data information.

These are the Useful Lives used in the 30 June 2023 valuation.

TABLE E-2: USEFUL LIVES

Asset Class	Minimum Life	Total Useful Life Range
Bridge	2 years	70-100 years
Crossing	2 years	75 years
Drainage	2 years	70-100 years

Footpath	2 years	20-80 years
Island	2 years	75 years
Marking	2 years	1 year
Minor Structure	2 years	10-100 years
Railing	2 years	30-50 years
Retaining Wall	2 years	50-100 years
Sign	1 year	10 years
Street Light Light	2 years	20 years
Street Light Bracket	2 years	25 years
Street Light Pole	2 years	25 years
Surface Water Channel	2 years	80 years
Traffic Facility	2 years	10-20 years
Treatment Length Basecourse	2 years	100 years
Treatment Length Formation	2 years	100 years
Treatment Length Subbase	2 years	100 years
Treatment Length Surface	2 years	15 years

E03.2 Valuation Methodology

The assets have been valued based on the Depreciated Replacement Cost (DRC) approach for depreciable assets as outlined in the New Zealand Infrastructure Asset Valuation and Depreciation Guidelines.

Data:.RAMM

Unit Replacement Cost: Applicable contract rates used where available or previous valuation rate adjusted as per Waka Kotahi NZTA CFA guidelines

Useful Lives: As detailed in table E-2 above

Depreciation Methods: Straight Line

Valuation Tool: RAMM Valuation Module was used to carry out the valuation.

Land Transport Activity Management Plan 2024-34

Part 2 – Appendices

Appendix A – Revisions to Activity Management Plan

A1 Summary of 2024 Long Term Plan Process

The AMPs are developed with prudency in mind but must follow best practice and current ideas on the life of assets. Council finds that in practice, the life of assets is very hard to predict and has spent some effort collecting and analysing its data on infrastructure. The future cost components are a mix of uncertainty around renewal types, timeframes and appropriate technologies and, therefore, a healthy tension of estimated cost and actual current budgets and deliverables. The budgets in the AMP have been developed on the basis of using today's technologies. Council knows, from experience, in this fast moving world that changes occur, new technologies are developed and better and smarter ways of doing things are developed. The result is today's forecast budgets, while both prudent and representing the best available information when developed, can sometimes be reduced or amended.

The document contains material and forecasts submitted to Audit New Zealand and NZ Transport Agency as at 8 April 2024. The financial forecasts are summarised in Appendix B.

Once the LTP is adopted, the adopted programmes and budgets, and the implications of any changes made from the proposed AMP are notified within Appendix A. These changes and implications will then be a key input into subsequent plan updates.

Budget Changes for Consultation as at 12th May 2024

There were no changes to the budget following consultation, other than a change to the cost of funds/interest calculations which has impacted Land Transport in Year 2 onward .

The final operation budget (uninflated and inflated), with this change reflected is shown below. There are no changes to the capex budgets.

Land Transport Opex Budget – UNINFLATED

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30 - Land Transport (Subsidised)	3700-Depreciation	252,419	453,312	566,343	724,263	893,215	1,063,356	1,231,543	1,397,361	1,567,482	1,734,736	9,884,030
30*00*00 - Activitiy Support	2001-Salaries	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	1,440,800
30*00*00 - Activitiy Support	2059-Training & Travel Costs	0	0	0	0	0	0	0	0	0	0	0
30*00*00 - Activitiy Support	3801-Interest on Loans	380,170	405,141	442,350	514,295	594,007	627,217	673,499	704,786	719,453	740,370	5,801,288
30*00*00 - Activitiy Support	4005-Overhead Allocations	1,000,544	1,032,488	1,079,368	1,058,071	1,060,844	1,102,876	1,044,477	1,042,577	1,084,492	1,038,400	10,544,136
30*70*20 - Pavement Mtce Sealed (11)	2202-Roading Maintenance	1,400,000	1,562,967	3,002,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	16,906,703
30*70*20 - Pavement Mtce Sealed (11)	3700-Depreciation	100	100	100	100	100	100	100	100	100	100	1,000
30*70*21 - Pavement Mtce Unsealed (12)	2201-Metal	0	0	0	0	0	0	0	0	0	0	0
30*70*21 - Pavement Mtce Unsealed (12)	2202-Roading Maintenance	1,014,954	1,014,871	1,014,871	1,014,871	1,014,871	1,014,871	1,014,871	1,014,871	1,014,871	1,014,871	10,148,793
30*70*21 - Pavement Mtce Unsealed (12)	3060-HRC Resource Consents	83	83	83	83	83	83	83	83	83	83	830
30*70*22 - Routine Drainage Mtce (13)	2202-Roading Maintenance	900,000	1,009,945	1,329,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	10,309,505
30*70*22 - Routine	3700-Depreciation	10	10	10	10	10	10	10	10	10	10	100

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
Drainage Mtce (13)												
30*70*23 - Structures Mtce (14)	2202-Roading Maintenance	300,000	1,360,200	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	13,148,181
30*70*23 - Structures Mtce (14)	3700-Depreciation	459	459	459	459	459	459	459	459	459	459	4,590
30*70*24 - Level Crossing Devices (31)	2202-Roading Maintenance	35,000	21,183	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	336,183
30*70*25 - Network & Asset Management (51)	2059-Training & Travel Costs	767	767	767	767	767	767	767	767	767	767	7,669
30*70*25 - Network & Asset Management (51)	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
30*70*25 - Network & Asset Management (51)	2204-Other Contract Purchases	1,164,296	1,610,313	2,092,849	1,592,849	1,592,849	1,592,849	1,592,849	1,592,849	1,592,849	1,592,849	16,017,401
30*70*25 - Network & Asset Management (51)	3012-Consultants Expenses	0	0	0	0	0	0	0	0	0	0	0
30*70*25 - Network & Asset Management (51)	3040-Miscellaneous Expenses	21,171	21,171	21,171	21,171	21,171	21,171	21,171	21,171	21,171	21,171	211,712
30*70*25 - Network & Asset Management (51)	3056-Refreshments	337	337	337	337	337	337	337	337	337	337	3,370
30*70*25 - Network & Asset	3066-Software Charges	30,906	30,906	30,906	30,906	30,906	30,906	30,906	30,906	30,906	30,906	309,059

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
Management (51)												
30*70*25 - Network & Asset Management (51)	3069-Subscriptions	801	801	801	801	801	801	801	801	801	801	8,012
30*70*25 - Network & Asset Management (51)	3700-Depreciation	5,486,676	5,494,989	5,506,780	5,532,530	5,545,971	5,559,411	5,572,852	5,586,293	5,599,733	5,613,174	55,498,410
30*70*26 - Environmental (Vegetation) Maintenance (21)	2202-Roading Maintenance	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	13,890,420
30*70*27 - Street Cleaning	2202-Roading Maintenance	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	319,800
30*70*28 - Traffic Services Maintenance (22)	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
30*70*28 - Traffic Services Maintenance (22)	3052-Power	320,065	320,065	320,065	320,065	320,065	320,065	320,065	320,065	320,065	320,065	3,200,655
30*70*28 - Traffic Services Maintenance (22)	3072-Signs & Markings	199,970	199,970	199,970	199,970	199,970	199,970	199,970	199,970	199,970	199,970	1,999,701
30*70*28 - Traffic Services Maintenance (22)	3073-Streetlights	195,284	341,312	195,284	195,284	195,284	195,284	195,284	195,284	195,284	195,284	2,098,868
30*70*28 - Traffic Services	3092-Highway Streetlights	69,680	69,680	69,680	69,680	69,680	69,680	69,680	69,680	69,680	69,680	696,802

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
Maintenance (22)												
30*70*28 - Traffic Services Maintenance (22)	3700-Depreciation	132	132	132	132	132	132	132	132	132	132	1,320
30*70*30 - Minor Events	2201-Metal	19,496	19,496	19,496	19,496	19,496	19,496	19,496	19,496	19,496	19,496	194,962
30*70*30 - Minor Events	2202-Roading Maintenance	780,504	794,524	780,504	780,504	780,504	780,504	780,504	780,504	780,504	780,504	7,819,058
30*70*41 - Cycleways Subsidised	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
30*71*20 - Pavement Mtce Sealed (11)	2202-Roading Maintenance	0	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023	2,007,207
30*71*22 - Routine Drainage Mtce (13)	2202-Roading Maintenance	0	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	175,878
30*71*23 - Structures Mtce (14)	2202-Roading Maintenance	0	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	21,204
30*71*23 - Structures Mtce (14)	3700-Depreciation	0	0	0	0	104,000	104,000	104,000	104,000	104,000	104,000	624,000
30*71*25 - Network & Asset Management (51)	2204-Other Contract Purchases	0	2,568	2,568	2,568	2,568	2,568	2,568	2,568	2,568	2,568	23,112
30*71*25 - Network & Asset Management (51)	3012-Consultants Expenses	0	96,826	96,826	96,826	96,826	96,826	96,826	96,826	96,826	96,826	871,434
30*71*26 - Environmental Mtce (21)	2202-Roading Maintenance	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	1,326,490

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30*71*28 - Traffic Services Mtce (22)	2202-Roading Maintenance	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	360,500
30*72*30 - Emergency Reinstatement (41)	2201-Metal	37,001	37,001	37,001	37,001	37,001	37,001	37,001	37,001	37,001	37,001	370,012
30*72*30 - Emergency Reinstatement (41)	2202-Roading Maintenance	976,088	1,976,089	1,976,089	1,976,089	1,976,089	1,976,089	1,976,089	1,976,089	1,976,089	1,976,089	18,760,889
30*72*30 - Emergency Reinstatement (41)	3012-Consultants Expenses	137,511	137,511	137,511	137,511	137,511	137,511	137,511	137,511	137,511	137,511	1,375,107
33*75 - Non Subsidised	2202-Roading Maintenance	159,915	378,081	596,247	814,413	814,413	814,413	814,413	814,413	814,413	814,413	6,835,134
33*75 - Non Subsidised	3700-Depreciation	72	166	242	377	553	3,397	8,116	13,317	19,239	25,575	71,052
33*75*25 - Network & Asset Mgt	2202-Roading Maintenance	6,654	6,654	6,654	6,654	6,654	6,654	6,654	6,654	6,654	6,654	66,540
33*75*25 - Network & Asset Mgt	3012-Consultants Expenses	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249	6,249	62,494
33*75*25 - Network & Asset Mgt	3056-Refreshments	0	0	0	0	0	0	0	0	0	0	0
33*75*25 - Network & Asset Mgt	3700-Depreciation	1,324	2,489	3,654	4,819	20,284	21,449	22,614	23,779	24,944	26,109	151,466
33*75*25 - Network & Asset Mgt	3801-Interest on Loans	712,446	678,939	666,304	655,863	650,383	624,184	603,419	559,452	497,230	424,548	6,072,768
33*75*25 - Network & Asset Mgt	4005-Overhead Allocations	89,364	91,780	95,623	93,566	93,737	97,242	92,275	92,043	95,521	91,509	932,661
33*75*31 - Under Verandah Lighting	2202-Roading Maintenance	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	74,921
33*75*32 - Facility Parking	2202-Roading Maintenance	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	132,050

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
33*75*33 - Cross & Shelters	2202-Roading Maintenance	659	659	659	659	659	659	659	659	659	659	6,588
33*75*34 - Plant Pest Control	2202-Roading Maintenance	68,754	68,754	68,754	68,754	68,754	68,754	68,754	68,754	68,754	68,754	687,541
33*75*34 - Plant Pest Control	3012-Consultants Expenses	768	768	768	768	768	768	768	768	768	768	7,682
33*75*36 - Miscellaneous	2202-Roading Maintenance	9,195	9,195	9,195	9,195	9,195	9,195	9,195	9,195	9,195	9,195	91,952
33*75*36 - Miscellaneous	2206-All Other Maintenance Dayworks	204	204	204	204	204	204	204	204	204	204	2,040
33*75*36 - Miscellaneous	3040-Miscellaneous Expenses	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	2,539	25,393
33*75*38 - Cycleway Maintenance	2202-Roading Maintenance	100,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,450,000
33*75*38 - Cycleway Maintenance	3012-Consultants Expenses	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	93,000
33*75*40 - Horizons Road Safety Education Promotion Activities	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
33*75*41 - Cycleways	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
33*75*41 - Cycleways	3058-Repair & Maintc - Planned	0	0	0	0	0	0	0	0	0	0	0
33*75*41 - Cycleways	3700-Depreciation	1,308	1,308	1,308	1,308	88,548	163,915	185,982	209,648	231,315	252,982	1,137,623
33*75*44 - Streetflag Installation	2202-Roading Maintenance	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	85,800
33*76 - Pedestrian	3700-Depreciation	9,750	17,510	21,870	27,949	34,427	40,833	47,152	53,371	59,739	65,988	378,588
33*76*00 - District	2202-Roading Maintenance	39,276	138,708	138,708	138,708	138,708	138,708	138,708	138,708	138,708	138,708	1,287,648

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
33*76*00 - District	2203-Mainstreet Contract (from P&R)	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427	89,427	894,265
33*76*00 - District	3012-Consultants Expenses	1,298	1,298	1,298	1,298	1,298	1,298	1,298	1,298	1,298	1,298	12,975
33*76*00 - District	3700-Depreciation	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	2,119,570
33*76*00 - District	3801-Interest on Loans	(19,046)	(30,655)	(42,902)	(55,930)	(70,941)	(85,295)	(102,934)	(120,249)	(136,172)	(156,068)	(820,192)
33*77*00 - District	2203-Mainstreet Contract (from P&R)	90,000	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	1,212,278
	Total	**18,078,917**	**21,983,246**	**24,566,986**	**22,741,324**	**23,199,240**	**23,506,797**	**23,667,207**	**23,850,590**	**24,051,187**	**24,145,534**	**229,791,028**

Land Transport Opex Budget – INFLATED

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30 - Land Transport (Subsidised)	3700-Depreciation	252,419	453,312	566,352	724,310	893,384	1,064,092	1,232,896	1,399,388	1,570,274	1,738,360	9,894,788
30*00*00 - Activitiy Support	2001-Salaries	151,284	158,488	165,692	172,896	180,100	187,304	194,508	201,712	208,916	216,120	1,837,020
30*00*00 - Activitiy Support	2059-Training & Travel Costs	0	0	0	0	0	0	0	0	0	0	0
30*00*00 - Activitiy Support	3801-Interest on Loans	382,544	413,307	459,542	548,263	649,898	704,558	779,280	842,911	892,211	956,558	6,629,072
30*00*00 - Activitiy Support	4005-Overhead Allocations	1,041,011	1,113,513	1,203,544	1,216,122	1,254,639	1,337,786	1,306,275	1,339,033	1,425,623	1,404,867	12,642,415
30*70*20 - Pavement Mtce Sealed (11)	2202-Roading Maintenance	1,450,400	1,652,056	3,258,219	1,744,271	1,791,160	1,836,486	1,883,375	1,928,701	1,975,590	2,020,916	19,541,176
30*70*20 - Pavement Mtce Sealed (11)	3700-Depreciation	100	100	100	100	100	100	100	100	100	100	1,000
30*70*21 - Pavement Mtce Unsealed (12)	2201-Metal	0	0	0	0	0	0	0	0	0	0	0
30*70*21 - Pavement Mtce Unsealed (12)	2202-Roading Maintenance	1,051,492	1,072,719	1,101,135	1,132,596	1,163,042	1,192,473	1,222,920	1,252,351	1,282,797	1,312,228	11,783,753
30*70*21 - Pavement Mtce Unsealed (12)	3060-HRC Resource Consents	86	88	90	93	95	98	100	102	105	107	964

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30*70*22 - Routine Drainage Mtce (13)	2202-Roading Maintenance	932,400	1,067,512	1,442,990	1,127,099	1,157,397	1,186,685	1,216,984	1,246,272	1,276,570	1,305,859	11,959,768
30*70*22 - Routine Drainage Mtce (13)	3700-Depreciation	10	10	10	10	10	10	10	10	10	10	100
30*70*23 - Structures Mtce (14)	2202-Roading Maintenance	310,800	1,437,731	1,558,057	1,602,573	1,645,653	1,687,297	1,730,377	1,772,021	1,815,101	1,856,745	15,416,357
30*70*23 - Structures Mtce (14)	3700-Depreciation	459	459	459	459	459	459	459	459	459	459	4,590
30*70*24 - Level Crossing Devices (31)	2202-Roading Maintenance	36,260	22,390	37,975	39,060	40,110	41,125	42,175	43,190	44,240	45,255	391,780
30*70*25 - Network & Asset Management (51)	2059-Training & Travel Costs	805	844	882	920	959	997	1,035	1,074	1,112	1,150	9,778
30*70*25 - Network & Asset Management (51)	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
30*70*25 - Network & Asset Management (51)	2204-Other Contract Purchases	1,206,211	1,702,101	2,270,741	1,777,619	1,825,405	1,871,598	1,919,383	1,965,576	2,013,361	2,059,554	18,611,548
30*70*25 - Network & Asset Management (51)	3012-Consultants Expenses	0	0	0	0	0	0	0	0	0	0	0
30*70*25 - Network & Asset Management (51)	3040-Miscellaneous Expenses	21,933	22,378	22,971	23,627	24,262	24,876	25,511	26,125	26,760	27,374	245,819
30*70*25 - Network & Asset Management (51)	3056-Refreshments	349	356	366	376	386	396	406	416	426	436	3,913
30*70*25 - Network & Asset Management (51)	3066-Software Charges	32,019	32,668	33,533	34,491	35,418	36,314	37,242	38,138	39,065	39,961	358,849

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30*70*25 - Network & Asset Management (51)	3069-Subscriptions	830	847	869	894	918	941	965	989	1,013	1,036	9,302
30*70*25 - Network & Asset Management (51)	3700-Depreciation	5,486,676	5,495,463	5,508,256	5,536,993	5,552,396	5,568,189	5,584,385	5,600,970	5,617,959	5,635,338	55,586,627
30*70*26 - Environmental (Vegetation) Maintenance (21)	2202-Roading Maintenance	1,439,047	1,468,217	1,507,111	1,550,171	1,591,842	1,632,124	1,673,796	1,714,078	1,755,749	1,796,031	16,128,167
30*70*27 - Street Cleaning	2202-Roading Maintenance	33,132	33,803	34,698	35,690	36,649	37,577	38,536	39,463	40,423	41,350	371,320
30*70*28 - Traffic Services Maintenance (22)	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
30*70*28 - Traffic Services Maintenance (22)	3052-Power	331,588	338,309	347,271	357,193	366,795	376,077	385,679	394,961	404,563	413,845	3,716,280
30*70*28 - Traffic Services Maintenance (22)	3072-Signs & Markings	207,169	211,368	216,968	223,167	229,166	234,965	240,964	246,763	252,762	258,561	2,321,853
30*70*28 - Traffic Services Maintenance (22)	3073-Streetlights	202,314	360,767	211,883	217,937	223,795	229,459	235,317	240,980	246,839	252,502	2,421,794
30*70*28 - Traffic Services Maintenance (22)	3092-Highway Streetlights	72,189	73,652	75,603	77,763	79,854	81,874	83,965	85,985	88,076	90,096	809,057
30*70*28 - Traffic Services Maintenance (22)	3700-Depreciation	132	132	132	132	132	132	132	132	132	132	1,320
30*70*30 - Minor Events	2201-Metal	20,198	20,607	21,153	21,758	22,343	22,908	23,493	24,058	24,643	25,209	226,370
30*70*30 - Minor Events	2202-Roading Maintenance	808,602	839,812	846,847	871,042	894,457	917,092	940,507	963,142	986,557	1,009,191	9,077,249
30*70*41 - Cycleways Subsidised	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
30*71*20 - Pavement Mtce Sealed (11)	2202-Roading Maintenance	0	235,735	241,980	248,894	255,584	262,052	268,743	275,210	281,901	288,369	2,358,468
30*71*22 - Routine Drainage Mtce (13)	2202-Roading Maintenance	0	20,656	21,203	21,809	22,395	22,962	23,548	24,115	24,701	25,268	206,657
30*71*23 - Structures Mtce (14)	2202-Roading Maintenance	0	2,490	2,556	2,629	2,700	2,768	2,839	2,907	2,978	3,046	24,915
30*71*23 - Structures Mtce (14)	3700-Depreciation	0	0	0	0	119,184	119,184	119,184	119,184	119,184	119,184	715,104
30*71*25 - Network & Asset Management (51)	2204-Other Contract Purchases	0	2,714	2,786	2,866	2,943	3,017	3,094	3,169	3,246	3,320	27,157
30*71*25 - Network & Asset Management (51)	3012-Consultants Expenses	0	102,345	105,056	108,058	110,963	113,771	116,675	119,483	122,388	125,196	1,023,935
30*71*26 - Environmental Mtce (21)	2202-Roading Maintenance	137,424	140,210	143,924	148,036	152,016	155,863	159,842	163,689	167,668	171,515	1,540,187
30*71*28 - Traffic Services Mtce (22)	2202-Roading Maintenance	37,348	38,105	39,114	40,232	41,313	42,359	43,440	44,486	45,567	46,613	418,577
30*72*30 - Emergency Reinstatement (41)	2201-Metal	38,333	39,110	40,146	41,293	42,403	43,476	44,586	45,659	46,770	47,843	429,621
30*72*30 - Emergency Reinstatement (41)	2202-Roading Maintenance	1,011,227	2,088,726	2,144,057	2,205,315	2,264,598	2,321,905	2,381,187	2,438,494	2,497,776	2,555,083	21,908,368
30*72*30 - Emergency Reinstatement (41)	3012-Consultants Expenses	142,461	145,349	149,199	153,462	157,587	161,575	165,700	169,688	173,814	177,801	1,596,637
33*75 - Non Subsidised	2202-Roading Maintenance	164,393	396,985	640,369	894,225	913,771	932,503	952,049	970,780	990,326	1,009,058	7,864,460
33*75 - Non Subsidised	3700-Depreciation	72	168	245	386	571	3,814	9,262	15,294	22,206	29,654	81,670
33*75*25 - Network & Asset Mgt	2202-Roading Maintenance	6,894	7,033	7,220	7,426	7,626	7,818	8,018	8,211	8,411	8,604	77,260

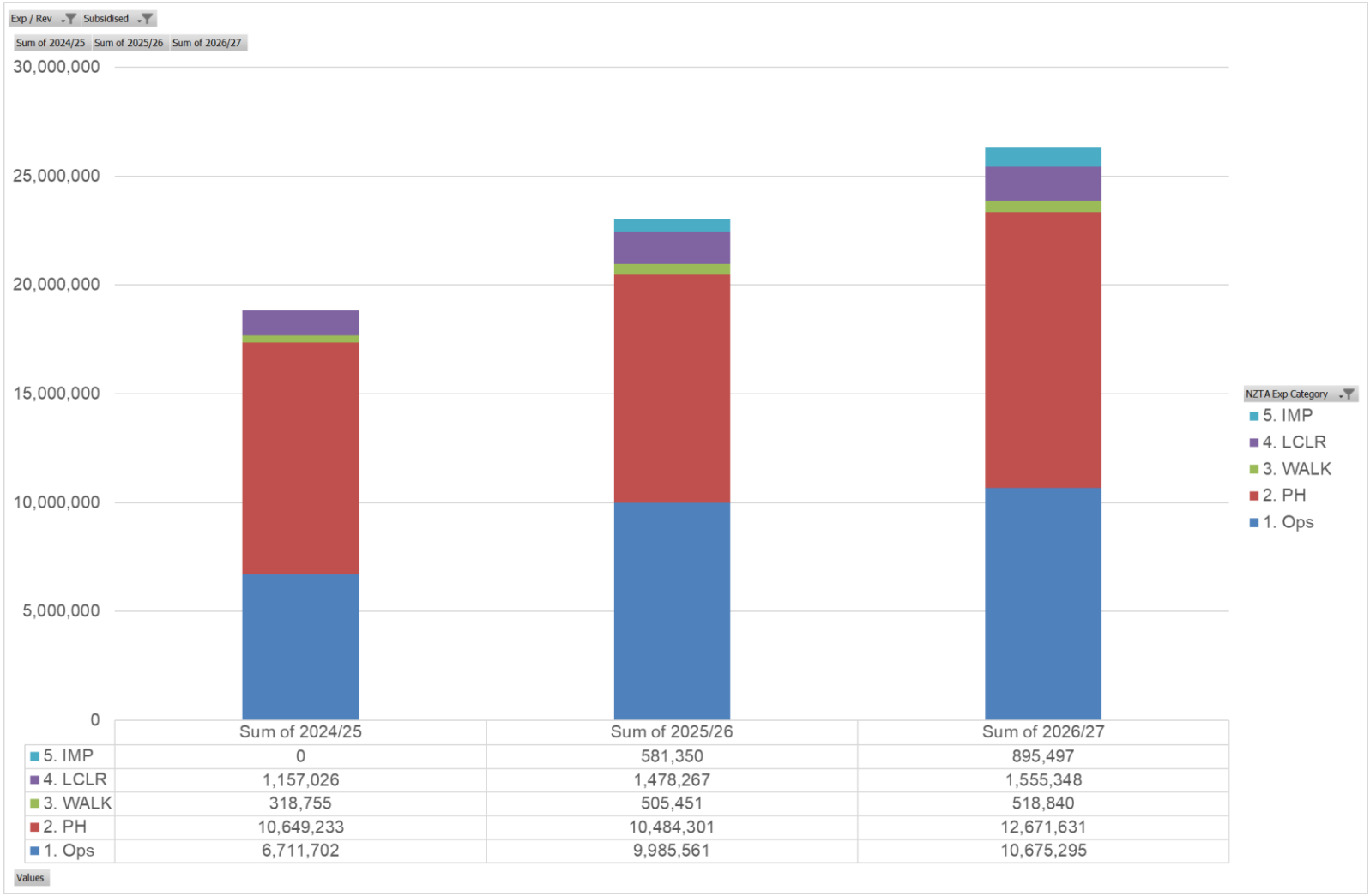
Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
33*75*25 - Network & Asset Mgt	3012-Consultants Expenses	6,474	6,606	6,781	6,974	7,162	7,343	7,531	7,712	7,899	8,081	72,562
33*75*25 - Network & Asset Mgt	3056-Refreshments	0	0	0	0	0	0	0	0	0	0	0
33*75*25 - Network & Asset Mgt	3700-Depreciation	1,324	2,555	3,819	5,120	22,843	24,211	25,615	27,053	28,525	30,032	171,098
33*75*25 - Network & Asset Mgt	3801-Interest on Loans	712,536	679,243	666,929	656,948	651,683	625,010	603,361	558,258	494,647	420,185	6,068,800
33*75*25 - Network & Asset Mgt	4005-Overhead Allocations	92,768	98,602	106,088	106,866	110,039	117,010	114,301	116,982	124,233	122,335	1,109,224
33*75*31 - Under Verandah Lighting	2202-Roading Maintenance	7,762	7,919	8,129	8,361	8,586	8,803	9,028	9,245	9,470	9,687	86,991
33*75*32 - Facility Parking	2202-Roading Maintenance	13,680	13,958	14,327	14,737	15,133	15,516	15,912	16,295	16,691	17,074	153,323
33*75*33 - Cross & Shelters	2202-Roading Maintenance	683	696	715	735	755	774	794	813	833	852	7,649
33*75*34 - Plant Pest Control	2202-Roading Maintenance	71,229	72,673	74,598	76,730	78,792	80,786	82,849	84,843	86,905	88,899	798,303
33*75*34 - Plant Pest Control	3012-Consultants Expenses	796	812	833	857	880	903	926	948	971	993	8,919
33*75*36 - Miscellaneous	2202-Roading Maintenance	9,526	9,719	9,977	10,262	10,538	10,804	11,080	11,347	11,623	11,889	106,765
33*75*36 - Miscellaneous	2206-All Other Maintenance Dayworks	211	216	221	228	234	240	246	252	258	264	2,369
33*75*36 - Miscellaneous	3040-Miscellaneous Expenses	2,630	2,684	2,755	2,834	2,910	2,984	3,060	3,134	3,210	3,283	29,484
33*75*38 - Cycleway Maintenance	2202-Roading Maintenance	103,600	158,550	162,750	167,400	171,900	176,250	180,750	185,100	189,600	193,950	1,689,850
33*75*38 - Cycleway Maintenance	3012-Consultants Expenses	9,635	9,830	10,091	10,379	10,658	10,928	11,207	11,476	11,755	12,025	107,982
33*75*40 - Horizons Road Safety Education	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0

Activity Name	GL Name	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10	Total
Promotion Activities												
33*75*41 - Cycleways	2202-Roading Maintenance	0	0	0	0	0	0	0	0	0	0	0
33*75*41 - Cycleways	3058-Repair & Maintc - Planned	0	0	0	0	0	0	0	0	0	0	0
33*75*41 - Cycleways	3700-Depreciation	1,347	1,347	1,347	1,347	101,324	189,880	216,470	245,675	273,062	301,077	1,332,875
33*75*44 - Streetflag Installation	2202-Roading Maintenance	8,889	9,069	9,309	9,575	9,833	10,082	10,339	10,588	10,845	11,094	99,622
33*76 - Pedestrian	3700-Depreciation	9,750	17,510	21,870	27,949	34,427	40,833	47,152	53,371	59,739	65,988	378,588
33*76*00 - District	2202-Roading Maintenance	40,690	146,614	150,498	154,798	158,959	162,982	167,143	171,166	175,327	179,349	1,507,527
33*76*00 - District	2203-Mainstreet Contract (from P&R)	92,646	94,524	97,028	99,800	102,483	105,076	107,759	110,352	113,035	115,629	1,038,331
33*76*00 - District	3012-Consultants Expenses	1,344	1,371	1,408	1,448	1,487	1,525	1,564	1,601	1,640	1,678	15,066
33*76*00 - District	3700-Depreciation	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	211,957	2,119,570
33*76*00 - District	3801-Interest on Loans	-19,046	-30,655	-42,902	-55,930	-70,941	-85,295	-102,934	-120,249	-136,172	-156,068	-820,192
33*77*00 - District	2203-Mainstreet Contract (from P&R)	93,240	131,805	135,297	139,162	142,903	146,520	150,260	153,877	157,618	161,234	1,411,916
		18,484,283	22,860,243	26,085,131	24,570,795	25,539,024	26,332,179	26,975,312	27,641,265	28,352,044	28,931,392	255,771,668

A2 NZ Transport Agency Budgets

The final application to NZ Transport Agency is shown below:-

2.1 The table and graph below shows the summary uninflated expenditure budgets submitted to NZTA. It is sorted by NZTA expenditure categories 1. Ops (Operations), 2. PH (Pothole prevention), 3. WALK (Walking and Cycling), 4. LCLR (Low cost low risk), and 5. IMP (Improvements).



	Sum of 2024/25	Sum of 2025/26	Sum of 2026/27
5. IMP	0	581,350	895,497
4. LCLR	1,157,026	1,478,267	1,555,348
3. WALK	318,755	505,451	518,840
2. PH	10,649,233	10,484,301	12,671,631
1. Ops	6,711,702	9,985,561	10,675,295

Row Labels	Sum of 2024/25	Sum of 2025/26	Sum of 2026/27
1. Ops			
30 70 23 Structures Maintenance	310,800	1,437,731	1,558,057
30 70 24 Level Crossing Devices	36,260	22,391	37,975
30 70 25 Network & Asset Management	1,262,136	1,759,161	2,329,312
30 70 26 Environmental Maintenance	1,439,047	1,468,217	1,507,111
30 70 27 Street Cleaning Maintenance	33,132	33,803	34,699
30 70 28 Traffic Services Maintenance	813,259	984,096	851,725
30 70 30 Minor Events	828,800	860,419	868,000
30 71 23 Structures Maintenance SPR	0	2,490	2,556
30 71 25 Network & Asset Management SPR	0	105,060	107,843
30 71 26 Environmental Maintenance SPR	137,424	140,210	143,924
30 71 28 Traffic Services Maintenance SPR	37,348	38,105	39,114
30 72 30 Emergency Reinstatement	1,192,022	2,273,185	2,333,402
SLTSTR 030 Structures Components Replacements	497,280	733,981	731,509
SLTSTR 031 Traffic Services Renewals	124,194	126,711	130,068
1. Ops Total	**6,711,702**	**9,985,561**	**10,675,295**
2. PH			
30 70 20 Sealed Pavement Maintenance	1,450,400	1,652,056	3,258,219
30 70 21 Unsealed Pavement Maintenance	1,051,578	1,072,806	1,101,225
30 70 22 Routine Drainage Maintenance	932,400	1,067,512	1,442,990
30 71 20 Sealed Pavement Maintenance SPR	0	235,735	241,980
30 71 22 Routine Drainage Maintenance SPR	0	20,656	21,203
SLTSTR 026 Unsealed Road Metalling	1,559,331	1,590,939	1,633,083
SLTSTR 027 Sealed Road Surfacing	3,108,000	2,011,433	2,064,716
SLTSTR 028 Drainage Renewals	673,400	367,299	377,029
SLTSTR 029 Pavement Rehabilitation	1,874,124	2,465,865	2,531,186
2. PH Total	**10,649,233**	**10,484,301**	**12,671,631**
3. WALK			
33 76 00 Footpath Maintenance	134,680	242,510	248,934
SLTSTR 034 Footpath Renewals	184,075	262,941	269,906
3. WALK Total	**318,755**	**505,451**	**518,840**
4. LCLR			
SLTCON 024 Low Cost Low Risk Improvements	726,395	855,113	877,765
SLTCON 035 Low Cost Low Risk Road 2 Zero	430,631	623,154	677,583
4. LCLR Total	**1,157,026**	**1,478,267**	**1,555,348**
5. IMP			
SLTCON 029 B292 Mangateitei Rail Over Bridge Repla	0	0	0
SLTSTR 033 Bridge Renewals	0	581,350	895,497
5. IMP Total	**0**	**581,350**	**895,497**
Grand Total	**18,836,716**	**23,034,930**	**26,316,611**

2.2 NZ Transport Agency advised Council of their indicative budget allocation for 2024/27 on 10 June 2024. This saw a reduction of $0.7M funds for Operations, potholes and improvements over three years, being 1% lower in total.

Councils' view is that the funding difference is minor in value and can be accommodated within the programme schedule, absorbed within the normal flexes of programme delivery dynamics as well as through the optimisation improvements being implemented across Infrastructure delivery, with regards to single supplier programme management, targeted Road Management planning, enhanced asset management processes and management of minor event management and pothole prevention programme.

The indicative budget approvals are shown below, in total dollars.

Activity Class	2024-27 indicative funding allocation	2021-24 allocation at NLTP adoption
Local Road Pothole Prevention	$33,534,000	$29,636,000
Local Road Operations	$21,104,000	$14,367,000
Local Road Improvements - Bridge & Structure Renewals	$1,477,000	$5,208,000

Budget approvals for Low Cost Low Risk and Walking and Cycling will be due later in 2024, along with finalised budget approvals.

Appendix B - Summary Financial Tables

B1 Summary Budgets $NZD as at 8 April 2024 Uninflated

B1.1 Maintenance and Operations Budget

B1.1.1 The table below contains the uninflated maintenance expenditure budgets for the next 10 years from July 2024.

	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
A. Subsidised											
Direct Cost											
A. Opex											
A. Local Road Maint											
Environmental Maintenance	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	1,389,042	13,890,420
Footpath Maintenance	294,915	612,513	830,679	1,048,845	1,048,845	1,048,845	1,048,845	1,048,845	1,048,845	1,048,845	9,080,023
Level Crossing Devices	35,000	21,183	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	336,183
Minor Events	800,000	814,020	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	8,014,022
Network & Asset Management	1,218,278	1,664,296	2,146,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	1,646,831	16,557,224
Routine Drainage Maintenance	900,000	1,009,945	1,329,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	1,009,945	10,309,505
Sealed Pavement Maintenance	1,400,000	1,562,967	3,002,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	1,562,967	16,906,703
Street Cleaning Maintenance	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	31,980	319,803
Structures Maintenance	300,000	1,360,200	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	1,435,998	13,148,181
Traffic Services Maintenance	784,999	931,028	785,000	785,000	785,000	785,000	785,000	785,000	785,000	785,000	7,996,025
Unsealed Pavement Maintenance	1,015,037	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	1,014,954	10,149,620
A. Local Road Maint Total	**8,169,251**	**10,412,128**	**12,802,396**	**10,760,562**	**10,760,562**	**10,760,562**	**10,760,562**	**10,760,562**	**10,760,562**	**10,760,562**	**106,707,709**
B. SPR Maint											
Environmental Maintenance SPR	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	132,649	1,326,488
Network & Asset Management SPR	0	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395	99,395	894,551
Routine Drainage Maintenance SPR	0	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	19,542	175,878
Sealed Pavement Maintenance SPR	0	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023	223,023	2,007,208
Structures Maintenance SPR	0	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	2,356	21,204
Traffic Services Maintenance SPR	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	36,050	360,500
B. SPR Maint Total	**168,699**	**513,014**	**513,014**	**513,014**	**513,014**	**513,014**	**513,014**	**513,014**	**513,014**	**513,014**	**4,785,829**
C. Emergency Reinstatement											
Emergency Reinstatement	1,150,600	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601	2,150,601		2,150,601	20,506,007
C. Emergency Reinstatement Total	**1,150,600**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**2,150,601**	**20,506,007**

	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
A. Opex Total	9,488,550	13,075,743	15,466,011	13,424,177	13,424,177	13,424,177	13,424,177	13,424,177	13,424,177	13,424,177	131,999,545
Direct Cost Total	**9,488,550**	**13,075,743**	**15,466,011**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**131,999,545**
A. Subsidised Total	**9,488,550**	**13,075,743**	**15,466,011**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**13,424,177**	**131,999,545**
B. Non Subsidised											
Cost of Funds											
A. Opex											
D. Non Subsidised Maint											
Professional Services Unsub	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752	12,287,660
D. Non Subsidised Maint Total	**1,073,570**	**1,054,367**	**1,075,229**	**1,144,266**	**1,235,448**	**1,262,879**	**1,320,729**	**1,356,536**	**1,364,884**	**1,399,752**	**12,287,660**
A. Opex Total	1,073,570	1,054,367	1,075,229	1,144,266	1,235,448	1,262,879	1,320,729	1,356,536	1,364,884	1,399,752	12,287,660
Cost of Funds Total	**1,073,570**	**1,054,367**	**1,075,229**	**1,144,266**	**1,235,448**	**1,262,879**	**1,320,729**	**1,356,536**	**1,364,884**	**1,399,752**	**12,287,660**
Depreciation											
A. Opex											
A. Local Road Maint											
Network & Asset Management	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221	69,871,749
A. Local Road Maint Total	**5,964,207**	**6,182,433**	**6,312,855**	**6,503,905**	**6,899,656**	**7,169,019**	**7,384,917**	**7,600,427**	**7,819,109**	**8,035,221**	**69,871,749**
A. Opex Total	5,964,207	6,182,433	6,312,855	6,503,905	6,899,656	7,169,019	7,384,917	7,600,427	7,819,109	8,035,221	69,871,749
Depreciation Total	**5,964,207**	**6,182,433**	**6,312,855**	**6,503,905**	**6,899,656**	**7,169,019**	**7,384,917**	**7,600,427**	**7,819,109**	**8,035,221**	**69,871,749**
Direct Cost											
A. Opex											
A. Local Road Maint											
Personnel	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	144,080	1,440,800
A. Local Road Maint Total	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**144,080**	**1,440,800**
D. Non Subsidised Maint											
Amenity and Under verandah lights Unsub	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	7,492	74,921
Crossing and shelters Unsub	659	659	659	659	659	659	659	659	659	659	6,588
Cycleway Maintenance	100,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,450,000
Facility Roads Maintenance Unsub	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	13,205	132,050
Kerb & Channel Maint (P&R)	90,000	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	124,698	1,212,282

	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
NEW Streetflag Installation and removal	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	8,580	85,800
Non Subsidised Miscellaneous Maintenance	11,938	11,939	11,939	11,939	11,939	11,939	11,939	11,939	11,939	11,939	119,385
Non-Subsidised - Cycleway maintenance	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	9,300	93,000
Plant Pests Unsub	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522	69,522	695,222
Professional Services Unsub	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	7,903	79,034
D. Non Subsidised Maint Total	**318,600**	**403,298**	**403,298**	**403,298**	**403,298**	**403,298**	**403,298**	**403,298**	**403,298**	**403,298**	**3,948,284**
A. Opex Total	462,680	547,378	547,378	547,378	547,378	547,378	547,378	547,378	547,378	547,378	5,389,084
Direct Cost Total	**462,680**	**547,378**	**547,378**	**547,378**	**547,378**	**547,378**	**547,378**	**547,378**	**547,378**	**547,378**	**5,389,084**
Internal Costs											
A. Opex											
A. Local Road Maint											
Personnel	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909	11,476,798
A. Local Road Maint Total	**1,089,909**	**1,124,268**	**1,174,991**	**1,151,637**	**1,154,581**	**1,200,118**	**1,136,752**	**1,134,620**	**1,180,013**	**1,129,909**	**11,476,798**
A. Opex Total	1,089,909	1,124,268	1,174,991	1,151,637	1,154,581	1,200,118	1,136,752	1,134,620	1,180,013	1,129,909	11,476,798
Internal Costs Total	**1,089,909**	**1,124,268**	**1,174,991**	**1,151,637**	**1,154,581**	**1,200,118**	**1,136,752**	**1,134,620**	**1,180,013**	**1,129,909**	**11,476,798**
B. Non Subsidised Total	**8,590,366**	**8,908,446**	**9,110,453**	**9,347,186**	**9,837,063**	**10,179,394**	**10,389,776**	**10,638,961**	**10,911,384**	**11,112,260**	**99,025,291**
Grand Total	**18,078,916**	**21,984,189**	**24,576,464**	**22,771,363**	**23,261,240**	**23,603,571**	**23,813,953**	**24,063,138**	**24,335,561**	**24,536,437**	**231,024,836**

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B1.2 Capital Budget

B1.2.1 The table below contains the uninflated capital expenditure budgets for the next 10 years from July 2024.

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
A. Subsidised											
Capital											
B. Capex											
A. Local Road Renewals											
B292 Mangateitei Rail Over Bridge Replacement (Mangateitei Road)	0	0	0	4,600,000	0	0	0	0	0	0	4,600,000
Bridge Renewals	0	550,000	825,342	825,342	825,342	825,342	825,342	825,342	825,342	825,342	7,152,736
Drainage Renewals	650,000	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	347,492	3,777,428
Footpath Renewals	177,679	248,762	248,762	248,762	248,762	248,762	248,762	248,762	248,762	117,679	2,285,451
Pavement Rehabilitation	1,809,000	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	2,332,891	22,805,019
Sealed Road Surfacing	3,000,000	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	1,902,964	20,126,676
Structures Components Replacements	480,000	694,400	674,202	674,202	674,202	674,202	674,202	674,202	674,202	674,202	6,568,013
Traffic Services Renewals	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	119,878	1,198,780
Unsealed Road Metalling	1,505,145	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	1,505,146	15,051,458
A. Local Road Renewals Total	**7,741,702**	**7,701,532**	**7,956,676**	**12,556,676**	**7,956,676**	**7,956,676**	**7,956,676**	**7,956,676**	**7,956,676**	**7,825,593**	**83,565,560**
C. LR Construction											
B297 Matahiwi Track Suspension bridge upgrade	0	0	0	5,200,000	0	0	0	0	0	0	5,200,000
Low Cost Low Risk Improvements	701,153	809,000	809,000	770,000	770,000	770,000	770,000	770,000	770,000	770,000	7,709,153
Low Cost Low Risk Road 2 Zero	415,667	589,550	624,500	672,027	672,027	672,027	672,027	672,027	672,027	672,027	6,333,906
C. LR Construction Total	**1,116,820**	**1,398,550**	**1,433,500**	**6,642,027**	**1,442,027**	**1,442,027**	**1,442,027**	**1,442,027**	**1,442,027**	**1,442,027**	**19,243,059**
B. Capex Total	8,858,522	9,100,082	9,390,176	19,198,703	9,398,703	9,398,703	9,398,703	9,398,703	9,398,703	9,267,620	102,808,619
Capital Total	**8,858,522**	**9,100,082**	**9,390,176**	**19,198,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,267,620**	**102,808,619**
A. Subsidised Total	**8,858,522**	**9,100,082**	**9,390,176**	**19,198,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,398,703**	**9,267,620**	**102,808,619**
B. Non Subsidised											
Capital											
B. Capex											
E. Non Subsidised Capital											

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Bus Shelter Renewals & Installation Unsub (Amended name)	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	125,000
Facility Road & Car Park Renewals Unsub	20,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	290,000
Motorist Service & Information Signs Unsub	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000
NEW Cycleway Horopito Hub	0	0	0	1,677,000	0	0	0	0	0	0	1,677,000
NEW Great Rides story telling / Artwork	0	0	0	0	216,667	216,667	216,667	216,667	216,667	216,667	1,300,000
NEW Installation of stock truck effluent site - Taumarunui	0	0	0	715,000	0	0	0	0	0	0	715,000
NEW Mountains to Sea - Te Hangaruru extn	0	0	0	2,665,000	2,665,000	0	0	0	0	0	5,330,000
Ohakune to Raetihi cycle trail	0	0	0	20,000	20,000	20,000	100,000	0	0	0	160,000
Seal Extensions Unsub	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	58,251	582,510
E. Non Subsidised Capital Total	**105,751**	**115,751**	**115,751**	**5,192,751**	**3,017,418**	**352,418**	**432,418**	**332,418**	**332,418**	**332,418**	**10,329,510**
B. Capex Total	105,751	115,751	115,751	5,192,751	3,017,418	352,418	432,418	332,418	332,418	332,418	10,329,510
Capital Total	**105,751**	**115,751**	**115,751**	**5,192,751**	**3,017,418**	**352,418**	**432,418**	**332,418**	**332,418**	**332,418**	**10,329,510**
B. Non Subsidised Total	**105,751**	**115,751**	**115,751**	**5,192,751**	**3,017,418**	**352,418**	**432,418**	**332,418**	**332,418**	**332,418**	**10,329,510**
Grand Total	**8,964,273**	**9,215,833**	**9,505,927**	**24,391,454**	**12,416,121**	**9,751,121**	**9,831,121**	**9,731,121**	**9,731,121**	**9,600,038**	**113,138,129**

B2 Summary Budgets $NZD as at 8 April 2024 Inflated

B2.1 Maintenance and Operations Budget

B2.1.1 The table below contains the inflated maintenance expenditure budgets for the next 10 years from July 2024.

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
A. Subsidised											
A. Local Road Maint											
Opex											
Direct Cost											
Environmental Maintenance	1,439,047	1,468,217	1,507,111	1,550,171	1,591,842	1,632,124	1,673,796	1,714,078	1,755,749	1,796,031	16,128,166
Footpath Maintenance	304,253	644,780	894,728	1,155,851	1,182,430	1,207,961	1,234,540	1,260,069	1,286,648	1,312,179	10,483,438
Level Crossing Devices	36,260	22,391	37,975	39,060	40,110	41,125	42,175	43,190	44,240	45,255	391,781
Minor Events	828,800	860,419	868,000	892,800	916,800	940,000	964,000	987,200	1,011,200	1,034,400	9,303,621
Network & Asset Management	1,262,147	1,761,908	2,332,148	1,840,793	1,890,292	1,938,140	1,987,637	2,035,487	2,084,983	2,132,831	19,266,365
Routine Drainage Maintenance	932,400	1,067,512	1,442,990	1,127,099	1,157,397	1,186,685	1,216,984	1,246,272	1,276,570	1,305,859	11,959,768
Sealed Pavement Maintenance	1,450,400	1,652,056	3,258,219	1,744,271	1,791,160	1,836,486	1,883,375	1,928,701	1,975,590	2,020,916	19,541,176
Street Cleaning Maintenance	33,132	33,803	34,699	35,690	36,649	37,577	38,536	39,464	40,423	41,351	371,324
Structures Maintenance	310,800	1,437,731	1,558,057	1,602,573	1,645,653	1,687,297	1,730,377	1,772,021	1,815,101	1,856,745	15,416,357
Traffic Services Maintenance	813,259	984,096	851,725	876,060	899,610	922,375	945,925	968,690	992,240	1,015,005	9,268,983
Unsealed Pavement Maintenance	1,051,578	1,072,806	1,101,225	1,132,688	1,163,137	1,192,571	1,223,019	1,252,453	1,282,901	1,312,335	11,784,714
Direct Cost Total	**8,462,076**	**11,005,720**	**13,886,876**	**11,997,057**	**12,315,081**	**12,622,341**	**12,940,363**	**13,247,625**	**13,565,647**	**13,872,907**	**123,915,693**
Opex Total	8,462,076	11,005,720	13,886,876	11,997,057	12,315,081	12,622,341	12,940,363	13,247,625	13,565,647	13,872,907	123,915,693
A. Local Road Maint Total	**8,462,076**	**11,005,720**	**13,886,876**	**11,997,057**	**12,315,081**	**12,622,341**	**12,940,363**	**13,247,625**	**13,565,647**	**13,872,907**	**123,915,693**
B. SPR Maint											
Opex											
Direct Cost											
Environmental Maintenance SPR	137,424	140,210	143,924	148,036	152,015	155,862	159,842	163,689	167,668	171,515	1,540,185
Network & Asset Management SPR	0	102,345	105,056	108,058	110,963	113,771	116,676	119,483	122,388	125,196	1,023,937
Routine Drainage Maintenance SPR	0	20,656	21,203	21,809	22,395	22,962	23,548	24,115	24,701	25,268	206,657
Sealed Pavement Maintenance SPR	0	235,735	241,980	248,894	255,584	262,052	268,743	275,210	281,901	288,369	2,358,469
Structures Maintenance SPR	0	2,490	2,556	2,629	2,700	2,768	2,839	2,907	2,978	3,046	24,915

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Traffic Services Maintenance SPR	37,348	38,105	39,114	40,232	41,313	42,359	43,440	44,486	45,567	46,613	418,577
Direct Cost Total	**174,772**	**539,541**	**553,834**	**569,658**	**584,971**	**599,774**	**615,087**	**629,890**	**645,204**	**660,007**	**5,572,738**
Opex Total	174,772	539,541	553,834	569,658	584,971	599,774	615,087	629,890	645,204	660,007	5,572,738
B. SPR Maint Total	**174,772**	**539,541**	**553,834**	**569,658**	**584,971**	**599,774**	**615,087**	**629,890**	**645,204**	**660,007**	**5,572,738**
C. Emergency Reinstatement											
Opex											
Direct Cost											
Emergency Reinstatement	1,192,022	2,273,185	2,333,402	2,400,071	2,464,589	2,526,956	2,591,474	2,653,841	2,718,359	2,780,727	23,934,625
Direct Cost Total	**1,192,022**	**2,273,185**	**2,333,402**	**2,400,071**	**2,464,589**	**2,526,956**	**2,591,474**	**2,653,841**	**2,718,359**	**2,780,727**	**23,934,625**
Opex Total	1,192,022	2,273,185	2,333,402	2,400,071	2,464,589	2,526,956	2,591,474	2,653,841	2,718,359	2,780,727	23,934,625
C. Emergency Reinstatement Total	**1,192,022**	**2,273,185**	**2,333,402**	**2,400,071**	**2,464,589**	**2,526,956**	**2,591,474**	**2,653,841**	**2,718,359**	**2,780,727**	**23,934,625**
A. Subsidised Total	**9,828,870**	**13,818,446**	**16,774,112**	**14,966,785**	**15,364,641**	**15,749,071**	**16,146,925**	**16,531,357**	**16,929,210**	**17,313,641**	**153,423,057**
B. Non Subsidised											
A. Local Road Maint											
Opex											
Depreciation											
Network & Asset Management	5,964,246	6,183,013	6,314,548	6,508,763	6,936,787	7,222,860	7,447,622	7,673,593	7,903,607	8,132,290	70,287,329
Depreciation Total	**5,964,246**	**6,183,013**	**6,314,548**	**6,508,763**	**6,936,787**	**7,222,860**	**7,447,622**	**7,673,593**	**7,903,607**	**8,132,290**	**70,287,329**
Direct Cost											
Personnel	151,284	158,488	165,692	172,896	180,100	187,304	194,508	201,712	208,916	216,120	1,837,020
Direct Cost Total	**151,284**	**158,488**	**165,692**	**172,896**	**180,100**	**187,304**	**194,508**	**201,712**	**208,916**	**216,120**	**1,837,020**
Internal Costs											
Personnel	1,133,779	1,212,115	1,309,632	1,322,988	1,364,679	1,454,796	1,420,576	1,456,015	1,549,856	1,527,202	13,751,638
Internal Costs Total	**1,133,779**	**1,212,115**	**1,309,632**	**1,322,988**	**1,364,679**	**1,454,796**	**1,420,576**	**1,456,015**	**1,549,856**	**1,527,202**	**13,751,638**
Opex Total	7,249,309	7,553,616	7,789,872	8,004,647	8,481,566	8,864,960	9,062,706	9,331,320	9,662,379	9,875,612	85,875,987
A. Local Road Maint Total	**7,249,309**	**7,553,616**	**7,789,872**	**8,004,647**	**8,481,566**	**8,864,960**	**9,062,706**	**9,331,320**	**9,662,379**	**9,875,612**	**85,875,987**
D. Non Subsidised Maint											
Opex											
Cost of Funds											

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Professional Services Unsub	1,076,034	1,062,837	1,093,046	1,179,318	1,292,639	1,341,046	1,426,453	1,493,468	1,535,058	1,611,577	13,111,476
Cost of Funds Total	**1,076,034**	**1,062,837**	**1,093,046**	**1,179,318**	**1,292,639**	**1,341,046**	**1,426,453**	**1,493,468**	**1,535,058**	**1,611,577**	**13,111,476**
Direct Cost											
Amenity and Under verandah lights Unsub	7,762	7,919	8,129	8,361	8,586	8,803	9,028	9,245	9,470	9,687	86,991
Crossing and shelters Unsub	683	696	715	735	755	774	794	813	833	852	7,650
Cycleway Maintenance	103,600	158,550	162,750	167,400	171,900	176,250	180,750	185,100	189,600	193,950	1,689,850
Facility Roads Maintenance Unsub	13,680	13,958	14,327	14,737	15,133	15,516	15,912	16,295	16,691	17,074	153,324
Kerb & Channel Maint (P&R)	93,240	131,806	135,297	139,163	142,904	146,520	150,261	153,877	157,618	161,235	1,411,921
NEW Streetflag Installation and removal	8,889	9,069	9,309	9,575	9,833	10,082	10,339	10,588	10,845	11,094	99,622
Non Subsidised Miscellaneous Maintenance	12,368	12,619	12,953	13,323	13,682	14,028	14,386	14,732	15,090	15,437	138,618
Non-Subsidised - Cycleway maintenance	9,635	9,830	10,091	10,379	10,658	10,928	11,207	11,476	11,755	12,025	107,982
Plant Pests Unsub	72,025	73,485	75,432	77,587	79,672	81,689	83,774	85,790	87,876	89,892	807,222
Professional Services Unsub	8,188	8,354	8,575	8,820	9,057	9,287	9,524	9,753	9,990	10,219	91,767
Direct Cost Total	**330,069**	**426,286**	**437,579**	**450,081**	**462,180**	**473,875**	**485,974**	**497,670**	**509,769**	**521,465**	**4,594,948**
Opex Total	1,406,103	1,489,123	1,530,625	1,629,399	1,754,819	1,814,921	1,912,427	1,991,138	2,044,827	2,133,042	17,706,424
D. Non Subsidised Maint Total	**1,406,103**	**1,489,123**	**1,530,625**	**1,629,399**	**1,754,819**	**1,814,921**	**1,912,427**	**1,991,138**	**2,044,827**	**2,133,042**	**17,706,424**
B. Non Subsidised Total	**8,655,412**	**9,042,739**	**9,320,497**	**9,634,046**	**10,236,385**	**10,679,881**	**10,975,133**	**11,322,458**	**11,707,206**	**12,008,654**	**103,582,411**
Grand Total	**18,484,282**	**22,861,185**	**26,094,609**	**24,600,831**	**25,601,025**	**26,428,953**	**27,122,058**	**27,853,815**	**28,636,416**	**29,322,294**	**257,005,468**

B2.2 Capital Budget

B2.2.1 The table below contains the inflated capital expenditure budgets for the next 10 years from July 2024.

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
A. Subsidised											
A. Local Road Renewals											
Renewal											
Capital											
B292 Mangateitei Rail Over Bridge Replacement (Mangateitei Road)	0	0	0	5,133,600	0	0	0	0	0	0	5,133,600
Bridge Renewals	0	581,350	895,497	921,082	945,842	969,777	994,538	1,018,473	1,043,233	1,067,168	8,436,960
Drainage Renewals	673,400	367,299	377,029	387,801	398,226	408,303	418,728	428,805	439,230	449,307	4,348,128
Footpath Renewals	184,075	262,941	269,906	277,618	285,081	292,295	299,758	306,972	314,435	152,159	2,645,240
Pavement Rehabilitation	1,874,124	2,465,865	2,531,186	2,603,506	2,673,493	2,741,146	2,811,133	2,878,787	2,948,774	3,016,428	26,544,442
Sealed Road Surfacing	3,108,000	2,011,433	2,064,716	2,123,708	2,180,797	2,235,983	2,293,072	2,348,258	2,405,346	2,460,532	23,231,845
Structures Components Replacements	497,280	733,981	731,509	752,409	772,635	792,187	812,413	831,965	852,191	871,743	7,648,313
Traffic Services Renewals	124,194	126,711	130,068	133,784	137,380	140,857	144,453	147,929	151,526	155,002	1,391,904
Unsealed Road Metalling	1,559,331	1,590,939	1,633,083	1,679,743	1,724,897	1,768,546	1,813,701	1,857,350	1,902,504	1,946,154	17,476,248
Capital Total	**8,020,404**	**8,140,519**	**8,632,994**	**14,013,251**	**9,118,351**	**9,349,094**	**9,587,796**	**9,818,539**	**10,057,239**	**10,118,493**	**96,856,680**
Renewal Total	8,020,404	8,140,519	8,632,994	14,013,251	9,118,351	9,349,094	9,587,796	9,818,539	10,057,239	10,118,493	96,856,680
A. Local Road Renewals Total	**8,020,404**	**8,140,519**	**8,632,994**	**14,013,251**	**9,118,351**	**9,349,094**	**9,587,796**	**9,818,539**	**10,057,239**	**10,118,493**	**96,856,680**
C. LR Construction											
LOS											
Capital											
B297 Matahiwi Track Suspension bridge upgrade	0	0	0	5,803,200	0	0	0	0	0	0	5,803,200
Low Cost Low Risk Road 2 Zero	430,631	623,154	677,583	749,982	770,143	789,632	809,793	829,281	849,442	868,931	7,398,572
Capital Total	**430,631**	**623,154**	**677,583**	**6,553,182**	**770,143**	**789,632**	**809,793**	**829,281**	**849,442**	**868,931**	**13,201,772**
LOS Total	430,631	623,154	677,583	6,553,182	770,143	789,632	809,793	829,281	849,442	868,931	13,201,772
Renewal											
Capital											
Low Cost Low Risk Improvements	726,395	855,113	877,765	859,320	882,420	904,750	927,850	950,180	973,280	995,610	8,952,683
Capital Total	**726,395**	**855,113**	**877,765**	**859,320**	**882,420**	**904,750**	**927,850**	**950,180**	**973,280**	**995,610**	**8,952,683**

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Renewal Total	726,395	855,113	877,765	859,320	882,420	904,750	927,850	950,180	973,280	995,610	8,952,683
C. LR Construction Total	**1,157,026**	**1,478,267**	**1,555,348**	**7,412,502**	**1,652,563**	**1,694,382**	**1,737,643**	**1,779,461**	**1,822,722**	**1,864,541**	**22,154,455**
A. Subsidised Total	**9,177,430**	**9,618,786**	**10,188,342**	**21,425,753**	**10,770,914**	**11,043,476**	**11,325,439**	**11,598,000**	**11,879,961**	**11,983,034**	**119,011,135**
B. Non Subsidised											
E. Non Subsidised Capital											
Growth											
Capital											
Seal Extensions Unsub	60,348	61,571	63,202	65,008	66,756	68,445	70,192	71,882	73,629	75,319	676,352
Capital Total	**60,348**	**61,571**	**63,202**	**65,008**	**66,756**	**68,445**	**70,192**	**71,882**	**73,629**	**75,319**	**676,352**
Growth Total	60,348	61,571	63,202	65,008	66,756	68,445	70,192	71,882	73,629	75,319	676,352
LOS											
Capital											
NEW Cycleway Horopito Hub	0	0	0	1,871,532	0	0	0	0	0	0	1,871,532
NEW Great Rides story telling / Artwork	0	0	0	0	248,300	254,584	261,084	267,367	273,867	280,151	1,585,353
NEW Installation of stock truck effluent site - Taumarunui	0	0	0	797,940	0	0	0	0	0	0	797,940
NEW Mountains to Sea - Te Hangaruru extn	0	0	0	2,974,140	3,054,090	0	0	0	0	0	6,028,230
Ohakune to Raetihi cycle trail	0	0	0	22,320	22,920	23,500	120,500	0	0	0	189,240
Capital Total	**0**	**0**	**0**	**5,665,932**	**3,325,310**	**278,084**	**381,584**	**267,367**	**273,867**	**280,151**	**10,472,295**
LOS Total	0	0	0	5,665,932	3,325,310	278,084	381,584	267,367	273,867	280,151	10,472,295
Renewal											
Capital											
Bus Shelter Renewals & Installation Unsub (Amended name)	12,950	13,213	13,563	13,950	14,325	14,688	15,063	15,425	15,800	16,163	145,140
Facility Road & Car Park Renewals Unsub	20,720	31,710	32,550	33,480	34,380	35,250	36,150	37,020	37,920	38,790	337,970
Motorist Service & Information Signs Unsub	15,540	15,855	16,275	16,740	17,190	17,625	18,075	18,510	18,960	19,395	174,165
Capital Total	**49,210**	**60,778**	**62,388**	**64,170**	**65,895**	**67,563**	**69,288**	**70,955**	**72,680**	**74,348**	**657,275**
Renewal Total	49,210	60,778	62,388	64,170	65,895	67,563	69,288	70,955	72,680	74,348	657,275
E. Non Subsidised Capital Total	**109,558**	**122,349**	**125,590**	**5,795,110**	**3,457,961**	**414,092**	**521,064**	**410,204**	**420,176**	**429,818**	**11,805,922**
B. Non Subsidised Total	**109,558**	**122,349**	**125,590**	**5,795,110**	**3,457,961**	**414,092**	**521,064**	**410,204**	**420,176**	**429,818**	**11,805,922**

Row Labels	Sum of 2024/25 Budget	Sum of 2025/26 Budget	Sum of 2026/27 Budget	Sum of 2027/28	Sum of 2028/29	Sum of 2029/30	Sum of 2030/31	Sum of 2031/32	Sum of 2032/33	Sum of 2033/34	Sum of Total
Grand Total	**9,286,988**	**9,741,135**	**10,313,932**	**27,220,863**	**14,228,875**	**11,457,568**	**11,846,503**	**12,008,204**	**12,300,137**	**12,412,852**	**130,817,057**

Appendix C – Detailed Improvement Plan

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
B02 Strategic Case						
Create a summary table that shows resilience linked programmes and activities.	Council should consider including a summary table that shows resilience linked programmes and activities. While risk management and resilience have been considered in the AMP their links to asset management decision-making could be clearer. REG Decision Making advice	Active	2021 AMP - REG Review	Decision Making	D	
Develop Consultation & Engagement Plan for the AMP development.	It maybe useful to be able to carry out some of the decision making and stakeholder perspective advice that REG has given. Will provide buy in and deadlines.	Active	2021 AMP - REG Review	Systems	D	
B03 Programme Business Case						
Consider the use of a Multi-Criteria Analysis (MCA) to provide a robust way to identify the preferred/ recommended option.	This would ensure better discussion on programme optimisation. It would be better if Value for Money and customer requirements were part of the Multi-Criteria Analysis for all RDC's assets. The illustration of trade-off discussion in the AMP could be improved. The recommended option should be selected using a comprehensive Multi Criteria Analysis (MCA) approach to form good evidence and the AMP should include better discussion on programme optimisation. The benefits and risks associated with the selected programme could also be more clearly illustrated. This can be a description of the things that go into it eg footpath priority ranking - condition, usage, level of service eg width, near the rest homes She used for footpaths - defects were weighted on user experience eg crack but level is lower than a pothole which can interfere with someone's travel.	Active	2021 AMP - REG Review	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Investigate how the links between the preferred option in the Programme Business Case (PBC) and risks could be improved.	The links between the preferred option in the Programme Business Case (PBC) and risks could be improved. The Risk-based assessment of the recommended programme option should be clearly illustrated.	Active	2021 AMP - REG Review	Decision Making	D	
Investigate illustrating the linkage between wellbeings and decision-making more clearly with the help of a summary table.	Create a summary table or infographic for clarity	Active	2021 AMP - REG Review	Decision Making	D	
Investigate the use of Root Cause Analysis to better understand the core problems / issues impacting the network performamce.	If the benefits of establishing a root cause analysis justify the effort, then build the analysis and use for future AMPs. Will need to be clear what problems would benefit from a root cause analysis.	Active	2021 AMP - REG Review	Decision Making	D	
Council should consider including financial expenditure to meet each of the improvement items.	Include estimated financial expenditure for different scenarios as a table.	Active	2021 AMP - REG Review	Evidence	D	
Explain why not all ONRC measures are not suitable for use in the AMP.	Not all One Network Road Classification (ONRC) measures are utilised by Council in the AMP. Include a list of all the ONRC measures and state where it is used or why it is not applicable. Maybe do this as an appendix. Note when will this be superceded by ONF measures?	Active	2021 AMP - REG Review	Evidence	D	
B04 Delivery - Maintenance Contracts Improvements						
Review of surface assets vs surface/paving jobs in RAMM Contractor	To support removal of obsolete dispatches - review of surface assets vs open RAMM dispatches for surfacing and paving	Active	2018 AMP	Evidence	B	
Dispatch Quality Dimension Improvements via Fault code configuration	Action: Using Fault code configuration to drive better Dispatch Quality in the dimensions area. Many of the fault codes allow optional input of length, width, depth and quantity which means the user in not prompted for missing information. Where possible these should be set to either - Give warning if blank or - Never This should trigger a response if data is missing. Many of the fault codes allow multiple units of measure which should also be reviewed.	Active	MAX.maintenance	Evidence	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Redundant Dispatch Clean up	Action: Review all dispatches of an open status (entered, dispatched, in progress) using key dates to determine if there are redundant dispatches which are contributing to the MAX.maintenance error totals	Active	MAX.maintenance	Evidence	D	
Maintenance Activity Location Review	Action: Maintenance activity should be correctly located: Source: MAX.quality run	Active	MAX.quality	Evidence	G	
Input missing maintenance cost data	Input missing maintenance cost data	Active	2023 Technical Audit	Evidence	B	
B04 Delivery - Network & Asset Management Improvements						
Include a section in the AMP on staff skills, capabilities, training and development to support the business outcomes	Include a section in the AMP on staff skills, capabilities and training & development to support the business objectives and expected outcomes.	Active	2019 AMP Review (by GHD)	People / Culture	D	
Council should consider clearly integrating One Network Road Classification (ONRC) into the Council's service delivery approach.	Probably look to refer to the new ONF standard and update to that, improvement plan action. There must be something we can refer to from our current contracts.	Active	2021 AMP - REG Review	Service Delivery	D	
C02 Risk Management Improvements						
Improve information on assets and activity associated risks.		Future	2018 AMP	Systems	D	
Routinely examine untreated risk and existing controls.		Future	2018 AMP	Systems	D	
Make improvements on costings and prioritisation of risks	Make further improvements on costings and prioritisation of risks.	Future	2019 AMP Review (by GHD)	Decision Making	D	
Review Risk setup inline with Part 1	Risk Register included in 2021 AMP an improvement.	Active	2021 AMP	Systems	D	
Investigate how risk management outcomes can be used to further support the right delivery	Further imbed risk management outcomes in how it gets used to support the right delivery	Active	2019 AMP Review (by GHD)	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Improve the clarity and linkages of the four risk types (planning, management, delivery, and physical asset risk) with their integration into the RDC's transportation risk analysis is not clear.	All four risk types (planning, management, delivery, and physical asset risk) have been considered by Council. However, their integration into the RDC's transportation risk analysis is not clear. Improve clarity and linkages when reviewing section	Active	2021 AMP - REG Review	Benefit Delivery	D	
C03 Environmental Stewardship Improvements						
Develop approach to managing and tracking consents	Develop approach to managing and tracking consents and the associated requirements (including monitoring, associated assets)	Future	2018 AMP	Systems	D	
D00 Activity Management						
Council should consider removing the 'Data Quality and Confidence' subsection in Section D of the document.	This subsection is repetitive and uses the same reference (C05). Recommend review of placement within document. Ensure relevance of information is discussed	Active	2021 AMP - REG Review	Evidenc e	D	
D01 Activity Management Introduction						
Council should consider including an overview of the funding approval process and timetable.	While there is some information on funding approvals, procurement approval, construction approvals and maintenance approvals, included this could be more comprehensive. Council should consider including an overview of the approval process and timetable in the improvement programme section. Consider creating a flowchart or diagram to illustrate process	Active	2021 AMP - REG Review	Decision Making	D	
D02 Network Safety Improvements						
Speed limit Review	Undertake a speed limit Review	Future	2021 AMP	Decision Making	D	
Intersection Review	Undertake a Intersection Review	Future	2021 AMP	Evidence	D	
Review Traffic Counting method used by Council	Partially complete – Subconsultants used to deliver programme from 2021, ensuring programme achieved annualy	Active	2021 AMP	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Develop a program for network improvements	Using MAX.quality first run, determine any initial network attributes to review. Separate into separate tasks as progresses	Active	MAX.quality	Evidence	B	
Centerline vs Carriageway Improvements	The correctness of the network is key to asset locations, valuations etc. A review of centrelines and relationship of calibration points in relationship to carriageways is key to network correctness.	Active	MAX.quality	Evidence	B	
Network Data Error Review	A review MAX.quality Network Data errors	Active	MAX.quality	Evidence	D	
D03 Pavement AM Improvements						
Produce the pavement renewal strategy	There are a number of documents related to pavement renewals but the strategy is not formally recorded.	Future	2018 AMP	Systems	D	
Review the Treatment Length Segmentation	The treatment length segmentation of the network should be reviewed and updated where applicable, to ensure this aligns with pavement/surfacing asset information for the network. The treatment length segmentation forms the basis of the valuation dataset for the treatment length components, so it is important the treatment lengths are updated and maintained in accordance with construction and renewal activities on the network.	Future	2019 Valuation	Decision Making	D	
Complete a top down check by comparison with annual depreciation rates		Active	2018 AMP	Systems	D	
Complete a top down check on historical trends for renewals	Complete a top down check on historical trends for renewal quantities, costs, network LOS KPIs such as condition, performance and backlog	Active	2018 AMP	Systems	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Maintain the Expected Surface Lives in RAMM	a. Analysing Achieved lives on a 3 yearly cycle that matches AMP cycles b. Cross check surface life analysis against table 4.4 of Chipsealing in NZ Check once updated if any updates needed to the Carriageway surface table (make this a periodic activity) Work identified through these REG Guides: 2. Maintaining Expected Surface Lives in RAMM https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/managing-expected-surface-lives-in-RAMM-guideline.pdf 3. Managing Expected Surface Lives in RAMM https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/managing-expected-surface-lives-in-RAMM-overview.pdf	Active	REG	Decision Making	D	
Consider modifying the network condition survey frequencies to better support consistency of current data available for the three yearly planning cycle	Consider modifying the network condition survey frequencies to better support consistency of current data available for the three yearly planning cycle.	Active	2019 AMP Review (by GHD)	Decision Making	D	CCDC
D04 Structures AM Improvements						
Develop a strategy to prioritise improvements on all 50Max restricted bridges	2023 RDC Review: Priority is “Low”	Future	2021 AMP	Service Delivery	H	
Retaining Wall Performance	Gain an understanding of retaining wall performance, currently not condition rated and managed on as needs basis	Future	2021 AMP	Decision Making	H	
Global resource consent for painting bridges	Council is in the process of applying for a global resource consent from Horizons Regional Council for painting bridges. This will provide a set of procedures and strategies to help manage environmental impacts for this type of work.	Active	2018 AMP	Service Delivery	B	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Review breakdown between Bridge/Major Culvert/ minor Culvert in RAMM	RAMM data review to confirm SW_culvert on bridge is correct. Confirm if drainage with a bridge id is actually a major culvert. Confirm large culverts have bridge id in drainage to classify as major culvert	Active	MAX.quality	Evidence	B	
D05 Drainage AM Improvements						
Drainage - renewal rate vs depreciation rate	Compare the renewal rate and depreciation rate to assess the effectiveness of the District wide capital renewal plan.	Future	2021 AMP	Decision Making	B	
Drainage RAMM assets Audit	Undertake an audit of the RAMM database and capture missing assets – between 1998 and 2007 drainage assets were collected irregularly.	Future	2021 AMP	Evidence	E	
Drainage Inlet and Outlet Improvement	Review missing drainage inlet and outlet information by drainage type. Determine if sufficient options are available in the lookup table Determine if any rules for bulk update can be found	Future	MAX.quality	Evidence	F	
Drainage Location Review	Action : Almost all Drainage records with missing location information have northing and easting values so can use RAMM or other GIS tools to place. If using RAMM possibly delay until Network Phase is complete Source: Quality tests	Future	MAX.quality	Evidence	G	
Drainage Construction Date - Improve missing data for Culverts	Drainage construction date - part of Transport Insights Asset Management reporting - DR1 (17/18 score 20.5; 18/19 score 44.5, 19/20 55.6, 20/21 69.4, 21/22 68.9). Renamed DRAIN5 22/23 14.1) and also tested in MAX.qualityinsight 403	Future	MAX.quality	Evidence	H	
Surface water Channel Date of construction Improvement	Action: Surface Water Channel review types and consider if construction date can be taken from pavement data (where available) as an assumed date of construction Source: SW channel construction date - part of REG AM - SW1 (17/18 score 13.4, 18/19 13.8, 19/20 13.8, 20/21 13.9, 20/21 14.1). Renamed SW5 22/23 14.1 and also tested in MAX.quality run	Future	MAX.quality	Evidence	I	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Drainage Inspection Data Improvement	Action : Implement business process to improve Drainage inspection data capture. 2022 Contract 1901 requires contractors to do updates and additions for drainage (and other) assets.	Active	MAX.quality	Evidence	B	1/10/22
D06 Railings AM Improvements						
Railings Condition Ratings	Undertake a condition rating process for Railings	Future	2021 AMP	Evidence	D	
Railing Shape Improvement	Action : desk top exercise using street view to set the shape. Source: MAX.quality run	Future	MAX.quality	Evidence	G	
D06 Signs and Markings AM Improvements						
RAMM Sign Location Review	Action : Almost all Signs records with missing location information have northing and easting values so can use RAMM or other GIS tools to place. If using RAMM possibly delay until Network Phase is complete Source: REG AM-Si2 - 17/18 score 95.5 (Low) -> 21/22 100%; 22/23 Measure removed.	Future	MAX.quality	Evidence	B	30/6/22
Implement the Council Delineation Standard	Council has a delineation Standard 2010- review implementation to date and finish outstanding markings. Reviewed 2017 \\ghdnet.internal\ghd\NZ\Taumarunui\Projects\51\34054\Technical\Delineation\Delineation report	Future	2021 AMP	Service Delivery	B	
Data analysis for each road having at least 1 name blade sign	Desk top exercise to confirm each road has at least one name blade sign. Can be RAMM SQL exercise using sign class/type	Future	Max.quality	Evidence	C	
Curvature warning signs standardisation	Our strategy should be consistent with ONRC implementation Strategy	Future	2018 AMP	Systems	D	
10% network audit to check if signs in RAMM	Need a sample of different roads to audit. Audit and confirm if confidence in both completeness - Are all signs in RAMM - Do signs in RAMM exist - Are attibutes in RAMM correct. Once 10% done review if need to setup a complete audit over the network	Future	2018 AMP	Evidence	E	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Sign Dimensions review	Action : review if any possible assumptions to be made about sign width and height by sign type Source : part of REG AM-Si1 Max.quality run	Future	MAX.quality	Evidence	H	
Signs Condition Rating	Undertake a condition rating process for Signs Currently roadmen report signs needing replacement but no formal condition survey. Complete audits before undertaking this task	Future	2021 AMP	Evidence	I	
D06 Streetlight AM Improvements						
Review information requirements to support Streetlight Management	Consider using this data within RAMM to determine the remaining useful life and improve confidence in forecasted streetlight spending. The condition rating data on streetlights is gathered annually by the streetlight contractor and is stored in the RAMM Contractor module.	Future	2018 AMP	Evidence	G	
Streetlight Location Review	Action : All Streetlight records with missing location information have northing and easting values so can use RAMM or other GIS tools to place. If using RAMM possibly delay until Network Phase is complete score improved to 99.9 in 21/22 then lowered to 14 in 22/23. Unsure why this has changed. Source: REG AM-Sl1; now LIGHTS5 & MAX.quality Run	Future	MAX.quality	Evidence	H	
D07 Footpath AM Improvements						
Off Road footpaths - Add carriageways	Add off road footpath carriageway. - Bell road Zig Zag - Bell to High - Bakers Track - Bell to West -Kanuka to Teitei Note that location mapping was done in 2022 but may not be uploaded to RDC GIS yet.	Future	MAX.quality	Evidence	B	
Identify any additional footpaths subsidisable under NZTA rules	Identify additional footpaths owned by Council which are part of the pedestrian network and as such are subsidisable under NZTA work category 125 footpath maintenance.	Future	2021 AMP	Decision Making	B	
Footpath Condition Rating into RAMM	Currently Footpath Condition Rating is maintained in a spreadsheet. RAMM should be updated with a condition rating per footpath section	Future	2021 AMP	Evidence	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Produce a walking and cycling strategy for the District	Strategy to support the development of cycleways and walkways. Maximising the new NZTA subsidised opportunities	Future	2018 AMP	Systems	H	
Placement of Pram Crossings in RAMM	Capture the placement and status of Pram Crossings in RAMM.	Future	2021 AMP	Evidence	H	
Footpath extra Area Update	Action : Review any known extra footpath areas and set. Bulk update all footpath extra areas which are currently NULL to zero. Impact of changing null to zero is minimal on value as null assumes zero. Source : MAX.quality run	Active	MAX.quality	Evidence	C	
D08 Great Rides (Cycleways) AM Improvements						
NZCT Cycleway AM plan for complete length - Confirm Councils commitment	Before proceeding need to confirm Councils commitment to this project. Complete at the end of Te Hangaruru Stage 2.	Future	2018 AMP	Systems	C	
Cycleway Asset Inventory	Undertake an inventory of assets on Council maintain / owned sections of the off road cycleways - Fisher Track - Depot Road	Future	2021 AMP	Evidence	B	
Tasks identified in NZCT Trail Warrant of Fitness inspection and report in 2022	Locate copy of WoF Inspection. Isolate tasks that are RDC specific for adding to Cycleway Asset Management Improvement Tasks. Add tasks relevant to creating a single mountains to sea AMP jointly with all parties to this NZCT AMP (mountains to sea)	Future	2022 WOF	Systems	D	
Review Council's Cycling Awareness Strategy	Confirm current Cycling Awareness Strategy (need a copy) Review in light to latest information and best practice	Future	2021 AMP	Service Delivery	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Produce a specific Asset Management Plan for the trail from Mt Ruapehu to The North Mole at Whanganui.	This would include Ruapehu and Whanganui District Councils, NZTA and Department of Conservation: to create a plan for the complete cycleway. Trail Governance would have to commit funds for the work programme.	Future	2018 AMP	Systems	H	
D09 Bus Shelter AM Improvements						
Bus Shelter Configuration Review	Consider replacing the bus shelters over time with uniform relocatable structures. Uniform relocatable structures can be easily moved as dictated by demand.	Future	2018 AMP	Systems	B	
Bus Shelter Strategy	1. Determine the Bus Shelter Service to Provide to School Children Of particular interest is the level of service to provide for school kids waiting at bus stops with the following options to be continued: -Provide no bus shelters (remove the existing) -Decreasing level of service with the removal of shelters as they fall into disrepair -Policy for when a bus shelter should be supplied to a new location -Proactive management based on tracking where the demand currently is and moving the shelters on to different concrete pads. 2. Define Bus Shelter ownership and management -Ownership -Responsibility for the delivery of activities associated with bus shelter operations, maintenance, renewals and development -Responsibility for the cost of the above activities	Future	2021 AMP	Decision Making	D	
Add Bus Shelter information to RAMM	Add information on Bus Shelters to RAMM	Future	2021 AMP	Evidence	G	
Bus Shelter Needs Assesment based on population density	Population density and school bus shelter requirements are continually changing. RDC will evaluate future need based on population density and consider replacing the bus shelters over time with uniform relocatable structures that can be easily moved as dictated by demand.	Future	2018 AMP	Systems	H	
D10 Facility Roads and Carparks AM Improvements						

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Setup systematic process for inspections and work initiation	Maintenance & renewals planning & delivery	Future	2018 AMP	Systems	B	
Develop a Facility Roads and Carparks Renewals Plan		Future	2021 AMP	Decision Making	B	
Review if Facitlity Roads and Carparks can be managed in RAMM		Future	2021 AMP	Evidence	D	
Facility Roads and Carparks Management Review	Meet with asset team leaders to discuss * Address ownershipand who will be in charge of what. * Clarity (agreement / MoU) on who is responsible for: * Asset ownership * funding for maintenance, renewal and improvement (does this follow ownership) * Asset Management (inspections, work programmes, work delivery) * Where and how budgets are held or funded * How are service requests handled	Active	2018 AMP	Systems	B	
D10 Network and Asset Management						
Council should consider including other Asset management systems used by Council (e.g., SCATS, JunoViewer, RoadRoid, Assetfinda, or Hansen etc.). The use of Multi Criteria Analysis (MCA) and root cause analysis should be investigated.	These AM systems are unlikely to be relevant or cost effective for a rural authority. Maybe include a section to state that these have been investigated and the BCA shows not worthwhile. Include a section on the implementation of GHD Max and that the BCA is worthwhile	Active	2021 AMP - REG Review	Evidence	D	
D12 Asset Information Management Improvements						
Review the AMP asset data quality tables and identify priorities	Review AMP data confidence tables	Active	2018 AMP	Evidence	B	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Prepare an active Data Quality Management Plan	Road Controlling Authorities should have an active Data Quality Management Plan Work identified through this REG Guide: 1. Data Quality Management https://www.nzta.govt.nz/assets/Road-Efficiency-Group/docs/data-quality-management-guideline.pdf This plan will generate improvement plans/tasks for individual asset types	Active	REG	Evidence	B	
Review missing ownership for assets	Knowing asset ownership can have a material effect on the Valuation (currently have to assumed all owned by Council). * Step 1 Agree a methodology to determine asset owner by asset type with update tasks per asset type * Action and support methodology	Active	2019 Valuation	Decision Making	C	
Review the REG 2022/23 Data Quality Reports and identify priorities	Review 2022/23 REG reports	Active	2024 AMP	Evidence	B	
D12 Network & Asset Management Improvements						
Integrate KPI with ONRC targets	Current / historical KPIs may have had targets tied to non-ONRC classification. Next AMP needs to split out ONRC classes for some KPIs	Future	2018 AMP	Evidence	D	
Review current AMP KPIs and Measures and assess for ease of reporting	Review made some progress	Future	2018 AMP	Evidence	D	
Investigate if a cross-asset renewals strategy would be beneficial to Council	Consider if a cross-asset renewals strategy would be beneficial. This would provide guidance how renewals for different asset classes might be prioritised against each other.	Future	2019 AMP Review (by GHD)	Decision Making	D	
Improve the renewals section for signs	Expand and improve on the renewals section for signs	Future	2019 AMP Review (by GHD)	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Improve the renewals section for railings	Expand and improve on the renewals section for railings	Future	2019 AMP Review (by GHD)	Decision Making	D	
Expand in the AMP the discussion on asset performance analysis and link to risk	Expand the discussion and commentary of performance analysis for most of the asset classes and link to risk (to support any shortcomings)	Future	2019 AMP Review (by GHD)	Decision Making	D	
Create a document to explain how the KPIs are measured		Future	2018 AMP	Evidence	G	
Identify the desired maturity levels for the AMP reviews so that the identified improvement options can be further prioritised	Identify the desired maturity levels against this review so that the identified improvement options can be further prioritised.	Future	2019 AMP Review (by GHD)	People / Culture	G	
Consider whether a broader approach to criticality (route and asset) would offer benefits to the prioritisation of works	Consider whether a broader approach to criticality (route and asset) would offer benefits to the prioritisation of works. This could potentially benefit asset classes like Road Structures.	Future	2019 AMP Review (by GHD)	Decision Making	G	
Improve the renewals section for bus shelters	Expand and improve on the renewals section for bus shelters	Future	2019 AMP Review (by GHD)	Decision Making	G	
Develop a schedule in the AMP showing who is involved in the preparation of the AMP	Develop a schedule showing who is involved in the preparation of the AMP and their relevant department.	Active	2019 AMP Review (by GHD)	Decision Making	A	
Review AMP KPIs for opportunity to automate / use RAMM data smarter	First pass review and then discuss with Council to identify any further steps needed	Active	2018 AMP	Evidence	B	
Investigate opportunities for how some decision making could be directly shown in the AMP	Investigate opportunities for how some decision making could be directly shown in the AMP, for example certain types of 'faults' identified during a condition inspection could be immediately dispatched for fixing upon office verification. Further building line of sight from inputs to actions and across different business processes.	Active	2019 AMP Review (by GHD)	Decision Making	D	
Include in AMP discussion on any significant level of service gaps identified	More commentary and discussion could be shown to discuss any significant level of service gaps identified.	Active	2019 AMP Review (by GHD)	Decision Making	D	
Improve the relationship of the different AMPs (planning and activities) in the next AMP	Improve the relationship of the different AMPs (planning and activities) in the next AMP round.	Active	2019 AMP Review (by GHD)	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Improve the renewals section for cycleways	Expand and improve on the renewals section for cycleways	Active	2019 AMP Review (by GHD)	Decision Making	D	
Include in the AMP clearer reporting on how RDC has followed up on NZTA audit recommendations	Include clearer reporting on how RDC has followed up on NZTA audit recommendations. Use the AMIP to support this feedback loop.	Active	2019 AMP Review (by GHD)	Communicating	D	
In the AMP provide a register of specific deferred renewals due to budget or other constraints	If there is a clear deferral of renewal work occurring to due to budget or other constraints then these works should be maintained in a register.	Active	2019 AMP Review (by GHD)	Decision Making	D	
Expand in the AMP the information in the Lifecycle Management sections showing performance and condition data	Expand the section and tables in the Lifecycle Management sections to show performance and condition data >> analysis and discussion >> use for investment decision making.	Active	2019 AMP Review (by GHD)	Communicating	D	2021
In the AMP create a strong link to the business process for maintenance and asset decision making and management	Create a strong link to the business process for maintenance (usually centred around maintenance contracts) and asset decision making and management for best outcomes. (strengthening line of sight)	Active	2019 AMP Review (by GHD)	Decision Making	D	
Include a section in the AMP on key operational data and its role in the planning of transport assets	Include a section in the AMP on key operational data and its role in the planning of transport assets.	Active	2019 AMP Review (by GHD)	Decision Making	D	
Centralise information on changes in growth and demand (including forecasting) in AMP Part 1	Include a section in Part 1 to centralise the information and commentary on changes in growth and demand (including forecasting).	Active	2019 AMP Review (by GHD)	Decision Making	D	
Develop a Road Safety strategy and integrate it into the AMP appropriately	Develop a Road Safety strategy and integrate it into the AMP appropriately.	Active	2019 AMP Review (by GHD)	Decision Making	E	
Investigate whether a method of coordinating works during the planning, design and delivery phases could deliver benefits to RDC	Investigate whether a method of coordinating works during the planning, design and delivery phases could deliver benefits to RDC (as opposed to only through only the AMP phase which is affected by the need for the Transport AMP to be delivered prior to the other AMPs).	Active	2019 AMP Review (by GHD)	Decision Making	H	
E01 Financial Management Improvements						

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Obtain leads to funding streams	Currently 2021 AMP to allow for expected change to subsidy. Further actions: * Investigate options for co-funding of improvement works on Ohakune Mountain Road where it is of benefit to the ski field operator. * Continue to lobby Government to retain Special Purpose Road FAR rates at 100%. Funding confirmed to be changing to that of Base rate in 2024/25	Future	2021 AMP	Service Delivery	D	2023
Include in the AMP a depreciation forecast	Include a forecast of depreciation in the AMP with discussion on what the trend may indicate for the future asset management.	Active	2019 AMP Review (by GHD)	Decision Making	D	
E03 Financial Valuation Improvements						
Review the RAMM Valuation Setup for treatment length components for basecourse and subbase	Review the setup of the multiple individual treatment length components for the basecourse and subbase asset classes in the RAMM asset valuation module, to confirm if a more streamlined approach could be utilised. This could potentially improve efficiencies with the valuation process and improve reporting outcomes by way of aggregating data changes to an asset class level.	Future	2019 Valuation	Decision Making	D	
Review Default Lives used for Asset Valuation	Default lives should be reviewed as part of the 2019/20 full valuation, to confirm these are appropriate/applicable for existing asset types where there are large numbers of unknown construction dates	Future	2019 Valuation	Decision Making	D	
Undertake a detailed analysis on the calculation of depreciation for pavement and surfacing	Undertake a detailed analysis on the calculation of depreciation for pavement and surfacing assets, including whether more granularity on long and short life pavements and surfaces are being appropriately recognised	Future	2019 Valuation	Systems	D	
Run an Asset Impairment Workshop	In the next valuation process, include a workshop with client and consultant staff to provide a more detailed look at whether any RDC transport assets could be considered impaired.	Future	2019 Valuation	Decision Making	D	

Task	Task Description	Status	Source	REG Pillar	Priority	Completed Date
Improve the RAMM Valuation Module Naming Conventions	Make some additional valuation module setup improvements, to improve naming conventions applied	Future	2019 Valuation	Systems	G	
Improve asset attributes that contribute to asset valuations	Continue to update and improve existing asset datasets, particularly where attributes influence outcomes in the valuation process, such as those used for calculating unit of measures for an asset.	Active	MAX.quality	Evidence	B	Ongoing
Special Project Forestry Activity Impacts						
Approach forestry and farm forest owners for harvest plan information	Council will carry out a project to improve its forestation information with input from forest stakeholders.	Future	2018 AMP	Evidence	B	
Review and update map of forestry routes and expectations using RDC rating database	* Update map of forestry. Reconcile 2006 data with harvesting undertaken to date. Update information for forward planning * Council will carry out a project to improve its forestation information with input from forest stakeholders	Future	2018 AMP	Evidence	B	
Setup Routes as a RAMM UDT for Forestry Routes and Initial Data Setup	Routes Type = Forestry Routes Sub Type = Hierarchy Use existing Forestry Map (GIS) as initial data to create in RAMM	Future	2018 AMP	Evidence	C	

Appendix D - Risk Register – Land Transport

D1 Schedule 1 – Land Transport Activity Risk Management External Context Review – PESTLE Analysis

PESTLE analysis is used to gain a macro picture of an industry environment. PESTLE stands for Political, Economic, Social, Technological,Legal and Environmental factors. It allows Council to form an impression of the factors that might impact on its business. The following trends, issues or factors provide the external context for the management of risks for the Land Transport activity, and theiranticipated impacts. This informs the Risk Register (Schedule 2). Risks with no impact identified were not included in the Register.

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			
			Levels of Service	Growth and Demand	Revenue and Funding	Regulatory or Stakeholder Requirements or Constraints
Political	Government Policy Statement (GPS) on Land Transport Funding	The GPS is the Government's primary tool to communicate what it wants to achieve in land transport, and how it expects to see funding allocated between types of activity across the land transport system. Historically, the GPS is issued three-yearly but sometimes this can be affected by the electoral cycle. A change in government could cause a larger change to the GPS. A change in government has occurred and they have indicated a change in policy direction by statements made by the Minister of Transport and potential issue of an interim GPS with differing funding priorities	A change in the GPS can create a significant increase or decrease in LoS eg. decreased in fundingfor Active Travel modes	No impact identified	Council would be constrained as to which activities it could fund depending on Government available funds	No impact anticipated
Economy	Infrastructure delivery capacity	The infrastructure industry in New Zealand is stretched with a general shortage of experienced technical personnel.	Inability to deliver planned programmes to the required time and quality	No impact anticipated	Reduced resource availability or lack of competition will potentially increase the costs and therefore pressure on the rates or a reduction in services able to be delivered. Note that most of the Land Transport contracts are not due for renewal in the next three years.	No impact anticipated
Economy	Oil prices	Volatility in global crude oil prices affecting reseal prices.	A sudden change in costs will impact the quantity of resurfacing that can be completed	No impact anticipated	No impact anticipated	No impact anticipated
Economy	Trends in RDC Primary Sector	The primary sector is the largest productive sector in the region. Identified trends in this industry include: Government's Business Growth Agenda aims to increase exports as a percentage of GDP from 30% to 40% by 2025. The Government is implementing actions to	May lead to pressure to improve geometrics and other manoeuvrability and safety aspects of pavements on specific routes to accommodate increased HCV	Expect a significant increase in HCV movements associated with forestry harvesting operations (potentially 800,000 movements, both directions). HCV	An increase in the rates base from commercial properties is considered unlikely. A rating differential has been implemented by Council to recover	No impact anticipated

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			Regulatory or Stakeholder Requirements or Constraints
			Levels of Service	Growth and Demand	Revenue and Funding	
		increase NZ's export market growth. MBIE is conducting an Agribusiness research study for the Manawatu-Whanganui region There is an estimated 36,500 ha of forestry plantation which is expected to reach maturity from 2015 onwards. At harvest, this area may yield up to 24 million tonnes of timber which needs to be transported out of the district. Progression to larger farming units and transport vehicles Potential for conversion of some forestry land to sheep/deer/dairy following harvesting. Conversion of sheep & deer farms to dairy Continued increase in area of land under market gardening. Increasing aggregate extraction in north of the district, potential opening of coal mines Potential for conversion of some forestry land to carbon farming. Conversion of sheep & deer farms to Carbon farming	numbers and vehicle sizes. Actual needs, locations and timings have not been determined at this time. Carbon farming by contrast may lead to reduced VKT on parts of the network, enabling lower LOS to be used.	movements from forestry may have significant impact on a small % of roads in the district (both sealed and unsealed). Key routes likely to be affected are: Oio, Poro-O-Tarao, Paparoa, Pipiriki Raetihi Road. Other trends may also contribute increased or decreased HCV movements around the district (depending on overall landuse changes). However, timing and magnitude of impact is unknown at this time. MBIE study will provide additional knowledge here. RDC is currently developing an Economic Development Strategy. Increase in HCV traffic brings increases safety risk (fatal or serious accidents), especially when combined with increased tourist traffic. Carbon farming by contrast may lead to reduced VKT demand on parts of the network, enabling lower LOS to be used.	forestry costs from forest owners	

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			Regulatory or Stakeholder Requirements or Constraints
			Levels of Service	Growth and Demand	Revenue and Funding	
Economy	Tourism Trends	Tourism is an important contributor to the Ruapehu economy. Key trends are: Overall annual visitor numbers to the district are increasing. There are peaks in visitor numbers in both winter and summer. The number of holiday homes in the district is increasing, reflecting Ruapehu as a domestic holiday destination. Government initiative Tourism 2025 is active within the district. National cycle trails are driving recreational cyclist numbers (Rural roads in the district are included in the National Cycleway network). Also, following trends are perceived (but not yet quantified): Increasing numbers of motor homes. Increasing numbers of Te Araroa / Freedom walkers. Increasing numbers of recreational road users (e.g. adventure bikers). Conversely, RAL bankruptcy may reduce skifield offerings, affecting tourism numbers.	● Increased congestion on tourist routes at peak tourist times ● Increasing expectations regarding vehicular ride comfort and urban periphery pavement sealing. ● Increasing expectations regarding the amenity value of "visitor townships". ● Minor improvements required to some roads which are part of the National Cycle Network (e.g. Kokomiko Road). ● Potential for increased risk of injury/death arising from accidents involving active uses of the network.	Overall vehicle kms travelled in the district is increasing due to the both the increase in the usual resident population and visitors. Visitor trends are driving demand at peak times (summer and winter) for both vehicle and pedestrian traffic in specific locations.	Additional funding required for seal extensions on urban periphery roads. Limited opportunities for RDC to capture funding from tourism: ● Holiday homes trend is sustaining rates base in the district despite declining normally resident population.	No impact anticipated
Economy	Inflation	According to Stats NZ, th annual inflation rate in NZ reached a 32 year high in the June 2022 quarter. There has been a 20.35% increase in the Waka Kotahi Maintenance Cost Adjustment Factor from Mar 19 to Mar 22	● Annually, if CAF increases are larger than forecast, levels of service may have to be reduced	●	● Costs increased in the Tender prices received in 2022. ● In order to maintain affordability for rate payers, work quantity may have to be reduced. ● Conversely, rates or debt would need to be increased annually to keep up with CAS if higher than forecasted	
Legal / Regulator	Increasing environmental	Increased requirements, costs and difficulties of obtaining consents for the Land	No impact anticipated.	No impact anticipated	Increased costs of doing business.	Under the NES requirements for

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			Regulatory or Stakeholder Requirements or Constraints
			Levels of Service	Growth and Demand	Revenue and Funding	
y	standards: • Horizons One Plan • National Environmental Standards (NES) • Zero Carbon	Transport activity. NES for drinking water sources imposes restrictions on discharge permits above abstraction points (this has been in effect since 2008) NES for contaminated land requires contaminated land to be identified and assessed before it is developed (this has been in effect since 2011).				drinking water sources, there is potential for increased requirements with respect to managing discharges from road network (inc. carparks) where above water supply abstraction points. Also consents now required for works near stop banks. NES for contaminated land unlikely to impact the land transport activity. Zero Carbon may require review of materials used in the roading activity.
Legal / Regulatory	Co-Management with Iwi	Co-management of land under the RMA and Settlement Agreements.	No impact anticipated.	No impact anticipated	Changed way of doing business and potential of increased costs of doing business.	Increasing the number of stakeholders to engage with for works
Social	Changing demographics – Usually Resident Population	In Growth Planning Assumptions RDC LTP 2024-34, Ruapehu District's usual resident population is projected to increase slowly over the next 10 years	Potential shift in LoS priorities e.g. demand for wider footpaths to accommodate mobility scooters.	Improvements required on Urban edge as population increases Additional footpaths Seal extensions	Increased costs to meet the growth needs.	No impact anticipated
Social	Changing demographics – Peak Population	In the Planning Assumptions document, peak population is predicted to decline over the next 10 years. Key growth areas for holiday homes and subdivision activity has been: ● Ohakune ● Rangataua ● National Park	Community expectation regarding levels of service, in particular widening and/or sealing roads, and provision of footpaths, kerbing and stormwater channels.	Minor growth in asset base through adoption of third party infrastructure from greenfield growth. Increasing traffic volumes on urban periphery roads due to a	A decrease in new holiday homes in the district would reduce the number of increases to District's rates base	No impact anticipated

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			Regulatory or Stakeholder Requirements or Constraints
			Levels of Service	Growth and Demand	Revenue and Funding	
		● Horopito	RDC has established a policy regarding seal extensions for subdivisions.	range of factors including tourism, ski area growth, lifestyle changes and some subdivision. Holiday homes occupancy contributes to seasonal peaks in traffic due to high avg occupants per home (4.4-4.7) compared to normally resident households (2.5).		
Technological	Electric Vehicles	Increase in electric vehicle numbers	Working with other agencies a LoS has to be established and supported for the supply of adequate charging Stations. This could impact the obtainability of parking spaces within high demand areas	No impact anticipated	No impact anticipated	No impact anticipated
Technological	Digital Disruption	The increase in the availability of digital information and systems that could disrupt or support the delivery of Land Transport. For example: ● Digital twining (digital representation of the physical world) ● Asset sensors ● Control systems ● Mobility-as-a-service (smart car-sharing) ● AI	Greater data could allow for increase in quality of decision making and/or process efficiencies to be attained	Mobility-as-a-service could change demand for car ownership levels	Digital improvements often need an upfront investment. This will either be difficult to fund or reduce short term operational funding while investments are being made for future benefit	A growing amount of the community, road users and tourists are digitally savvy and therefore will increase the need for Council to provide information in more digital formats as well as an increase in data expectations overall
Technological	Change in Class 1 Maximum (44 - 47 tonnes)	50MAX trucks have been introduced to the NZ road network. 50MAX are trucks that are slightly longer than standard 44 tonne vehicles and have an additional axle (9 in total) in order to operate at 50 tonnes maximum total weight. High Productivity Motor Vehicles (HPMVs)	50MAX are permitted on RDC roads as they are designed to have no greater pavement wear than the current 44 tonne vehicle fleet. However, they are restricted from some	No impact anticipated	If 50MAX routes are required, funding will be required from rates. Upgrading roads and bridges to be suitable for the larger, heavier vehicles is costly and as most roads would	No impact anticipated

Category	Trends, Issues or Factors	What is the Trend, Issue or Factor?	What are the anticipated impacts on RDC Land Transport Activity?			
			Levels of Service	Growth and Demand	Revenue and Funding	Regulatory or Stakeholder Requirements or Constraints
		can be longer , wider or heavier than standard vehicles. Council has no HPMV routes but these vehicles can travel by permit if necessary.	bridges and narrow roads in the district. NZTA is upgrading all 50MAX restricted bridges on the State Highway network. Longer term there may be increased pressure on RDC to upgrade 50MAX restricted bridges in the district.		be classified as Access accessing NZTA funding will be restricted.	
Environmental	Climate Change	Climate change is expected to impact the frequency and severity of weather-related hazards (rainfall patterns, storm intensity and frequency, drought): • Increase in overall rainfall, with increase in rainfall intensity • Number and strength of ex-tropical cyclones reaching NZ also likely to increase • Decrease in winter temperatures and snowfall. Places which currently receive snowfall likely to see shift to rainfall or sleet.	Potential decrease in route availability and resilience	No impact anticipated	Potential increases in Emergency Works expenditure associated with the effects of increased rainfall intensity and frequency (e.g. landslips, flooding, bridge scour). Emergency Works budget has remained steady based on past 5 year average.	No impact anticipated

D2 Schedule 2 – Land Transport Activity Risk Register

The risk register in the following table identifies risks for the current and future Land Transport activities of Ruapehu District Council. It has been developed in consultation with key staff. It is informed by the PESTLE analysis (Schedule 1) and key staff's knowledge of Asset Management Functions.

Land Transport maintains its master risk register as part of its online Asset Management Improvement Programme tool (AirTable). These will be monitored as part of the ongoing improvement programme management. Any improvement actions required to manage risk are treated as part of the broader improvement tasks register.

The Risk Register analyses risks that have a higher risk profile than the routine levels of service maintenance. The process for identifying the risks is outlined in Part 1 Managing Risk (Section 8).

Once risks have been identified and evaluated the next step is to understand the options for tolerating the risk. That is, is it a risk the council will accept or should a mitigate/management strategy be created.

Risk Tolerance has been defined as

- **Reduce**: The risk is unacceptable and must be reduced.
- **Tolerate**: The risk can be tolerated provided it is as low as reasonably practicable. Opportunities to reduce the risk further should be identified and implemented where it is practicable (cost-effective) to do so. The risk should be actively monitored to ensure it remains as low as reasonably practicable.
- **Accept**: The risk is acceptable and does not need to be reduced further. The risk should be periodically reviewed to ensure it remains as low as reasonably practicable.

All the risks described in this section are owned by the Land Transport Manager and it is their task to ensure that risks are communicated, reviewed and reported on appropriately.

The below table provides a snapshot of the current risk register.

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT4	Removal of full funding for Special Purpose Roads	- Changes to NZTA Financial Assistance Rates (FAR) will primarily impact Special Purpose Roads (Ohakune Mountain Road) from 100% subsidy to the standard Council FAR (74%). A transition period is expected. - Note that Waka Kotahi have opened up the opportunity for Council to lobby to maintain a full subsidy rate - Spend approximately 10% of current budget on OMR (16km) - Future of mountain ski-fields could have a further impact Consequences - Will require an extra $250,000 council funding per year - equivalent to a 1% rate rise - Impacts can be managed if introduced in a staged approach.	- The 2021 AMP allowed for the expected changes to subsidy - Major works (costs) were bought forward, where appropriate, in the 2021 AMP to take advantage of the full subsidy while available.	Major	Almost Certain	Extreme	Tolerate	1/07/2025
LT1	Collapse of unmaintained bridges	- Covers two scenarios where bridges may not be maintained and are therefore at a higher risk of collapse or other significant failure: - Bridges built by private parties on Paper Roads - Council bridges on Council unmaintained roads - A previous case had coroner findings that Council had some responsibility to a failure as it is on road reserve - The full extent of exposure is unknown, as is the total number of unmaintained structures. Currently, 24 unmaintained bridges have been identified. - Although inspections of the 24 identified bridges are carried out every 6 years, RDC has so far been unable to reduce this risk. Consequences: - Potential failure of unmaintained	- 6-yearly inspections of the 24 known bridges by GHD - Reported on a GHD's monthly report to Council - Adding unmaintained bridges to the register (in RAMM) as they are discovered - Gain legal opinion where required - Develop and resource a strategy for dealing with these risks (e.g. remove, close, upgrade or other solution). - Add bridges to the register as they are discovered - Get written agreements with landowners for who will maintain them - Agreements in place with landowners to agree on who will maintain the bridge (currently 3 in place - for new bridges) - If agreement not reached then Council has right to close the paper	Catastrophic	Possible	Extreme	Reduce	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
		bridges leading to injury, death, and/or environmental impact - Potential for loss of life from bridge collapse (Some bridges have significant (> 5m) drops beneath them.) - Potential low likelihood as an unmaintained network has very low volumes, but the full extent of exposure is unknown. - Potentially decreasing tolerance for this risk due to changing H&S requirements.	road and then remove the bridge (Tararua looking at this)					
LT19	Climate change causing more severe weather events	- Increased heavy rainfall events - Culverts and drainage can't cope with water flows - Changing weather has redefined the definition of 20 and 100 year events for stormwater design - Risk likely to increase over time as the impacts become better known - Note that increased carbon farming can have a positive impact on providing more land stability and less slash Consequences: - Increased occurrence of under slips impacting roads with significant costs to reinstate the roads - Washing out of roads - Slash being washed off the forestry properties causing downstream damage to property and roading assets - Safety issues to road users if driving through a flooded road	- Designing Culverts to the latest standards and requirements at the time of replacement	Significant	Likely	High	Tolerate	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT17	Cost of maintaining minimum levels of service becomes unaffordable	- Work costs and escalations are rising quicker than Council rate rises - New road maintenance and renewal contracts started in October 2022 with significant rises in tendered rates. - This is in alignment with what has been happening across the country - Maintenance costs escalation is running higher than standard CPI that influence rate rises	- Writing the 2024 AMP to request adequate funding but also considering lowering LoS when possible - Managing work to the available budgets	Major	Possible	High	Tolerate	1/07/2025
LT13	Ability to resource the delivery of Asset Management Programme	- Council loses access to the necessary skilled resources to deliver the Land Transport Programme. - These resources are made up of internal and external resources (consultants and contractors) - Loss of Intellectual property through loss of key staff - Need for competitive procurement environment creating undesired change to personnel - Housing and accommodation shortages can also add to the challenging of moving more resources into the district Notes: - Council is happy with its current level of access to the right resources	- Procurement strategy is the primary location where this risk is managed - Breaking up of physical work contracts helped provide a more sustainable supplier market - Contractual requirements for consultants and contractors to meet expectations of providing skilled resources - Acknowledge that at times, resources need to be sourced from outside of the district for physical works - Risk is tolerable within current arrangements but preparedness is required for future procurement rounds	Major	Possible	High	Tolerate	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT9	Changing road user trends causing safety issues	- Changing road user trends result in an increased risk of fatal and serious accidents occurring on the road network. Trends include: - HCV movements - Motor homes - Cyclists - Unfamiliar or inexperienced drivers - Recreational road users (e.g. adventure bikers) - Te Araroa / Freedom walkers	- Risk is being targeted for reduction with current and future actions. - Walking and Cycling Strategy being prepared - Speed Management Plan underway - Cycle Awareness Strategy (to be absorbed by Walking & Cycling Strategy) - Follow the Traffic Control Devices Manual for appropriate signage and markings - Currently only $15,000 per year safety education budget (through Horizons Road Safety Programme), which is not currently targeting this increasing risk. - Consider temporary warning signs on routes with forestry harvesting as required. - Monitor road safety incidents and trends - Consider safety awareness campaign at tourist information sites (highlight hazards in the district) - Connect with national road safety campaigns targeting tourists. - Engage with forestry / trucking companies on driver awareness of hazards in the district. - Potentially verge mowing on roads which are key freedom walking routes - Lobby Waka Kotahi for cycleway support on State Highways or signage and funding to support alternative routes	Catastrophic	Unlikely	High	Reduce	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT14	Availability of Aggregates declining	- Some quarries closing or looking to close - Getting harder to get resource consent to open or continue a quarry - Difficult to get consent and / or iwi approval for using river gravels - Increased H&S requirements on quarries increases costs - Nationwide shortages of suitable aggregate causing scarcity and cost increases - Consequences: - Costs will increase for aggregates and travels costs will increase and transporting has to come from further afar - Wouldn't be able to complete work due to aggregates becoming more scarce. - Negative impact on carbon usage when increasing cartage distances	- Annual aggregate negotiations at start of financial year - NZTA specs for other aggregates that can be used (but don't meet M4 standard) - Actively identify, and prepare, sites for mobile crushers to be used - Council owns a number of properties with quarry designations - Look at the use of more alternative specs for aggregates that can be used - Use of recycled glass and other materials - Monitor progress with the use of metal blends for unsealed road maintenance metaling	Significant	Possible	High	Tolerate	1/07/2025
LT2	Increased pavement deterioration due to forestry haulage	- Increases in HCVs, primarily due to forestry harvesting over the next 20 years, will impact pavement deterioration. - This is the first round of forestry harvests from the 1990s planting programme. - Over the next 20 years, 24 million tonnes of timber could be exported (23,000 tonnes per week). - Plantation locations are known, but the timing of harvests is unknown. - There is some uncertainty about likely freight routes as influenced by commercial decisions about preferred export locations. - Expect significant impacts on ~15% of the sealed network (~150km). - Forestry harvesting is a certainty in the district. - Consequences are potentially significant but magnitude, timing and location are uncertain. Forestry driven renewals alone could be > 100% of	- Budget allocation for pavement renewals was increased from 0.5km in 2006 to 7km per year in 2009. - Have targeted pavement renewals on strategic forestry routes - RDC has agreements on a case-by-case basis with some forest owners that they will pay for any increased maintenance on the unsealed network due to forestry haulage. This covers some of the unsealed roads likely to be affected. - Due to the difficulty of predicting pavement deterioration, we typically respond reactively to forestry industry requests for work on roads. - Risk may be tolerable, but we need a greater understanding of the timing and magnitude of impacts on RDC expenditure over the next 20 years. - Improve knowledge about forestry harvest programme to input into pavement renewal forecasts. - Longer-term consider options for	Significant	Likely	High	Tolerate	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
		the current annual district-wide renewal budget. The next 10-20 years will require increased reactive renewals. - Consequences: - Potentially reduce pavement life from 65 years to 30 years. Also increased maintenance on the unsealed network. - Increased costs for pavement rehab as there is a need to design for increased HCV loads (expect most plantations to be replanted).	alternative sources of funding for forestry road renewals.					
LT5	Collapse of maintained bridges	- Potential failure of maintained bridges, resulting in route closure - The district's bridge stock is aging, with most bridges constructed prior to 1972, before the introduction of modern seismic standards. - History of some heavy vehicles crossing bridges while overweight with no permits - Heavy vehicle weights have increased since a lot of the bridges were designed - Restrictions are not always complied with increasing risk to both user and the bridge - Using good bridge data to assess overweight permit requests to minimise the stress these cause on bridges - There is a lack of funding available from Waka Kotahi to fund the identified bridge replacements (some bridges on low-volume roads do not qualify and will always struggle to be funded).	- Risk is managed through current practices. The likelihood has been chosen because the bridge stock is degrading and aging. - All bridges are inspected on a 2-yearly cycle in accordance with the NZTA S6 manual - The bridge inspections provide defect and condition data. From this data, bridges possibly requiring strengthening or replacement are further investigated and added to a renewals forward works programme - Bridge renewals are prioritised based on condition, freight load, traffic, and the availability of alternative routes. - Restrictions have been place on bridges where applicable - There are currently 16 Class 1 weight-restricted bridges. - There are currently 5 bridges with speed restrictions. - Additional signage has been installed to give advanced warning on bridges where it is known that users are ignoring the restrictions. - Bridges will be inspected immediately following a seismic	Catastrophic	Unlikely	**High**	Reduce	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
			event, and closures or restrictions will be put in place accordingly. - Bridges will be inspected if the network management team become aware that vehicles crossing a bridge have not being complying with any restrictions - Bridges will be closed if a risk of immediate failure is identified during an inspection. An assessment will then be completed to consider the options to maintain customer LoS, including: - Temp bridge - Detour - Emergency repairs					
LT11	Snow and Ice causing road closures or dangerous driving conditions	- Road closures and traffic accidents resulting from snow and ice on district roads. - High frequency hazard impacting Central Plateau and mountain roads. (E.g. roads through National Park are closed on average 3 days per year). - Local centres can remain isolated after State Highways are opened because local roads still blocked/iced.	- Snow and ice are a routine hazard on district roads due to location and altitude, however, there may be opportunities to improve RDC response (if cost-effective). - RDC implements pre-treatment (CMA, gritting and snow clearing for the Ohakune Mountain Road - There is no contracted response for Local Road network. Contractors do have equipment for clearing roads (i.e. snow ploughs that can be called upon. However, it is prioritised to the State Highway network.	Significant	Possible	**High**	Tolerate	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT15	Pavements and Surfaces don't achieve their Expected Lives	- The design and workmanship are inadequate for surfaces and pavements to fully achieve their expected lives - Historical pavements not reaching expected lives - This can include pre-mature failure - Rehabilitations being done are on pavements that have not achieved their expected life - Changes in what good design should be over time - Some seal extensions were thin layer of metal (approx. 50mm) over dirt and then a surface - Most pavements were constructed during 50's to early 80's so potential bow-wave of renewals - Completing the work at the wrong time of year or in inappropriate weather - This is a risk every year from design and works completed in the past - Failures increase the future need for more renewals to be programmed - No actions can be taken to reduce the risk from historical works, but the lessons learned need to be applied to reduce this risk in current and future works. - Risk may increase temporarily when there is a change in designers or contractors. Consequences: - Not achieving the lowest whole-of-life value for the network - Increased pavement maintenance and renewal costs	- Aiming to keep progressing and advancing Work earlier in the prior Work whether it is rehab designs or pre-surfacing repairs - New rehabs are being designed and constructed appropriately to get best long term life	Major	Possible	High	Tolerate	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT20	Changing expectations and regulations causing increased cost and timeframes to the ways of doing business	- There are a number of changes There are increased expectations on engagement and consultation with different parties to undertake work - Local Government Reform - Relationship agreements between Council and iwi - RMA reform - Reacting to climate change and carbon reduction targets - Reacting to government, Waka Kotahi and Te Ringa Maimoa initiatives - Note that there are usually wider council and community benefits from these changes - Note consultation with Kiwirail and The Lines Company on required works is also contributing to time and costs challenges for getting work done Consequences: - Increased expectations and requirements will have an impact on the length of time to progress approvals for work and associated increase costs	- None currently	Minor	Possible	**Medium**	Tolerate	1/07/2025
LT6	No programme to open up more network to 50MAX Vehicles	- Council does not have a specific programme to upgrade bridges to open up more of the network to 50MAX Vehicles (there is no requirement to do this) - Hard to economically justify upgrading a Class 1 bridge that is 50MAX restricted so that it can now handle 50MAX Notes: - NZTA is upgrading all 50MAX restricted bridges on the State Highway network - Increases in HCV traffic in the district resulting from primary sector trends (refer PESTLE Analysis for summary) may lead to increased pressure on RDC to upgrade 50MAX	- Some weight restricted bridges will be upgraded in 2024/34 to 100% of Class I - All bridges that can not cope with 50MAX vehicles have been identified and mapped on GIS - This risk has been rated as medium and "Accept" as any additional upgrades, outside of those to existing restricted bridges, will need to be planned in advance to receive funding from NZTA. Additional pressure from stakeholders will be managed or reviewed as it arises.	Significant	Unlikely	**Medium**	Accept	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
		restricted bridges in the district - NZTA funding for 50MAX upgrades may be restricted on low volume roads Consequences: - Council's reputation maybe negatively impacted if complaints are received from some industries that would be benefit economically from more of the network being accessible by 50MAX vehicles						
LT10	Spill of major hazardous substances on the road network	- Hazardous substances can spill from a vehicle when they are involved in a crash (whether a single or multi-vehicle incident) - The current known distribution of spills includes State Highways, rail, and local roads (e.g. fuel deliveries to farms, chemicals to water treatment plants). - Current incident frequency is approx. 1 incident per year (most likely to occur on a state highway). Consequences: - A spill can have a significant impact on the environment. For example, impacts the spilled contents ending up in local rivers and water supplies	- Fire service provides initial containment - Council maintenance contractors provide traffic and detour management and some basic materials for small spillages - Note that the nearest hazmat cleanup team is based in Palmerston North (3 hours away). - Maintaining regional capability through CDEM Group Hazardscape Planning - Supported by Emergency Management structures within Council and the Region - Carriers have existing and effective controls in place for the transport of hazardous substances. - Note that the level of exposure is unknown in terms of frequency and types of substances being transported - There are currently no route restrictions in place regarding the transport of hazardous substances. - Regional Civil Defense Emergency Management (CDEM) planning is well established and practiced.	Significant	Unlikely	**Medium**	Accept	1/07/2025

Risk ID	Risk Name	Risk Description	Current Actions/ Controls addressing the risk	Consequence	Likelihood	Risk Score	Tolerance	Review Date
LT8	Deep side drains are a safety hazard	- Deep drains adjacent to roads are a feature of the Ruapehu District road network. These drains pose a safety hazard to road users. - Missing clear zones on side of road up to the drain also contributes to risk - Deep drains reduce flooding and having wet pavements leading to increased maintenance - Note, deep drains are to support drainage of land as opposed to a water channel which is sized to handle the water runoff from the road Consequences: - Injury or death attributable to when a vehicle leaves the road and ends up driving into a deep drain	- Deep drains are repositioned - Deep drains are repositioned or re-profiled in conjunction with pavement renewals. - This should take into consideration any effects on stormwater capacity and potential flooding issues. - it is noted that it will take a long time to address All the Deep drains.	Significant	Unlikely	**Medium**	Accept	1/07/2025
LT7	Footpaths users can be injured by slipping or tripping	- Unresolved trip hazards on footpaths - Generally caused by settlement and tree roots uplifting footpaths - Footpaths can become slippery if moss or algae allowed to build up on the surface - Note that footpaths are generally in good condition. Consequences: - Pedestrians can suffer an injury as they fall	- Footpath condition inspections carried out every 2 years - Network Inspections identify maintenance needs on a 'Best Effort' basis as defined in the contract - Risk can be accepted provided high-risk slip and trip hazards can be identified and addressed. - Note, Parks and Reserves look after some aspects of footpaths (need to ensure process that any issues are reported back to Transport for action) - The Network Maintenance Contractor is engaged to deliver a systematic approach to maintaining the footpaths by using the data generated by the network inspections and customer requests - Footpath renewals are prioritised on a number of risk factors - A lip grinding contractor has been engaged separately from time to time to address trip hazards.	Minor	Unlikely	**Low**	Accept	1/07/2025

Appendix E - Resource Consents

Below is a list of all the current consents Land Transport holds with Horizons Regional Council.

Consent No	Consent Status	Type	Sub Type	River	Location	Volume	Description	Commence	Expire	Review
ATH-2000008852.00	Current	Bridge Construction	Land Use Consent (River & Lake Beds)	Makara Stream	Whangaehu		Bridge Construction	17/10/2000	26/09/2035	
101400	Current	Land Use Consent	River and Lake Beds	Makotuku River	Raetihi Ohakune Road, Raehiti		Bridge Construction	17/10/2000	26/09/2035	
ATH-2007011672.01	Current	Bridge Construction & Maintenance	Land Use Consent (River & Lake Beds)	Mangakahikatoa Stream	Northern Whanganui		Bridge Construction & Maintenance	25/05/2007	2/04/2042	
ATH-2007011672.02	Current	Bridge Construction & Maintenance	Land Use Consent (River & Lake Beds)	Mangakahikatoa Stream	Northern Whanganui		Bridge Construction & Maintenance	25/05/2007	2/04/2042	
105108	Current	Discharge Permit	Land		Raetihi Ohura Road, Shorts Hill, Raetihi	13,890m3 of cleanfill	Cleanfill Discharge	10/12/2009	19/11/2014	S.124 Existing Use
102074	Current	Land Use Consent	River and Lake Beds	Makara Stream	Middle Road, Horopito West		Culvert Construction	1/02/2002	17/12/2036	
103862	Current	Land Use Consent	River and Lake Beds	Maukuroa Stream	Miro Street , Manunui, Taumarunui		Culvert Construction	6/12/2006	15/11/2042	
6087	Current	Land Use Consent	River and Lake Beds	Pipiriki Raetihi Road, RD 6, Raetihi			Culvert Construction	6/06/1995	17/05/2030	
101040	Current	Land Use Consent	River and Lake Beds	Waitaanga Stream	Waitaanga North Road, Waitaanga		Culvert Construction	26/04/2000	31/03/2035	
ATH-1995004266.00	Current	Culvert Construction	Land Use Consent (River & Lake Beds)	Mangaetoroa River	Whangaehu		Culvert Construction	08/06/1995	17/05/2030	
ATH-2002009608.00	Current	Culvert Construction	Land Use Consent (River & Lake Beds)	Makara Stream	Whangaehu		Culvert Construction	01/02/2002	17/12/2036	
ATH-1996004307.00	Current	Culvert Construction	Land Use Consent (River & Lake Beds)	Mangaetoroa Stream	Whangaehu		Culvert Construction	27/09/1996	6/09/2031	

Consent No	Consent Status	Type	Sub Type	River	Location	Volume	Description	Commence	Expire	Review
ATH-2000008446.00	Current	Culvert Construction	Land Use Consent (River & Lake Beds)	Penetaiti Stream	Whanganui River		Culvert Construction	26/04/2000	31/03/2035	
ATH-2006011536.00	Current	Culvert Construction	Land Use Consent (River & Lake Beds)	Whanganui River	Northern Whanganui		Culvert Construction	06/12/2006	15/11/2042	
4335	Current	Land Use Consent	River and Lake Beds		Oio Road, Retaruke		Culvert Construction and Maintenance	22/04/1994	30/03/2029	
ATH-1994001334.00	Current	Culvert Construction & Maintenance	Land Use Consent (River & Lake Beds)	Retaruke River	Northern Whanganui		Culvert Construction and Maintenance	22/04/1994	30/03/2029	
ATH-1996004135.00	Current	Erosion Protection Works	Land Use Consent (River & Lake Beds)	Mangawhero River	Whangaehu		Erosion Protection Works	24/06/1996	31/05/2031	
ATH-2007011668.00	Current	Fish Passage Construction	Land Use Consent (River & Lake Beds)	Makara Stream	Northern Whanganui		Fish Passage Construction	20/04/2007	28/03/2042	
105635	Current	Land Use Consent	River and Lake Beds	Mangawhero River	Mangawhero Terrace, Ohakune		Land Disturbance	17/02/2011		
ATH-2011013708.00	Current	Land Disturbance	Land Use Consent (River & Lake Beds)	Mangawhero River	Whangaehu		Land Disturbance	17/02/2011		
103876	Current	Land Use Consent	River and Lake Beds	Maukuroa Stream	Miro Street , Manunui, Taumarunui		Land Disturbance and Excavation	6/12/2006	15/11/2042	
ATH-2006011552.00	Current	Land Disturbance & Excavation	Land Use Consent (River & Lake Beds)	Whanganui River	Northern Whanganui		Land Disturbance and Excavation	06/12/2006	15/11/2042	
ATH-2008012440.00	Current	Multi-Culvert Ford Reconstruction	Land Use Consent (River & Lake Beds)	Mangaetoroa Stream			Muiti-Culvert Ford Reconstruction	04/11/2008	1/07/2043	
104541	Current	Land Use Consent	River and Lake Beds	Makotuku River	Ruapehu District Council Road Reserve		Multi-Culvert Ford Reconstruction	4/11/2008	1/07/2043	
103970	Current	Land Use Consent	River and Lake Beds	Ohura River			Multiple Bridge Construction and Maintenance	25/05/2007	2/04/2042	

Consent No	Consent Status	Type	Sub Type	River	Location	Volume	Description	Commence	Expire	Review
105581	Current	Land Use Consent	River and Lake Beds	Mangawhero River	Mangawhero Terrace, Ohakune		Pedestrian Bridge Construction	17/02/2011		
ATH-2011013646.00	Current	Pedestrian Bridge Construction	Land Use Consent (River & Lake Beds)	Mangawhero River	Whangaehu		Pedestrian Bridge Construction	17/02/2011		
ATH-2018202110.00	Current	Rangiwaea Stream Culvert Replacement	Land Use Consent (River & Lake Beds)	Rangiwhaia Stream	Whangaehu		Rangiwaea Stream Culvert Replacement	16/10/2018	1/07/2023	
ATH-2009013094.00	Existing Use Protection Applies (s124)	Recontouring & Earthworks	Land Use Consent (Land)	Hoihenga Stream	Northern Whanganui		Recontouring and Earthworks	10/12/2009	19/11/2014	S.124 Existing Use
105107	Current	Land Use Consent	Land		Raetihi Ohura Road, Shorts Hill, Raetihi	13,890m3 of cleanfill	Recontouring and Earthworks	10/12/2009	19/11/2014	S.124 Existing Use
101046	Current	Land Use Consent	River and Lake Beds	Mangawhero Stream	Ohakune		River Control Works	17/07/2000	26/06/2035	
100330	Current	Land Use Consent	River and Lake Beds	Ongarue River	Ongarue Back Road Bridge		River Control Works	1/12/1998	10/11/2032	
100585	Current	Land Use Consent	River and Lake Beds	Piopiotea Stream,	Raurimu Road and Uwha Road		River Control Works	27/04/1999	6/04/2034	
ATH-1996004778.00	Current	Road Construction	Land Use Consent (Land)	Mangaetoroa Stream	Whangaehu		Road Construction	23/01/1996	6/12/2030	
ATH-1996004783.00	Current	Road Construction	Land Use Consent (Land)	Mangaetoroa Stream	Whangaehu		Road Construction	23/01/1996	6/12/2030	
7008	Current	Land Use Consent	River and Lake Beds	Mangoihe Stream	Raetihi to Pipiriki Road		Road Construction	3/03/1997	10/02/2032	
ATH-1997003322.00	Current	Road Construction	Land Use Consent (River & Lake Beds)	Mangoihe Stream	Northern Whanganui		Road Construction	03/03/1997	10/02/2032	
6388	Current	Land Use Consent	Land		Raetihi-Pipiriki Road, Raetihi		Road Construction	23/01/1996	6/12/2030	
6391	Current	Land Use Consent	Land		Raetihi to Pipiriki Road		Road Construction	23/01/1996	6/12/2030	
ATH-2002009743.00	Current	Slip Material Clearing	Land Use Consent (Land)	Whanganui River	Northern Whanganui		Slip Material Clearing	24/05/2002	3/05/2039	

Consent No	Consent Status	Type	Sub Type	River	Location	Volume	Description	Commence	Expire	Review
103708	Current	Land Use Consent	River and Lake Beds	Whanganui River	Pukehou Road, Kakahi		Stopbank Construction	13/10/2006	22/09/2041	
ATH-2006011369.00	Current	Stopbank Construction	Land Use Consent (River & Lake Beds)	Whanganui River	Northern Whanganui		Stopbank Construction	13/10/2006	22/09/2041	
ATH-2010012849.00	Current	Stopbank Construction	Land Use Consent (River & Lake Beds)	Whanganui River	Northern Whanganui		Stopbank Construction	15/03/2010		
ATH-2010013227.00	Current	Stopbank Construction	Land Use Consent (River & Lake Beds)	Whanganui river	Northern Whanganui		Stopbank Construction	15/03/2010		
104900	Current	Land Use Consent	River and Lake Beds		Pukehou Road, Kakahi		Stopbank Construction	15/03/2010		
105227	Current	Land Use Consent	River and Lake Beds		Pukehou Road, Kakahi		Stopbank Construction	15/03/2010		
103301	Current	Discharge Permit	Water		Mountain road, Mt Ruapehu		Stormwater Discharge (Containing Calcium Magnesium Acetate, CMA)	3/06/2005	30/05/2015	S.124 Existing Use
103302	Current	Discharge Permit	Land		Mountain road, Mt Ruapehu		Stormwater Discharge (Containing Calcium Magnesium Acetate, CMA)	3/06/2005	30/05/2015	S.124 Existing Use
6531	Current	Water Permit	Non-consumptive	Whangaehu River	Whangaehu Valley Road		Stormwater Diversion	15/05/1996	23/04/2031	
101150	Current	Water Permit	Non-consumptive	Waitaanga Stream	Waitaanga North Road, Waitaanga		Temporary Waterway Diversion	26/04/2000	31/03/2035	
100627	Current	Water Permit	Non-consumptive	Piopiotea Strea,	Raurimu Road and Uwha Road		Water Diversion	28/04/1999	7/04/2034	
101593	Current	Water Permit	Non-consumptive	Whanganui River	Matapuna Bridge, Taumarunui		Water Diversion	2/06/2001	12/05/2031	
101595	Current	Water Permit	Non-consumptive	Whanganui River	Matapuna Bridge, Taumarunui		Water Diversion	4/06/2001	14/05/2031	
102962	Current	Water Permit	Non-consumptive	Whanganui River	Marsack Road, Taumarunui		Water Diversion	5/08/2004	5/08/2039	

Consent No	Consent Status	Type	Sub Type	River	Location	Volume	Description	Commence	Expire	Review
104542	Current	Water Permit	Non-consumptive	Makotuku River	Ruapehu District Council Road Reserve		Waterway Diversion Construction	4/11/2008	1/07/2043	
ATH-2008012441.00	Current	Waterway Diversion Construction	Water Permit (Non-Consumptive)	Mangaetoroa Stream	Whangaehu		Waterway Diversion Construction	04/11/2008	1/07/2043	

Appendix F – Cycleway Maintenance Responsibility Table

Section	From	To	Trail Length	River	Connecting Length	Owner	Maintained by	Surface Type	Off Road	RDC Maintained Rd Network	RDC Paper Road	RDC Paper Rd maintained by DOC	DOC	Other
Ohakune Old Coach Roa	**Ohakune**	**Horopito**	**11.1**			**DOC**	**DOC**		**Y**				**11.1**	
Old Station Rd	Thames St	Marshalls Rd			1.0	RDC	RDC	Seal with off road gravel cycle path	Y	1.0				
Marshalls Rd	Old Station Rd	Old Coach Road			1.5	RDC	RDC	Gravel		1.5				
Clydes Access	Old Coach Road	Matapuna Rd			1.4	RDC	RDC	Gravel & 2 fords		1.4				
Ruatiti & Middle Road	**Horopito**	**Mangapurua**												
Farm Section	Clydes Access	SH4			0.6	RDC	RDC	Gravel		0.6				
SH4	Clydes Access	Hutiwai Road			0.2	NZTA	RDC	Gravel off road trail	Y	0.2				
Hutiwai Rd	SH4	Harore Rd			0.2	RDC	RDC	Gravel		0.2				
Harore Rd	Hutiwai Rd	Middle Rd			0.4	RDC	RDC	Grass	Y		0.4			
Middle Rd	Harore Rd	Ruatiti Rd			13.5	RDC	RDC	Gravel		13.5				
Ruatiti Rd	Middle Rd	Makino Rd			14.3	RDC	RDC	Seal		14.3				
Mangapurua Track	Makino Rd	Mangapurua Rd			14.8	RDC	RDC	Gravel		14.8				
Mangapurua Track	**Mangapurua Rd**	**Mangapurua Landing, Whanganui River**	**36.0**			**DOC**	**DOC**		**Y**			**36.0**		
Mangapurua Landing	**Mangapurua Landing**	**Pipiriki**		**32.0**		**N/A**	**N/A**	**Whanganui River**	**Y**					**32.0**
Whanganui River Road	**Pipiriki**	**Whanganui**												
Whanganui River Road	Pipiriki	District Boundary			6.4	RDC	RDC	Seal	N	6.4				
Whanganui River Road	District Bdy	SH4			57.6	WDC	WDC	Seal	N					57.6
SH4	Whanganui River Rd	Whanganui			11.0	NZTA	NZTA	Seal	N					11.0
Whanganui	SH4	North Mole (Trail end)			10.0	WDC	WDC	Gravel off road trail	Y					10.0
Alternative M2S Track														
Kaiwhakauka Track	**End of Oio Road**	**Mangapurua Trig**							**Y**					
Depot Rd	Oio Road	Mangapurua Rd			1.0	RDC	RDC	Metal	Y	1.0				
Mangapurua Rd	Kaiwhakauka Track	Kaiwhakauka Track (Doc Section)			5.0	RDC	RDC	Metal	Y	5.0				
Kaiwhakauka Track	**Mangapurua Rd**	**Doc Section**	**10.0**			**DOC**	**DOC**	Gravel cycle path	**Y**			**10.0**		
Tracks Connector	**Upper Retaruke Rd**	**End of Oio Rd (Whakahoro)**												
Oio Rd	Upper Retaruke Rd	End of Oio Rd			7.0	RDC	RDC	Seal		7.0				
Oio Rd	Upper Retaruke Rd	End of Oio Rd (Whakahoro)			18.0	RDC	RDC	Metal		18.0				
Fishers Track	**National Park**	**Kurua Road**	**15**			**RDC**	**RDC**	Gravel / Grass	**Y**		**15**			
Fisher Rd	Pehi Rd	Kurua Rd			1.2	RDC	RDC	Metal		1.2				
Kurua Rd	Fisher Rd	Upper Retaruke Rd			4.6	RDC	RDC	Gravel / Grass		4.6				
Kurua Rd	Fisher Rd	Upper Retaruke Rd			9.8	RDC	RDC	Metal		9.8				
Upper Retaruke Rd	Kurua Rd	Monument (Junction of Oio Rd & Upper Retaruke)			9.3	RDC	RDC	Metal		9.3				
Upper Retaruke Rd	Kurua Rd	Monument (Junction of Oio Rd & Upper Retaruke)			2.1	RDC	RDC	Seal		2.1				
			72.1	**32.00**	**190.9**			**Total**	**295.00**	**111.9**	**15.4**	**46.00**	**11.1**	**110.6**
Timber Trail	**Pureora**	**Ongarue**	**72.0**			**DOC**	**DOC**	35km in District	**Y**				**35.0**	**37.0**
Timber Trail Car park	Timber Trail Car park	Ongarue			1.8	RDC	RDC	Seal		1.8				
Ongarue	Ongarue	Okahukura Bridge Rd			12.7	RDC	RDC	Metal		12.7				
Okahukura Bridge Rd	Okahukura Bridge Rd	Taumarunui			7.5	RDC	RDC	Seal		7.5				
			72.0		**22.0**			**Total**	**94.0**	**22.0**	**0.0**	**0.0**	**35.0**	**37.0**
	Taumarunui	District Boundary			180	NZTA	NZTA	Seal. 51km in District						180.0
	Taumarunui	Kawautahi Rd			9.6	RDC	RDC	Seal		9.6				
	Taumarunui	Kawautahi Rd			14.4	RDC	RDC	Metal		14.4				
	Hikumutu Rd	Oio Rd			1.9	RDC	RDC	Seal		1.9				
	Hikumutu Rd	Oio Rd			18.5	RDC	RDC	Metal		18.5				
					224.4			**Total**	**224.4**	**44.4**	**0.0**	**0.0**	**0.0**	**180.0**
			144.1	**32.0**	**437.3**				**613.4**	**178.3**	**15.4**	**46.0**	**46.1**	**327.6**

Note: All lengths in kilometres (km)

Appendix G – Restricted and Unmaintained Bridges

G1 - Weight Restricted Bridges

Bridge No.	Bridge Name	Road Name	Maximum Weight on any One Axle (kg)	Gross Weight (Maximum sum of Axle Weight)	Gross Weight (Maximum sum of Axle Weight) (kg)	Maximum Speed Limit (Km/h)	Comments
4	Aitchesons	Mangakara	8,200	90% Class I	17700	10	Note: Class 1 is 8,200kg axle
19	Heao No.1	Heao	4,000	40% Class I	8000	5	
43	Knights	Knights	8,200	50% Class I	10000	15	Additional bracing would increase capacity to 70%
147	Kokopuiti Rail Over Bridge	Kokopuiti	5,700	50% Class I	11000	15	Inspection says 55% Class 1, but signs in 10% increments
148	Waipu Rail Over Bridge	Waipu	5,000	50% Class I	10000	5	
153	Waikaka Rail Overbridge	Waikaka	8,200	90% Class I	18000	15	New Posting
174	Rimu No.2	Rimu	6,500	60% Class I	12000	15	
186	Tockers	Tangarakau	3,400	30% Class I	6000	15	Removal of sand from deck will increase to 40% Class I
218	Lacy's Suspension	Te Rata	6,000		9200	10	Note current restriction is a reduction from previous 10,500kg
240	Woods	Woods	5,700	50% Class I		50	
278	Hoihenga Suspension	Hoihenga	5,000		10000	15	
292	Rail Over Bridge	Mangateitei	8,200	70% Class I	14000	15	
297	Mangawhero Stream	Matahiwi Track	8,200	80% Class I	16000	5	
308	Haitanas Suspension	Haitana's Access	7,200		12000	15	
309	Thompsons Bridge	Haitana's Access	7,200	60% Class I		15	
404	Ruapehu Road Rail Overbridge	Ruapehu Road	2,500	40% Class I	5000	50	Note: this is heavier than many empty buses, some weigh 13,500kg empty without fuel or driver!

G2 - Speed Restricted Bridges

Bridge No.	Bridge Name	Road Name	Maximum Weight on any One Axle (kg)	Gross Weight (Maximum sum of Axle Weight)	Gross Weight (Maximum sum of Axle Weight) (kg)	Maximum Speed Limit (Km/h)	Comments
30	Grants	Kaikara	8200			10	Speed Restriction - 10kph restriction to remain
60	Mangakara No.4	Mangakara				30	Speed Restriction
71	Mansons Siding	Mansons Siding				30	Speed Restriction
132	Richardsons	Otunui North				30	Speed Restriction - 100% Class I, App D
192	Treacy's	Paparoa				10	Speed Restriction
241	Bodys (Fifields)	Bodys				10	Speed Retsriction - 100% Class I App D

G3 – 50 Max Restricted Bridges

Bridge No.	Bridge Name	Road Name	Location
125	ORANGI	ORANGI ROAD	96
281	TOKITOKIRAU STREAM	MAKAKAHI ROAD	12857
31	KAIKARA #2	KAIKARA ROAD	1246
32	KAIKARA #3	KAIKARA ROAD	1465
132	OTUNUI NORTH NO.3 (RICHARDSON'	OTUNUI NORTH ROAD	4392
147	KOKOPUITI R.O.B.	KOKOPUITI ROAD	227
148	WAIPU R.O.B. (NIHONIHO PAH)	WAIPU ROAD	299
153	WAIKAKA R.O.B.	OHURA NORTH ROAD	6275
174	RIMU ROAD NO.2	RIMU ROAD	1395
186	TANGARAKAU ROAD NO.1	TANGARAKAU ROAD	86
19	HEAO #1	HEAO ROAD	3939
192	TE MAIRE MANGAOHUTU NO.4 (TREA	PAPAROA ROAD	7169
218	LACY'S SUSPENSION	OIO ROAD	42996
240	WOODS	WOODS ROAD	1604
241	BODYS (FIFIELDS)	BODY ROAD	65
278	HOIHENGA SUSPENSION	HOIHENGA ROAD	1023
291	MANGATEITEI STREAM #3	MANGATEITEI ROAD	1616
292	R.O.B.	MANGATEITEI ROAD	850
297	MANGAWHERO STREAM	MATAHIWI TRACK	1285
30	KAIKARA #1(GRANT'S)	KAIKARA ROAD	691
308	HAITANAS SUSPENSION	HAITANA'S ACCESS ROAD	145
309	THOMPSON BRIDGE	HAITANA'S ACCESS ROAD	406
4	AITCHESONS	MANGAKARA ROAD	5315
404	OHAKUNE RAIL OVERBRIDGE	RUAPEHU ROAD	2074
43	KNIGHTS	KNIGHTS ROAD	851
60	MANGAKARA NO.4	MANGAKARA ROAD	5534
71	MANSONS SIDING	MANSONS SIDING ROAD	83
331	MANGOIHE STREAM	PIPIRIKI RAETIHI ROAD	12655
339	RUATITI STREAM	RUATITI ROAD	18735

356	WHANGAEHU RIVER (NGAMOKAI)	WHANGAEHU VALLEY ROAD	4614
118	ONGARUE STREAM NO.2 (OKAUAKA)	ONGARUE STREAM ROAD	8323
175	ROTO ROAD NO.1 (KAKAHI)	ROTO ROAD	5550
205	TOKIRIMA NO.3 (BLAREMBURGS)	TOKIRIMA ROAD	6164
385	OHURA RIVER	OHURA ROAD	33066
58	MANGAKARA #2 (MANGAKARA STRM)	MANGAKARA ROAD	1425
89	NGAPUKE NO.2	NGAPUKE ROAD	2130
90	NIHONIHO TRUSS	OHURA NORTH ROAD	6100
91	OHURA MOKAU NO.1 (MATIERE)	OHURA MOKAU ROAD	40

G4 - Unmaintained Bridges

Bridge No.	Bridge Name	Road Name	Route Position	Ward	Remarks
242	Waitangi Access No.2 (McGuinness')	Waitangi Access		Taumarunui	Bridge Closed, for farm use only
447	Tapuiwahine No 2	Tapuiwahine		Ohura	Old wooden bridge. Access to Ohura Mokau? Possibly replaced by farmer
187	Tangarakau Road No.2	Tangarakau	1,500	Ohura	Past Gate Not Maintained
431	Rakautangi Footbridge (Owens)	Symes	270	Waimarino	Suspension Footbridge
448	Rakautangi No 2	Rakautangi (Symes)		Waimarino	Railway iron with ponga deck?
446	Pura Pit	Pura Road, off Waitewhena		Ohura	Access to Ohura County metal pit. May have been replaced by Colin Mackenzie
325	Ongangana Stream	Owairua	2,130	Waimarino	Hardwood Beams with hardwood deck (Understrut), also Photo 04-Sep-98
276	Gillets No.2	Otautau	880	Waimarino	Bridge Closed in 1989
277	Gillets No.3	Otautau	900	Waimarino	Bridge Closed in 1989
425	Tuahu Stream (Small Banana)	Off S.H.4 Parapara's	155,000	Waimarino	Castellated Girders with CIS concrete deck
439	Steeles Bridge (Retaruke River)	Off Oio Road	40,000	National Park	Wooden Deck Steel Truss Bridge
445	Makahiwi	Off Kawautahi	15,290	National Park	Possibly upgraded by Carter Holt for forestry access
307	Maungarongo Pa	Off Burns St.	30	Waimarino	RSJ's with precast concrete deck slabs. Marae Access opposite Bracken Street
444	Maungarongo Pa No.2	Off Burns St.	514	Waimarino	Concrete bridge on 2nd private access to marae
199	Te Whakarae	Motutara	120	Ohura	Not Council Bridge
67	Maungaroa No.4	Maungaroa		National Park	Bridge Closed
419	Cornelius's Bridge	Mangatiti		Waimarino	Private bridge. RDC may do 6-yearly inspections
408	Chasm	Mangaeturoa South Rd	7,045	Waimarino	Private Bridge Concrete Slabs
33	Kaikimotu No.3	Kaikimotu	2,480	Ohura	Not Maintained By Council
34	Kaikimotu No.4	Kaikimotu		Ohura	Not Maintained By Council
149	Kaikimotu No.1	Kaikimotu	483	Ohura	Replaced by Carter Holt. Not Maintained By Council
227	Kaikimotu No.2	Kaikimotu	903	Ohura	Replaced by Carter Holt. Not Maintained By Council
450	Rawnsleys	Crotons		Waimarino	Part of bridge might be on road reserve
442	Mangawhero River	Burns/ Mangawhero River	2,224	Waimarino	Private Bridge with not maintained sign

Appendix H - Forward Works Programme

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2024/25	Bridge	Bridge	Structural	BURNS STREET	30					ea	Structures maintenance	$0.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OPOTIKI ROAD	2,297					ea	Structures maintenance	$13,491.20
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OTAUTAU ROAD	746					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	RUAPEHU ROAD	2,085					ea	Structures maintenance	$2,480.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KOKAKORIKI ROAD	1,545					ea	Structures maintenance	$8,618.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MANSONS SIDING ROAD	83					ea	Structures maintenance	$7,936.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OPOTIKI ROAD	1,328					ea	Structures maintenance	$15,624.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	SADDLER ROAD	232					ea	Structures maintenance	$13,020.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE BACK ROAD	10,351					ea	Structures maintenance	$6,200.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	ARAMAHOE ROAD	17					ea	Structures maintenance	$49,600.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	HALL ROAD	158					ea	Structures maintenance	$13,020.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	HIKUMUTU ROAD	14,371					ea	Structures maintenance	$12,276.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	WAIKAKA ROAD	7,290					ea	Structures maintenance	$29,946.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	BODY ROAD	65					ea	Structures maintenance	$4,340.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	PIPIRIKI RAETIHI ROAD	21,751					ea	Structures maintenance	$12,511.60
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	HAPURUA ROAD	250					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge	Structural	WAIKAKA ROAD	10,200					ea	Structures maintenance	$0.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MANGAKARA ROAD	1,195					ea	Structures maintenance	$15,252.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OKAHUKURA BRIDGE ROAD	196					ea	Structures maintenance	$29,140.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	ROTO ROAD	555					ea	Structures maintenance	$4,650.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MATAHIWI TRACK	2,258					ea	Structures maintenance	$11,408.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	PAKIHI ROAD	279					ea	Structures maintenance	$24,180.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	7,412					ea	Structures maintenance	$4,774.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	3,686					ea	Structures maintenance	$3,720.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	PUKEKAHA ROAD	1,500					ea	Structures maintenance	$9,052.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	SH 4 (PARAPARA ROAD)	1,040					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	TAPUIWAHINE ROAD	8,915					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	TANGARAKAU ROAD	387					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MANGAHOE ROAD	154					ea	Structures maintenance	$8,122.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MAUNGAROA ROAD	5,265					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	WAITANGI ACCESS ROAD	274					ea	Structures maintenance	$9,126.40
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	JONES ROAD	92					ea	Structures maintenance	$5,208.00
2024/25	Bridge	Bridge	Structural	NGAKONUI ONGARUE	13,584					ea	Structures maintenance	$9,362.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance	ROAD								
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MAIN SERVICE ROAD	1,100					ea	Structures maintenance	$7,192.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KAKAHI VALLEY ROAD	3,091					ea	Structures maintenance	$17,422.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KAIKARA ROAD	691					ea	Structures maintenance	$28,272.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KURURAU ROAD	14,882					ea	Structures maintenance	$26,908.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KURURAU ROAD	15,098					ea	Structures maintenance	$8,432.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	HAPURUA ROAD	4,457					ea	Structures maintenance	$2,852.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	TAWATA ROAD	6,985					ea	Structures maintenance	$1,612.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	29,950					ea	Structures maintenance	$1,116.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	16,800					ea	Structures maintenance	$2,294.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	PIAUA ROAD	1,852					ea	Structures maintenance	$2,418.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MANGAHOUHOU ROAD	137					ea	Structures maintenance	$1,364.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	PARAKETU ROAD	2,138					ea	Structures maintenance	$1,488.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	TAWATA ROAD	10,840					ea	Structures maintenance	$2,604.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	HAPURUA ROAD	5,547					ea	Structures maintenance	$1,364.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	KURURAU ROAD	24,940					ea	Structures maintenance	$3,906.00
2024/25	Bridge	Bridge	Structural	MAKOKOMIKO ROAD	4,615					ea	Structures maintenance	$3,596.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	POKATEA KOKAKONUI ROAD	1,867					ea	Structures maintenance	$8,432.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	MANGAPARO ROAD	30					ea	Structures maintenance	$3,472.00
2024/25	Bridge	Bridge Maintenance	Structural Maintenance	TOKIRIMA ROAD	547					ea	Structures maintenance	$620.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	WHANGANUI RIVER ROAD	257					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	OHURA NORTH ROAD	6,100					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	VILES ACCESS ROAD	140					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	KAKAHI VALLEY ROAD	3,097					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	SMITHS ROAD	285					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	NGAPUKE ROAD	7,068					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	MANGAWHERO RIVER ROAD	714					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	KAWAUTAHI ROAD	20,068					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	UPPER RETARUKE ROAD	6,030					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	MANGAORAKEI ROAD	2,093					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	KURUA ROAD	2,029					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	KAIKARA ROAD	1,468					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge	Structural Painting	RUATITI ROAD	11,349					ea	Structures maintenance	$0.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance										
2024/25	Bridge	Bridge Maintenance	Structural Painting	OIO ROAD	41,441					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	PUKEKAHA ROAD	7,170					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	KAWAUTAHI ROAD	17,226					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	OHURA MOKAU ROAD	7,472					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	TAPUIWAHINE ROAD	8,403					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Maintenance	Structural Painting	MAKAKAHI ROAD	12,857					ea	Structures maintenance	$0.00
2024/25	Bridge	Bridge Renewal	Bridge Renewal	UPPER RETARUKE ROAD	6,030					ea	Bridge and structures renewals	$550,000.00
2024/25	Bridge	Bridge Renewal	Bridge Renewal	MATAHIWI TRACK	1,285					ea	Bridge and structures renewals	$5,251,590.49
2024/25	Bridge	Bridge Renewal	Bridge Renewal	MANGAHOE ROAD	154					ea	Bridge and structures renewals	$500,000.00
2024/25	Bridge	Bridge Renewal	Bridge Renewal	POKATEA KOKAKONUI ROAD	1,867					ea	Bridge and structures renewals	$300,000.00
2024/25	Bridge	Bridge Repair	Component Replacement	BENNETT ROAD	235					ea	Structures component replacements	$173,228.00
2024/25	Bridge	Bridge Repair	Component Replacement	KIRIKAU VALLEY ROAD	3,310					ea	Structures component replacements	$390,547.30
2024/25	Bridge	Bridge Repair	Component Replacement	KAIKARA ROAD	1,468					ea	Structures component replacements	$47,740.00
2024/25	Bridge	Bridge Repair	Component Replacement	HAITANA'S ACCESS ROAD						ea	Structures component replacements	$55,986.00
2024/25	Bridge	Bridge Repair	Component Replacement	MANGAKARA ROAD	1,425					ea	Structures component replacements	$21,824.00
2024/25	Bridge	Bridge Repair	Component	KURUA ROAD	1,016					ea	Structures component	$9,858.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
			Replacement								replacements	
2024/25	Bridge	Bridge Repair	Component Replacement	WHAKAMARO ROAD	12					ea	Structures component replacements	$16,864.00
2024/25	Bridge	Bridge Repair	Component Replacement	PUKEKAHA ROAD	7,170					ea	Structures component replacements	$16,120.00
2024/25	Bridge	Bridge Repair	Component Replacement	ORUAKUKURU ROAD	15,845					ea	Structures component replacements	$35,402.00
2024/25	Bridge	Bridge Repair	Component Replacement	BURNAND ROAD	2,200					ea	Structures component replacements	$18,662.00
2024/25	Bridge	Bridge Repair	Component Replacement	ECHOLANDS ROAD	600					ea	Structures component replacements	$35,154.00
2024/25	Culvert	Large Culvert Repair	Component Replacement	WILLIAMSONS ROAD	530					ea	Structures component replacements	$59,520.00
2024/25	Culvert	Large Culvert Repair	Component Replacement	MANGAETUROA SOUTH ROAD	6,580					ea	Structures component replacements	$37,820.00
2024/25	Culvert	Large Culvert Repair	Component Replacement	TAWATA ROAD	14,997					ea	Structures component replacements	$43,772.00
2024/25	Culvert	Large Culvert Repair	Component Replacement	MIRO STREET	723					ea	Structures component replacements	$22,320.00
2024/25	Culvert	Large Culvert Repair	Component Replacement	ORUAKUKURU ROAD	4,165					ea	Structures component replacements	$34,720.00
2024/25	Project	Project	RTZ - Ohakune	RAETIHI OHAKUNE ROAD						sq.m	Unsubsidised	$500,000.01
2024/25	Project	Project	OMR Vertical Alignment	OHAKUNE MOUNTAIN ROAD						sq.m	Unsubsidised	$320,000.00
2024/25	Project	Project	RTZ - Taumarunui	GOLF ROAD						sq.m	Unsubsidised	$25,000.00
2024/25	Project	Project	RTZ - Taumarunui	MAATA STREET						sq.m	Unsubsidised	$50,000.00
2024/25	Project	Project	Speed Management Plan	Various						sq.m	Unsubsidised	$325,000.00
2024/25	Project	Project	Associated Improvements	Various - Pavement Rehabilitation Sites						sq.m	Unsubsidised	$554,252.00
2024/25	Project	Project	Rural Road Improvements	Various - Following River Valley Meetings						sq.m	Unsubsidised	$554,252.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2024/25	Project	Project	RTZ - Ohakune	OHAKUNE MOUNTAIN ROAD						sq.m	Unsubsidised	$554,252.00
2024/25	Rehab	Reconstruction	Generic	OHURA ROAD	1,500	3,100		5.5		sq.m	Sealed road pavement rehabilitation	$768,000.00
2024/25	Rehab	Reconstruction	Generic	OHURA ROAD	12,000	12,500		5.5		sq.m	Sealed road pavement rehabilitation	$240,000.00
2024/25	Rehab	Reconstruction	Generic	OLD STATION ROAD	41	831		5		sq.m	Sealed road pavement rehabilitation	$500,000.00
2024/25	Rehab	Reconstruction	Generic	MANGAPARO ROAD	500	1,900		5.5		sq.m	Sealed road pavement rehabilitation	$672,000.00
2024/25	Rehab	Reconstruction	Generic	HIHI STREET	23	373		6.2		sq.m	Sealed road pavement rehabilitation	$168,000.00
2024/25	Reseal	Asphalt	Generic	MORERO TERRACE	0	168				sq.m	Sealed road resurfacing	$19,711.21
2024/25	Reseal	Asphalt	Generic	TURAKI STREET	0	102				sq.m	Sealed road resurfacing	$47,907.50
2024/25	Reseal	Chipseal	Generic	BURNAND ROAD	0	397				sq.m	Sealed road resurfacing	$24,400.01
2024/25	Reseal	Chipseal	Generic	BURNAND ROAD	397	801				sq.m	Sealed road resurfacing	$25,423.04
2024/25	Reseal	Chipseal	Generic	BURNAND ROAD	801	1,200				sq.m	Sealed road resurfacing	$3,399.53
2024/25	Reseal	Chipseal	Generic	BURNAND ROAD	1,200	1,689				sq.m	Sealed road resurfacing	$29,518.56
2024/25	Reseal	Chipseal	Generic	ESPLANADE (TOWN)	0	349				sq.m	Sealed road resurfacing	$849.88
2024/25	Reseal	Chipseal	Generic	FINDLAY STREET	0	350				sq.m	Sealed road resurfacing	$18,047.55
2024/25	Reseal	Chipseal	Generic	FINDLAY STREET	350	435				sq.m	Sealed road resurfacing	$1,721.83
2024/25	Reseal	Chipseal	Generic	FINDLAY STREET	435	769				sq.m	Sealed road resurfacing	$1,754.31
2024/25	Reseal	Chipseal	Generic	MANGAREWA ROAD	0	391				sq.m	Sealed road resurfacing	$3,800.75
2024/25	Reseal	Chipseal	Generic	MIRIAMA STREET	0	55				sq.m	Sealed road resurfacing	$221.84
2024/25	Reseal	Chipseal	Generic	MIRIAMA STREET	55	150				sq.m	Sealed road resurfacing	$16,897.86
2024/25	Reseal	Chipseal	Generic	MIRIAMA STREET	150	488				sq.m	Sealed road resurfacing	$42,601.33
2024/25	Reseal	Chipseal	Generic	MIRIAMA STREET	488	711				sq.m	Sealed road resurfacing	$27,796.85
2024/25	Reseal	Chipseal	Generic	NGAKONUI ONGARUE ROAD	26,040	27,830				sq.m	Sealed road resurfacing	$110,488.34
2024/25	Reseal	Chipseal	Generic	OKAHUKURA SADDLE ROAD	3,900	5,175				sq.m	Sealed road resurfacing	$85,382.80

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2024/25	Reseal	Chipseal	Generic	OLD STATION ROAD	0	862				sq.m	Sealed road resurfacing	$60,926.94
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	8,186	8,249				sq.m	Sealed road resurfacing	$3,485.56
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	8,279	8,309				sq.m	Sealed road resurfacing	$1,529.92
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	51	135				sq.m	Sealed road resurfacing	$401.88
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	135	2,158				sq.m	Sealed road resurfacing	$3,972.81
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	2,158	2,173				sq.m	Sealed road resurfacing	$0.00
2024/25	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	2,174	3,517				sq.m	Sealed road resurfacing	$4,634.56
2024/25	Reseal	Chipseal	Generic	ONGARUE WAIMIHA ROAD	0	880				sq.m	Sealed road resurfacing	$0.00
2024/25	Reseal	Chipseal	Generic	ONGARUE WAIMIHA ROAD	17,862	18,039				sq.m	Sealed road resurfacing	$365.41
2024/25	Reseal	Chipseal	Generic	ORUAKUKURU ROAD	0	1,350				sq.m	Sealed road resurfacing	$2,771.60
2024/25	Reseal	Chipseal	Generic	ORUAKUKURU ROAD	1,350	1,481				sq.m	Sealed road resurfacing	$571.39
2024/25	Reseal	Chipseal	Generic	ORUAKUKURU ROAD	1,516	1,562				sq.m	Sealed road resurfacing	$107.09
2024/25	Reseal	Chipseal	Generic	ORUAKUKURU ROAD	1,562	1,644				sq.m	Sealed road resurfacing	$203.55
2024/25	Reseal	Chipseal	Generic	PIWARI STREET	0	110				sq.m	Sealed road resurfacing	$45.23
2024/25	Reseal	Chipseal	Generic	PIWARI STREET	110	251				sq.m	Sealed road resurfacing	$22.62
2024/25	Reseal	Chipseal	Generic	PIWARI STREET	251	797				sq.m	Sealed road resurfacing	$360.86
2024/25	Reseal	Chipseal	Generic	RUATITI ROAD	2,153	2,975				sq.m	Sealed road resurfacing	$2,608.85
2024/25	Reseal	Chipseal	Generic	PIWARI STREET	797	830				sq.m	Sealed road resurfacing	$41.68
2024/25	Reseal	Chipseal	Generic	PORO O TARAO ROAD	0	940				sq.m	Sealed road resurfacing	$6,455.17
2024/25	Reseal	Chipseal	Generic	PORO O TARAO ROAD	940	1,380				sq.m	Sealed road resurfacing	$104,757.41
2024/25	Reseal	Chipseal	Generic	PORO O TARAO ROAD	1,380	1,508				sq.m	Sealed road resurfacing	$126.05
2024/25	Reseal	Chipseal	Generic	PORO O TARAO ROAD	4,430	4,844				sq.m	Sealed road resurfacing	$0.00
2024/25	Reseal	Chipseal	Generic	PORO O TARAO ROAD	7,314	8,644				sq.m	Sealed road resurfacing	$1,164.74
2024/25	Reseal	Chipseal	Generic	RAETIHI OHAKUNE ROAD	6,100	7,642				sq.m	Sealed road resurfacing	$3,137.89
2024/25	Reseal	Chipseal	Generic	RAETIHI OHAKUNE ROAD	7,642	8,800				sq.m	Sealed road resurfacing	$1,080.15
2024/25	Reseal	Chipseal	Generic	RAETIHI OHAKUNE ROAD	8,800	9,060				sq.m	Sealed road resurfacing	$778.26
2024/25	Reseal	Chipseal	Generic	RIVER ROAD	0	145				sq.m	Sealed road resurfacing	$3,923.59
2024/25	Reseal	Chipseal	Generic	RATA STREET	0	106				sq.m	Sealed road resurfacing	$68.85

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2024/25	Reseal	Chipseal	Generic	RATA STREET	106	216				sq.m	Sealed road resurfacing	$10,018.60
2024/25	Reseal	Chipseal	Generic	RUATITI ROAD	1,192	1,428				sq.m	Sealed road resurfacing	$266.96
2024/25	Reseal	Chipseal	Generic	RUATITI ROAD	1,428	2,153				sq.m	Sealed road resurfacing	$2,628.92
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	0	29				sq.m	Sealed road resurfacing	$256.10
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	29	480				sq.m	Sealed road resurfacing	$3,723.70
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	480	709				sq.m	Sealed road resurfacing	$26,708.92
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	709	741				sq.m	Sealed road resurfacing	$33.15
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	741	790				sq.m	Sealed road resurfacing	$6,309.27
2024/25	Reseal	Chipseal	Generic	SEDDON STREET	790	1,300				sq.m	Sealed road resurfacing	$8,371.12
2024/25	Reseal	Chipseal	Generic	TAITUA STREET	238	448				sq.m	Sealed road resurfacing	$27,179.40
2024/25	Reseal	Chipseal	Generic	TARINGAMOTU ROAD	4,962	7,537				sq.m	Sealed road resurfacing	$9,255.26
2024/25	Reseal	Chipseal	Generic	WARD STREET (NAT. PARK)	415	429				sq.m	Sealed road resurfacing	$0.00
2024/25	Reseal	Chipseal	Generic	WHANGAEHU VALLEY ROAD	1,685	3,154				sq.m	Sealed road resurfacing	$343,410.33
2024/25	Reseal	Chipseal	Generic	TARINGAMOTU ROAD	7,537	7,588				sq.m	Sealed road resurfacing	$3,731.68
2024/25	Reseal	Chipseal	Generic	TAY STREET	0	170				sq.m	Sealed road resurfacing	$14,529.94
2024/25	Reseal	Chipseal	Generic	TURAKI STREET	102	215				sq.m	Sealed road resurfacing	$13,081.28
2024/25	Reseal	Chipseal	Generic	TURAKI STREET	215	365				sq.m	Sealed road resurfacing	$114.08
2024/25	Reseal	Chipseal	Generic	TURAKI STREET	365	472				sq.m	Sealed road resurfacing	$4,540.99
2024/25	Reseal	Chipseal	Generic	TURAKI STREET	472	550				sq.m	Sealed road resurfacing	$1,005.43
2024/25	Reseal	Chipseal	Generic	WARD STREET (NAT. PARK)	0	187				sq.m	Sealed road resurfacing	$11,274.64
2024/25	Reseal	Chipseal	Generic	WARD STREET (NAT. PARK)	187	415				sq.m	Sealed road resurfacing	$13,536.71
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OTAUTAU ROAD	746					ea	Structures maintenance	$0.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	KURUA ROAD	2,029					ea	Structures maintenance	$8,928.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	ROTO ROAD	8,135					ea	Structures maintenance	$15,500.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	NGAKONUI ONGARUE ROAD	14,249					ea	Structures maintenance	$6,200.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	NGAKONUI ONGARUE ROAD	14,792					ea	Structures maintenance	$13,454.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	TARINGAMOTU ROAD	7,363					ea	Structures maintenance	$20,311.20
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	TARINGAMOTU ROAD	19,866					ea	Structures maintenance	$11,160.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OHURA NORTH ROAD	6,100					ea	Structures maintenance	$27,032.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OHURA MOKAU ROAD	40					ea	Structures maintenance	$13,392.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OIO ROAD	13,086					ea	Structures maintenance	$8,246.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OIO ROAD	16,017					ea	Structures maintenance	$6,758.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OPATU ROAD	1,348					ea	Structures maintenance	$4,774.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OTUNUI NORTH ROAD	175					ea	Structures maintenance	$16,554.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OTUNUI SOUTH ROAD	4,250					ea	Structures maintenance	$5,084.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	MORERO TERRACE	654					ea	Structures maintenance	$19,840.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WHENUAKURA ROAD	413					ea	Structures maintenance	$9,300.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	BURNS STREET	454					ea	Structures maintenance	$8,618.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	MATAHIWI TRACK	1,285					ea	Structures maintenance	$38,688.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	OHUTU ROAD	150					ea	Structures maintenance	$22,878.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	ORUAKUKURU ROAD	15,145					ea	Structures maintenance	$8,308.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	5,599					ea	Structures maintenance	$11,470.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	11,349					ea	Structures maintenance	$43,772.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	SMITHS ROAD	285					ea	Structures maintenance	$16,244.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WHANGAEHU VALLEY ROAD	3,159					ea	Structures maintenance	$6,944.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WHANGAEHU VALLEY ROAD	4,614					ea	Structures maintenance	$19,964.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	TARANUI ROAD	620					ea	Structures maintenance	$13,516.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	TAPUIWAHINE ROAD	8,403					ea	Structures maintenance	$21,948.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	UEPANGO ROAD	3,944					ea	Structures maintenance	$4,960.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	UPOKO ROAD	465					ea	Structures maintenance	$1,364.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	UPPER RETARUKE ROAD	7,626					ea	Structures maintenance	$7,626.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WAIKAKA ROAD	976					ea	Structures maintenance	$2,604.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WAIONE ROAD	1,084					ea	Structures maintenance	$3,224.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WAIONE ROAD	2,939					ea	Structures maintenance	$2,604.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	WANGANUI VALLEY ROAD	502					ea	Structures maintenance	$3,472.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	HIKUMUTU ROAD	2,920					ea	Structures maintenance	$5,828.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	TARANUI STREET	77					ea	Structures maintenance	$744.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	FIELDS TRACK	8,642					ea	Structures maintenance	$1,860.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	MAKAKAHI ROAD	301					ea	Structures maintenance	$1,860.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	MIDDLE ROAD	280					ea	Structures maintenance	$1,240.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	MIDDLE ROAD	2,405					ea	Structures maintenance	$2,480.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	RUAPEHU ROAD	1,321					ea	Structures maintenance	$1,488.00
2025/26	Bridge	Bridge Maintenance	Structural Maintenance	SHANNON STREET	666					ea	Structures maintenance	$2,914.00
2025/26	Bridge	Bridge Repair	Component Replacement	HEAO ROAD	3,954					ea	Structures component replacements	$55,800.00
2025/26	Bridge	Bridge Repair	Component Replacement	HOHOTAKA ROAD	4,175					ea	Structures component replacements	$33,790.00
2025/26	Bridge	Bridge Repair	Component Replacement	HIKUMUTU ROAD	5,991					ea	Structures component replacements	$13,640.00
2025/26	Bridge	Bridge Repair	Component Replacement	HIKUMUTU ROAD	9,263					ea	Structures component replacements	$42,842.00
2025/26	Bridge	Bridge Repair	Component Replacement	OIO ROAD	41,441					ea	Structures component replacements	$14,880.00
2025/26	Bridge	Bridge Repair	Component Replacement	ORUAIWI ROAD	295					ea	Structures component replacements	$30,256.00
2025/26	Bridge	Bridge Repair	Component Replacement	PAPAROA ROAD	318					ea	Structures component replacements	$75,268.00
2025/26	Bridge	Bridge Repair	Component Replacement	HOIHENGA ROAD	1,023					ea	Structures component replacements	$28,458.00
2025/26	Bridge	Bridge Repair	Component Replacement	MAKAKAHI ROAD	12,857					ea	Structures component replacements	$28,582.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Bridge	Bridge Repair	Component Replacement	MURUMURU ROAD	839					ea	Structures component replacements	$75,268.00
2025/26	Culvert	Large Culvert Repair	Component Replacement	TARINGAMOTU ROAD	770					ea	Structures component replacements	$162,688.00
2025/26	Culvert	Large Culvert Repair	Component Replacement	PUKEKAHA ROAD	5,341					ea	Structures component replacements	$58,528.00
2025/26	Project	Project	RTZ - Taumarunui	TURAKI STREET						sq.m	Unsubsidised	$288,000.00
2025/26	Project	Project	RTZ - Taumarunui	ARAWA STREET						sq.m	Unsubsidised	$7,200.00
2025/26	Project	Project	RTZ - Ohakune	GOLDFINCH STREET						sq.m	Unsubsidised	$18,850.00
2025/26	Project	Project	RTZ - School Speeds	CARROLL STREET						sq.m	Unsubsidised	$10,000.00
2025/26	Project	Project	RTZ - Ohura	OHURA ROAD						sq.m	Unsubsidised	$19,000.00
2025/26	Project	Project	RTZ - School Speeds	GREY STREET						sq.m	Unsubsidised	$10,000.00
2025/26	Project	Project	RTZ - School Speeds	OHORERE STREET						sq.m	Unsubsidised	$10,000.00
2025/26	Project	Project	RTZ - School Speeds	NGARIMU STREET						sq.m	Unsubsidised	$10,000.00
2025/26	Project	Project	RTZ - School Speeds	PUKEKAHA ROAD						sq.m	Unsubsidised	$10,000.00
2025/26	Project	Project	Minor Improvements	Various - Previous River Valley Meetings						sq.m	Unsubsidised	$900,000.00
2025/26	Rehab	Reconstruction	Generic	WAITAANGA ROAD	0	4,400		5.5		sq.m	Sealed road pavement rehabilitation	$2,112,000.00
2025/26	Reseal	Asphalt	Generic	AYR STREET	276	299				sq.m	Sealed road resurfacing	$2,508.26
2025/26	Reseal	Asphalt	Generic	AYR STREET	299	319				sq.m	Sealed road resurfacing	$2,713.06
2025/26	Reseal	Asphalt	Generic	BELL ROAD (TOWN)	0	56				sq.m	Sealed road resurfacing	$11,451.85
2025/26	Reseal	Asphalt	Generic	EAST STREET	397	585				sq.m	Sealed road resurfacing	$1,048.77
2025/26	Reseal	Asphalt	Generic	GOLF ROAD ROUNDABOUT	0	130				sq.m	Sealed road resurfacing	$10,778.51
2025/26	Reseal	Asphalt	Generic	GOLF ROAD ROUNDABOUT #2	0	60				sq.m	Sealed road resurfacing	$5,140.54

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2025/26	Reseal	Asphalt	Generic	RUANUI STREET	0	43				sq.m	Sealed road resurfacing	$3,771.77
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	0	995				sq.m	Sealed road resurfacing	$114,307.89
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	995	1,056				sq.m	Sealed road resurfacing	$6,843.85
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	1,056	1,382				sq.m	Sealed road resurfacing	$37,650.55
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	1,382	1,936				sq.m	Sealed road resurfacing	$67,209.49
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	1,936	2,428				sq.m	Sealed road resurfacing	$64,231.35
2025/26	Reseal	Asphalt	Generic	TAUPO ROAD	2,428	2,574				sq.m	Sealed road resurfacing	$11,168.43
2025/26	Reseal	Chipseal	Generic	ARAWA STREET	0	120				sq.m	Sealed road resurfacing	$15,159.91
2025/26	Reseal	Chipseal	Generic	AYR STREET	108	130				sq.m	Sealed road resurfacing	$2,312.85
2025/26	Reseal	Chipseal	Generic	AYR STREET	319	415				sq.m	Sealed road resurfacing	$14,603.07
2025/26	Reseal	Chipseal	Generic	BELL ROAD (TOWN)	256	299				sq.m	Sealed road resurfacing	$3,115.61
2025/26	Reseal	Chipseal	Generic	BELL ROAD (TOWN)	2,100	2,280				sq.m	Sealed road resurfacing	$29,040.10
2025/26	Reseal	Chipseal	Generic	BURNAND ROAD	2,221	2,318				sq.m	Sealed road resurfacing	$5,519.96
2025/26	Reseal	Chipseal	Generic	CONWAY STREET	120	220				sq.m	Sealed road resurfacing	$8,294.69
2025/26	Reseal	Chipseal	Generic	CONWAY STREET	243	358				sq.m	Sealed road resurfacing	$10,160.55
2025/26	Reseal	Chipseal	Generic	DREADNOUGHT ROAD	0	840				sq.m	Sealed road resurfacing	$54,390.29
2025/26	Reseal	Chipseal	Generic	DREADNOUGHT ROAD	2,318	2,968				sq.m	Sealed road resurfacing	$35,512.71
2025/26	Reseal	Chipseal	Generic	FISHER ROAD	25	45				sq.m	Sealed road resurfacing	$1,594.22
2025/26	Reseal	Chipseal	Generic	GOLDFINCH STREET	163	183				sq.m	Sealed road resurfacing	$2,823.01
2025/26	Reseal	Chipseal	Generic	GOLDFINCH STREET	183	285				sq.m	Sealed road resurfacing	$15,796.75
2025/26	Reseal	Chipseal	Generic	GOLDFINCH STREET	405	674				sq.m	Sealed road resurfacing	$33,842.88
2025/26	Reseal	Chipseal	Generic	GOLDFINCH STREET	707	1,114				sq.m	Sealed road resurfacing	$56,777.82
2025/26	Reseal	Chipseal	Generic	GOLF ROAD	2,390	2,427				sq.m	Sealed road resurfacing	$4,187.60
2025/26	Reseal	Chipseal	Generic	GOLF ROAD	2,623	2,838				sq.m	Sealed road resurfacing	$24,550.18
2025/26	Reseal	Chipseal	Generic	HIKUMUTU ROAD	4,979	5,254				sq.m	Sealed road resurfacing	$17,597.77
2025/26	Reseal	Chipseal	Generic	KATARINA STREET	0	126				sq.m	Sealed road resurfacing	$1,023.39
2025/26	Reseal	Chipseal	Generic	KATARINA STREET	126	262				sq.m	Sealed road resurfacing	$89,233.37
2025/26	Reseal	Chipseal	Generic	KATARINA STREET	262	306				sq.m	Sealed road resurfacing	$66.74
2025/26	Reseal	Chipseal	Generic	MAATA STREET	0	196				sq.m	Sealed road resurfacing	$25,170.35

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2025/26	Reseal	Chipseal	Generic	MAATA STREET	196	270				sq.m	Sealed road resurfacing	$8,988.41
2025/26	Reseal	Chipseal	Generic	MACKENZIE STREET	0	188				sq.m	Sealed road resurfacing	$10,651.48
2025/26	Reseal	Chipseal	Generic	MAKOKOMIKO ROAD	8,653	8,699				sq.m	Sealed road resurfacing	$2,980.80
2025/26	Reseal	Chipseal	Generic	MANGAREWA ROAD	3,901	6,080				sq.m	Sealed road resurfacing	$119,692.48
2025/26	Reseal	Chipseal	Generic	MANGATEITEI ROAD	790	850				sq.m	Sealed road resurfacing	$3,717.05
2025/26	Reseal	Chipseal	Generic	MANGAWHERO TERRACE EXTN.(SOUTH)	0	53				sq.m	Sealed road resurfacing	$4,076.69
2025/26	Reseal	Chipseal	Generic	MARSACK ROAD	3,305	3,329				sq.m	Sealed road resurfacing	$2,584.02
2025/26	Reseal	Chipseal	Generic	MIRO STREET	0	349				sq.m	Sealed road resurfacing	$92,031.50
2025/26	Reseal	Chipseal	Generic	MIRO STREET (OHAKUNE)	0	140				sq.m	Sealed road resurfacing	$18,263.77
2025/26	Reseal	Chipseal	Generic	MIRO STREET (OHAKUNE)	1,477	1,535				sq.m	Sealed road resurfacing	$5,367.07
2025/26	Reseal	Chipseal	Generic	MIRO STREET (OHAKUNE)	1,535	1,809				sq.m	Sealed road resurfacing	$24,774.07
2025/26	Reseal	Chipseal	Generic	MORERO TERRACE	168	303				sq.m	Sealed road resurfacing	$18,956.29
2025/26	Reseal	Chipseal	Generic	MORERO TERRACE	303	427				sq.m	Sealed road resurfacing	$18,126.37
2025/26	Reseal	Chipseal	Generic	NELVIN AVENUE	0	170				sq.m	Sealed road resurfacing	$9,222.55
2025/26	Reseal	Chipseal	Generic	NGAKONUI ONGARUE ROAD	25,959	26,040				sq.m	Sealed road resurfacing	$4,705.73
2025/26	Reseal	Chipseal	Generic	OHINETONGA ROAD	0	25				sq.m	Sealed road resurfacing	$1,274.94
2025/26	Reseal	Chipseal	Generic	OHOEKA STREET	320	345				sq.m	Sealed road resurfacing	$1,274.94
2025/26	Reseal	Chipseal	Generic	OHURA ROAD	0	97				sq.m	Sealed road resurfacing	$7,052.17
2025/26	Reseal	Chipseal	Generic	OHURA ROAD	12,000	12,039				sq.m	Sealed road resurfacing	$2,507.32
2025/26	Reseal	Chipseal	Generic	OHURA ROAD	26,882	27,024				sq.m	Sealed road resurfacing	$8,196.30
2025/26	Reseal	Chipseal	Generic	OHURA SLIP LANE	0	85				sq.m	Sealed road resurfacing	$47.67
2025/26	Reseal	Chipseal	Generic	OIO ROAD	5,133	5,606				sq.m	Sealed road resurfacing	$32,599.10
2025/26	Reseal	Chipseal	Generic	OIO ROAD	5,606	6,986				sq.m	Sealed road resurfacing	$88,137.79
2025/26	Reseal	Chipseal	Generic	OIO ROAD	10,621	12,038				sq.m	Sealed road resurfacing	$85,739.57
2025/26	Reseal	Chipseal	Generic	OIO ROAD	15,958	16,042				sq.m	Sealed road resurfacing	$5,047.41

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Reseal	Chipseal	Generic	OLD STATION ROAD	1,420	1,990				sq.m	Sealed road resurfacing	$42,548.76
2025/26	Reseal	Chipseal	Generic	OLD STATION ROAD	1,990	2,379				sq.m	Sealed road resurfacing	$35,112.34
2025/26	Reseal	Chipseal	Generic	OMATANE ROAD	246	358				sq.m	Sealed road resurfacing	$6,478.00
2025/26	Reseal	Chipseal	Generic	OMATANE ROAD	358	480				sq.m	Sealed road resurfacing	$7,552.50
2025/26	Reseal	Chipseal	Generic	ONGARUE STREAM ROAD	0	23				sq.m	Sealed road resurfacing	$1,795.55
2025/26	Reseal	Chipseal	Generic	ONGE STREET	0	116				sq.m	Sealed road resurfacing	$7,745.40
2025/26	Reseal	Chipseal	Generic	PIPIRIKI RAETIHI ROAD	1,571	2,604				sq.m	Sealed road resurfacing	$72,523.31
2025/26	Reseal	Chipseal	Generic	PIPIRIKI RAETIHI ROAD	4,943	5,185				sq.m	Sealed road resurfacing	$19,677.68
2025/26	Reseal	Chipseal	Generic	RUATITI ROAD	11,919	12,182				sq.m	Sealed road resurfacing	$14,691.69
2025/26	Reseal	Chipseal	Generic	RUATITI ROAD	12,182	12,700				sq.m	Sealed road resurfacing	$23,846.39
2025/26	Reseal	Chipseal	Generic	PONGAHURU ROAD	123	153				sq.m	Sealed road resurfacing	$83.37
2025/26	Reseal	Chipseal	Generic	PONGAHURU ROAD	171	201				sq.m	Sealed road resurfacing	$1,552.87
2025/26	Reseal	Chipseal	Generic	PORO O TARAO ROAD	4,663	7,314				sq.m	Sealed road resurfacing	$1,513.51
2025/26	Reseal	Chipseal	Generic	RAETIHI OHAKUNE ROAD	10,950	11,000				sq.m	Sealed road resurfacing	$4,334.78
2025/26	Reseal	Chipseal	Generic	RAETIHI OHAKUNE ROAD	11,018	11,114				sq.m	Sealed road resurfacing	$8,568.90
2025/26	Reseal	Chipseal	Generic	RAILWAY ROW	650	987				sq.m	Sealed road resurfacing	$24,002.49
2025/26	Reseal	Chipseal	Generic	RANGIPO STREET	0	443				sq.m	Sealed road resurfacing	$47,385.93
2025/26	Reseal	Chipseal	Generic	RATA STREET (OHAKUNE)	120	226				sq.m	Sealed road resurfacing	$9,145.21
2025/26	Reseal	Chipseal	Generic	RIMU STREET (OHAKUNE)	0	64				sq.m	Sealed road resurfacing	$8,382.25
2025/26	Reseal	Chipseal	Generic	REU STREET	0	185				sq.m	Sealed road resurfacing	$23,564.91
2025/26	Reseal	Chipseal	Generic	RUATITI ROAD	15,500	16,296				sq.m	Sealed road resurfacing	$34,525.25
2025/26	Reseal	Chipseal	Generic	SHANNON STREET	252	528				sq.m	Sealed road resurfacing	$24,215.83
2025/26	Reseal	Chipseal	Generic	TARINGAMOTU ROAD	15,470	17,190				sq.m	Sealed road resurfacing	$3,937.44
2025/26	Reseal	Chipseal	Generic	TAUMARUNUI STREET	257	487				sq.m	Sealed road resurfacing	$25,935.51
2025/26	Reseal	Chipseal	Generic	TAUMARUNUI STREET	487	524				sq.m	Sealed road resurfacing	$2,364.40

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2025/26	Reseal	Chipseal	Generic	TAUPO ROAD (SOUTH)	0	47				sq.m	Sealed road resurfacing	$6,372.02
2025/26	Reseal	Chipseal	Generic	THAMES STREET	0	182				sq.m	Sealed road resurfacing	$32,177.33
2025/26	Reseal	Chipseal	Generic	WAIARUHE ROAD	504	1,217				sq.m	Sealed road resurfacing	$42,444.37
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KNIGHTS ROAD	867					ea	Structures maintenance	$8,494.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MANGAWHERO RIVER ROAD						ea	Structures maintenance	$0.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE STREAM ROAD	8,302					ea	Structures maintenance	$23,436.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KAWAUTAHI ROAD	20,068					ea	Structures maintenance	$1,240.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE WAIMIHA ROAD	8,537					ea	Structures maintenance	$8,060.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	TOKIRIMA ROAD	5,709					ea	Structures maintenance	$5,704.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	CUFF ROAD	3,510					ea	Structures maintenance	$3,844.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KAIKARA ROAD	1,248					ea	Structures maintenance	$8,928.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KAWAUTAHI ROAD	17,226					ea	Structures maintenance	$8,022.80
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KOROMIKO ROAD	1,121					ea	Structures maintenance	$2,604.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MANGAKARA ROAD	5,534					ea	Structures maintenance	$4,588.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MAUNGAROA ROAD	2,322					ea	Structures maintenance	$9,052.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MAUNGAROA ROAD	4,433					ea	Structures maintenance	$4,464.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MANGAORAKEI ROAD	2,093					ea	Structures maintenance	$12,400.00
2026/27	Bridge	Bridge	Structural	OLD STATION ROAD	2,385					ea	Structures maintenance	$4,712.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MANGAETUROA SOUTH ROAD	7,023					ea	Structures maintenance	$1,116.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	TARINGAMOTU ROAD	500					ea	Structures maintenance	$0.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	NGAKONUI ONGARUE ROAD	23,502					ea	Structures maintenance	$7,502.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OIO ROAD	18,420					ea	Structures maintenance	$6,324.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OIO ROAD	36,787					ea	Structures maintenance	$14,756.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE BACK ROAD	0					ea	Structures maintenance	$14,384.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE BACK ROAD	12,613					ea	Structures maintenance	$5,952.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ORANGI ROAD	90					ea	Structures maintenance	$11,036.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KIRTON ROAD	9					ea	Structures maintenance	$15,004.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OHURA NORTH ROAD	6,280					ea	Structures maintenance	$1,116.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KURUA ROAD	1,666					ea	Structures maintenance	$7,688.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RIMU ROAD	1,395					ea	Structures maintenance	$7,936.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	TAWATA ROAD	4,632					ea	Structures maintenance	$3,348.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	TE MAIRE VALLEY ROAD	6,426					ea	Structures maintenance	$5,580.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	WAITEWHENA ROAD	6,793					ea	Structures maintenance	$6,944.00
2026/27	Bridge	Bridge	Structural	WAITEWHENA ROAD	19,509					ea	Structures maintenance	$15,376.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	WHAKAMARO ROAD	2,074					ea	Structures maintenance	$7,316.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	DREADNOUGHT ROAD	848					ea	Structures maintenance	$7,254.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	EGMONT STREET	89					ea	Structures maintenance	$6,572.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RAETIHI OHAKUNE ROAD	11,114					ea	Structures maintenance	$19,220.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	PIPIRIKI RAETIHI ROAD	12,655					ea	Structures maintenance	$12,152.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	PIPIRIKI RAETIHI ROAD	19,767					ea	Structures maintenance	$42,160.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	32,980					ea	Structures maintenance	$32,178.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	27,657					ea	Structures maintenance	$6,572.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	20,507					ea	Structures maintenance	$9,610.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RAETIHI OHAKUNE ROAD	11,000					ea	Structures maintenance	$8,618.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ONGARUE STREAM ROAD	23					ea	Structures maintenance	$124.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KAITIEKE ROAD	486					ea	Structures maintenance	$1,612.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	KOKOPUITI ROAD	226					ea	Structures maintenance	$5,332.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	PAPAROA ROAD	7,169					ea	Structures maintenance	$124.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RIMU STREET	35					ea	Structures maintenance	$4,464.00
2026/27	Bridge	Bridge	Structural	TYNE STREET	88					ea	Structures maintenance	$496.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
		Maintenance	Maintenance									
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	NGAKONUI ONGARUE ROAD	16,463					ea	Structures maintenance	$3,038.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	SIMMONS ROAD	1,122					ea	Structures maintenance	$2,542.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	PIPIRIKI RAETIHI ROAD	5,269					ea	Structures maintenance	$62.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	PIPIRIKI RAETIHI ROAD	5,275					ea	Structures maintenance	$682.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MATAI STREET	503					ea	Structures maintenance	$2,542.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	3,105					ea	Structures maintenance	$2,232.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RUATITI ROAD	9,471					ea	Structures maintenance	$992.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	OHURA ROAD	6,860					ea	Structures maintenance	$3,348.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	RURU STREET	37					ea	Structures maintenance	$3,658.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	ORUAKUKURU ROAD	4,772					ea	Structures maintenance	$5,456.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MANGAETUROA SOUTH ROAD	4,783					ea	Structures maintenance	$2,232.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	NGAKONUI ONGARUE ROAD	19,531					ea	Structures maintenance	$1,860.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	TAWATA ROAD	9,910					ea	Structures maintenance	$744.00
2026/27	Bridge	Bridge Maintenance	Structural Maintenance	MAKAKAHI ROAD	5,104					ea	Structures maintenance	$1,860.00
2026/27	Bridge	Bridge Repair	Component Replacement	PAPA ROAD	435					ea	Structures component replacements	$21,142.00
2026/27	Bridge	Bridge Repair	Component	VILES ACCESS ROAD	140					ea	Structures component	$62,620.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
			Replacement								replacements	
2026/27	Bridge	Bridge Repair	Component Replacement	KIRIKAU VALLEY ROAD	58					ea	Structures component replacements	$149,172.00
2026/27	Bridge	Bridge Repair	Component Replacement	PAPAROA ROAD	10					ea	Structures component replacements	$49,848.00
2026/27	Bridge	Bridge Repair	Component Replacement	WOODS ROAD	1,583					ea	Structures component replacements	$79,236.00
2026/27	Bridge	Bridge Repair	Component Replacement	MANGAKARA ROAD	5,315					ea	Structures component replacements	$14,384.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	TE MAIRE VALLEY ROAD	1,137					ea	Structures component replacements	$41,292.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	UEPANGO ROAD	1,506					ea	Structures component replacements	$20,832.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	ARAWA STREET	764					ea	Structures component replacements	$26,350.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	GOLDFINCH STREET	678					ea	Structures component replacements	$22,072.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	ORUAKUKURU ROAD	15,950					ea	Structures component replacements	$56,420.00
2026/27	Culvert	Large Culvert Repair	Component Replacement	MANGAWHERO RIVER ROAD	894					ea	Structures component replacements	$40,114.00
2026/27	Project	Project	RTZ - Taumarunui	SHORT STREET						sq.m	Unsubsidised	$75,000.00
2026/27	Project	Project	RTZ - School Speeds	KAITIEKE ROAD						sq.m	Unsubsidised	$10,000.00
2026/27	Project	Project	RTZ - School Speeds	NGAPUKE ROAD						sq.m	Unsubsidised	$10,000.00
2026/27	Project	Project	RTZ - School Speeds	TARINGAMOTU ROAD						sq.m	Unsubsidised	$10,000.00
2026/27	Project	Project	RTZ - School Speeds	TOKIRIMA ROAD						sq.m	Unsubsidised	$10,000.00
2026/27	Project	Project	RTZ - School Speeds	ONGARUE VILLAGE ROAD						sq.m	Unsubsidised	$10,000.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2026/27	Project	Project	RTZ - Ohakune	TAINUI STREET						sq.m	Unsubsidised	$5,000.00
2026/27	Project	Project	RTZ - Ohakune	MIRO STREET (OHAKUNE)						sq.m	Unsubsidised	$10,000.00
2026/27	Rehab	Reconstruction	Generic	OHAHUKURA SADDLE ROAD	30	300		5.5		sq.m	Sealed road pavement rehabilitation	$1,017,600.00
2026/27	Rehab	Reconstruction	Generic	MANGAPARO ROAD	5,500	8,000		5.5		sq.m	Sealed road pavement rehabilitation	$1,200,000.00
2026/27	Reseal	Asphalt	Generic	BELL ROAD (LINK TO SH)	0	74				sq.m	Sealed road resurfacing	$1,273.61
2026/27	Reseal	Asphalt	Generic	GOLDFINCH STREET	0	163				sq.m	Sealed road resurfacing	$50,362.38
2026/27	Reseal	Asphalt	Generic	GOLF ROAD	0	36				sq.m	Sealed road resurfacing	$22,519.26
2026/27	Reseal	Asphalt	Generic	HIKAIA STREET	0	136				sq.m	Sealed road resurfacing	$57.21
2026/27	Reseal	Asphalt	Generic	MARAE STREET	0	136				sq.m	Sealed road resurfacing	$16,645.56
2026/27	Reseal	Chipseal	Generic	ALEXANDRA ROAD	0	74				sq.m	Sealed road resurfacing	$33.15
2026/27	Reseal	Chipseal	Generic	ALEXANDRA ROAD	74	512				sq.m	Sealed road resurfacing	$683.14
2026/27	Reseal	Chipseal	Generic	ALEXANDRA ROAD	512	832				sq.m	Sealed road resurfacing	$2,528.14
2026/27	Reseal	Chipseal	Generic	BELL ROAD (TOWN)	56	256				sq.m	Sealed road resurfacing	$785.80
2026/27	Reseal	Chipseal	Generic	BUDDO STREET	0	179				sq.m	Sealed road resurfacing	$349.66
2026/27	Reseal	Chipseal	Generic	BUDDO STREET	406	545				sq.m	Sealed road resurfacing	$541.57
2026/27	Reseal	Chipseal	Generic	BUDDO STREET	545	607				sq.m	Sealed road resurfacing	$259.31
2026/27	Reseal	Chipseal	Generic	BUDDO STREET	607	628				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	BURNAND ROAD	2,120	2,209				sq.m	Sealed road resurfacing	$838.35
2026/27	Reseal	Chipseal	Generic	CONWAY STREET	0	120				sq.m	Sealed road resurfacing	$225.05
2026/27	Reseal	Chipseal	Generic	CONWAY STREET	220	243				sq.m	Sealed road resurfacing	$95.34
2026/27	Reseal	Chipseal	Generic	DREADNOUGHT ROAD	854	2,306				sq.m	Sealed road resurfacing	$6,986.42
2026/27	Reseal	Chipseal	Generic	DREADNOUGHT ROAD	2,968	3,254				sq.m	Sealed road resurfacing	$35,863.89
2026/27	Reseal	Chipseal	Generic	DREADNOUGHT ROAD	3,254	3,401				sq.m	Sealed road resurfacing	$6,851.95
2026/27	Reseal	Chipseal	Generic	DUNCAN STREET	560	722				sq.m	Sealed road resurfacing	$280.60
2026/27	Reseal	Chipseal	Generic	DUNCAN STREET	722	857				sq.m	Sealed road resurfacing	$719.06
2026/27	Reseal	Chipseal	Generic	FISHER ROAD	0	25				sq.m	Sealed road resurfacing	$76.27
2026/27	Reseal	Chipseal	Generic	GOLDFINCH STREET	685	707				sq.m	Sealed road resurfacing	$45.23
2026/27	Reseal	Chipseal	Generic	GOLDFINCH STREET	1,114	1,150				sq.m	Sealed road resurfacing	$0.00

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2026/27	Reseal	Chipseal	Generic	GOLF COURSE ROAD	0	557				sq.m	Sealed road resurfacing	$1,282.92
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	36	75				sq.m	Sealed road resurfacing	$20,938.21
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	140	360				sq.m	Sealed road resurfacing	$829.04
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	668	760				sq.m	Sealed road resurfacing	$43,621.37
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	1,616	1,688				sq.m	Sealed road resurfacing	$19.07
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	1,688	2,314				sq.m	Sealed road resurfacing	$753.21
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	2,314	2,390				sq.m	Sealed road resurfacing	$476.72
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	2,427	2,447				sq.m	Sealed road resurfacing	$76.27
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	2,467	2,503				sq.m	Sealed road resurfacing	$9.53
2026/27	Reseal	Chipseal	Generic	GOLF ROAD	2,503	2,623				sq.m	Sealed road resurfacing	$144.90
2026/27	Reseal	Chipseal	Generic	GREY STREET	0	425				sq.m	Sealed road resurfacing	$3,523.26
2026/27	Reseal	Chipseal	Generic	GREY STREET	425	914				sq.m	Sealed road resurfacing	$7,396.18
2026/27	Reseal	Chipseal	Generic	GREY STREET	914	1,155				sq.m	Sealed road resurfacing	$198.34
2026/27	Reseal	Chipseal	Generic	GREY STREET	1,155	1,466				sq.m	Sealed road resurfacing	$272.84
2026/27	Reseal	Chipseal	Generic	HIKUMUTU ROAD	5,947	9,192				sq.m	Sealed road resurfacing	$11,607.01
2026/27	Reseal	Chipseal	Generic	HIKUMUTU ROAD	9,220	9,613				sq.m	Sealed road resurfacing	$166.19
2026/27	Reseal	Chipseal	Generic	HILLVIEW CRESCENT	0	158				sq.m	Sealed road resurfacing	$617.73
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	0	53				sq.m	Sealed road resurfacing	$30,479.65
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	53	264				sq.m	Sealed road resurfacing	$104,496.01
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	264	499				sq.m	Sealed road resurfacing	$437.25
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	499	636				sq.m	Sealed road resurfacing	$33.15
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	636	949				sq.m	Sealed road resurfacing	$564.08
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	949	1,157				sq.m	Sealed road resurfacing	$66.30
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	1,157	1,275				sq.m	Sealed road resurfacing	$162.08
2026/27	Reseal	Chipseal	Generic	LAIRDVALE ROAD	1,275	1,545				sq.m	Sealed road resurfacing	$577.80
2026/27	Reseal	Chipseal	Generic	MARAE STREET	136	382				sq.m	Sealed road resurfacing	$1,105.76
2026/27	Reseal	Chipseal	Generic	MARSACK ROAD	50	91				sq.m	Sealed road resurfacing	$6,746.77
2026/27	Reseal	Chipseal	Generic	MARSACK ROAD	91	112				sq.m	Sealed road resurfacing	$3,455.66
2026/27	Reseal	Chipseal	Generic	MARSACK ROAD	112	1,350				sq.m	Sealed road resurfacing	$7,930.43

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2026/27	Reseal	Chipseal	Generic	MARSACK ROAD	1,350	2,543				sq.m	Sealed road resurfacing	$6,982.99
2026/27	Reseal	Chipseal	Generic	MIDDLE ROAD	7,751	8,319				sq.m	Sealed road resurfacing	$34,271.64
2026/27	Reseal	Chipseal	Generic	MARTIN PLACE	0	112				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	MARTIN PLACE (NORTH)	0	54				sq.m	Sealed road resurfacing	$54.71
2026/27	Reseal	Chipseal	Generic	MIDDLE ROAD	10,864	13,327				sq.m	Sealed road resurfacing	$5,332.56
2026/27	Reseal	Chipseal	Generic	MIDDLE ROAD	13,327	13,352				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	MIRO STREET	349	1,076				sq.m	Sealed road resurfacing	$9,788.07
2026/27	Reseal	Chipseal	Generic	MIRO STREET	1,076	1,187				sq.m	Sealed road resurfacing	$3,398.42
2026/27	Reseal	Chipseal	Generic	MIRO STREET	1,187	2,129				sq.m	Sealed road resurfacing	$9,691.84
2026/27	Reseal	Chipseal	Generic	MIRO STREET	2,129	2,302				sq.m	Sealed road resurfacing	$10,439.17
2026/27	Reseal	Chipseal	Generic	MIRO STREET	2,302	2,324				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	PLUNKET STREET	0	336				sq.m	Sealed road resurfacing	$957.31
2026/27	Reseal	Chipseal	Generic	TAITUA STREET	0	238				sq.m	Sealed road resurfacing	$97.45
2026/27	Reseal	Chipseal	Generic	TAWHERO ROAD	0	200				sq.m	Sealed road resurfacing	$120.18
2026/27	Reseal	Chipseal	Generic	TAWHERO ROAD	200	400				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	TAWHERO ROAD	400	642				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	TURAKINA VALLEY ROAD	0	34				sq.m	Sealed road resurfacing	$1,134.36
2026/27	Reseal	Chipseal	Generic	TURAKINA VALLEY ROAD	34	1,519				sq.m	Sealed road resurfacing	$7,368.02
2026/27	Reseal	Chipseal	Generic	TURAKINA VALLEY ROAD	1,527	1,901				sq.m	Sealed road resurfacing	$1,050.88
2026/27	Reseal	Chipseal	Generic	TUROA DRIVE ROUNDABOUT	0	83				sq.m	Sealed road resurfacing	$35.70
2026/27	Reseal	Chipseal	Generic	WAIMARINO ROAD	0	41				sq.m	Sealed road resurfacing	$5,385.33
2026/27	Reseal	Chipseal	Generic	WAIMARINO ROAD	41	105				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	WAIMARINO ROAD	105	199				sq.m	Sealed road resurfacing	$181.15
2026/27	Reseal	Chipseal	Generic	WAIONE ROAD	2,608	2,630				sq.m	Sealed road resurfacing	$9.53
2026/27	Reseal	Chipseal	Generic	WAIONE ROAD	2,630	2,658				sq.m	Sealed road resurfacing	$1,798.99
2026/27	Reseal	Chipseal	Generic	WAIONE ROAD	2,678	2,839				sq.m	Sealed road resurfacing	$1,162.19
2026/27	Reseal	Chipseal	Generic	WAIONE ROAD	2,839	2,852				sq.m	Sealed road resurfacing	$0.00

Work Year	Work Group	Work Type	Work Subtype	Road	Start (m)	End (m)	Length (m)	Width (m)	Area	Unit of Measure	Work Fund Category Final	Total Project Cost
2026/27	Reseal	Chipseal	Generic	WAITEA BRANCH ROAD	3,711	3,787				sq.m	Sealed road resurfacing	$251.22
2026/27	Reseal	Chipseal	Generic	WAITEA BRANCH ROAD	3,787	4,098				sq.m	Sealed road resurfacing	$18,760.20
2026/27	Reseal	Chipseal	Generic	WAITEA BRANCH ROAD	4,098	4,250				sq.m	Sealed road resurfacing	$36.14
2026/27	Reseal	Chipseal	Generic	WAITEA BRANCH ROAD	4,250	4,280				sq.m	Sealed road resurfacing	$0.00
2026/27	Reseal	Chipseal	Generic	WHANGAEHU VALLEY ROAD	8,292	9,106				sq.m	Sealed road resurfacing	$52,381.55
2026/27	Reseal	Chipseal	Generic	WHANGANUI RIVER ROAD	0	245				sq.m	Sealed road resurfacing	$11,331.96
2026/27	Reseal	Chipseal	Generic	WHANGANUI RIVER ROAD	255	3,950				sq.m	Sealed road resurfacing	$12,612.88

Appendix I - Request for Service Targets

ID	Subtype	Priority	Schedule	Complete
ROADING*ASSIST COUNCIL	ASSIST COUNCIL (ROADING USE ON	Routine	2 days	15 days
ROADING*BRIDGE	BRIDGE ISSUES	Routine	2 days	15 days
ROADING*BUILDING	BUILDING MOVEMENTS	Routine	1 day	5 days
ROADING*ENGINEER	CONTRACT ENGINEER REQUIRED	Routine	1 day	5 days
ROADING*CORRUGATIONS	CORRUGATIONS	Routine	2 days	15 days
ROADING*CULVERT	CULVERT ISSUES	Routine	2 days	15 days
ROADING*CULVERT	CULVERT ISSUES	Urgent	4 hrs	3 days
ROADING*FLOODING	FLOODING OF THE ROAD	Urgent	4 hrs	3 days
ROADING*FOOTPATH	FOOTPATH ISSUES	Routine	2 days	15 days
ROADING*KERB	KERB AND CHANNEL ISSUES	Routine	2 days	15 days
ROADING*LITTER	LITTER	Routine	2 days	15 days
ROADING*LITTER	LITTER	Urgent	4 hrs	2 days
ROADING*MOWING	MOWING	Routine	2 days	15 days
ROADING*NO SPRAY	NO SPRAY REQUEST	Routine	3 days	15 days
ROADING*NZTA SH4 RAE_WHAN	NZTA SH4 RAE TO WHANG AKA PARA	Routine	1 day	5 days
ROADING*POTHOLES	POTHOLES	Routine	1 day	5 days
ROADING*RAPID_NUM	RAPID NUMBER PLATES	Routine	1 day	10 days
ROADING*CAPITAL	ROADING TEAM TO INVESTIGATE	Routine	1 day	5 days
ROADING*SLIPS	SLIPS	Emergency	30 mins	2 days
ROADING*SPRAYING	SPRAYING	Routine	2 days	15 days
ROADING*STREET_LIGHT	STREET LIGHT ISSUES	Routine	4 days	30 days
ROADING*STREET_LIGHT	STREET LIGHT ISSUES	Emergency	4 hrs	2 days
ROADING*ROAD_SIGNS	STREET SIGNS	Routine	2 days	15 days
ROADING*ROAD_SIGNS	STREET SIGNS	Urgent	1 day	3 days
ROADING*SURFACE - SEALED	SURFACE ISSUES SEALED ROAD	Routine	2 days	15 days
ROADING*SURFACE - SEALED	SURFACE ISSUES SEALED ROAD	Urgent	1 day	5 days
ROADING*SURFACE - UNSEALED	SURFACE ISSUES UNSEALED ROAD	Routine	2 days	15 days
ROADING*SURFACE - UNSEALED	SURFACE ISSUES UNSEALED ROAD	Urgent	1 day	5 days
ROADING*TREES	TREES FALLEN OR STANDING	Routine	2 days	15 days
ROADING*TREES	TREES FALLEN OR STANDING	Urgent	1 day	5 days
ROADING*UNDERSLIP	UNDERSLIP	Emergency	30 mins	2 days
ROADING*URBAN ADDRESSES	URBAN ADDRESS ISSUES	Routine	1 day	10 days
ROADING*WATER_CHAN	WATER CHANNEL ISSUES	Routine	2 days	15 days
ROADING*WATER_CHAN	WATER CHANNEL ISSUES	Urgent	1 day	3 days

Appendix J - Smart Buyer Self-Assessment

NZTA – Smart Buyer Self- Assessment for Council as at March 2023

This assessment is based on the Smart Buyer Principles identified in the Road Maintenance Task Force Report. Score the following byticking the appropriate box - (1) Disagree to (5) Strongly Agree

Ruapehu District Council - Assessment statement **Our Organisation**	**Score**				
	1	**2**	**3**	**4**	**5**
1. Fully understands the different contracting models available. *RDC contracting strategy and consideration of maintenance contract options, use of Network Consultant.*					x
2. Holds meetings that updates the contracting industry on the forward works programme and any changes it is taking in approach and proactively engages with the contracting industry to ensure that gains optimal value out of any changes being implemented. *RDC with Network Consultant has close working relationships with contractors. In the last 12 months, RDC is also increasing its engagement with contractors.*					x
3. Has sufficient robust data (or is in the process of gathering robust data) on our networks that enables optimal integrated decision-making. *RDC good data but could improve (see NZTA audit)*			x		
4. Has access to expertise that fully enables best use of the data available. *RDC has good skills in analysing data to useful information and knowledge, and applying that.*				x	
5. Is open to alternative solutions to those proposed in the contract documents. *RDC contracting has performance and outputs to encourage alternative best value solutions.*				x	
6. Understands risk and how to allocate and manage it. *RDC PESTLE risk assessment and responsive culture to hazards and call centre requests. High focus on public safety.*				x	
7. Has a Council that is prepared to pay more now to achieve a lower whole of life cost. *RDC constant assessment of long-term value in contracts and works programmes*				x	
8. Actively pursues value for money & does not always award contracts to the lowest price. *RDC focus on contract specs, commercial drivers and performance criteria.*				x	
9. Is able to manage supplier relationships / contracts to ensure that expenditure is optimal and sustains infrastructural assets at appropriate levels of service. *RDC with Network Consultant develops closer working relationships with contractors and focus on long-term value*					x
10. Supports ongoing skill and competency training and development for its staff. *RDC staff attendance at courses, conferences and industry forum and training sessions*				x	
11. Actively participates in gatherings to share and gain knowledge within the sector. *RDC staff attendance at courses, conferences and industry forum and training sessions*				x	
12. Is effective in keeping up with best practice in procurement including best practice RFP / contract documentation. *RDC contracting strategy, use of specialist consultant.*					x
13. Regularly seeks and receives candid feedback from suppliers on its own performance as a client and consistently looks to improve its performance. *RDC with Network Consultant has developed a close working relationship with contractors that encourages feedback.*				x	
14. Explores opportunities for collaboration by either sharing in-house resources with neighbours, or by procuring together or tendering together. That exploration could be through an LGA s17A evaluation of transport function delivery options. *RDC with contracting strategy*				x	

Ruapehu District Council - Assessment statement Our Organisation	Score				
	1	2	3	4	5
and Network Consultant forged collaborative working relationships with contractors. Joint tendering with neighbouring councils not a preferred option at this time – although has been investigated or implemented previously with neighbours, examples include previous Streetlight Contract, Road marking and associations through MWLASS.					
Number of ticks in each column			1	10	4
Multiplying factor	x1	x2	x3	x4	x5
Total Score in Column			3	40	20
Total Score	**63**				

Score: **Interpretation**
65 to 70: Our organisation is a Smart Buyer - people love working for us and with us!
55 to 64: **Our organisation has embraced Smart Buyer principles as still has some areas where it can improve**

45 to 54: Our organisation gets by but has opportunities for improvement
30 to 44: Our organisation is not rocking the boat when it comes to pursuing value for money

0 to 29: Our organisation is a bit of a basket case!

If you were to repeat this assessment in say one or two years' time, how do you expect it will have changed, which questions will show the greatest change (up or down) and what action / inaction on the part of your organisation will have been the driver of that change?

The need for 'smarter buyers' (pages 36 and 37 of the RMTF report)

A theme that underpins a number of the conclusions of this review is that RCAs must be both efficient and effective managers of their road assets and smart buyers of the services they require. These issues strongly relate to the concept of 'smart procurement' with a balanced focus across 'the three Es':

1. Economy – through securing (or supporting) the provision of products, materials and expertise at the quality, in the volumes and at the times and locations required, at the lowest price
2. Efficiency – through the processes used, including standard documentation and contracting forms selected for achieving best cost / quality and outcomes; and knowledge of the product / materials and supplier market applied
3. Effectiveness – taking opportunities for changing from traditional products and materials by maintaining support for innovation in the nature and characteristics of products and materials, and for a strong supplier market

The impact of raising the capability of RCAs would include reduced supplier selection process costs, better management of risk and more objective assessment of performance for use in future supplier selection processes.
The contracting industry has provided the following useful analysis of the characteristics of a smart buyer: Some RCAs are smart buyers but this is believed to be the exception.

Smart buyers have:

- An improved understanding of costs that better inform their decision making process
- An understanding of the impact delivery models and supplier selection criteria can have on the value of contracts
- Robust forward work programmes that are communicated to the industry and supported by budgets that allows the work to be completed
- Knowledge of the network to determine treatments required based on physical evidence and supported by knowledge of the costs involved
- In house expertise that aids the decision making process and allows acceptance of innovative solutions possibly with or without the involvement of consultants
- A clear understanding of risk and how it is allocated and managed
- An understanding that lowest price will not always deliver desirable outcomes
- An understanding that being prepared to pay more may result in enhanced whole of life value for money.

Not so smart buyers:

- Award contracts predominately based on price – with little appreciation of any risk to best value for money
- Outsource work to the detriment of asset knowledge
- Choose contract forms that are fashionable, not well understood and poorly managed
- Lack technical and contractual management skills
- Lack asset management skills that prevent the development of robust forward work programmes
- Do not support forward work programmes with appropriate budgets.

Task Force members debated the nuances around individual items in these lists but believe that they provide a platform on which to build a list of the characteristics that would be exhibited by an RCA that has the capability and the capacity to be a smart buyer.

One Task Force member described a smart buyer in the following terms:
A 'smart buyer' RCA ensures its staff are up-to-date, regularly shares best practice experiences with colleagues from other agencies, and supports and resources their teams appropriately in the recognition that getting the strategic direction right is a very small cost compared to the consequence of getting it wrong. This requires staff to be involved in regular training, attendance and participation in sector gatherings, and involvement in NZTA investigating teams and the like. Ironically in the interests of 'cost-saving' many agencies are limiting staff involvement in these activities. A smart buyer does not ask the question – what if I train my staff and they leave? – but rather asks the question – what if I don't train my staff and they stay?