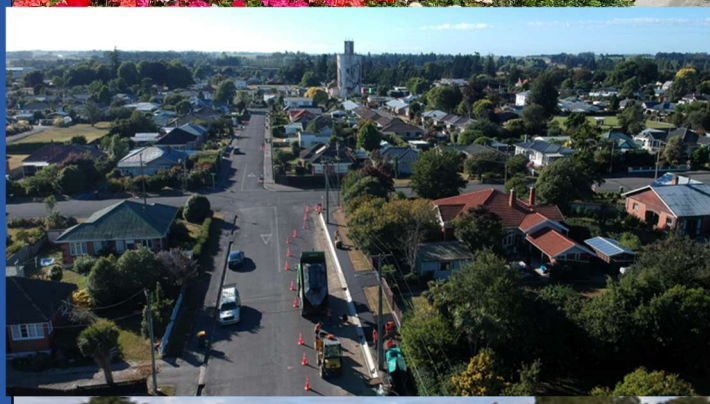
Roading Activity Management Plan

For the Waimate District Council

2024-34

150 Years of Public Funded Roads

1874 - 2024



Waimate District Council

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Roading Activity Management Plan

for the Waimate District Council

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UPDATE REGISTER

Version Number	Date	Description of Update	Updated By
Version 1	July 2000	Opus International Consultants	M Keast
Version 2	October 2003	Opus International Consultants	J Park/F Northover
Version 3	September 2007	Major Revision of first versions of AMP Opus International Consultants	B Fauth / R Moffat
Version 4	November 2011	Update following AMP Compliance Status Report completed by Waugh Infrastructure Management Ltd, April 2011	Grant Holland Robert Moffat
Version 5	December 2014	Updates throughout document Waimate DC and Waugh Infrastructure Management Ltd	Grant Holland Robert Moffat
Version 6	12 December 2017	Updates throughout document Waimate DC and Waugh Infrastructure Management Ltd	Robert Moffat Grant Holland
Version 7	September 2020 August 2021	Updates throughout document Waimate DC and Waugh Infrastructure Management Ltd	Robert Moffat Grant Holland
Version 8	August 2023	Update of Executive Summary and Glossary of Terms and moved Glossary of Terms to the appendices.	Jo Yeo Rob Moffat
	September-December 2023	Updating of Main AMP document	Rob Moffat Jo Yeo
	September – October 2024	Update Approved NLTP Update Final Strategies information	Rob Moffat Jo Yeo
		Adopted by Council 15 October 2024	
	November 2024	Update to include Years 4 to 10 numbers ,Methodology for selecting individual roads for Reseal and Overlay and 3 year Programme	Rob Moffat Jo Yeo
		Adopted by Council 17 December 2024	
	March 2025	updated assumptions for LTP page 289	Rob Moffat

PREFACE

Welcome to the Waimate District Council's Roading Activity Management Plan. For over 150 years, we have been pioneers in infrastructure development, consistently delivering fit for purpose roading services to our community.

This document is your guide to our strategies, activities, and procedures for managing and maintaining our road network. Our primary goal is to provide a safe, efficient, and sustainable transportation system that caters to our community's needs, and fuels economic growth and productivity. We are dedicated to upholding the highest service standards while minimising the environmental impact of our operations.

Considering current financial challenges, we have stuck to our conservative budgeting approach. This has allowed us to develop a practical, no-nonsense budget focused on essential expenditures. Our main objective is to ensure operational continuity, recognising the financial constraints of all our stakeholders.

We would like to express our gratitude to the devoted Councillors and staff who have contributed to the development of our road network over the past century and a half. Their innovative thinking, commitment, and hard work have been pivotal in shaping the infrastructure we depend on daily. We take pride in our progress over the years, and we acknowledge that it would not have been possible without the dedication of our staff and contractors.

We invite everyone to engage with this plan especially NZ Transport Agency Waka Kotahi (NZTA), provide feedback, and join us on our journey towards a safer, more efficient, and sustainable road network. Your support and cooperation are greatly appreciated.

Thank you,

Robert Moffat

Roading Manager

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1 EXECUTIVE SUMMARY

1.1 Purpose of Roading Asset Management Planning

This Activity Management Plan for Roading 2024-34 (AMP) has been developed to provide the Waimate District Council (WDC) with a long-term management tool for roading activities. It documents management, planning, financial, engineering, and technical best-practices to ensure that the levels of service required is provided cost-effectively for the current and future community.

"*An AM Plan documents the organisation's intended AM programmes for management of its assets and services based on the organisation's understanding of service level requirements and the network's capability to meet those requirements. The AM Plan can be considered as a business case for the long-term financial forecasts and should drive strategic thinking and planning and ensure the organisation is operating in a financially sustainable manner. AM Plans can also act as a vehicle for communication with customers and other parties on different funding scenarios and impacts on service levels and risk.*" (IIMM Version 6.0, 2020).

1.2 Plan Level

Council has undertaken a structured assessment of the appropriate level of asset management practice for the Roading assets, see Section 2.2. This has been adopted by Council through the Asset Management Policy Statement.

This analysis of factors suggested that asset management practice should at least be at '**Core**' level for Roading. The previous AMP has been reviewed and the approach to update the AMP to a level of Core or higher of Asset Management has been taken. The following principles are used by Council to guide asset management planning and decision making in Roading assets:

- Appropriate Levels of Service (LoS) are determined through effective consultation.
- Service delivery needs form the basis of asset management (AM)
- Asset management decision making is transparent and accountable.
- Asset management is integrated with corporate, financial, business, and budgetary planning using Asset/Activity Management Plans (AMP) and Council's Long Term Plan (LTP)
- Council collaborates with neighbouring authorities and other agencies including NZ Transport Agency Waka Kotahi (NZTA) and Environment Canterbury (ECan)
- Informed asset planning decision making, takes a lifecycle management and inter-generational approach.
- Sustainable management provides for present needs whilst sustaining resources for future generations.

1.3 Assets Included in This Plan

The Roading assets include all Council-owned and maintained roads, streets, bridges, footpaths, and related infrastructure within the District, as summarised in Table 1.1. The roading network incorporates 1,325 kilometres of maintained roading, of which 51% is unsealed, and 55km classified as urban.

Table 1.1 - Roading Assets (as of August 2023)[1]

Asset	Quantity		
Total Length of Road	1,325 km		
Sealed Road	651 km	Urban 49.1 km	Rural 601.9 km
Unsealed Road	674 km	Urban 6.3 km	Rural 668.0 km
Bridges	182	3,369 m	
Culverts	3,544	37,226 m	
Concrete Fords	90	1,750 m	
Kerb and Channel	49,131 m		
Signs	4,752		
Street Lights	493		
Footpaths	63 km		

Table 1.2 summarises Council's 2022 valuation of the Roading assets, assessed as having a total replacement value of $576 million, excluding unformed ('paper') roads.

An annual depreciation or decline in service potential figure is used to determine an affordable programme of work necessary to maintain the network within pre-determined financial constraints. This has been valued at $3.8 million per annum, a 29.3% increase compared to the 2020 RAMM valuation.

Table 1.2 - Road Asset Valuation Summary (June 2022)[2]

Asset	Optimised Replacement Cost	Optimised Depreciated Replacement Cost	Annual Depreciation
Land	$80,672,118	$80,672,118	$0
Formation	$190,302,784	$190,302,784	$0
Unsealed Pavement Structure	$39,908,447	$39,908,447	$0
Seal Pavement Structure	$132,544,528	$73,255,555	$1,039,236
Sealed Pavement Surface	$23,740,366	$12,991,324	$1,367,712
Bridges	$54,571,726	$25,913,519	$568,476
Drainage	$24,947,687	$11,565,610	$251,706
Drain Fords	$2,942,405	$730,119	$65,028
Footpaths	$9,329,617	$3,368,775	$305,570
Signs	$765,300	$535,710	$33,755
Street Lighting	$591,401	$355,057	$19,422
Surface Water Channels	$15,111,622	$6,719,503	$151,461
Traffic Facilities	$114,373	$55,825	$3,900
Total Road Assets	**$575,542,374**	**$446,374,346**	**$3,806,266**

[1] All data is taken from Waimate District Council's RAMM database for roading assets.
[2] WSP Auckland, NZ, Road Asset Valuation as at 30 June 2022 – Waimate District Council, November 2022

1.4 Key Problem Statements

Council has identified key challenges faced by the Organisation in continuing to deliver roading services that meet the levels of service required by customers in the most cost-effective way, at an asset/activity management level.

- Figure 1.1 displays the District's Key Problem Statements against the National, Regional, and Local strategic directions.
- Table 1.3 details the impacts and benefits of addressing these key problem statements and sets the strategic context for Council's Activity Management Plan.

Figure 1.1 - Waimate District Council Roading Services Key Problem Statements 2024

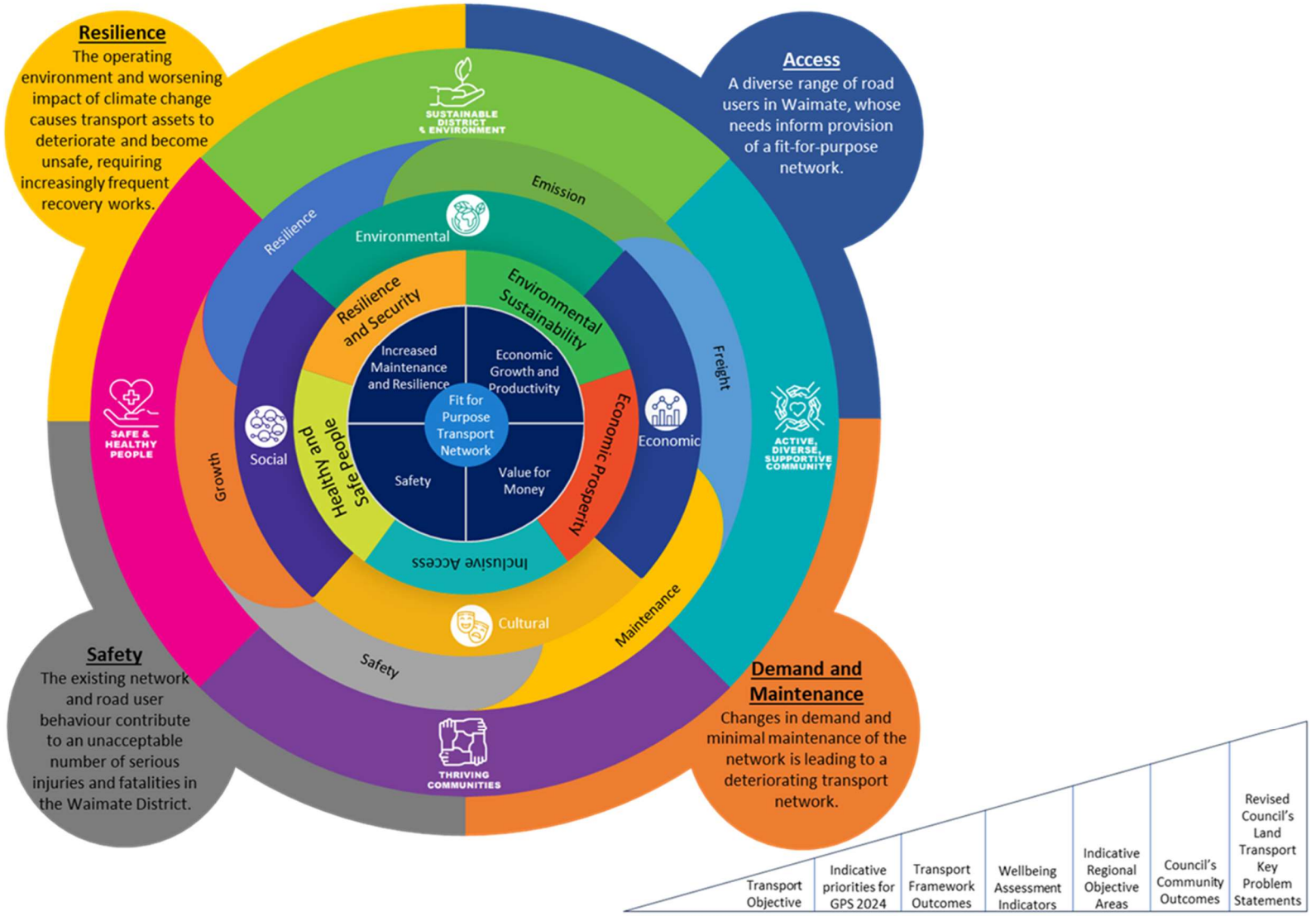


Table 1.3 - Key Problem Statements, Impacts, and Benefits

Key Problem Statement	Impacts on the Network	Community Benefits	Management Benefits
Resilience The operating environment and worsening impact of climate change causes transport assets to deteriorate and become unsafe, requiring increasingly frequent recovery works.	• Limited pavement strength • Decreased road user safety. • Drainage studies to identify future planning and strategies. • Pavement strength analyses identify significant issues within flood-prone areas • Insufficient drainage • Flood damage of assets • Limited access	• Reliability of network • Safer roads • Access maintained. • Comfort and customer experience maintained / improved. • Social and economic benefits through maintenance of network and access	• Levels of service met. • Safer network provided. • Proactive maintenance and renewals can be prioritised on road assets most at risk. • Minimised wet weather event disruptions • Progressive climate change adaptation • Reduced emergency works and recovery
Safety The existing network and road user behaviour contribute to an unacceptable number of serious injuries and fatalities in the Waimate District.	• Compromised safety on the network • Potential inconsistency between other Districts • Social and economic impact of fatalities and serious injuries	• Improved road safety for the network • Safer, better informed road users • Regionally aligned approaches to informing road user choices and system management • Improvements on infrastructure and speed management	• *Road-to-Zero* objectives progressively achieved. • Contribution to Regional and National initiatives, strategic goals, and objectives. • Reduction in deaths and serious injuries

Key Problem Statement	Impacts on the Network	Community Benefits	Management Benefits
Access A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network.	• Increase in allowable larger, oversized, and overweight vehicles on network. • Width and strength of pavements and structures (bridges) not suitable for load and size • Suitability of assets for different users (including pedestrians and cyclists)	• Improved community well-being and resilience • All road users considered. • Active transport users (pedestrians and cyclists) are given greater priority. • Safety improvements for active transport users • Suitability of assets for different users (including pedestrians and cyclists) • Network enables local economy	• Levels of service met. • More resilient roading network • Safer network • Greater accessibility to all road users • Accessibility for Mobility Scooters • Reduction in VKT and carbon emissions
Demand and Maintenance Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network.	• Bow-wave of pavement seals (1963-73 rapid construction – 30km/yr. seal extension) • Levels of service not met (performance) • Network no longer fit for purpose across the network. • Increase in allowable larger, oversized, and overweight vehicles. • Pavement strength and width challenged (including pavement structure) • Natural water courses lost (due to intensive land use – reshaping of watercourses), causing surface flooding	• Low costs to date • Levels of service and expectations met. • Safer network • Accessible network • Efficient use of resources • Network resilience	• Council rates and NZTA investment has been minimised to date. • Levels of service and expectations met. • Bridge capacity prioritised • Aging assets are addressed in a timely manner. • Appropriate quantities of proactive maintenance and renewals can be prioritised on road assets most at risk

1.5 Key Stakeholders and Customers

1.5.1 Key Stakeholders

The Council is the ultimate owner of the roading assets, as the designated Road Controlling Authority. The Crown entity established to manage Roading activities is NZ Transport Agency Waka Kotahi (NZTA). Other key stakeholders of the roading network include:

- Environment Canterbury Regional Council (ECan)
- Owners and operators of inter-connecting or co-located networks, including NZTA State Highways and NZTA-appointed representatives, such as network contractors, neighbouring territorial authorities, and Department of Conservation Te Papa Atawhai (DOC)
- Road users (customers), as detailed in Table 1.4
- Representative road-user groups such as Transporting New Zealand: Ia Ara Aotearoa, Federated Farmers, and others. These are distinct from users (Council's customers)
- Council employees, and Council-appointed consultants and contractors who manage and work on the District's roading assets.

1.5.1.1 Customer Groups

Waimate District Council's customers fall into three different groups, detailed in Table 1.4.

Table 1.4 - Roading Customer Groups

Customer Group	Description	Customers
Users	Those who directly use the service	• Private drivers • Commercial and freight road users • Drivers of public and other transport services (e.g., tourist buses) • Active road users including pedestrians and cyclists
Associated Service Providers	These are other service providers who rely on the Roading network	• Contractors • Utilities service providers – use the road corridor to co-locate and access their assets. • Transport operators. • Emergency Services
The Wider Community	Non-users that are affected if the service is not provided	• Residents • Ratepayers • Tourists • Event organisers • Residents who live beside the roads • Local businesses – requiring access

1.5.1.2 Aoraki Roading Collaboration (ARC) – Mid-South Canterbury (Waimate, Mackenzie, Timaru, and Ashburton District Councils)

Since 2014, a strong collaboration has developed across Mid-South Canterbury Councils, which has ensured cost-effective service delivery in-line with industry best practice. The development of a common Maintenance Contract document between Waimate, Mackenzie, Timaru, and Ashburton

District Councils has formed an excellent platform for greater alignment of transportation services delivery. It has also supported cost-effective procurement of physical works and professional services.

The latest work is in the draft Delineation Strategy.

1.5.2 Funding Partners

Funding is provided by two significant parties:

- **NZ Transport Agency Waka Kotahi (NZTA)**

  NZTA co-invests, in accordance with operational requirements at a current Financial Assistance Rate (FAR) of 68%[3]. This is to fund the District's Maintenance, Operations, Renewals, Low-Cost Low Risk (Capital work), and Road Safety Programmes.

- **Ratepayers**

  Local Council rates provide funding for all roading non-subsidised activities and the remaining "local share" of roading costs qualifying for Financial Assistance from NZTA.

1.5.3 Mana Whenua

Council recognises Te Rūnanga o Waihao as mana whenua with ancestral and cultural relationships within the Waimate District and recognises Te Rūnanga o Ngāi Tahu as the iwi authority whose rohe (boundary) covers the Waimate District.

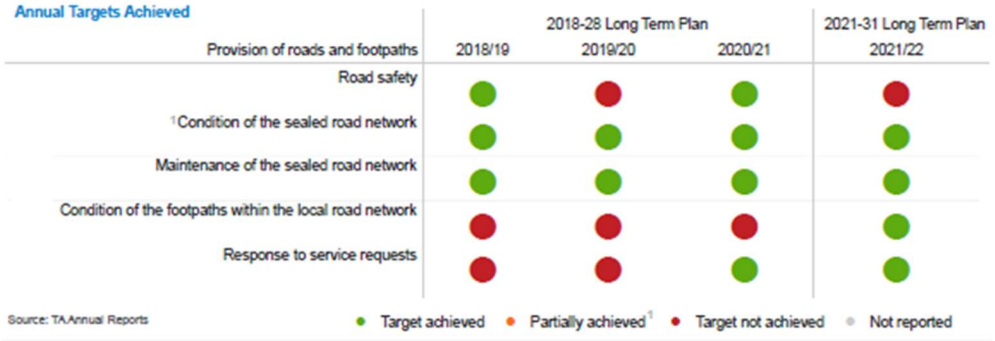
Council values the contribution Māori make to Council decision-making and have identified some Council-led initiatives to address the requirements[4].

1.6 Level of Service

The Roading asset comprises of a diversity of components including road pavements, surfaces, bridges, footpaths, drainage, signs, and streetlighting assets. Levels of Service (LoS) in this AMP cover key service attributes, such as accessibility, affordability, efficiency, quality, reliability, responsiveness, and safety.

LoS measures are expressed in terms of both "Customer Performance Measures", which measure the service received by the user, and "Technical Performance Measures", which measure how the organisation provides the service. Section 5 sets-out a framework for defining Levels of Service.

Figure 1.2 - Service Performance 2021/22 (August 2023 Transport Insights Te Ringa Maimoa)



(LGA Non-Financial Performance Measures)

[3] NZTA FARs 2024-27 NLTP
[4] Participation of Māori in the Decision-making Process - Waimate District Council (waimatedc.govt.nz)

1.7 Growth and Future Demands

The Waimate District roading network caters predominantly for low volume rural traffic on sealed and unsealed roads with only 55 kilometres (4.2%) of the network classified as urban road. The network includes just five kilometres of rural roads that caters for a traffic loading greater than 1,000vpd, classified as Primary Collector in the One Network Road Classification (ONRC) hierarchy, Figure 1.3. According to One Network Framework (ONF) hierarchy, most of the roads are classified as Rural Roads (83.1%), Figure 1.4, and as shown in Figure 1.5, most of the vehicle journeys are on Rural Roads and Rural Connectors.

Figure 1.3 - Network Percentage Length and Journeys Travelled (2023/24, Transport Insight)

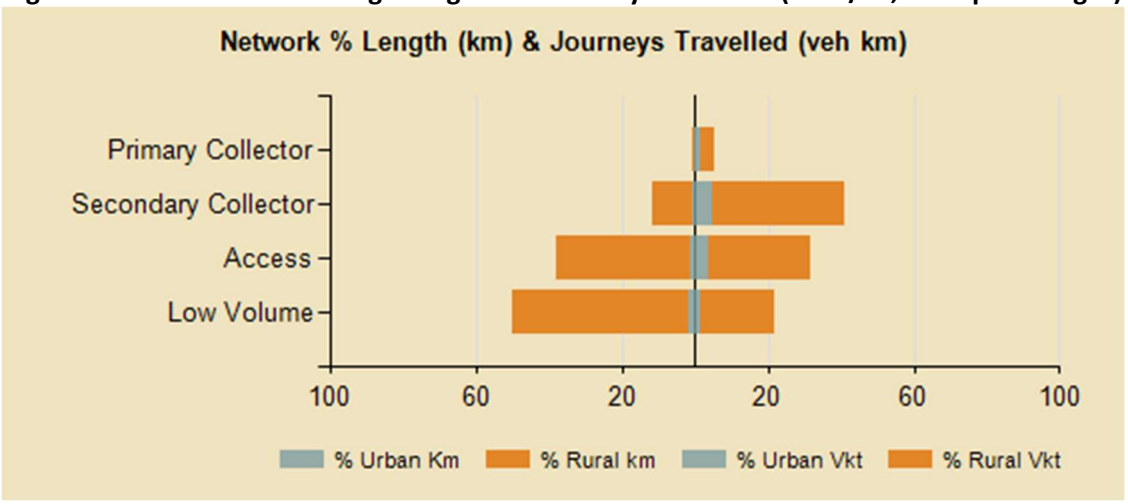


Figure 1.4 - Network Length by ONF Category (2023/24, Transport Insight)

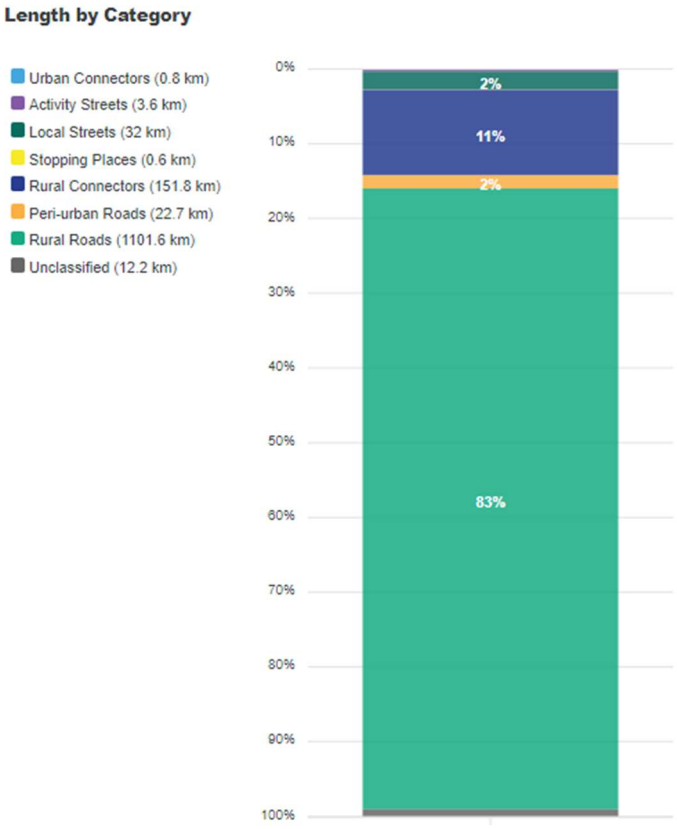
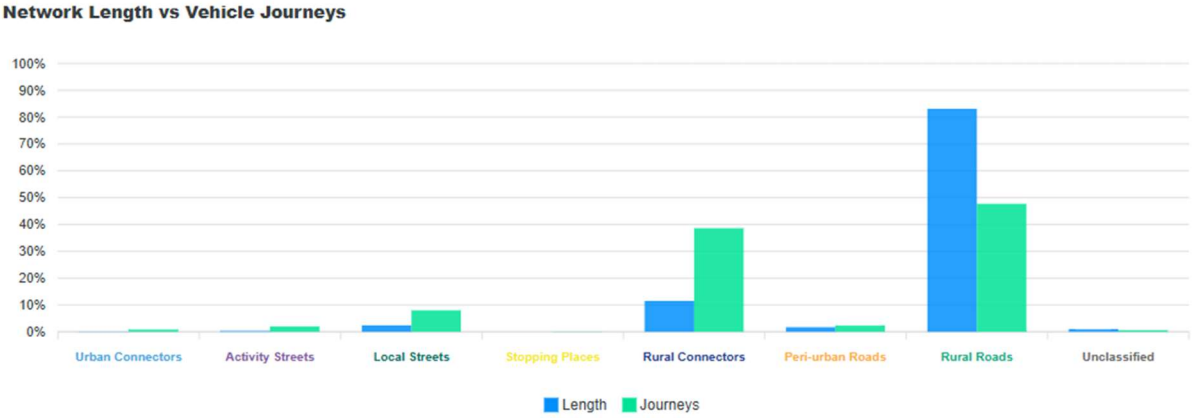


Figure 1.5 - Network Length Verses Vehicle Journey by ONF Category (2023/24, Transport Insight)



The 2018 Census population of Waimate District was 7,815[5] and the "Estimate Resident Population" as at 30 June 2023 for the Waimate District was 8,400[6]. The recommended medium growth scenario projects the District's population to increase to 9,500 in 2053, at an average rate of 0.4% growth per year between 2023 and 2053), Section 6.1.1.1. Over the last three years, COIVD-19 has changed the world and the way people think, move, and live. Anecdotally, the demand for properties in the Waimate District has increased with affordable housing, the changes in the working world (working remotely), and nearing future retirees are seeing the District as an attractive lifestyle option.

Population growth is likely to have minimal impact on future demand on the roading network. Trends in the mix of heavy traffic associated with land use changes within the District are likely to have a greater effect on Council's roading assets. To get a better prediction of likely demand, Council is currently reviewing their Traffic Count Strategy and data quality. This allows the Council to assess asset performance as utilisation of the asset changes, and review whether key assets provide sufficient capacity for current and future use. Further detail on growth and demand planning is provided in Section 6.

1.8 Sustainability

Transport legislation and policy in New Zealand calls for the need to rebuild after recent weather events and strengthen the resilience of the entire transport system for all New Zealanders[7]. The key strategic priorities identified in the GPS 2024 are Economic Growth and Productivity, Increased Maintenance and Resilience, Safety, and Value for Money. This means that Council must look at more sustainable revenue and ensure that roading services works and network management is delivered in a Value for Money manner, while supporting community resilience, safety, and economic growth and productivity.

As part of Canterbury Regional Council's Land Transport Plan, the key priorities are Maintenance, Resilience, Emissions, Growth, Safety, and Freight. This means that Council must ensure that the roading service works and network management is must also delivered in a manner that can mitigate the likely impacts of climate change, minimises and environmental harm.

Whilst there are no significant negative effects assessed as resulting from the Council's roading activities, opportunities exist to deliver road asset development and management services to reduce

[5] Statistics New Zealand, 2018 Population Usually resident population counts)
[6] Statistics New Zealand, 2023 population estimates
[7] Government Policy Statement on land transport 2024/34 - June 2024 (GPS 2024).

the negative impact for Waimate District's residents on the social, economic, environmental, or cultural well-being of the community.

Sustainability also considers the management of Council's staff and resourcing to ensure continued cost-effective delivery of roading activities and where possible, the reduction in travel demand and carbon emissions. There is a need to build-in a means of succession planning for roading's engineering (technical) and physical works (contracting) practices and procedures.

Planning for climate change adaptation, network resilience, emergency management response and recovery (Section 6.4), insurances of assets, and reduction of emission is required.

1.9 Risk Management

Council has a Risk Management Policy in place. A Risk Management Strategy has been described in Section 7 of this AMP.

Due to the collaborative effort of the Aoraki Roading Collaboration (ARC), a joint risk management assessment was undertaken. The types of risks considered are:

- Planning Risks
- Management Risks
- Delivery Risks
- Physical Asset Risks.

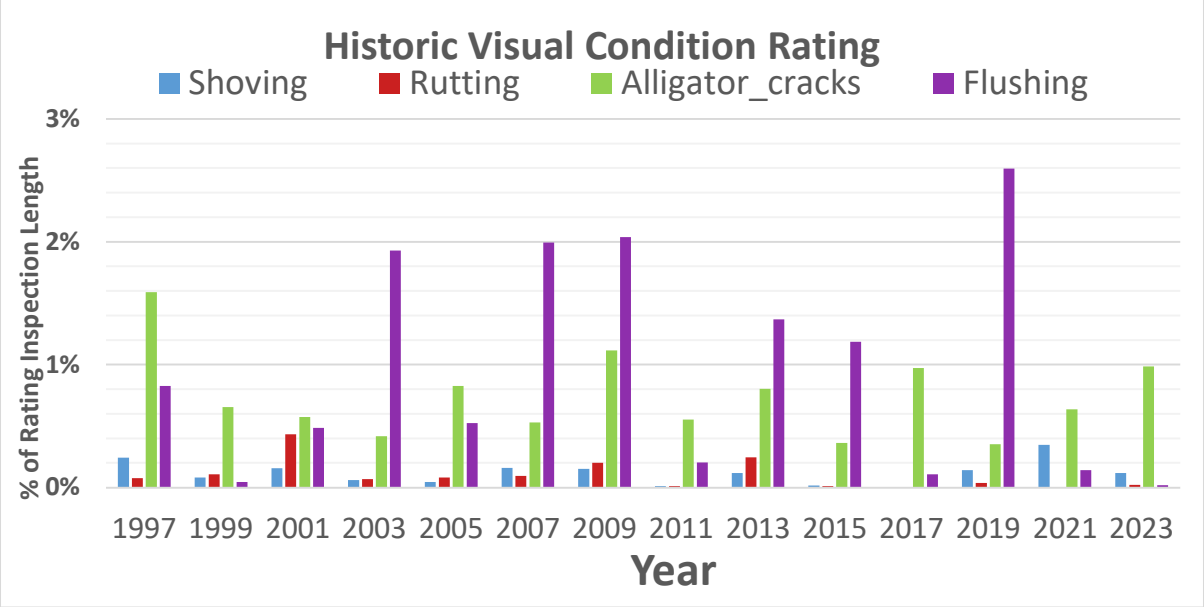
1.10 Lifecycle Management Plan

Council's Lifecycle Management planning identifies the maintenance, operations, and renewals activities required to keep the road assets operating at the currently established levels of service (LoS) in the most cost-effective manner. The Lifecycle Management Plan, Section 9, ensures that current strategies do not consume the asset, leading to an unexpected increase in maintenance/renewal expenditure in the future.

Waimate District Council undertakes condition and performance analysis of the network relying on the practical experience and knowledge of engineering staff to provide a gauge of network performance. This knowledge is used extensively for current and future planning purposes. Regular condition surveys of the asset components need to be undertaken, and the results and data recorded to ensure that an improved understanding of asset capacity at current service levels is developed.

Figure 1.6 shows the historical results from visual condition rating for sealed roads. This shows that the overall network condition was improved significantly in the 1990's and since then, it has remained relatively stable. This is indicating that maintenance and renewal levels for sealed roads are appropriate to maintain the condition of the pavements at an acceptable level, against the increase in heavy traffic mix and ages of parts of the network.

Figure 1.6 - Historical Visual Condition Rating Data for Sealed Roads (as at 2023)



Current asset management practice applies a combination of "reactive" condition driven and network lifecycle depreciation techniques to determine the work necessary to maintain the network within pre-determined financial constraints. Budgets quantities have been based on inspections and accurate historical quantities and costs, and future demands and growth. Increased investment is required above the NLTP 2021-24 due to cost increases a result of re-tendering the Road Network Operations and Maintenance Contract and inflation.

The increases include additional proactive drainage maintenance and renewals to provide network resilience.

This AMP recommends renewal works to the following transport infrastructure asset groups:

- **Sealed road resurfacing**

  The amount of delayed reseal has reduced, although there are roads over the expected life there is no backlog. The annual resurfacing area required is 5% of the total seal area or 181,000 m². This will reseal a small backlog of road which are over their expected life in a three-year period.

- **Pavement renewal/Rehabilitation**

  The quantities of pavement renewal required is based on road condition inspection and maintenance cost assessment. Use of additional modelling using surface and pavement strength (MSD) survey data is being developed. Initial results have informed some recommendations for prioritised sealed road renewals in the 2024 AMP period and the ability to fund renewals.

  Given the large proportion of pavements that were constructed in the same periods (1965 to 1973), Council is aware of the potential 'bow-wave' of rehabilitation and resealing works.

  The Council plans to complete modelling to determine a sustainable level for future pavement renewals, with any changes implemented in the 2027-30 Activity Management Plan.

- **Drainage**

  Roadside drainage is a key activity for:

- **Pavement Performance**

  Maximising the life of pavements by protecting them from ingress of water. This includes prioritising appropriate drainage works for roads in potential flood zones.

- **Traffic Risk**

  Poor drainage results water on the carriageway which is significant traffic safety risk.

- **Storm Damage Resilience**

  Uncontrolled water flows on the road pavement and shoulders causes erosion and gravel loss.

  The amount of road drainage work completed in past years has been **insufficient**, especially given the change in groundwater conditions arising from irrigation and weather events the District has faced. The increased drainage maintenance and constructed in the last two years has already reduced and prevented storm damage to the network.

  The urban kerb and channel network has 7,500m of assets , which are beyond end of their useful lives, these sections need to be replaced for pavement protection, safety, and amenity purposes. Council proposes to renew these sections over a 10-year period.

  Some Culvert assets are at or nearing the end of their useful life and provide insufficient capacity in extreme weather events. These assets will need to be progressively replaced.

- **Bridges**

  Council has a lists the bridges (Table 9.28 - List of Bridge Structures Component Replacement / Renewals. (Updated as of February 2025)) that are prioritised for structural component replacements over the next 10 years.

  Council is considering the future need of the following weight restricted side bridges, Scarletts Bridge on Fletchers Road, and Lundys Bridge on Crowes Road.

- **Footpaths**

  Footpaths provide a safe facility for pedestrians to encourage active transport modes They also provide safe routes for vulnerable users, such as the elderly, disabled, and young, to move to and from places within their community. Levels of service gaps are noticeable for the footpath asset Council proposes to renew 3,500 m² per year, which is modest amount. It will take 25 years to bring the footpaths to the desired standard.

Council has no specific plans for the disposal of any Roading assets within the term of this AMP apart the above identified weight restricted side bridges. This is subject to receiving adequate funding.

1.11 Financial Forecasts

The following tables shows Council's forecast for the Roading assets. A full forward budget and forecasts are shown Section 10. Funding for the management, operational and maintenance, and renewal work for the roading network is provided from the District's roading rates and NZTA's Financial Assistance, as identified in Section 1.5.2.

Table 1.5 - Roading Forecast Expenditure 2024-27 (as at October 2024)

Roading Budget Summary	2024-25	2025-26	2026-27	3 year Programme Totals
Maintenance & Operation (NZTA Assisted Programme)	$3,164,347	$3,202,634	$3,275,413	$9,642,394
Renewals (NZTA Assisted Programme)	$3,743,946	$3,553,286	$3,633,896	$10,931,129
New & Improved (NZTA Assisted Programme)	$0	$0	$0	$0
Resilience Programme (Crown Assisted Programme – FAR 84%)	$0	$0	$50,000	$50,000
Road Safety Promotion (NZTA Assisted Programme)	RSP Cluster arrangements with Timaru DC			
Maintenance & Operation (Non-Assisted Programme)	$147,200	$182,644	$186,030	$515,874
Renewal, New & Improved Infrastructure (Non-Assisted Programme)	$276,800	$32,000	$32,000	$340,800
Internal Costs	$502,827	$572,759	$613,699	$1,689,285
Total	**$7,885,120**	**$7,543,323**	**$7,741,038**	**$23,169,482**

Figure 1.7 - Average Annual Roading Expenditure 2024-27 (October 2024)

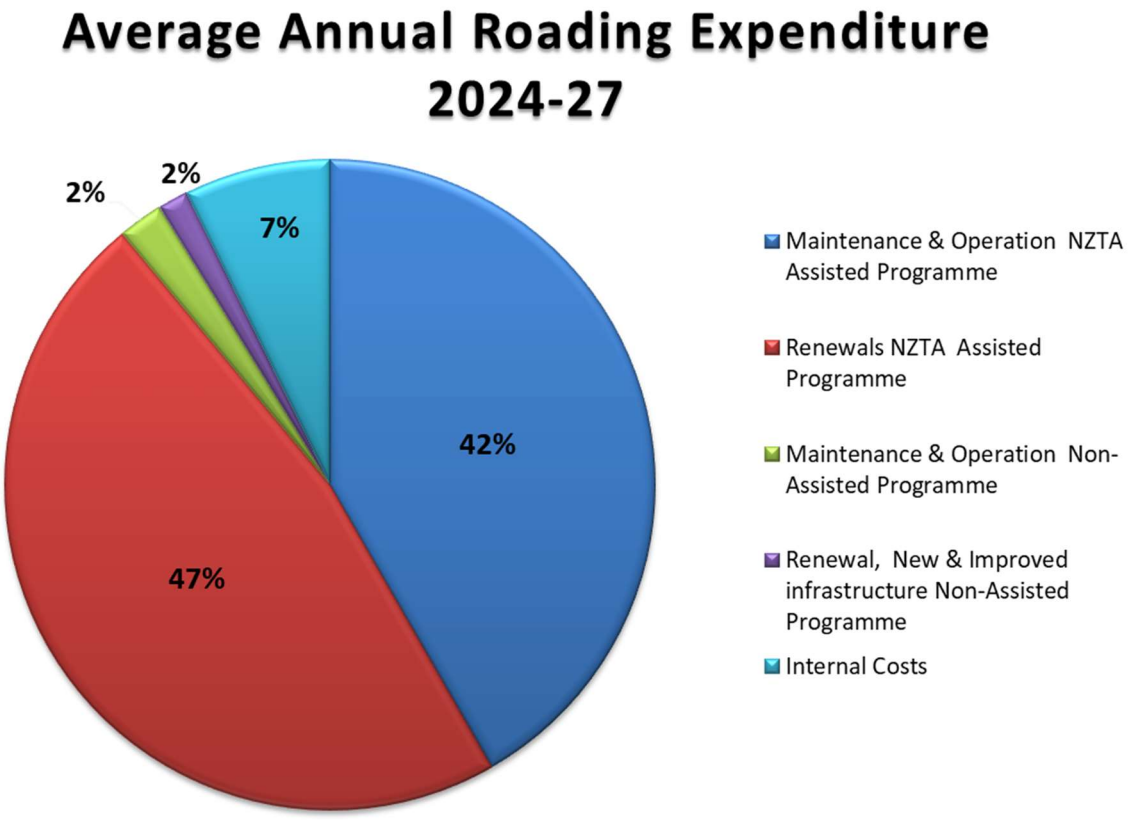


Table 1.6 - Roading Forecast Expenditure 2024-34 (as at November 2024)

Roading Budget Summary	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	10 year Programme Totals
Maintenance & Operation Waka Kotahi Assisted Programme	$3,164,347	$3,202,634	$3,275,413	$3,431,776	$3,524,527	$3,616,308	$3,706,473	$3,795,669	$3,886,481	$3,972,121	**$35,575,748**
Renewals Waka Kotahi Assisted Programme	$3,743,946	$3,553,286	$3,633,896	$4,595,637	$4,719,844	$4,842,752	$4,963,496	$5,082,942	$5,204,552	$5,319,237	**$45,659,588**
New & Improved Waka Kotahi Assisted Programme	$0	$0	$50,000	$530,950	$545,300	$559,500	$573,450	$587,250	$601,300	$614,550	**$4,062,300**
Road Safety Promotion Waka Kotahi Assisted Programme	RSP Cluster arrangements with Timaru DC										
Maintenance & Operation Non- Assisted Programme	$147,200	$182,644	$186,030	$156,312	$160,536	$164,717	$168,824	$172,886	$177,023	$180,924	**$1,697,095**
Renewal, New & Improved infrastructure Non-Assisted Programme	$160,000	$40,000	$41,240	$169,904	$174,496	$179,040	$183,504	$187,920	$192,416	$196,656	**$1,525,176**
Internal Costs	$504,230	$514,314	$525,912	$535,442	$549,913	$564,233	$578,301	$592,218	$606,387	$619,749	**$5,590,699**
Total	**$7,719,724**	**$7,492,878**	**$7,712,490**	**$9,420,021**	**$9,674,616**	**$9,926,550**	**$10,174,048**	**$10,418,885**	**$10,668,158**	**$10,903,237**	**$94,110,606**

Figure 1.8 - Average Annual Roading Expenditure 2024-34 (October 2024)

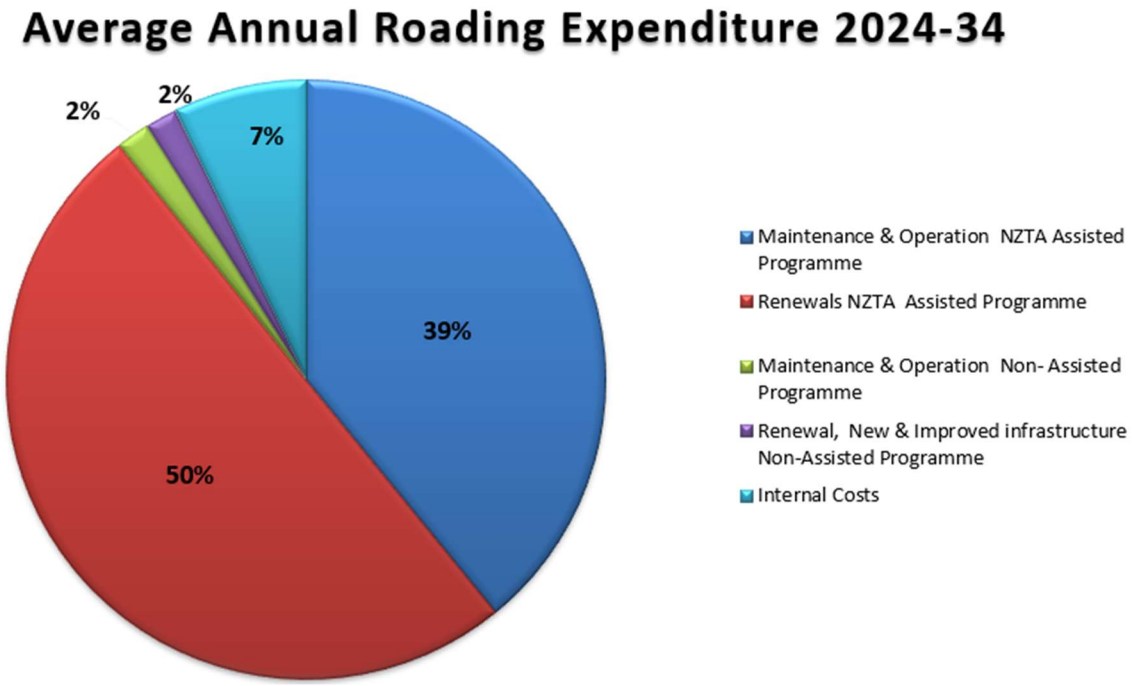
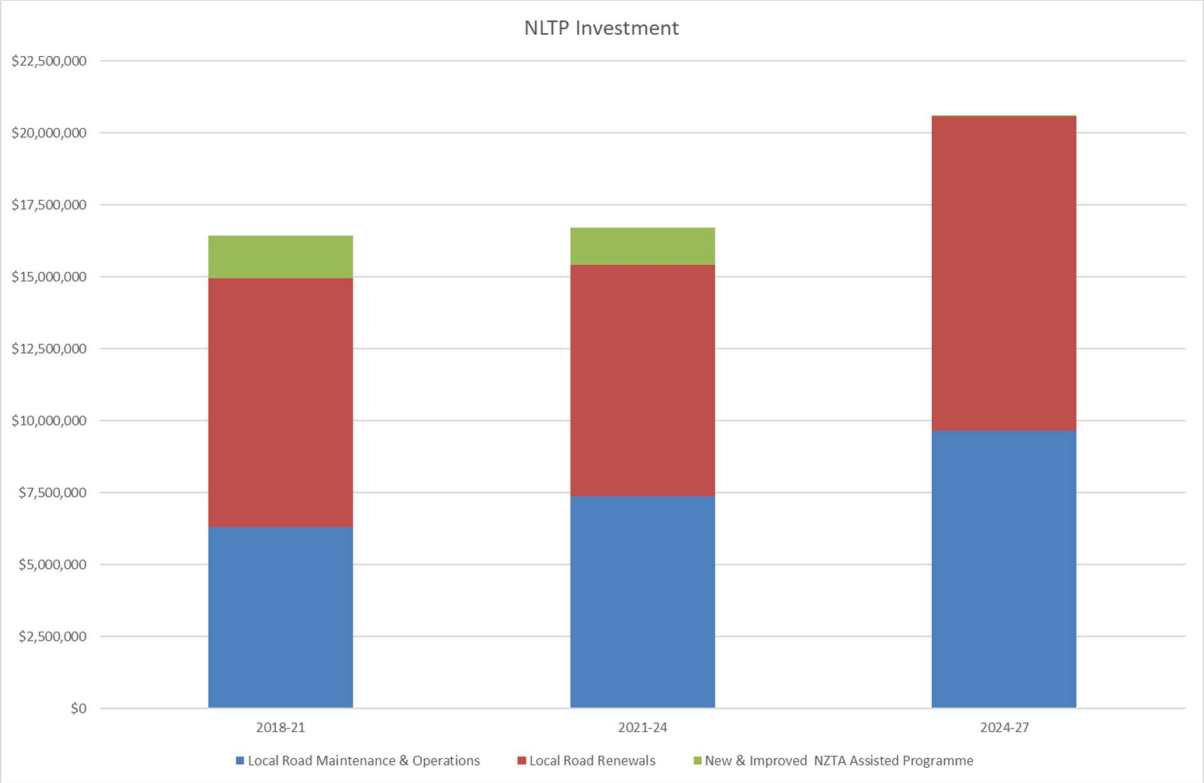


Table 1.7 - NLTP "Continuous Programmes" Historical Investment (as at October 2024)

Activity area	2018-21	2021-24	2024-27	Change $	Change %
Local Road Maintenance & Operations	$6,305,943	$7,374,368	$9,642,394	$2,268,026	31%
Local Road Renewals	$8,651,004	$8,044,577	$10,931,129	$2,886,552	36%
New & Improved NZTA Assisted Programme	$1,480,190	$1,283,760	$50,000	-$1,233,760	-96%
Total	$16,437,137	$16,702,704	$20,623,523	$3,920,818	23%

Figure 1.9 - NLTP "Continuous Programe" Histroical Investment (October 2024)



1.12 Processes and Asset Management Practices

1.12.1 Asset Management Practices

Waimate District Council employs and has the following staff responsible for the management of the roading assets:

- Roading Manager
- Roading Technician (Vacant)
- Senior Roading Officer
- Roading Officer
- Road Asset Information Technician
- Technical Support Officer – Roading – Part-time

Council Roading programme is delivered through a combination of in-house staff, external professional service consultants, and physical works contractors.

1.12.2 Roading Procurement Processes

In line with Council's NZTA Approved and Endorsed Procurement Strategy 2023, Council seeks to procure goods and services to support the community in an affordable and efficient manner. Within this approach, Council will consider the most appropriate bundling of work for maintenance and construction (renewal and improvement) in terms of Council's objective and the market's ability, capacity, and competitiveness.

While retaining scope for in-house teams and small local suppliers along with the benefits to the local economy they can provide, Council also has a responsibility to recognise the efficiencies and benefits derived from larger and longer-term maintenance and construction contracts. Competitive tendering, where price and quality are evaluated, will be used to select suppliers for road maintenance and large capital projects in general. In some cases, direct appointment may be the most effective approach, and this will be considered in terms of specialisation, market competitiveness, and the overall cost and efficiency to Council (value-for-money).

Opportunities for collaboration with other organisations will be considered where the procurement situation warrants such investigation. It is essential that collaborating organisations have compatible goals and operational procedures. Council has agreed to work closely with the other South and Mid-Canterbury Councils through Aoraki Roading Collaboration (ARC).

1.12.3 New Zealand Transport Agency Audits

1.12.3.1 Technical Audit

NZTA's Technical Audit of Waimate District Council was completed over 12-15 April 2021. Overall, it was mentioned that the road network is generally in good condition and the smooth travel index has been slowly declining since 2010/11. Council has the lowest cost per kilometre of maintenance expenditure compared with the rural districts peer group and nationally for the previous three years. Overall, "Some Improvement Needed" and 10 recommendation items were defined. For more details, refer to Section 11.2.4.1.

1.12.3.2 Procedural Audit

NZTA's Procedural Audit was conducted between 1-4 May 2023 for 1 July 2019 to 30 June 2022 period. Overall, the audit rated Council's procedures as "Effective", with eight recommendations and suggestions. The subject area that requires some improvement is in the "Procurement Procedures". For more details, refer to Section 11.2.4.2.

1.13 Plan Improvement and Monitoring

Council has developed this AMP based on its current knowledge of customer requirements, the configuration of the existing and future network to meet customer requirements, current asset information, and the strategies being adopted to achieve customer outcomes. To further develop the AMP to support asset management processes, systems, and data, Council recognises the need for ongoing improvement, which includes:

- Pavement modelling
- Traffic counting and Demand Management
- Footpath programmes

- Emissions baselining
- Review of the plans by internal staff and suitably qualified external consultants
- Developing an AMP that meets the requirements of the community
- Benchmarking key performance indicators against similar external TLAs
- A corporate commitment to implementing and maintaining suitable AM information systems
- Adopting a team approach to the preparation of future AMPs in order to maximise the buy-in of internal staff and sharing of specialised knowledge.

1.14 Key Assumptions and Confidence Level

There are significant assumptions and confidence level that have been made in the development of this AMP.

- Asset data, from RAMM database as at June 2023, has been taken as the verified network asset.
- Future changes in government requirements may affect the required Levels of Service and Strategic Priorities.
- No specific consultation or research has been conducted to determine future demands on the road network. Council has a moderate level of confidence in future demands based on current available information.
- The knowledge and reliance of Council's practitioners (Council's Roading staff, Council's consultants, and Council's contractors) directly providing current information to the development of this Roading AMP. This includes information collected from Residents Survey, Section 5.4.3.1.

The following are key financial forecast assumptions made:

- NZTA will continue to co-invest and provide financial assistance to Council for the road network.
- Council will continue to fund the current levels of service identified in this AMP.
- The dollar value shown in this AMP are October 2024 dollars, adjusted for inflation applicable to Roading Activity. (Adjusted using BERL Cost adjusters - October 2024)
- Some renewal costs are rough order of cost estimates that will require to be further researched and refined.
- No account has been taken of the impacts related to the development, acceptance, and implementation of the Risk Management Plan.
- Assumptions were made on 'Total Useful Life' and 'Residual Useful Life' of assets in relation to the asset valuation.
- Asset data is fit-for-purpose and reliable for the development of the long-term financial forecast.
- NZTA Funding Assistance Rate (FAR) subsidy will remain the same for the 10-year period of this plan and there will be no other NZTA funding changes.
- Funding Sources will be from NZTA National Land Transport Fund (NLTF) and Council Property Rates.

2 INTRODUCTION

2.1 Purpose of the Plan

Activity/Asset Management Plans (AMPs) are the main method of demonstrating the Local Government Act 2002, Schedule 10 – requirements. Council will also use the AMPs as a means to fulfil its statutory obligations for compliance with the following Acts and the Office of the Auditor-General for its assets and activities:

- Local Government Act 2002
- Resource Management Act 1991
- Building Act 2004
- Land Transport Management Act 2003
- Health Act 1956.

The objective of Asset/Activity Management planning is:

"*To provide the required level of service, in the most cost-effective manner, through management of assets for existing and future customers.*"

The purpose of this Activity Management Plan (AMP) is to:

i. Deliver on local government's purpose to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future.

ii. Demonstrate that the roading assets are operated and maintained in a sustainable, prudent and cost-effective manner, so that they provide the required levels of service (LoS) for current and future customers.

iii. Demonstrate regulatory compliance, which includes ensuring the Long Term Plan (LTP) is supported by:

- Quality information and assumptions underlying forecast information.
- Framework for forecast information and performance measures are appropriate to assess meaningful Levels of Service

iv. Demonstrate that the Asset/Activity Management (AM) level will be achieved.

The AMP has been prepared with the intention of an annual review of the financial statements and a three yearly review of the remainder of the AMP.

2.2 Asset Management Policy Statement for Roading Activity

The Waimate District Council Asset Management Policy Statement for the Roading Activity:

- Sets the direction of the roading asset management process
- Sets the appropriate level of asset management practice for the activity
- Ensure that Council's service delivery is optimised to deliver agreed Council's Community Outcomes and Levels of Service (LoS)
- Manage related risks
- Optimise expenditure over the entire lifecycle of the service delivery using appropriate assets as required.

The appropriate level of asset management practice identified for Council's Roading Activity is 'Core' practice, with some 'Intermediate' elements as highlighted by the Asset Management Maturity Assessment[8].

'Core' asset management practice is basic technical asset management planning undertaken at a level designed to meet minimum legislative and organisational requirements for financial planning and reporting. 'Core' practice provides technical management outputs for current levels of service, demand management, asset lifecycles, asset forward replacement programmes, new capital expenditure, and associated cash flow projections.

2.2.1 Policy Linkages to Other Plans

This Asset Management Policy links to, Council's LTP, the Canterbury Regional Land Transport Plan (RLTP), and Council's Roading Activity Management Plan (AMP). NZ Transportation Agency Waka Kotahi (NZTA) requires minimum asset management practice from the Policy. The Aoraki Roading Collaboration Group (ARC) is always looking at developing practice and producing numerous documents together.

2.2.2 Structured Assessment of Asset Management Practice

Council undertook a structured assessment of the appropriate level of asset management practice for the Roading Activity in March 2017. This structured assessment follows the guidance provided in Section 2.1 of the International Infrastructure Management Manual (2015) and Table 2.1.2 International Infrastructure Management Manual (2015). This was reviewed by Council and adopted on 15 August 2023.

Table 2.1 - Roading Activity/Asset Management Practice Assessment (as at March 2017, reviewed and adopted 15 August 2023)

Criteria	Assessment	Commentary
Population	Core	The initial population risk screen for urban areas, all township populations, and total District population showed that asset management practice should be 'Core'.
District Wide Risks	Core	Based on the identified District-wide risk factors, the suggested level of appropriate asset management practice should be 'Core'.
Costs and Benefits	$8 M (25% of total expenditure)	The roading budget is the largest in Council and represent higher risks if AM practice is not at an appropriate level. These budgets also allow more scope to develop asset management practice as appropriate.
Legislative Requirements	Compliance approach	Waimate District Council's Policy is to meet minimum legislative requirements and Council follows clear directives within timeframes acceptable to the community. Council will advocate on behalf of the community where legislation is deemed inappropriate.
Size, Condition, Complexity of Assets	Typical of a small urban and rural authority	There are a range of assets spread across the large District area. In particular, the roading network and rural water supplies are extensive with only a small rating base. While the assets are not highly complex the isolated nature of the communities requires a specific approach.

[8] International Infrastructure Management Manual (IIMM) - 2020

Criteria	Assessment	Commentary
Risks Associated with Failures	Moderate level of risk	Overall risks associated with asset failure have been assessed to be moderate. There are some critical routes, bridges, and demand issues pending.
Organisational Skills and Resources	Average, Core	Waimate District Council comprises a small organisation serving one main urban centre, small communities, and a large rural area. The success of the organisation relies on key staff. Experienced managers cover operations and planning roles. Specialist technical work is outsourced. Services are delivered through a combination of in-house teams, consultants, and contractors. Council periodically reviews resources required and adjusts the mix of resources to meet work requirements. This includes increasing in-house resourcing when required.
Customer Expectations	Average	The District has a range of community assets that are of a high standard and the community is justifiably proud of them and has high expectations of the development and maintenance. There is some variation in expectations across the District, particularly between Waimate township and more remote rural areas. Overall customer expectations are judged to be medium and the trend of increasing customer expectation is likely. This suggests a requirement for well-developed asset management practice to consistently meet community expectations in the long-term.
Sustainability	No Corporate Policy at this stage, part of AMP and planning process at activity level	Waimate District Council is following the sustainability regimes of the Land Transport Management Act 2003 (LTMA), NZTA direction[9], and Regional Land Transport Plan (RLTP)[10] requirements (including subsequent amendments and revisions) for Roading. Council is in the process of reviewing, updating, and developing its sustainability policies. This will include incorporating legislative changes and any national or regional policies or plans. Any impact of these on asset management practice will be incorporated into the next review of Asset Management Policies.
Final AM Level	**Core** *With Intermediate in additional areas as required by Waka Kotahi (co-funder)*	**Analysis of factors suggests that asset management practice should be Core.** **Additional emphasis is required in the following practice areas:** • **Demand Forecasting,** • **Asset Register Data,** • **Asset Condition,** • **Operational Planning,** • **Capital Works Planning,** • **Financial and Funding Strategies** • **Service Delivery Models** **in line with national directives and requirements.**

[9] Toitū Te Taiao – Our Sustainability Action Plan | Waka Kotahi NZ Transport Agency (nzta.govt.nz)
[10] Regional transport planning | Environment Canterbury (ecan.govt.nz)

2.3 Location

The general topography of the Waimate District is described as flat to rolling. The network has been split into 428km in flat topography, 853km in rolling topography, and 55km in mountainous topography. The District is bounded by the Pacific Ocean to the East, the Kirkliston Range to the West, the Pareora River to the North, and the Waitaki River to the South.

Figure 2.1 shows the boundary of the Waimate District alongside neighbouring local authorities.

State Highway 1 and State Highway 82 provide the principal regional connections for the road network within the Waimate District. Figure 2.2 shows both the location of the District within the Canterbury Region, and Figure 2.3 shows the State Highway and District roading network.

Figure 2.1 - Map of Waimate District Council Boundary

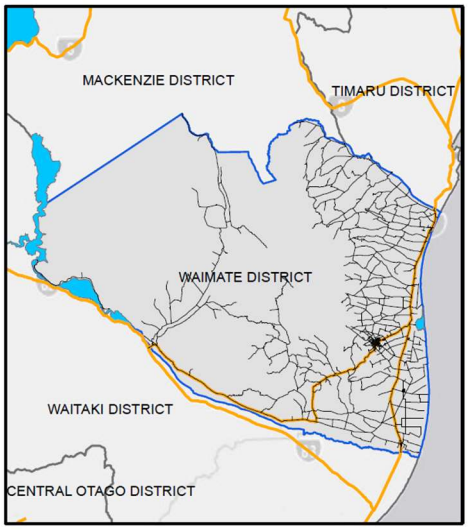


Figure 2.2 - Map of Waimate District in the Canterbury Region

Figure 2.3 - Waimate District Road Network and the State Highway

2.4 The Assets

The roading asset includes all Council owned and maintained roads, streets, bridges, footpaths, cycle paths, and related infrastructure within the District as shown in Table 2.2. Unformed (paper) roads are not included. For more information on the assets covered in this plan, refer to Section 4.

Table 2.2 - Roading Assets (as at August 2023)

Asset	Quantity		
Total Length of Road	1,325 km		
Sealed Road	651 km	Urban 49.1 km	Rural 601.9 km
Unsealed Road	674 km	Urban 6.3 km	Rural 668.0 km
Bridges	182	3,369 m	
Culverts	3,544	37,226 m	
Concrete Fords	90	1,750 m	
Kerb and Channel	49,131 m		
Signs	4,752		
Street Lights	493		
Footpaths	63 km		

The condition of the roads is dynamic over periods of time due to the District's topography, and the seasonal variations in climatic conditions and traffic demands.

2.5 Relationship with Other Council Documents

The Asset Management Planning process analyses the impact of the Levels of Service on the business and should be structured to be compatible with other key planning mechanisms and documents.

2.5.1 Long Term Plan[11]

Waimate District Council Long Term Plan (LTP) 2025 – 2034 sets out the broad strategic direction for the period of this plan, defining the Vision, Community's Desired Outcomes and Wellbeing, Strategic Goals, Identified Projects and Tasks, and the Financial Framework that will be required. The Community Outcomes and Wellbeing are directly related to Governance, Environment Protection, Sustainability, Economic Development, and Organisation Performance.

2.5.2 District Plan[12]

The Waimate District Plan assists the Council in carrying out its functions under the Resource Management Act 1991 so that it may achieve the purpose of the Act that is to "*promote the sustainable management of natural and physical resources*." The District Plan was developed in consultation with local communities and interest groups and controls such activities as:

- Erection, relocation, or demolition of structures, buildings, network utilities and signs
- Commercial activities
- Earthworks

[11] Long Term Plans - Waimate District Council (waimatedc.govt.nz)
[12] District Plan - Waimate District Council (waimatedc.govt.nz)

- Hazardous substances
- Planting, trimming, or removing vegetation
- Subdivision and development.
- Management of potential flood zones.

2.5.3 Other Related Asset/Activity Management Plans

Council has other Activity Groups, each managed through the production and use of Asset/Activity Management Plans (AMP). Of particular relevance to the Roading Activity are the Water Supply, Sewerage (Wastewater), and Stormwater AMPs. Cooperation with these Activity Groups is required as their works in the road corridor will have impacts on the Roading Activity.

2.5.4 Annual Plan, Report, and Budget

The works identified in this AMP will form the basis on which future Annual Plans and Reports are prepared and performance measures are reported on.

2.5.5 Infrastructure Strategy

This AMP will provide inputs required for the Roads and Footpaths portion of the 30-year Infrastructure Strategy (IS) as required by the 2014 amendment to the Local Government Act 2002. The Infrastructure Strategy forms part of Council's Long Term Plan.

2.5.6 Procurement Strategy

The Procurement Strategy is required by the Land Transport Management Act 1998, and signals Council's intentions for procurement of subsidised land transport activities. This Strategy was last updated and Endorsed by NZTA and Council in April 2023.

2.5.7 Contracts

The levels of service, strategies and information requirements contained in AMP's are translated into contract specifications and reporting requirements.

2.5.8 Bylaws, Standards, and Policies

These tools for asset creation and subsequent management are needed to support Asset Management tactics.

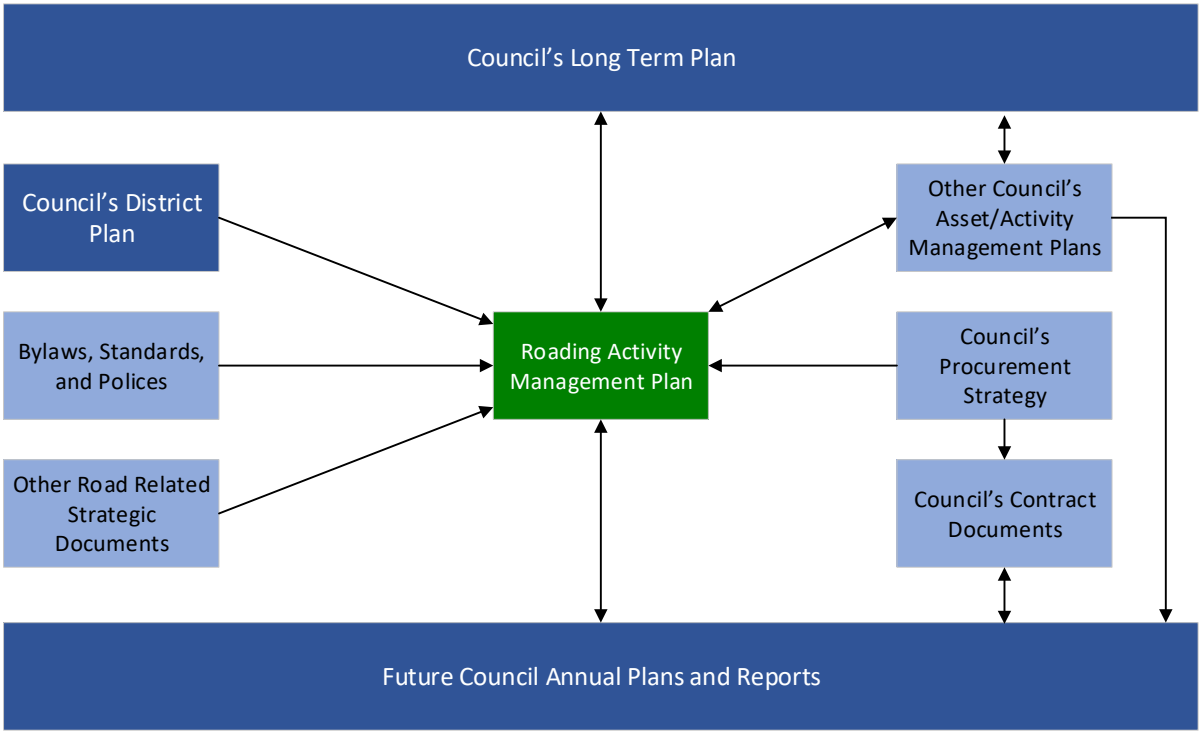
2.5.9 Other Road Related Strategic Documents

These include but is not limited to:

- Towards a productive, sustainable and inclusive economy: Aotearoa New Zealand's First Emissions Reduction Plan
- New Zealand's second emissions reduction plan
- Government Policy Statement on Land Transport 2024
- Transport Outcomes Framework
- Road to Zero
- New Zealand Walking and Cycling Strategy; Getting there on foot, by cycle
- Arataki – Our 30-year plan - 2023
- Canterbury Regional Policy Statement
- Canterbury Land and Water Regional Plan
- Regional Land Transport Plan 2024-34

- Regional Public Transport Plan
- Walking and Cycling Strategies

Figure 2.4 - General Relationship Between the Roading AMP and Other Strategic Document



2.6 How This Plan Will Be Used

This plan will be used in the multiple ways:

- To support NLTP funding applications to NZTA
- To provide a key input into Council's Long Term Plan, future Annual Plans and Reports, and Infrastructure Strategy
    - by providing a business case for why and how the Council will deliver its roading assets and service, key programmes, and funding required to deliver it.
- To help Council meet its goals and objectives in a way that best serves the community, customers, and road users
    - including measuring Council's identified performance against Levels of Service
- To document existing and planned work practices and procedures
- To document improvements to be undertaken to provide a more transparent, effective and efficient roading network.

2.7 Roading Asset Outcomes

Waimate District Council's Community Outcomes for 2024-2034, and Roading rationale are outlined in Table 2.3.

These outcomes have been translated into various targets for maintenance and renewals to be achieved in each financial year. The outcomes will be reported in each Annual Report.

"The purpose of road assets is to provide a sustainable, safe, convenient, comfortable, and cost effective road network for the movement of people, goods and vehicles throughout the Waimate District."

Table 2.3 - Community Outcomes and Roading Rationale 2024-27

Community Outcomes		Rationale
	A District that provides infrastructure for economic activity	*Efficient and safe roading networks are part of the essential infrastructure for economic growth and development*
	A District that encourages development	
	A District that actively promote itself and its businesses	
	A place where people are safe in their homes, work, and public spaces	*Safe and well maintained roads, footpaths and road verges promote safety of all road users, including pedestrians*
	Our services, infrastructure and environment enhance quality of life	
	A District that is enhanced through sustainable and diverse development	*A well-managed roading network minimises the adverse effects on the Environment*
	Our heritage is valued and protected	
	We value the natural environment, biodiversity, and landscapes	
	All people are encouraged to participate in our democratic process	*Roads and footpaths are an important element in both the residential and rural environment for physical exercise, leisure activities and social contact*
	District assets provide recreation and leisure choice	
	We celebrate and support the good things in our community	

2.8 Key Stakeholders and Customers

2.8.1 Key Stakeholders

The Council is the ultimate owner of assets, as the designated Road Controlling Authority. The Crown entity established to manage Roading activities is the NZ Transport Agency Waka Kotahi (NZTA). Other key stakeholders of the roading network include:

- Environment Canterbury Regional Council (ECan)
- Owners and operators of inter-connecting or co-located networks, including NZTA State Highways and NZTA-appointed representatives, such as network contractors, neighbouring territorial authorities and Department of Conservation Te Papa Atawhai (DOC)
- Road users
- Representative road-user groups such as Transporting New Zealand: Ia Ara Aotearoa, Federated Farmers, and others. These are distinct from users (Council's customers)
- Council employees, and Council-appointed consultants and contractors who manage and work on the District's roading assets.

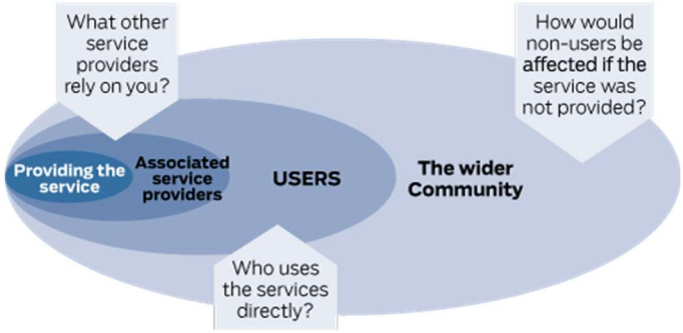
2.8.1.1 Customer Groups

Council's customers fall into three different groups:

- associated service providers
- users
- the wider community.

These are shown in Figure 2.5 and further detailed in Table 2.4.

Figure 2.5 - Customer Groups



Source: IIMM Figure 2.1.3.1, 2020 Edition

Table 2.4 - WDC Roading Customer Groups

Customer Group	Description	Customers
Associated Service Providers	These are other service providers who rely on the Roading network	• Contractors • Utilities service providers – use the road corridor to access their assets. • Transport operators • Emergency Services
Users	Those who directly use the service	• Private drivers • Commercial and freight road users • Drivers of public and other transport services (e.g. tourist buses) • Active road users including pedestrians and cyclists
The Wider Community	Non-users that are affected if the service is not provided	• Residents • Ratepayers • Tourists • Event organisers • Residents who live beside the roads • Local businesses – requiring access

2.8.1.2 Aoraki Roading Collaboration (ARC) – Mid-South Canterbury (Waimate, Mackenzie, Timaru, and Ashburton District Councils)

Since 2014, a strong collaboration has developed across Mid-South Canterbury Councils has ensured cost-effective service delivery in-line with industry best practice. The development of a common Maintenance Contract document between Waimate, Mackenzie, Timaru, and Ashburton District Councils has formed an excellent platform for greater alignment of transportation services delivery. It has also supported cost-effective procurement of physical works and professional services.

2.8.2 Funding Partners

Funding is provided by two significant parties:

- **NZ Transport Agency Waka Kotahi**

  NZTA co-invests, in accordance with operational requirements at a proposed Financial Assistance Rate (FAR) of 68%. This is to fund the District's Maintenance, Operations, Renewals, Low Cost Low Risk (Capital work), and Road Safety Programmes.

- **Ratepayers**

  Local Council rates provide funding for all roading non-subsidised activities and the remaining "local share" of roading costs qualifying for Financial Assistance from NZTA.

2.8.3 Mana Whenua

Council recognises Te Rūnanga o Waihao as mana whenua with ancestral and cultural relationships within the Waimate District and recognises Te Rūnanga o Ngāi Tahu as the iwi authority whose rohe (boundary) covers the Waimate District.

Council values the contribution Māori make to Council decision-making and have identified some Council-led initiatives to address the requirements[13].

- Working together with Māori organisations and individuals, to identify citizens who are considered to be Māori with an interest in the community in accordance with the requirements of Section81(1) of the LGA 2002. This includes all Māori, regardless of tribal affiliation, who reside in the district, who own land within the district or who have a recognised cultural affiliation with the district. This will also include Māori organisations that are directly involved in the interests of local Māori.
- Meeting with representatives of Te Runanga o Waihao at least once a year, to discuss current issues and the progress of the Long-Term Plan. These meetings are in addition to other contact as part of the consultation process.
- Provide meetings, on request, to explain current issues and proposals for consultation specifically for Māori groups, whenever practical considerations permit. These meetings can be, by request, limited to specific Māori group participation.
- Continue to involve tangata whenua in all relevant deliberations with regard to the application of the Resource Management Act. The Council will adhere to the basic principle that all its citizens are of equal importance in the community and are all part of that community. Accordingly, it will always strive to ensure that the interests of all its Māori citizens are fully addressed and considered in all decision-making processes and recognises the special need to ensure the capacity of Māori to play a full part in the decision-making process.

2.8.4 Other Parties

Other parties with an interest in Council's Roading AMP include Council employees, consultants, and contractors, who manage and work on the road assets, and suppliers of products and services.

2.9 Progress Since the Last AMP

This is the eighth version of the Roading Activity Management Plan produced by Waimate District Council. It provides a medium to long term indication of roading asset and activity management

[13] Participation of Māori in the Decision-making Process - Waimate District Council (waimatedc.govt.nz)

requirements and specific work programmes over the planning period from 1 July 2024 to 30 June 2034 and beyond.

This updated version of the plan incorporates the Business Case Approach (BCA) that was initially developed during 2016/17 as part of NZTA's requirements. The BCA brings a new thinking approach to the plan and is articulated more in the Lifecycle Management Section, Section 9.

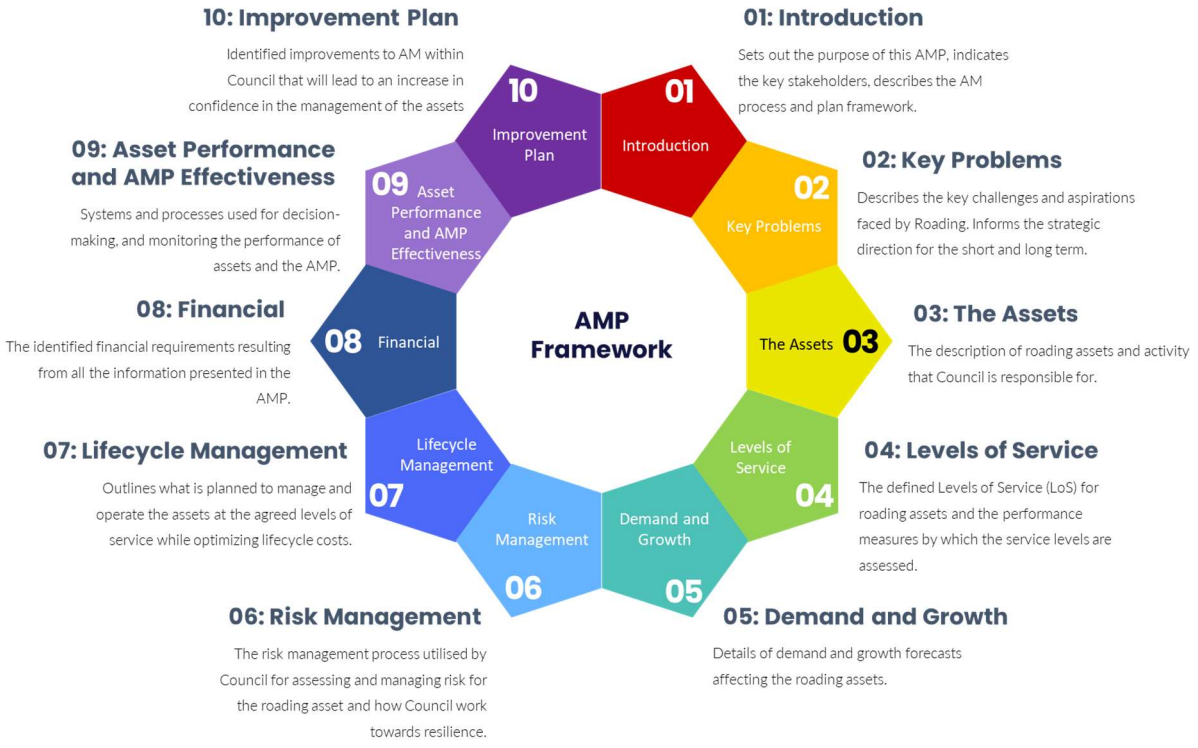
This plan will be periodically reviewed to incorporate further improvements and as appropriate new asset information. A significant objective is to optimise lifecycle asset management activities and provide a greater degree of confidence in decision-making and financial forecasts.

2.10 The Plan Framework

This AMP has been modified to integrate the business case approach and is structured around the current roading assets and activities, the existing and proposed future levels of service, and the consequential financial management plan for the next three to ten financial years. The AMP includes Maintenance, Operations, Renewals, and Capital Improvements, in-line with NZTA and Council requirements.

This AMP assumes that the current road network will be maintained in perpetuity, unless identified for disposal. This AMP generally follows the format recommended in the International Infrastructure Management Manual (IIMM) for a core level. The general Roading AMP Framework is included in Figure 2.6.

Figure 2.6 - Roading AMP Framework

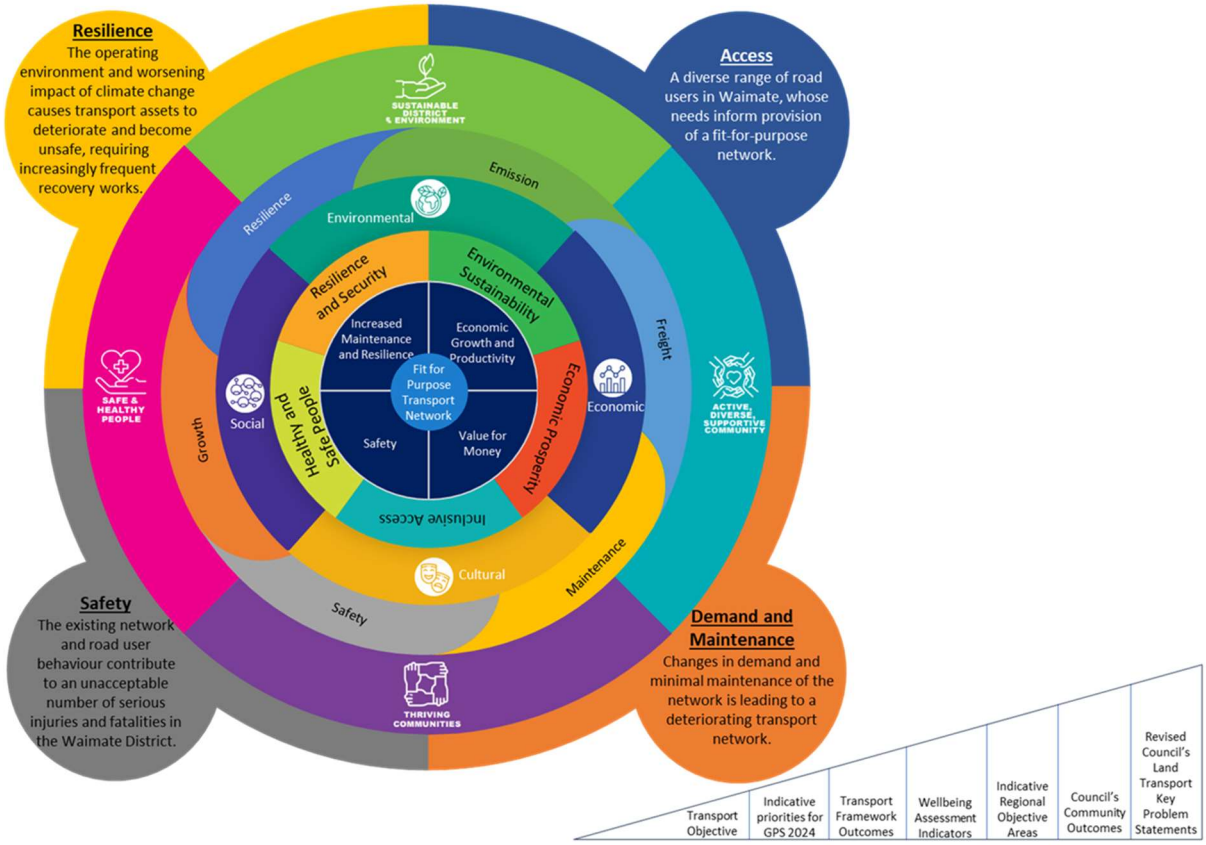


3 KEY PROBLEM AND BENEFIT STATEMENTS

3.1 Key Problem Statements

Council has identified the key challenges faced by the Organisation in continuing to deliver roading services that meet the levels of service required by customers in the most cost-effective way, at an asset activity management level. Figure 3.1 displays the District's Key Problem Statements against the National, Regional, and Local strategic directions.

Figure 3.1 - Waimate District Council Roading Services Key Problem Statements 2024



3.2 Impacts

Through the revision of the AMP and problem statements workshops, Council's Roading Key Problem Statements have been refined. Table 3.1 details some of the main impacts and evidence that support the key problem statements.

Table 3.1 - Key Problem Statements, Impacts, and Evidence

Key Problem Statement	Impacts on the Network	Evidence
Resilience The operating environment and worsening impact of climate change causes transport assets to deteriorate and become unsafe, requiring increasingly frequent recovery works.	• Limited pavement strength • Decreased road user safety • Insufficient drainage • Flood damage of assets • Limited access	• Soils and drainage maps • MSD survey, analysis, and interpretative reporting • Site works and pits. • Post event analysis. • Post event network damage. • Pavement defects where drainage is poor. • During event unplanned road closures
Safety The existing network and road user behaviour contribute to an unacceptable number of serious injuries and fatalities in the Waimate District.	• Compromised safety on the network. • Potential inconsistency between other Districts • Social and economic impact of fatalities and serious injuries	• District road crashes and fatality statistics • CAS data
Access A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network.	• Increase in allowable larger, oversized, and overweight vehicles on network. • Width and strength of pavements and structures (bridges) not suitable for load and size • Suitability of assets for different users (including pedestrians and cyclists)	• Traffic counting • MSD survey, analysis, and interpretative reporting • Requests form community • Observations / inspections / audits • Increase in heavy vehicle traffic counts (larger and heavier)
Demand and Maintenance Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network.	• Bow-wave of pavement seals (1963-73 rapid construction – 30km/yr. seal extension) • Levels of service not met (performance) • Network no longer fit for purpose across the network. • Increase in allowable larger, oversized, and overweight vehicles. • Pavement strength and width challenged (including pavement structure) • Natural water courses lost (due to intensive land use – reshaping of watercourses), causing surface flooding • Increased agricultural activity tha supports local economy but deteriorates the infrastructure.	• Road assets performance • Backlog of drainage work, therefore drainage poor and pavement defects have been observed. • Network no longer fit-for-purpose. • MSD survey, analysis, and interpretative reporting • FWDs(pavement strength surveys to support rehabilitation designs) • RAMM rating • Irrigation – higher water tables and moisture in pavement subgrades • Intensive land use – reshaping of watercourses. • Minimal widths • Limited pavement depth • 1963-73 rapid construction (seal extensions - 30km per year

3.3 Key Strategic Response and Benefits

Table 3.2 identifies the key strategic responses and benefits of addressing these key problem statements and sets the strategic context for Council's Activity Management Plan.

The benefits associated with the problem statements discussed are management or community focussed. An improved understanding of the key problems (aka. issues) that affect network performance assisted in optimising the work programme and delivering appropriate levels of service in a "value for money" manner.

As the demands on the network increases and the land-use adjacent to the road network changes, it is clear the levels of service will be challenged. It is timely to acquire data and knowledge and invest to protect the existing assets and ensure that levels of service remain fit-for-purpose and our assets remain reliable, accessible, safe, and resilient.

The consequences of not addressing these problems and associated programme may result in, but is not limited to:

- Assets no longer fit-for-purpose across all of the network
- Pavement strength challenged
- Performance "gaps" become evident
- More frequent unplanned road closures (limited access)
- Decreased road user safety, resulting in more Deaths and Serious Injury (DSI) crashes
- Social and economic impacts.

The roading programme needs to reflect the changing situation and demands, and proposes a greater investment in improving roading infrastructures (e.g. pavements) to meet the changing requirements of our community, customers, and road users.

Table 3.2 - Key Problem Statements, Key Strategic Response, and Benefits

Key Problem Statement	Key Strategic Response	Community Benefits	Management Benefits
Resilience The operating environment and worsening impact of climate change causes transport assets to deteriorate and become unsafe, requiring increasingly frequent recovery works.	• Undertake drainage maintenance and works to improve asset preservation and resilience. • Drainage studies to identify future planning and strategies (such as Soil Drainage Study) • Pavement strength analyses identify significant issues within flood-prone areas. • Consideration of climate changes based on forecasts for storm and other weather events. • Allocate funding for emergency works where required and increase funding to support where extra work is required	• Reliability of network • Safer roads • Access maintained. • Comfort and customer experience maintained / improved. • Social and economic benefits through maintenance of network and access	• Levels of service met. • Safer network provided. • Proactive maintenance and renewals can be prioritised on road assets most at risk. • Minimised wet weather event disruptions • Progressive climate change adaptation • Reduced emergency works and recovery

Key Problem Statement	Key Strategic Response	Community Benefits	Management Benefits
Safety The existing network and road user behaviour contribute to an unacceptable number of serious injuries and fatalities in the Waimate District.	• Network improvements (such as delineation) • Safety projects/programmes • Road user education and training • Speed management planning	• Improved road safety for the network • Safer, better informed road users • Regionally aligned approaches to informing road user choices and system management • Improvements on infrastructure and speed management	• *Road-to-Zero* objectives progressively achieved • Contribution to Regional and National initiatives, strategic goals and objectives. • Reduction in deaths and serious injuries
Access A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network.	• Integrate active transport opportunities with planning and development. • Consider all types of road users when developing projects and designs (e.g., shared paths) • Manage larger, heavier, and oversized vehicles permits (where required) • Bridges and structures maintenance and renewals, considered and managed appropriately to provide fit-for-purpose	• Improved community well-being and resilience • All road users considered. • Active transport users (pedestrians and cyclists) are given greater priority. • Safety improvements for active transport users • Suitability of assets for different users (including pedestrians and cyclists) • Network enables local economy	• Levels of service met • More resilient roading network • Safer network • Greater accessibility to all road users • Accessibility for Mobility Scooters • Reduction in VKT and carbon emissions

Key Problem Statement	Key Strategic Response	Community Benefits	Management Benefits
Demand and Maintenance Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network.	• Undertake drainage maintenance and works to improve asset preservation and resilience • Drainage studies to identify future planning and strategies (such as Soil Drainage Study) • Undertake appropriate level of maintenance to support current levels of service required for a fit-for-purpose network. • Schedule and futureproof planning for timely renewals of pavements (strength, width, drainage, etc) • Work with planning team to manage land use changes and growth. • Right-size investment to meet the changing demands on the road network. • Manage levels of service expectations	• Low costs to date • Levels of service and expectations met • Safer network • Accessible network • Efficient use of resources • Network resilience	• Council rates and NZTA investment has been minimised to date • Levels of service and expectations met. • Bridge capacity prioritised • Aging assets are addressed in a timely manner. • Appropriate quantities of proactive maintenance and renewals can be prioritised on road assets most at risk

3.4 Alignment of Key Problem Statements to Strategic Directions

Table 3.3 shows the alignment of Council's identified roading Key Problem Statements against the National, Regional and Local objectives. This identifies that the direction that Council is taking for the next NLTP 2024-27 is inline nationally, regionally, and locally. Nationally the Government Policy Statement (GPS) provides clear Strategic Priorities, regionally in Canterbury, common issues are identified, and locally, the community outcome indicates desires and expectations.

Table 3.3 - Alignment of Key Problem Statements to National and Regional Strategic Directions

National		Regional		Local	
Government Policy Statement (GPS) 2024-34	**Transport Outcomes Framework (TOF)**	**Transport Objectives**	**Transport Investment Priorities**	**Community Outcomes**	**Key Problem Statements**
Economic Growth and Productivity Efficient investment in our land transport system connects people and freight quickly and safely, supporting economic growth and creating social and economic opportunities including access to land for housing growth.	**Economic prosperity** Supporting economic activity via local, regional, and international connections, with efficient movements of people and products. **Inclusive access** Enabling all people to participate in society through access to social and economic opportunities, such as work, education, and healthcare.	**Growth** Develop the transport network to support well-planned, quality urban environments in areas of high growth **Freight** Transition to a low emission freight system that is more resilient, productive, and innovative **Safety** Reduce harm on our roads	• Create a well-maintained network • Manage risk of exposure to extreme events • Support and develop connected public transport and active transport networks • Implementing safer system • Support and develop freight systems connecting to air, rail, and sea	**Thriving Community** • A district that promotes infrastructure for economic activity • A district that encourages development • A district that actively promotes itself and its businesses **Sustainable District and Environment** • A district that is enhanced through sustainable and diverse development. • Our heritage is valued and protected. • We value the natural environment, biodiversity, and landscapes.	**Demand and Maintenance** Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network. **Access** A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network. **Resilience** The operating environment and worsening impact of climate change causes transport assets to deteriorate and become unsafe, requiring increasingly frequent recovery works.

National		Regional		Local	
Government Policy Statement (GPS) 2024-34	**Transport Outcomes Framework (TOF)**	**Transport Objectives**	**Transport Investment Priorities**	**Community Outcomes**	**Key Problem Statements**
Increased Maintenance and Resilience A transport system that is resilient to the impacts of weather events and other nature disasters. Increasing maintenance and resilience enables us to effectively manage and reduce current and future risk, and adapt to these challenges. (Road resealing, road rehabilitation and drainage maintenance)	**Resilience and security** Minimising and managing the risks from natural and human-made hazards, anticipating and adapting to emerging threats, and recovering effectively from disruptive events.	**Maintenance** Strengthen the maintenance of the current network, so the network continues to underpin the outcomes across the region **Resilience** Develop a resilient transport network that can better cope with unknown stresses, natural disasters and climate change impacts	• Create a well-maintained network • Manage risk of exposure to extreme events • Support and develop connected public transport and active transport networks • Implementing safer system • Support and develop freight systems connecting to air, rail, and sea	**Thriving Community** • A district that promotes infrastructure for economic activity • A district that encourages development • A district that actively promotes itself and its businesses **Active, Diverse, and Supportive Community** • All people are encouraged to participate in our democratic processes. • District assets provide recreation and leisure choice. • We celebrate and support the good things about our community.	**Demand and Maintenance** Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network. **Access** A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network. **Resilience** The operating environment and worsening impact of climate change causes transport assets to deteriorate and become unsafe, requiring increasingly frequent recovery works.

National		Regional		Local	
Government Policy Statement (GPS) 2024-34	**Transport Outcomes Framework (TOF)**	**Transport Objectives**	**Transport Investment Priorities**	**Community Outcomes**	**Key Problem Statements**
Safety A safe transport system is critically important. (Investment will be directed towards road policing and enforcement, alongside investment in other safety interventions such as building safer infrastructure, investing in safer drivers, and requiring safer vehicles.)	**Healthy and safe people** Protecting people from transport-related injuries and harmful pollution and making active travel an attractive option.	**Safety** Reduce harm on our roads	• Create a well-maintained network • Support and develop connected public transport and active transport networks • Implementing safer system	**Safe and Healthy People** • A place where people are safe in their homes, work, and public spaces. • Our services, infrastructure, and environment enhance quality of life. • A resilient and adaptive community in a changing environment	**Safety** The existing network and road user behaviour contribute to an unacceptable number of serious injuries and fatalities in the Waimate District.
Value for Money Deliver better outcomes for present and future generations of New Zealanders. Realise greater value from the financial investment made into our land transport system. Demonstrate both efficiency and effectiveness while delivering the intended outcomes. (While of life costs and benefits.)		**Maintenance** Strengthen the maintenance of the current network, so the network continues to underpin the outcomes across the region	• Create a well-maintained network • Manage risk of exposure to extreme events • Support and develop connected public transport and active transport networks • Implementing safer system • Support and develop freight systems connecting to air, rail, and sea	**Thriving Community** • A district that promotes infrastructure for economic activity • A district that encourages development • A district that actively promotes itself and its businesses	**Access** A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network.

National		Regional		Local	
Government Policy Statement (GPS) 2024-34	**Transport Outcomes Framework (TOF)**	**Transport Objectives**	**Transport Investment Priorities**	**Community Outcomes**	**Key Problem Statements**
	Environmental sustainability Transitioning to net zero carbon emissions, and maintaining or improving biodiversity, water quality, and air quality.	**Emissions** Develop a range of transport emission reduction solutions across Canterbury to reduce negative environmental and health impacts **Freight** Transition to a low emission freight system that is more resilient, productive, and innovative	• Support and develop connected public transport and active transport networks • Support and develop freight systems connecting to air, rail, and sea	**Safe and Healthy People** • A place where people are safe in their homes, work, and public spaces. • Our services, infrastructure, and environment enhance quality of life. • A resilient and adaptive community in a changing environment **Sustainable District and Environment** • A district that is enhanced through sustainable and diverse development. • Our heritage is valued and protected. • We value the natural environment, biodiversity, and landscapes	**Access** A diverse range of road users in Waimate, whose needs inform provision of a fit-for-purpose network. **Demand and Maintenance** Changes in demand and minimal maintenance of the network is leading to a deteriorating transport network.

4 DESCRIPTION OF ROADING ASSETS AND ACTIVITIES

Roading is the Waimate District Council's largest Council activity, involving 22% of Council rates income and 25% of operation and maintenance expenditure. Costs are expected to remain high to ensure that Council can deliver a fit-for purpose levels of service.

The Waimate District Council is responsible for the day-to-day operation, maintenance, renewal and improvement of the District's local roading network, excluding State Highways 1 and 82 that are owned and managed by NZ Transport Agency (NZTA). The Council also provides other assets such as car parks. The State Highways serves the District and are an important part of the overall roading network of the District. The Council works with NZTA and the Regional Transport Committee (Environment Canterbury Regional Council) to meet its obligations with regard to roading and to be consistent with the National Strategies and Priorities, and the Canterbury Regional Land Transport Priorities and Plan.

The purpose of roading assets is to provide a resilient, sustainable, safe, convenient, accessible, comfortable, cost effective, fit-for-purpose road network, for the movement of people, goods and vehicles throughout the Waimate District.

The roading assets and activities are made up of the following, but is not limited to:

- Land
- Road pavements - sealed and unsealed.
- Bridges and structures (bridges, large culverts, retaining walls, etc.)
- Drainage (Culverts, Concrete fords and Surface Water Channels, kerb and channels)
- Environmental management
- Traffic services (signs and road marking)
- Street lighting
- Footpaths and shared paths
- Road safety Promotion
- Car parks.

4.1 Network Classification Framework

4.1.1 One Network Roading Classification (ONRC)

A joint initiative between the NZTA and Local Government New Zealand has introduced a road classification system for all roads in New Zealand. The classification system aims:

- to deliver similar driving experience across New Zealand
- to support more consistent asset management across the country
- to make collaboration and prioritisation between those organisations responsible for the planning, delivery, operation and maintenance of the nation's roading network, leading to a more efficient and safer network and improved value for money.

The six ONRC categories are:

- National
- Arterial
- Regional
- Primary Collector
- Secondary Collector
- Access.

In the Waimate District, Figure 4.1 displays the main three categories within our roading network. Within the *Access* category, there is a sub-category of *Low Volume*. With Council's network, we have created another two sub-category, *Low Volume (Low Maintenance)* and *Low Volume (No Maintenance)*. Table 4.1 provides a general overview of the roading network according to ONRC.

Figure 4.1 - ONRC Categories in the Waimate Distirct Network[14]

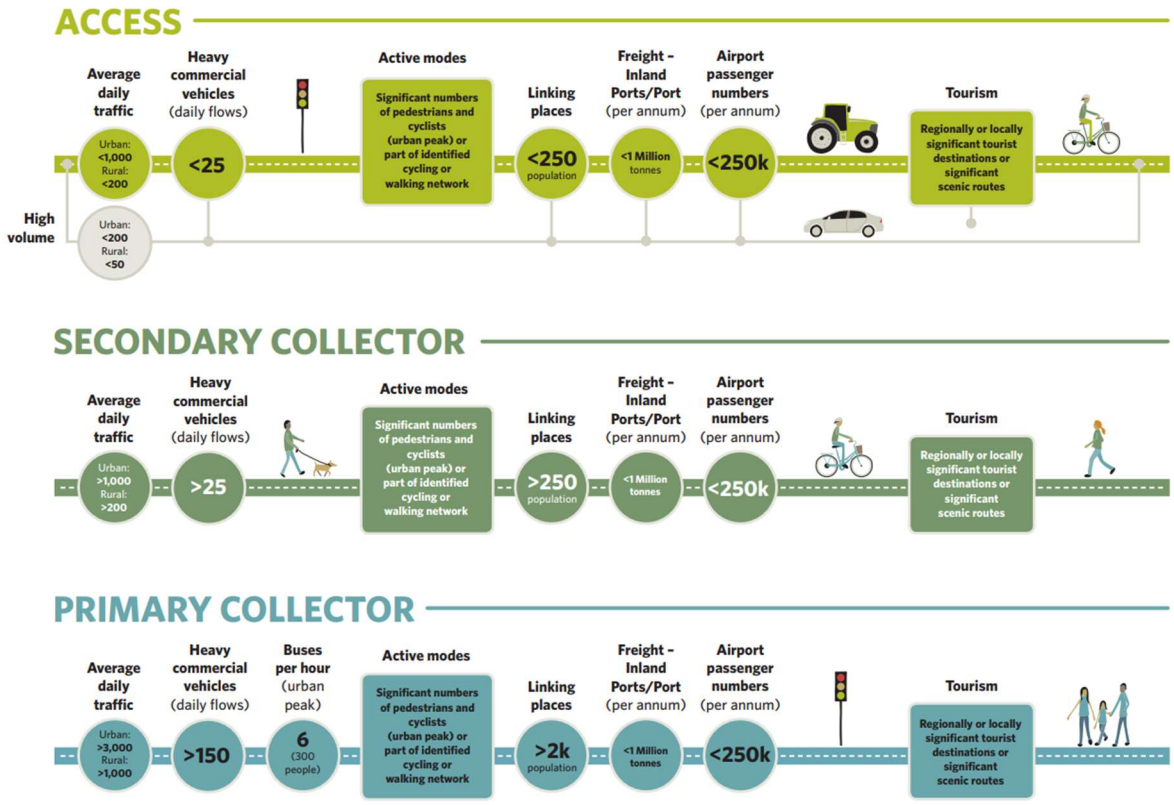


Figure 4.2 - One Network Road Classification - Functional Classification and their Thresholds[15]

ROAD & STREET CATEGORIES/CRITERIA	FUNCTIONAL CRITERIA AND THRESHOLDS									
	MOVEMENT OF PEOPLE & GOODS (LINK ← → PLACE)				ECONOMIC AND SOCIAL (LINK ← → PLACE)					
	TYPICAL DAILY TRAFFIC (AADT)[7]	HEAVY COMMERCIAL VECHICLES[5] (daily flows)	BUSES (urban peak)[3]	ACTIVE MODES[6]	LINKING PLACES	CONNECTIVITY	FREIGHT - INLAND PORTS/PORTS (per annum)	AIRPORT PASSENGER NUMBERS (per annum)[11]	TOURISM[9]	HOSPITALS
NATIONAL Meet 3 criteria (incl. at least 1 of Typical Daily Traffic, HCV or Buses & 1 economic or social)	U[4]: > 25,000 R: > 15,000	>800	> 40 buses or 2000 people per hour	Significant numbers of pedestrians and cyclists (urban peak) or part of identified cycling or walking network	>100,000 population[8]		>2 million tonnes (or >$3 billion)[10]	>3 million[11]	Regionally or locally significant tourist destinations or significant scenic routes	
(HIGH VOLUME) Meet at least 1 high volume (Typical Daily Traffic or HCV)	U: > 35,000 R: > 20,000	>1200								
REGIONAL Meet 2 criteria (incl. at least 1 of Typical Daily Traffic, HCV or Buses & 1 economic or social)	U: > 15,000 R: > 10,000	>400	> 40 buses or 2000 people per hour		>30,000 population[13]	Linking remote regions (regional councils) or sole connectivity in urban areas	>1 million tonnes[12]	>500,000[13]	Top 5 tourist destinations	Access to tertiary hospitals
ARTERIAL Meet 2 criteria (incl. at least 1 of Typical Daily Traffic, HCV or Buses)	U: > 5,000 R: > 3,000	>300	> 15 buses or 750 people per hour		>10,000 population[14]	Critical Connectivity (no alternative routes)		>250,000[15]	Regionally or locally significant tourist destinations or significant scenic routes	Access to regional hospitals
PRIMARY COLLECTOR Meet 1 criteria (incl. at least 1 of Typical Daily Traffic, HCV or Buses)	U: > 3,000 R: > 1,000	>150	> 6 buses or 300 people per hour		>2,000 population		< 1 million tonnes	<250,000		
SECONDARY COLLECTOR Meet 1 criteria (incl. at least 1 of Typical Daily Traffic or HCV)	U: > 1,000 R: > 200	>25			>250 population					
ACCESS All other roads	U: < 1,000 R: < 200	<25			<250 population					
(LOW VOLUME) Meet low volume Typical Daily Traffic	U: < 200 R: < 50									

[14] onrc-right-road-right-value-right-time-combined-poster.pdf (nzta.govt.nz)
[15] functional-classification.pdf (nzta.govt.nz)

Figure 4.3 - Waimate District One Network Roading Classification (ONRC) Map (As at November 2022)

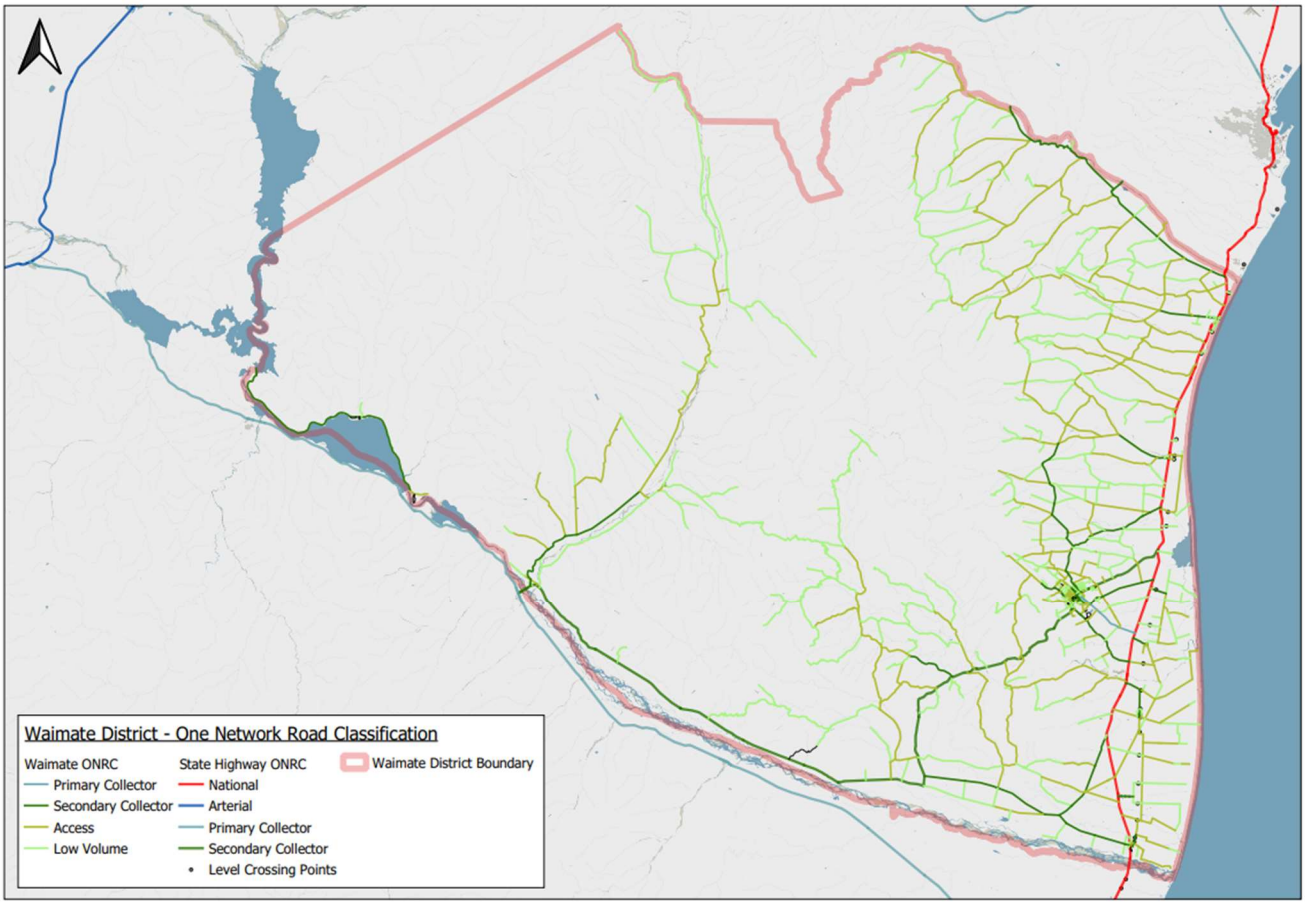


Table 4.1 - Sealed and Unsealed Pavement Quantities Against ONRC Categories

ONRC Category	Road Type	Typical Daily Traffic (AADT)	Heavy Commercial Vehicles (daily flows)	Length (km)	% of network by Length
Primary Collector	Urban – Sealed	> 3,000	> 150	1.184	20.9%
	Urban - Unsealed	> 3,000	> 150	0	0.0%
	Rural- Sealed	> 1,000	> 150	4.484	79.1%
	Rural- Unsealed	> 1,000	> 150	0	0.0%
Secondary Collector	Urban – Sealed	> 1,000	> 25	9.497	6.3%
	Urban - Unsealed	> 1,000	> 25	0	0.0%
	Rural- Sealed	> 200	> 25	141.883	93.7%
	Rural- Unsealed	> 200	> 25	0	0.0%
Access	Urban – Sealed	< 1,000	< 25	16.336	3.0%
	Urban - Unsealed	< 1,000	< 25	0.227	0.0%
	Rural- Sealed	< 200	< 25	364.119	67.8%
	Rural- Unsealed	< 200	< 25	156.254	29.1%
Low Volume	Urban – Sealed	< 200	< 25	22.043	4.3%

ONRC Category	Road Type	Typical Daily Traffic (AADT)	Heavy Commercial Vehicles (daily flows)	Length (km)	% of network by Length
	Urban - Unsealed	< 200	< 25	3.872	0.8%
	Rural- Sealed	< 50	< 25	89.225	17.6%
	Rural- Unsealed	< 50	< 25	392.628	77.3%
Low Volume (Low Maintenance)	Urban – Sealed	< 10		0.605	0.7%
	Urban - Unsealed	< 10		2.110	2.5%
	Rural- Sealed	< 10		2.160	2.5%
	Rural- Unsealed	< 10		80.590	94.3%
Low Volume (No Maintenance)	Urban – Sealed			0	0.0%
	Urban - Unsealed			0.095	0.2%
	Rural- Sealed			0	0.0%
	Rural- Unsealed			38.591	99.8%

Figure 4.4 - Road Length Split by ONRC (as at October 2023)

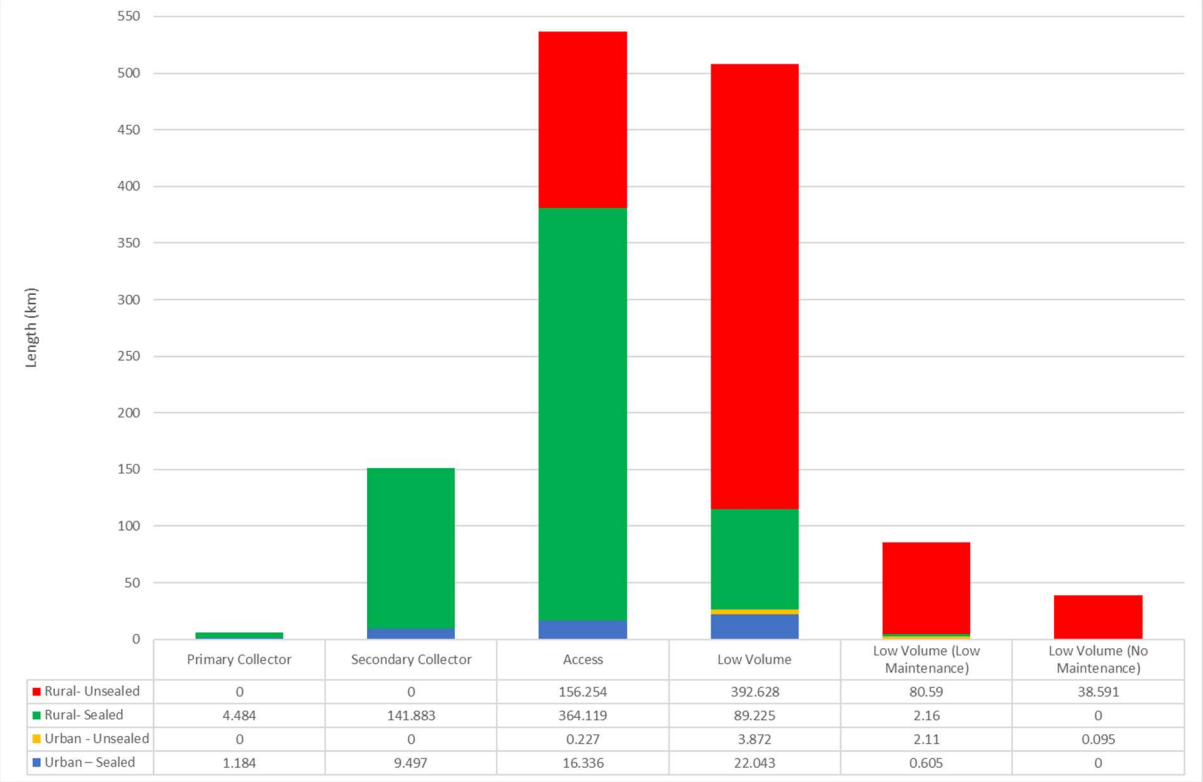
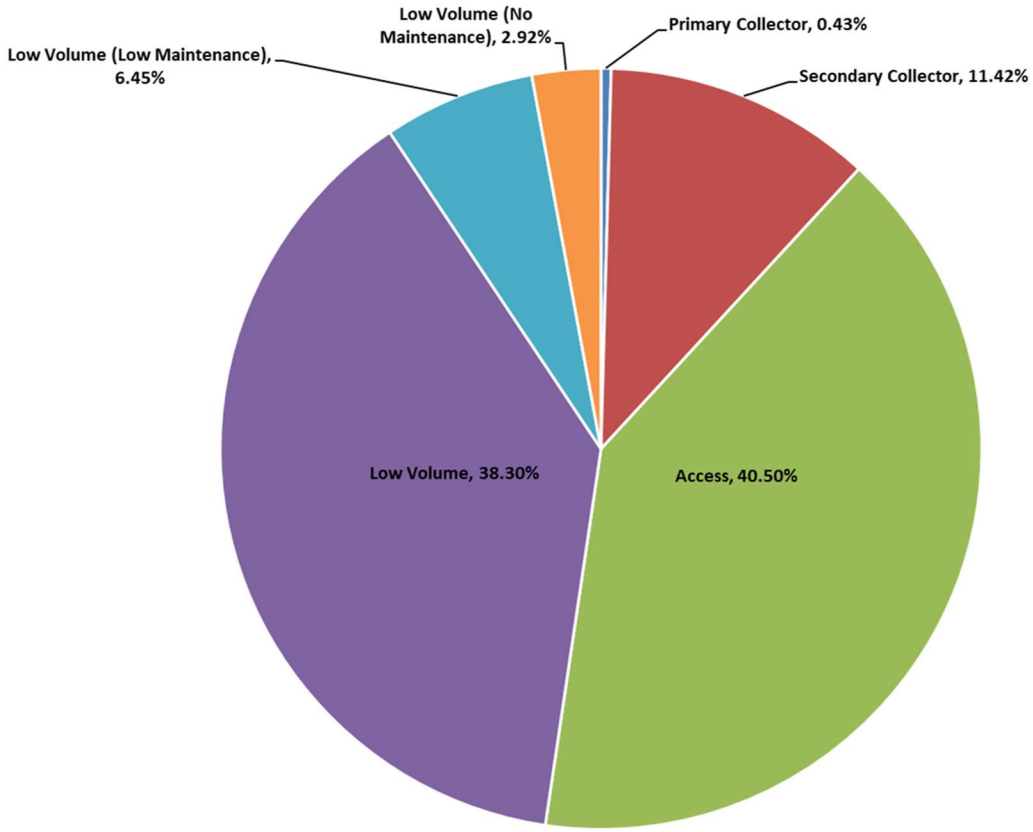


Figure 4.5 - ONRC Percentage Split of Network (as at October 2023)



Waimate District roading network is made up of mainly *Access* roads (including *Low Volumes*), with about 88% (1,168.9km) of the network with a small percentage make of *Primary and Secondary Collectors*.

4.1.2 One Network Framework (ONF)

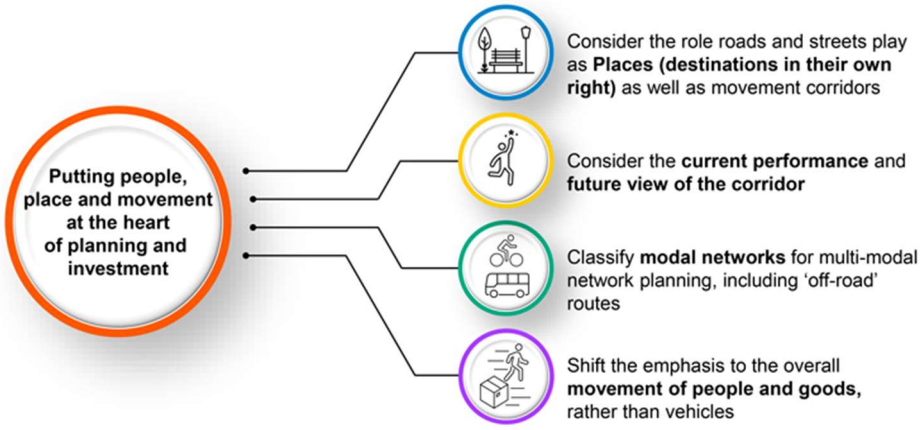
The One Network Framework (ONF) is New Zealand's national classification system for roads and streets. This replaces the One Network Road Classification (ONRC). The ONF is a tool introduced in February 2023 to help consistently categorise all roads and streets in New Zealand based on their function (transport use) and the ways that people use them (Movement and Place). ONF is a shift in how Council think about planning and investment in our roads and streets. Our roads and streets are transport corridors as well as considering people and the diverse ways our roads and street are used, therefore supporting those managing and investing in the land transport system to better consider different ways people travel, land use, community wellbeing, economic activity and future growth.

Where the historic approach has been for investment to be driven by the movement of goods and people, the ONF acknowledges that roads and streets are also places where people spend time. It also aligns with Government's wellbeing and environmental outcomes and recognises that roads and streets are used by a mix of people including pedestrians, cyclists, public transport users, and freight operators.

The ONF is a tool that will be used by people to inform planning, design, delivery, operation and maintenance of our transport network and the areas around them. The ONF road and street categories (Figure 4.6) can be used as functional descriptions for describing current and future state networks.

Figure 4.6 - ONF Street Families

Figure 4.7 - ONF Focus to People, Place and Movement



ONF focus to people, place and movement

Council is keen on incorporating the ONF categories into our decision-making process as it provide opportunities of combining land use planning with transport system planning. ONF guides Council to adopt a more forward-looking approach to the road network for today and the future. A stronger focus on a more people-centric approach towards townships in the District and to provide the appropriate walking and cycling infrastructures where its purpose fits.

Figure 4.7 and Figure 4.8 shows that Waimate District is mainly made up of Rural Road (83%) and Rural Connectors (11%). The other different ONF categories are mainly in the Waimate township. While ONF helps address most road types, Council is finding that the "Rural Roads" category lacks the granularity required for prioritising investments in rural roads, and therefore a combination of both ONF and ONRC is investigated further.

Figure 4.8 - Waimate District Network Characteristics by ONF Categories (as at October 2023)

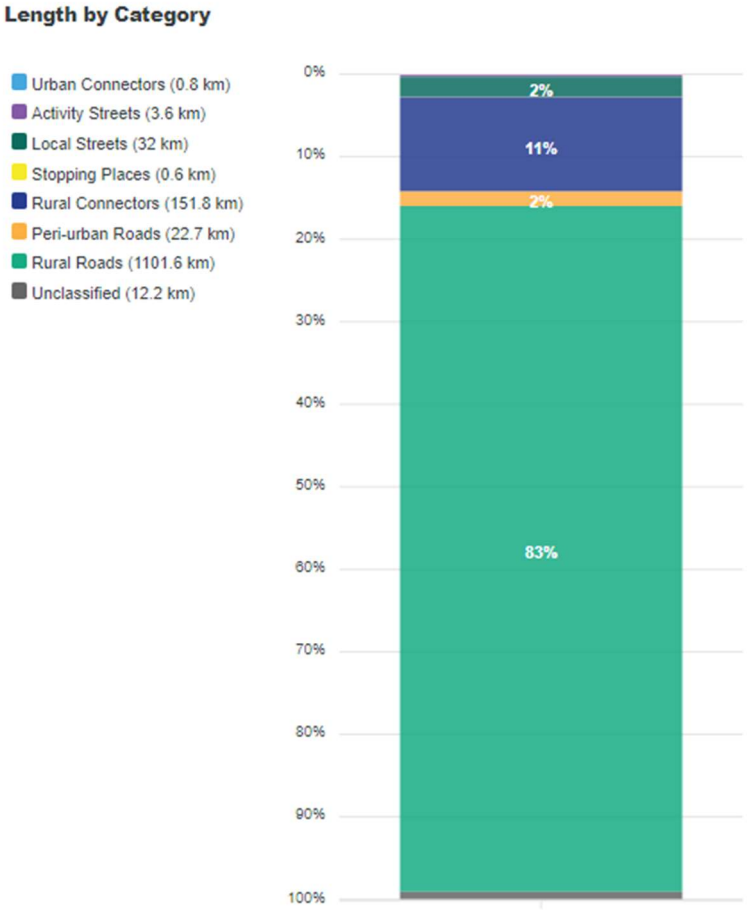
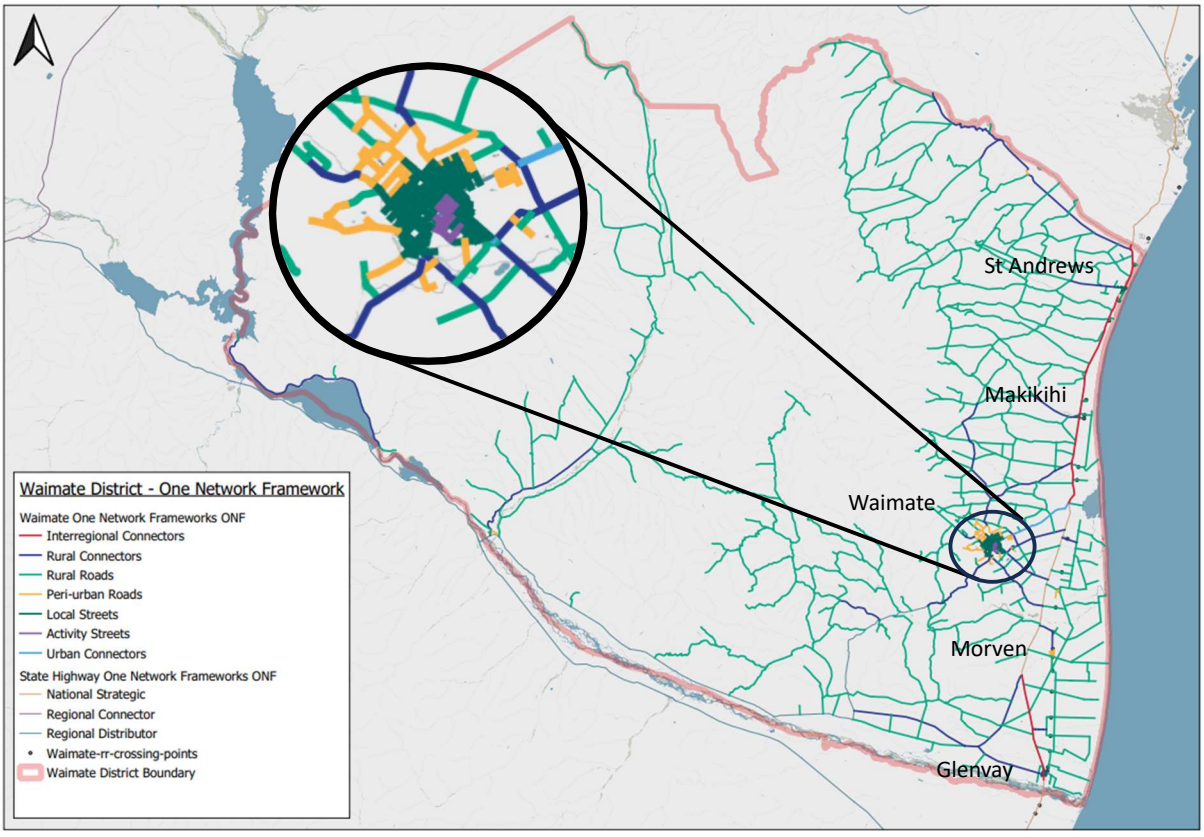


Figure 4.9 - Waimate District One Network Framework (ONF) Map (as at November 2022)



4.1.3 Waimate ONRC ONF Combination

Waimate District is a unique rural District and the One Network Framework structure has been felt to "not quite fit" the District, but recognising that roads and streets are places for people as well as transport corridors, and they contribute to a vibrant and liveable towns. Therefore, combining the two frameworks together, Council is able to provide a shift in thinking of how we think, plan, and invest in our network based on the types of road users, and the diverse ways that the roads and streets are used today and in the future.

Table 4.2 - Waimate Combination Classification

Type Level	Length (km)	Length (%)
Urban Connectors Primary Collector	0.760	0.057
Activity Streets Primary Collector	0.424	0.032
Activity Streets Secondary Collector	1.689	0.127
Activity Streets Access	0.937	0.071
Activity Streets Low Volume	0.545	0.041
Local Streets Secondary Collector	6.719	0.507
Local Streets Access	10.876	0.820
Local Streets Low Volume	14.476	1.092
Stopping Places Access	0.557	0.042
Rural Connectors Primary Collector	4.484	0.338
Rural Connectors Secondary Collector	**132.320**	**9.980**
Rural Connectors Access	10.090	0.761
Peri-urban Roads Secondary Collector	7.594	0.573
Peri-urban Roads Access	9.379	0.707
Peri-urban Roads Low Volume	10.128	0.764
Peri-urban Roads LV Low Maintenance	0.455	0.034
Peri-urban Roads LV No Maintenance	0.121	0.009
Rural Roads Secondary Collector	2.050	0.155
Rural Roads Access	**505.097**	**38.095**
Rural Roads Low Volume	**477.423**	**36.007**
Rural Roads LV Low Maintenance	81.301	6.132
Rural Roads LV No Maintenance	37.548	2.832
Unclassified Secondary Collector	1.008	0.076
Unclassified Low Volume	5.196	0.392
Unclassified LV Low Maintenance	3.709	0.280
Unclassified LV No Maintenance	1.017	0.077

A further refinement (combining) of the classification could aid Council in a more transparent levels of service decision-making and conversations with the road users and ratepayers, explaining the requirement for prioritisation of investment on the network.

Table 4.3 - Waimate Refined Combination Classification

Type Level	Length (km)	Length (%)
Urban Connectors Primary Collector	0.76	0.057
Activity Streets	3.595	0.271
Local Streets	32.071	2.419
Stopping Places Access	0.557	0.042
Rural Connectors	146.894	11.079
Peri-urban Roads Secondary Collector	7.594	0.573
Peri-urban Roads Access	9.379	0.707
Peri-urban Roads Low Volume	10.128	0.764
Peri-urban Roads LV Low/No Maintenance	0.576	0.043
Rural Roads Secondary Collector	2.05	0.155
Rural Roads Access	505.097	38.095
Rural Roads Low Volume	477.423	36.007
Rural Roads LV Low/No Maintenance	118.849	8.964
Unclassified Secondary Collector	1.008	0.076
Unclassified Low Volume	5.196	0.392
Unclassified LV Low/No Maintenance	4.726	0.356

With the "*Waimate Refined Combined Classification*" Framework, Table 4.3, this will allow Council:

- to identify the type of road users
- to have better understanding of the Levels of Service required and provided for the function of the road/street
- to have a more transparent decision-making process for the Levels of Service provided
- to provide the community and road users with a consistent level of service of assets and activities based on the "*classification type level*".

4.2 Pavement

The roading network incorporates of 1,325km of road pavements, of which 51% is unsealed, and 55.4km (4.2% of the whole network) is classified as urban. The optimised replacement cost (ORC) for Pavement is found in Table 4.5.

Table 4.4 - Road Pavement Assets (as at August 2023)[16]

Asset	Quantity		
Total Length of Road	1,325 km		
Sealed Road	651 km	Urban 49.1 km	Rural 601.9 km

[16] All data is taken from Waimate District Council's RAMM database for roading assets.

Asset	Quantity		
Unsealed Road	674 km	Urban 6.3 km	Rural 668.0 km

Figure 4.10 - Sealed vs Unsealed Road Network (Extracted November 2023, Transport Insights)

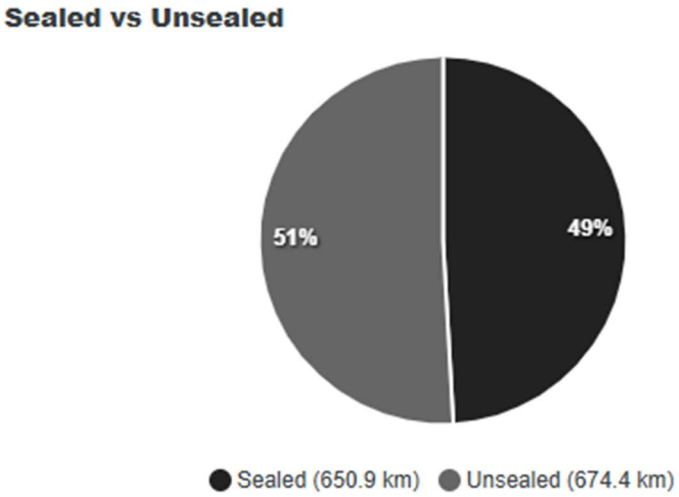


Table 4.5 - Pavement Optimised Replacement Cost (ORC)

Asset	Optimised Replacement Cost (ORC)
Unsealed Pavement Structure	$39,908,447
Sealed Pavement Structure	$132,544,528
Sealed Pavement Surface	$23,740,366

4.3 Bridges

Council manages a total of 182 bridges with a combined length of 3,369m (includes large culverts that are considered bridges as they have a waterway area over 3.4m^2). The profile of bridges include:

- 145 single lane bridges (92% length)
- 20 Timber bridges structural (10% length)
- 23 speed and weight restricted bridges (10% length)
- 1 speed only restricted bridges

The Optimised Replacement Cost (ORC) for bridges is $54,571,726 as at 30 June 2022.

Table 4.6 - Number of Bridge Asset (as at 1 July 2023)

Bridge Asset Type	Quantity	Length (m)	% of Length
Major Culvert			**5.4%**
Concrete Box Culvert	9	41	1.2%
Concrete Precast Box Culvert	10	47	1.4%
Conc. pipes Culvert	6	37	1.1%
Steel multi-plate Culvert	12	56	1.7%
Concrete			**19.1%**
Concrete, HC units	11	508	15.1%
Concrete, I beam	1	51	1.5%
Concrete	11	84	2.5%
Steel and Concrete			**55.4%**
Steel , Precast Conc. Deck	75	1,560	46.3%
Steel, Insitu. Conc. Deck	8	306	9.1%
Steel and Timber			**13.5%**
Steel, Timber deck	21	466	13.8%
Steel			**0.1%**
Steel, Steel deck	1	4	0.1%
Timber			**6.2%**
Timber	16	186	5.5%
Timber light truss	1	24	0.7%
Stone Arch			**0.3%**
Stone Arch	1	11	0.3%
Total	**182**	**3,369**	**100%**

Table 4.7 - Length of Bridge Asset (as at 1 July 2023)

Bridge Length Range (m)	Quantity	Total Length	No of Spans
2 to 5	41	167	46
6 to 13	72	726	96
14 to 29	41	857	89
30 to 60	18	706	60
61 to 161	10	912	71
Total	**182**	**3,369**	**362**

Table 4.8 - Weight and/or Speed Limit Restricted Bridges (as at 1 July 2023)[17]

Bridge No.	Bridge Name	Road Name	Length (m)	Year	axle/gross/speed	Ford
29	Holme Station Corner	Pareora River	22.40	1924	2000/3500/30	Yes
52	Ryans	Esk Bank	11.90	1986	-/3000/30	Yes
58	Taylors	Woolshed Valley	8.00	1993	80% / 30	Yes
64	Spring Bank	Springbank Rd	11.00	1923	---/6500/10	Yes
66	Old Horseshoe Bend	Old Horseshoe Bend	7.90	1920	5000/5000/30	No
81	Bournedale Homestead	Bournedale Homestead	14.60	1930	60%/4500/30	Yes
82	Hunter	Pakihi	24.40	1960	80% class1	No
93	Meyers	Gunns	7.30	1999	axle3500/30	Yes
99	Adams	Deep Creek	4.80	1890	10km	No
104	Frewens	Moores	6.00	1950	6000/9000/30	Yes
117	Poigndestres	Poigndestres	33.80	1920	2000/3000/10	No
120	Scarletts	Fletchers	12.20	1920	3000/5000/10	Yes
130	Lundys	Crowes	7.30	1960	1500/3000/30	Yes
142	Waihuna	Redcliffs Back	11.00	1920	4500/4500/30	Yes
152	Ponsonbys	Bridge	14.60	1988	gross3000/30	Yes
153	Whites	Whites	7.30	2000	60%/60%/30	Yes
156	Rickmans	Waitaki Valley	11.30	1969	3000/4000/30	Yes
157	Hursts	Hursts	14.60	1930	---/6500/10	Yes
158	McKees	Waihaorunga Back	15.20	1930	gross5000/30	Yes
170	Farm Road	Farm Road	24.40	1920	1600/3000/30	Yes
172	Cleeves	Milne	3.80	1986	6000/90%/30	Yes
174	Hakataramea Station	Homestead	14.60	1930	2000/4000/30	Yes
186	Menzies	Menzies	9.80	1930	---/6500/10	Yes
191	Hakataramea Downs	Hakataramea Downs	42.10	1920	70% 10km/hr	No
Total	**24**		**340.3**			**19 with fords**

[17] Bridge restrictions | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

4.4 Drainage

Waimate District Council own, operate and maintain drainage assets associated with the road pavements. Drainage assets include surface water channels, culverts (small), sumps, and soak pits. The quantities of each type of drainage asset are detailed in Table 4.9. The Optimised Replacement Cost (ORC) for drainage is $24,947,687, $2,942,405 for drain fords, and $15,111,622 for surface water channels (kerb and channels), as at 30 June 2022. This brings the Optimised Replacement Cost for all drainage assets to $43,001,714.

Table 4.9 - Drainage Asset

Drainage Type	Quantity	
	Length (m)	Quantity (No.)
Culvert		
0-300mm Dia.	22,499	2,287
300-440mm Dia.	3,900	372
450-500mm Dia.	3,153	3,395
520-600mm Dia.	4,176	337
600-950mm Dia.	1,902	152
990-1200mm Dia.	912	74
1250-2000mm Dia.	420	37
Total	**36,962**	**6,654**
Concrete Ford		
Concrete Fords	1,750	90
Total	**1,750**	**90**

Drainage Type	Length (km)
Kerb and Channel	
Kerb and Channel	41,873
Kerb and Dished Channel	5,437
Dished Channel	1,246
Kerb only	385
Mountable Kerb and Channel	105
Mountable Kerb Only	85
Total	**49,131**

4.5 Traffic Services

Council owns and maintains approximately 4,900 signs, 250 km of road marking lines and symbols, approximately 3,200 edge marker posts, and 1000 m of guard and sight rails. Signs includes regulatory, permanent warning, information, street name plates, directional, hazard, and miscellaneous signs.

The Optimised Replacement Cost (ORC) for signs is $657,286 and $47,361 for edge marker posts, as at 30 June 2022.

Table 4.10 - Signs Assets

Sign Type	Quantity (Each)
Information Signs including Road & Street Names	1,295
Warning Signs	2551
Regulatory Signs	1063
Total	**4,909**

4.6 Footpaths

There are 62.7 km of footpath on the roading network principally designed to be used by pedestrians. The majority (57.8 km) of the footpath is within the Waimate township area, and a relatively small amount (4.4km) is in the small townships of St Andrews, Glenavy, and Makikihi. Footpaths on State Highways are included in this asset group, as they are owned and maintenance by Waimate District Council. The Optimised Replacement Cost (ORC) for footpaths is $9,329,617, as at 30 June 2022.

Table 4.11 - Footpath Assets

Asset	Length (km)	Area (m^2)
Asphaltic Concrete	23.4	54,255
Concrete	0.3	610
Interlocking Paving Blocks	0.4	965
Unsealed Metal	5.8	14,368
Open Grade Emulsion Mix (OGEM)	2.9	6,851
Chipseal	29.5	62,487
Total	**62.3**	**139,536**

4.7 Cycle Paths and Shared Paths

Council own and maintain 2.2 km of shared path. This path is on the route from Waimate to Studholme Bush along Mt John Road, Hodges Road, and Gorge Road SH 82.

4.8 Street Lighting

Council owns and operates 481 streetlights on local road in the District. NZTA owns and operates street lights on the State Highways. The Optimised Replacement Cost (ORC) for Council's street lights is $591,401, as at 30 June 2022.

4.9 Traffic Facilities

There are other street furniture that Council owns that supports the road network. These includes but is not limited to the following, Table 4.12.

Table 4.12 - Traffic Facilities Assets

Asset	Quantity (Each)
Bike Stands	6
Bus Shelter	1
Litter Bins	13
Seats Highgate	18

5 LEVELS OF SERVICE (LoS)

5.1 Introduction

Asset management planning requires a clear understanding of customer needs and preferences, and the minimum legal obligations that Council must meet. A key objective of this plan is to match the levels of service provided by the road asset with customers' expectations, given legislative, financial, technical and safety constraints. Service standards, which are set to meet this key objective, provide the basis for the lifecycle management strategies and work programmes identified in Section 9.

The selection of appropriate Levels of Service is a key determinant of the cost of maintaining a network. The desire of a community is always for the highest possible levels of service, but this requires to be balanced against the cost and affordability. In New Zealand, this balancing process is required to be undertaken in consultation with the community, to ensure that the wishes of the community are reflected in what is provided.

Council's levels of service for the Roading Asset reflect current industry standards, and are based on:

- **Statutory Requirements:** Environmental standards, regulations and acts that impact on the way assets are managed (i.e., resource consents, building regulations, health and safety legislation, Local Government Act, etc.)
- **Customer Research and Expectations:** Information gained from the community through service complaints, surveys, and feedback.
- **Strategic Goals:** Provide guidelines for the scope of current and future services offered, the manner of service delivery and define specific levels of service that Council wishes to achieve.
- **Demands on the Roading Network:** Service demands that are placed on the network by the mix of road users and the way this demand varies across the District.

5.2 National

5.2.1 Key Legislations and Regulations

Legislation is established by Central Government and must be complied with at Local Government Level. Legislation and regulations affecting the Roading Activity and are related to the Council's responsibility to manage the roading assets and activities are provided in Table 5.1. Legislative requirements set the framework for the minimum standards of service that Council, as the Road Controlling Authority, must meet.

Table 5.1 - Legislations and Regulations Affecting the Roading Activity

Legislations and Regulations
Building Act 2004 (and amendments)
Civil Defence Emergency Management Act 2002
Climate Adaptation Bill
Climate Change Response Act 2002 (and amendments)
Climate Change Response (Zero Carbon) Amendment Act 2019
Environmental Protection Authority Act 2011
Epidemic Preparedness Act 2006 (and amendments)
Health Act 1956

Legislations and Regulations
Health & Safety at Work Act 2015
Heritage New Zealand Pouhere Taonga Act 2014
Land Transport Act 1998
Land Transport Management Act 2003
Land Transport Rule: Setting of Speed Limits 2022
Land Transport Rule: Traffic Control Devices 2004
Local Government Act 1974 (and amendments)
Local Government Act 2002 (and amendments)
Local Government Rating Act 2002 (and amendments)
Natural and Built Environment Act 2023
Ozone Layer Protection Act 1996
Public Bodies Contracts Act 1959
Public Works Act 1981 (and amendments)
Resource Management Act 1991
Resource Management Amendment Act 2020
Spatial Planning Act 2023
Taumata Arowai - The Water Services Regulator Act 2020
Traffic Regulations Act 1976
Transit NZ Act 1989
Transport Act 1962
Transport Act 1998
Utilities Access Act 2010
WorkSafe New Zealand Act 2013

There are multiple legislations and regulations that Council must work with. There is not one more important than the other, but more so how one may affect the roading more than another. The following are legislations that affect roading more than the others.

5.2.1.1 Local Government Act 2002 (LGA)

The core purpose of local government is defined in Section 10 of the Local Government Act 2002, states:

"*The purpose of local government is—*

to enable democratic local decision-making and action by, and on behalf of, communities; and

to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future."

The LGA 2002 gives local authorities the full capacity, and full rights, powers, and privileges to carry on or undertake any activity or business, do any act, or enter into any transaction wholly or principally for the benefit of its District.

Along with these wide sweeping powers comes the requirement to identify practicable options before making a decision, and to assess the benefits and costs of each option against the likely economic, environmental, social and cultural impacts.

Local authorities are also required to consult widely, effectively, and appropriately with the community to determine the communities' wishes and to seek feedback on all potentially significant activities – not only when a particular course of action is proposed, but at the various stages of the decision-making process.

Council has determined that it will consult its communities where practical, reasonable, and within the resources available to it. A significant aspect of this consultation process is the development of the Long Term Plan, which forms the long-term (not less than ten years) direction for all Council's activities.

5.2.1.2 Land Transport Management Act 2003 (LTMA)

The Land Transport Management Act (LTMA) requires Council to prepare a three-year land transport programme (which is reviewed annually and fully redeveloped at the completion of the three-year period) through a special consultative procedure, unless the local authority includes the matters that are required to be in such a programme in its Long Term Plan (LTP) or Annual Plan (AP), and provide details of those matters in a form acceptable to NZTA.

When preparing its land transport programme, Council must take into account how road maintenance:

- assists economic development.
- assists safety and personal security.
- improves access and mobility.
- protects and promotes public health.
- ensures environmental sustainability.

Levels of service provided, and maintenance practices used should be in-line with the objectives of the Government Policy Statement on Land Transport, Transport Outcomes Framework, Road to Zero, Transport Evidence Base Strategy, and the requirements of the LTMA.

5.2.1.3 Resource Management Act 1991 (and amendments)

The Resource Management Act 1991 requires Council to:

- sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of current and future generations.
- comply with the District and Regional Plans
- avoid, remedy or mitigate any adverse effect on the environment and structures (e.g., adverse effect of surface run-off from roads).

In this context, resource consents are one way, in which Council regulates the effects of activities such as building roads or bridges. Innovative design and use of best appropriate practice in accordance with Council's development standards and guidelines are also beneficial in taking into account and managing the effects an activity may have on the environment.

The Act requires Council to consult with Tangata Whenua and take into account the principles of the Treaty of Waitangi in the management of road infrastructural assets.

The Resource Management Amendment Act 2020 stipulates Councils must have regard to the Emissions Reduction Plans and National Adaption Plans under the Climate Change Response Act 2002 (as amended by the Climate Change Response (Zero Carbon) Amendment Act) when making and amending regional policy statements, regional plans, and district plans.

5.2.1.4 Building Act 2004

The Building Act 2004 requires Council to:

- ensure all buildings and facilities constructed comply with the Act
- produce Project Information Memoranda (PIM's) which supply all available information relating to an individual property. For the roading network the relevant information may include details of access restrictions, approvals, leases, plans, relevant records, notices, etc.

5.2.1.5 Health and Safety at Work Act 2015

The Health and Safety at Work Act 2015 requires Council to:

- protecting workers and other persons against harm to their health, safety and welfare by eliminating or minimising risks arising from work
- providing for fair and effective workplace representation, consultation, co-operation, and resolution of issues
- encouraging unions and employer organisations to take a constructive role in promoting improvements in work health and safety practices and assisting PCBUs and workers to achieve a healthier and safer working environment.
- promoting the provision of advice, information, education, and training in relation to work health and safety.
- securing compliance with the Act through effective and appropriate compliance and enforcement measures
- ensuring appropriate scrutiny and review of actions taken by persons performing functions or exercising powers under the Act
- providing a framework for continuous improvement and progressively higher standards of work health and safety.

5.2.1.6 Civil Defence Emergency Management Act 2002

The Civil Defence Emergency Management Act 2002 requires Council to:

- establish and be a member of a Civil Defence Emergency Management Group
- co-ordinate, through regional groups, planning, programmes and activities related to civil defence emergency management across the areas of reduction, readiness, response and recovery, and encourage co-operation and joint action within those regional groups.
- improve and promote the sustainable management of hazards in a way that contributes to the well-being and safety of the public and also to the protection of property.

5.2.1.7 Traffic Regulations Act 1976

The Traffic Regulations Act 1976 requires Council to:

- Comply with the rules for pedestrian crossings, traffic islands, road markings etc.
- Plan activities such that the network complies with driving rules

5.2.1.8 Public Works Act 1981

The Public Works Act 1981 consolidates and amends the law relating to public works and the Public Bodies Contracts Act 1959 makes provision for the making of contracts by local authorities and other public bodies. Therefore, enabling the acquisition of land for public works.

The Public Works Act 1981 requires Council to:

- set requirements for the acquisition of land by local authorities for roading works.
- sets requirements for stopping of roads and removal of trees on adjacent land,

5.2.1.9 Land Transport Rule: Setting of Speed Limits 2022

The Rule sets out the process for preparing speed management plans, the roles and responsibilities for the process, and the required content of the plans.

Setting of Speed Limits Rule 2022, Rule Amendment 2023, and probable changes in Rule 2024

5.2.1.10 Land Transport Rule: Traffic Control Devices 2004

Land Transport Rule: Traffic Control Devices 2004 and its amendments requires Council to:

- authorise and install traffic control devices in accordance with the rule
- ensure safe practice in the design and installation of traffic control devices and how they are used for traffic management.

5.2.1.11 Climate Change Response (Zero Carbon) Amendment Act 2019

Climate Change Response (Zero Carbon) Amendment Act 2019 does four key things:

- set a new domestic greenhouse gas emissions reduction target for New Zealand to:
    - reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050.
    - reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030
- establish a system of emissions budgets to act as steppingstones towards the long-term target
- require the Government to develop and implement policies for climate change adaptation and mitigation.
- establish a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals.

Climate change poses an unprecedented level of risk and adapting to and mitigating the impacts of climate change is a new priority focus for Councils. This Act provides a framework by which New Zealand can develop and implement clear and stable climate change policies.

Council is required to contribute towards emissions reductions. This includes looking at alternatives to work towards emissions reductions in the land transport sector.

5.2.2 National Strategies and Plans

Management of the roading network is subject to various strategies and plans determined at a national level. The Government's transport policy directions are set out in a number of guidance documents, including:

- Government Policy Statement on Land Transport
- Transport Outcome Framework

- Road to Zero
- Transport Evidence Base Strategy
- Arataki – Our 30-year Plan
- Thirty Years New Zealand Infrastructure Plan
- Emission Reduction Plan.

Together these main documents outline the Government's strategic direction and priorities for land transport sector.

5.2.2.1 Government Policy Statement on Land Transport (GPS)

Government's Key Strategic Priorities for land transport as set out in the Government Policy Statement on Land Transport 2024/25-2033/34 are:

- Economic Growth and Productivity
- Increased Maintenance and Resilience
- Safety
- Value for Money.

"*The Economic Growth and Productivity strategic priority is the overarching strategic priority for the direction of this GPS. Increased maintenance and resilience, safety and value for money are all equally weighted and important priorities that collectively support the delivery of a transport system that drives economic growth and productivity.*"

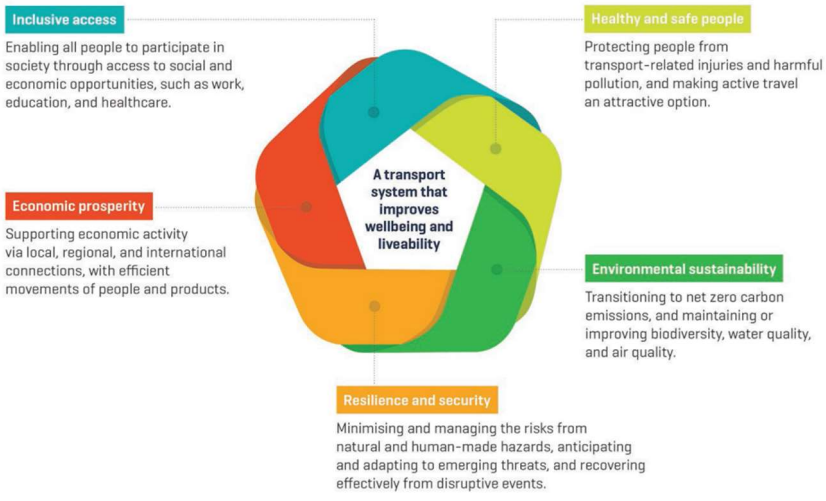
The GPS is a high-level government document that defines the desired outcomes and funding priorities for land transport activities to achieve national targets. The government's investment (NLTP – National Land Transport Programme) will be guided by these priorities.

As part of the GPS, additional reporting information has been identified and expected from Road Controlling Authorities (RCAs) with the currently resources.

5.2.2.2 Transport Outcomes Framework

The Transport Outcomes Framework defines a set of outcomes for New Zealand's transport system. A quality transport system is important for supporting and improving people's wellbeing and the liveability of places. The framework defines mode neutrality as a guiding principle for transport planning, investing, and regulating. This framework gives a broad direction to the transport system across the five connected outcomes.

Figure 5.1 - Transport Outcome Framework



5.2.2.3 Road to Zero: New Zealand's Road Safety Strategy

New Zealand's *Road to Zero* is based on Vision Zero, which is a world-leading approach that works towards zero harm on the road. The philosophy for *Road to Zero* is "No loss of life is acceptable." *Road to Zero* is a government strategy to guide improvements in road safety in New Zealand over the next 10 years. It places human wellbeing at the heart of our road transport planning.

"*We need to build a safe road system that is designed for people. This means doing our best to reduce crashes, but acknowledging that crashes will continue to happen. When crashes occur, we can prevent serious harm through safe vehicles, safe speeds and forgiving road design.*"

New Zealand's Road Safety vision is,

"*a New Zealand where no one is killed or seriously injured in road crashes. This means that no deaths or serious injury while travelling on our roads is acceptable.*"

Figure 5.2 - Road to Zero Strategy

5.2.2.4 Transport Evidence Base Strategy (TEBS)

"*The Transport Evidence Base Strategy identifies the key evidence activities needed to deliver an evidence-based transport system that improves wellbeing and liveability.*"

Having the right data and information available, and ensuring that the evidence-base is used appropriately in both decision and policy making. The strategy identified five key evidence generating enablers that support generation and use of the transport evidence base.

The TEBS has two primary objectives:

1. Ensure the right data, information, research and evaluation is available for decision-making
2. There is an established culture of evidence-based policy and decision-making.

Figure 5.3 - Transport Evidence Bace Strategy Identified Key Enablers and Agreed Actions

5.2.2.5 Arataki – Our 30-year Plan

The *Arataki* is NZ Transport Agency's 30-year Plan to support land transport planning and investment decisions. "*It focused on the actions NZTA (in collaboration with others) would need to make to the state highway network to achieve priority outcomes and deliver a fit-for-purpose land transport system.*"

Figure 5.4 - Arataki Conceptual Framework

In the plan, six key external factors/drivers that will shape and change the future of the land transport system are identified in Figure 5.5.

Figure 5.5 - Six Key External Factors / Driver of Land Transport

5.2.2.6 Thirty Year New Zealand Infrastructure Plan

The third *Infrastructure* Plan was released in 2015. The plan outlines the government's 30-year vision for New Zealand's infrastructure and was built on the previous plans, by outlining the government's vision for New Zealand's infrastructure and the role infrastructure will play in supporting our economic growth. The overall purpose of the plan is to improve investment certainty for businesses by giving confidence over current and future infrastructure provision. To achieve this purpose, the vision of the plan is to have New Zealand's infrastructure resilient and coordinated, and therefore contributes to a strong economy and high living standards.

In the Transport Sector, strong links between road, rail, shipping and aviation are vital for moving people and freight around the country and overseas. The key areas identified in the document are:

- Understanding future demand, revenue and investment
- Regulation that enables new transport technologies
- Keeping Auckland moving
- Supporting New Zealand's export economy and international connections.

5.2.2.7 Emission Reduction Plan

As climate change takes a larger stand on the situation in New Zealand, the government works on how the transport sector can reduce their emissions. The Second *Emission Reduction Plan* (ERP2) outlines the actions that New Zealand intend to take to reduce emissions in the second emissions budget period (2026-2030). The Government aims to meet its targets to reduce the impact of climate change and prepare for its future effects, focusing on five pillars, Figure 5.6. The ERP2 has also identified seven key policies that could have the greatest impact on New Zealand's ability to meet our targets, Figure 5.7.

Figure 5.6 - Climate Change Strategy Five Pillars

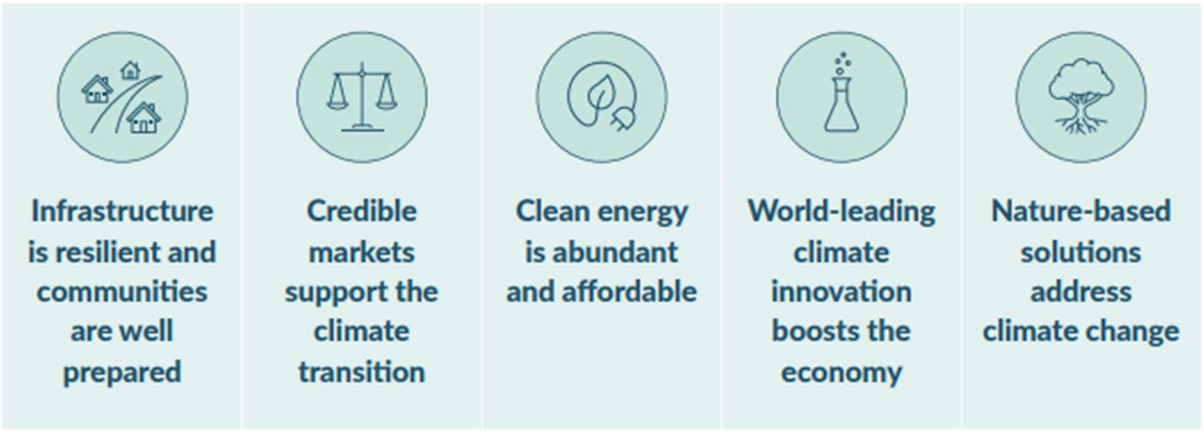
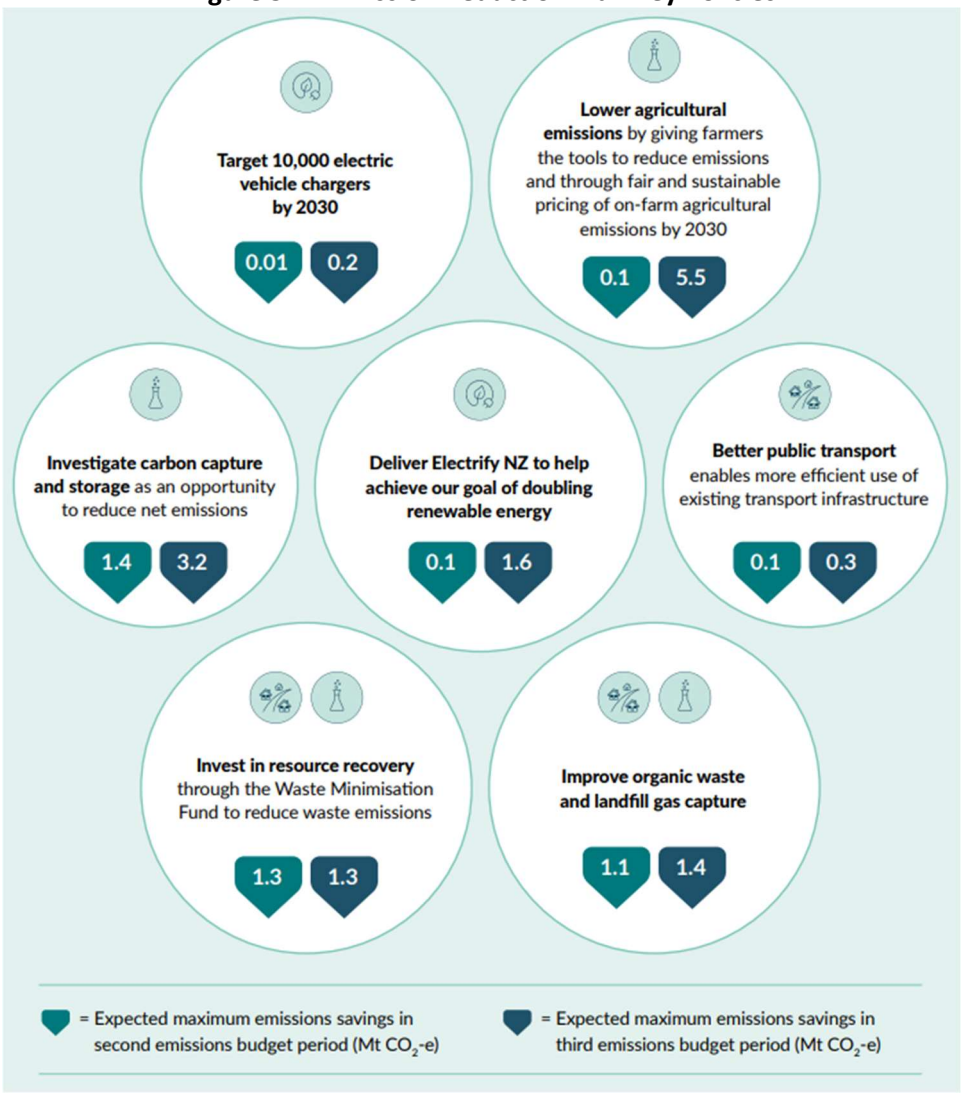


Figure 5.7 - Emission Reduction Plan Key Policies



5.2.3 Standards, Guidelines, and Code of Practice

A list of standards, codes of practice and guidelines adopted for use by Council are, but is not limited to:

- Bridge Inspection and Maintenance Manual – Transit NZ
- Bridge Manual (SP/M/022), NZTA
- Business Case Approach Guidance – NZTA
- Chipsealing in New Zealand, NZTA
- Code of Practice for Temporary Traffic Management (CoPTTM) - NZTA
- Guide to the Geometric Design of Rural Roads; AUSTROADS,
- High-Risk Intersections Guide – NZTA
- High-Risk Rural Roads Guide – NZTA
- International Infrastructure Management Manual, NAMS,2020
- Planning and Investment knowledge Base – NZTA
- Land Transport Benefits Framework Measures Manual – NZTA
- Land Transport Benefits Management Approach and Framework: Guidelines – NZTA
- Manual of Traffic Signs and Markings (MOTSAM) – NZTA
- Monetised Benefits and Costs Manual – NZTA
- National Code of Practice for Utility Operators' Access to Transport Corridors
- NZS 3910:2013 Conditions of Contract for Building and Civil Engineering Construction – Standards New Zealand
- NZS 4404:2010 Land Development and Subdivision Infrastructure – Standards New Zealand
- NZTA Specifications
- Procurement Manual – NZTA
- RAMM Road Condition Rating and Roughness Manual - Transfund
- Road Assessment and Maintenance Management (RAMM) Manual - Transfund
- Safe System Audit Guideline for Transport Projects – NZTA
- Safer Journeys for Motorcycling on New Zealand Roads – NZTA
- Speed Management Guide: Road to Zero Edition
- Vehicle Dimensions and Mass Permitting Manual – NZTA
- Guide to Bridge Technology Part 9: Hydraulic Design of Waterway Structures - Austroads
- List of NZTA's Standards and Guidelines Register for Land Transport.

5.3 Regional

5.3.1 Canterbury Regional Land Transport Plan (CRLTP)

The *Canterbury Regional Land Transport Plan* guides land transport planning and investment with the region, outlining the investment priorities into land transport within the Canterbury region. The 30-year vision for this plan is to:

"*An innovative, resilient, low emissions transport system that helps Canterbury thrive for generations.*"

Figure 5.8 displays the identified strategic objectives that will deliver the vision of the Canterbury Regional Land Transport Plan.

Figure 5.8 - Canterbury Regional Land Transport Plan Strategic Objectives

Figure 5.9 identifies Canterbury's ten-year transport investment priories.

Figure 5.9 - CRLTP Ten-year Transport Investment Priorities

5.3.2 Canterbury Land and Water Regional Plan (CLWRP)

The *Canterbury Land and Water Regional Plan* aims to provide a clear direction on how land and water are to be managed in the Canterbury Region. This plan aims to help deliver community aspirations for water quality in both the urban and rural areas. The community-driven priorities being developed by zone committees under the Canterbury Water Management Strategy will be actioned through the Land and Water Regional Plan, which will build on, improve, and in some instances replace, Chapters 4 to 8 of the Natural Resources Regional Plan (NRRP). The CLWRP will also embed the provisions of the Chapter 2 in the NRRP.

In the plan, there are higher standards for stormwater control and treatment that will be needed to be considered in drainage and environmental management going forward.

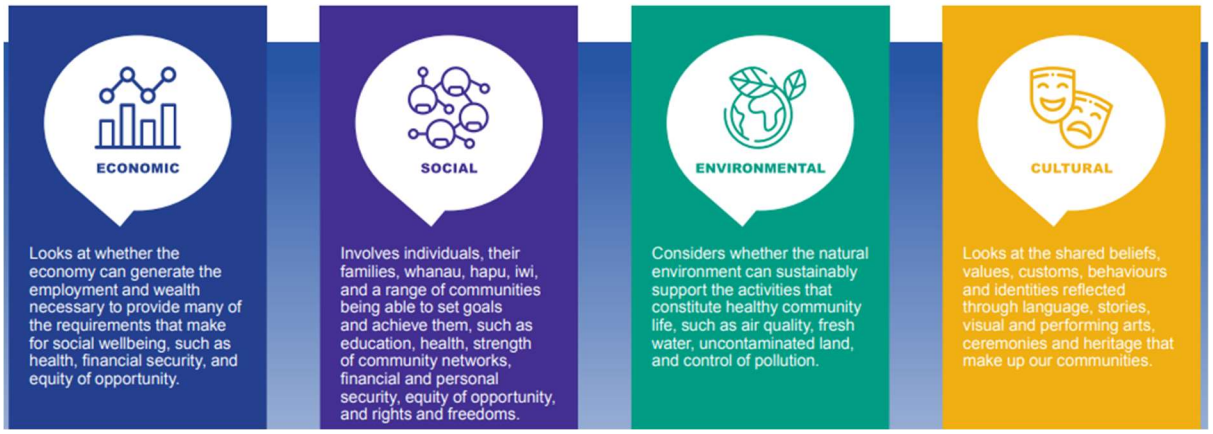
5.4 Local (Waimate District Council)

5.4.1 Community Outcomes and Wellbeing

Community consultation was undertaken to determine the desired community outcomes (Figure 5.10) and wellbeing (Figure 5.11). The challenge of the consultation process was to ensure that the community understands the cost implications of the outcomes and wellbeing they are requesting, and in turn the levels of service.

Figure 5.10 - Council Community Outcomes 2024-27

Figure 5.11 - Council's Wellbeing 2024-27



Council's defined wellbeing is in-line with the Government's wellbeing structure, and therefore allows for the local government initiatives to contribute back towards nationally. Council's community outcomes for 2024-2037 and related roading rationale are outlined in Table 5.2.

Table 5.2 - Community Outcomes and Roading Rationale

Community Outcomes		Roading Rationale
Thriving Communities	A District that provides infrastructure for economic activity	Efficient and safe roading network are part of the essential infrastructure for economic growth and development.
	A District that encourages development	
	A District that actively promotes itself and its business	
Safe & Healthy People	A place where people are safe in their homes, work, and public spaces	Safe and well-maintained roads, footpaths and road verges promote safety of all road users, including pedestrians.
	Our services, infrastructure and environment enhance quality of life	
	A District that is enhanced through sustainable and diverse development	

Community Outcomes		Roading Rationale
Sustainable District & Environment	We value the natural environment, biodiversity and landscapes	A well-managed roading network minimises the adverse effects on the Environment.
	Our heritage is valued and protected	
Active, Diverse, Supportive community	All people are encouraged to participate in our democratic process.	Roads and footpaths are an important element in both the residential and rural environment for physical exercise, leisure activities, and social contact.
	District assets provide recreation and leisure choices	
	We celebrate and support the good things in our community	

5.4.2 Strategies, Plans, Bylaws, and Policies

Council has a number of documents that contribute towards a set of Council regulations, "Roading Policies" that has an overall objective:

"*The purpose of road assets is to provide a sustainable, safe, convenient, comfortable and cost effective road network for the movement of people, goods and vehicles throughout the Waimate District.*"

To support this objective, the roading related documents are put in place to help regulate activities undertaken on the roading network. These Roading Policies achieve a number of purposes:

- To protect the asset from Ad-Hoc development
- To provide stakeholders with clear expectation on right of use
- To enable Council to provide consistent guidance for its stakeholders and users.

Some Council policies related to the roading asset but is not limited to are:

- Waimate District Council 30-Year Infrastructure Strategy
- Waimate District Council Asset Management Policy
- Waimate District Council Consolidated Bylaw (2018)
- Waimate District Council Delegations Policy 308
- Waimate District Council Dust Suppression Policy 501
- Waimate District Council Financial Contributions Policy 404
- Waimate District Council Financial Strategy
- Waimate District Council Procurement Policy 316
- Waimate District Council Procurement Strategy 2023
- Waimate District Council Revenue and Financing Policy 401
- Waimate District Council Risk Management Policy 302
- Waimate District Council Significance and Engagement Policy 301
- Waimate District Plan (2014)

5.4.3 Level of Service Customer Consultation

Customer consultation occurs as part of Council-wide and roading specific communication, engagement, discussions, and consultations. From these, information on customer expectations and levels of service are gathered. Some customer consultation includes but is not limited to:

- Resident's surveys

- Long Term Plan and Annual Plan consultation
- Customer feedback database
- Public meetings
- "Let's Chat" Waimate District platform
- Customer service request system.

5.4.3.1 Residents Surveys

Resident Surveys are completed every two years and are used to measure Council's performance against the Long Term and Annual Plans measures and is conducted by an external organisation. The results also give Council an understanding of the District's residents' sentiment towards the services and facilities that is provided.

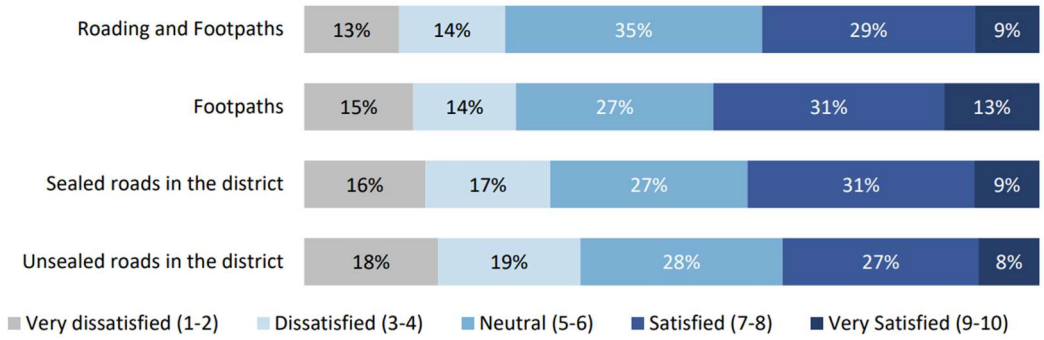
In the past, the survey was conducted by National Research Bureau, but in 2021, a new provider (Key Research) was commissioned to complete Residents Surveys for Waimate District Council. In the 2021 and 2023 survey, neutral responses were an additional response provided to surveyed residents, therefore the historical surveys cannot be compared with the 2021 and onwards surveys.

Table 5.3 - Residents Survey Detail Differences

≤ 2019 (National Research Bureau)	vs	≥ 2021 (Key Research)
Very Satisfied		Very Satisfied (9-10)
Fairly Satisfied		Satisfied (7-8)
Not Very Satisfied		Neutral (5-6)
Don't Know		Dissatisfied (3-4)
		Very Dissatisfied (1-2)
		Don't Know*

* In calculations, "Don't Know" responses were excluded.

Figure 5.12 - Results for Roading and Footpaths 2023



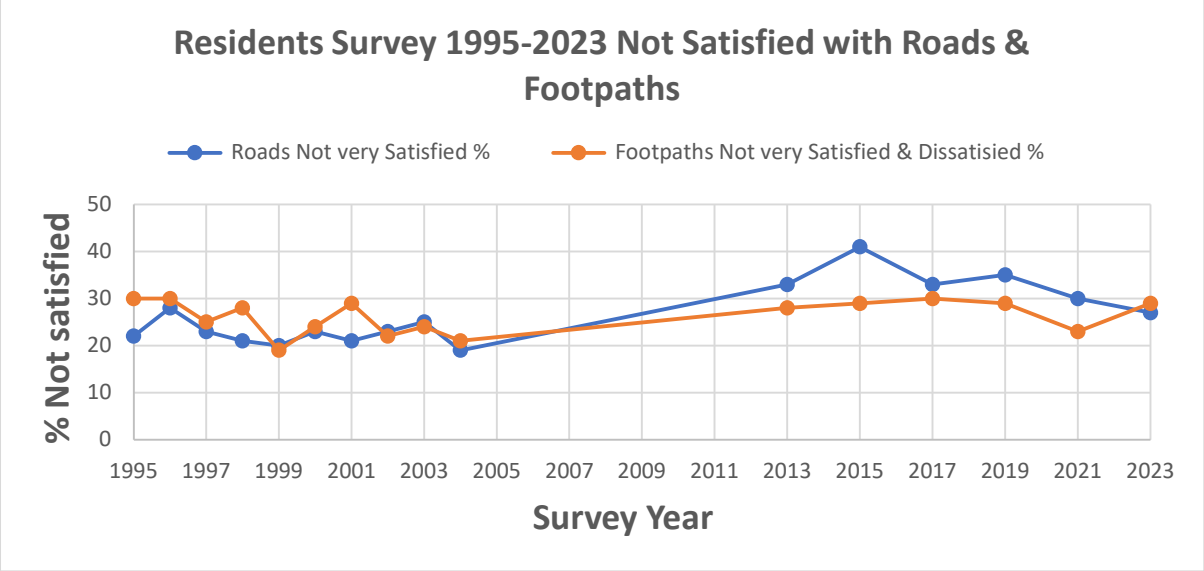
In the most recent survey, 2023, Figure 5.12 shows that overall, for the Roading and Footpath infrastructure:

- 38% of respondents were Satisfied or Very Satisfied
- 35% of respondents were Neutral.
- 27% of respondents were Dissatisfied or Very Dissatisfied.

For Footpaths:

- 44% of respondents were Satisfied or Very Satisfied
- 27% of respondents were Neutral.
- 29% of respondents were Dissatisfied or Very Dissatisfied.

Figure 5.13 - % of Residents That are Not Satisfied with Roads and Footpaths (1995-2023)



Footpaths have had an increased in percentage of respondents that were dissatisfied or very dissatisfied from 23% (2021) to 29% (2023), Figure 5.13. All Council's major footpath work (capital, renewals, maintenance) were undertaken after the survey period (2nd March – 11 April 2023), and therefore some residents' concerns have now been addressed. Benchmarking data against some other Councils have identified Council to be about 2% below the average satisfaction for footpaths, Figure 5.14.

For Sealed Roads:

- 40% of respondents were Satisfied or Very Satisfied
- 27% of respondents were Neutral.
- 33% of respondents were Dissatisfied or Very Dissatisfied.

Sealed Roads for the District also saw an increase in respondents that were dissatisfied or very dissatisfied from 27% (2021) to 33% (2023). Benchmarking data against some other Councils have identified Council to be about 14% above the average satisfaction for Sealed Roads.

For Unsealed Roads:

- 35% of respondents were Satisfied or Very Satisfied
- 28% of respondents were Neutral.
- 37% of respondents were Dissatisfied or Very Dissatisfied.

Unsealed Roads for the District also saw a decrease in respondents that were dissatisfied or very dissatisfied from 43% (2021) to 37% (2023). Benchmarking data against some other Councils have identified Council to be about 10% above the average satisfaction for Unsealed Roads.

Figure 5.14 - % of Residents That are Satisfied and Very Satisfied with Roads and Footpaths (2023)

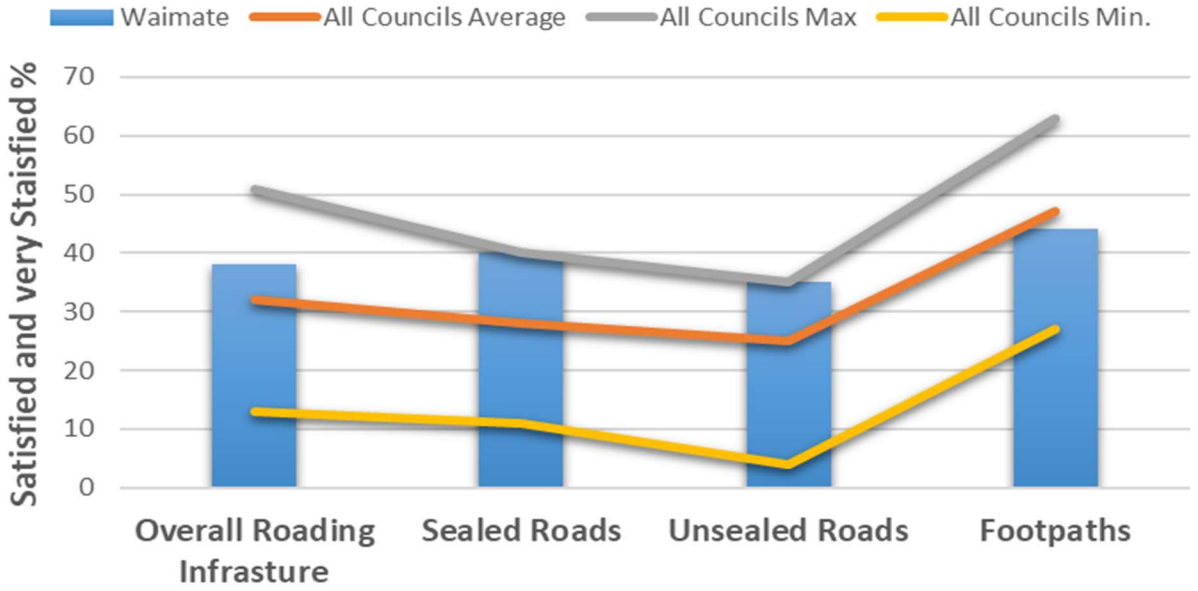


Table 5.4 - % of Residents Satisfied and Very Satisfied Between 2021 and 2023

	Overall roading and footpaths	Footpaths	Sealed roads in the district	Unsealed roads in the district
2023	38%	44%	40%	35%
2021	43%	50%	42%	33%

Overall, it is seen that in each area, other than Unsealed Roads in the District, respondents had a decreased in satisfaction, Table 5.4. It is noted in the report that while roading, and rural roads in particular, remains one of the most commented on issues in the District, there is a slight increase in satisfaction when it comes to perception of Unsealed Roads in the District.

Comments obtained from the Residents Survey identifies that the following areas require additional attention:

- Footpath maintenance/renewal
- New footpaths in Waimate township
- Road drainage in townships.

Also, over half of respondents (55%) would like for Council to spend a larger proportion of rates on Roading, and about the same proportion of rates that is currently being spent (54%) for footpaths.

5.4.3.2 Roading Customer Service Requests

Type of Request	Description of Request Type
Bridges	*Bridge Structures and Waterways.*
Compliance	*Issues on road caused by other parties. E.g. Utility operators failing to repair the road. Stock crossing not meeting to conditions.*
Detritus	*Material on road such as gravel, mud and wind brown trees.*
Drainage	*Water ponding due to inadequate drainage.*
Footpath	*Footpath surface defect.*

Operational	*Request for information on Council Requirements for activities on the road reserve and Service Requests such as installing a pipe across a road.*
Safety	*Issue that requires immediate response.*
Sealed road	*Sealed road defect such as a pothole*
Signage	*Damaged or loss of a sign, post or marker*
Street lighting	*Streetlight not working*
Unsealed road	*Unsealed road defect such as corrugations.*
Vegetation	*Vegetation affecting the operation of the road.*
State Highway	*Issues on State Highways referred to NZTA.*

A summary of the customer service requests made to Council over last 13 years can be seen in Table 5.5 and Figure 5.15. A total of 251 service requests were made in 2022/23, an increase over the last few years, with the highest numbers in "Compliance" and "Unsealed Roads". After the change of street lighting to LEDs, the number of service requests have decreased.

Over the last 3 years, the top four requests were as follows.

- **Compliance:** 20% (Issues on road caused by other parties generally the installation of cables and pipes.
- **Unsealed Road**: 13% (performance issues on the unsealed road)
- **Signage**: 10% (Damaged or loss of a sign or post)
- **Drainage:** 9% (Blocked Kerb & Channel and Drains)

Table 5.5 - Roading Customer Service Requests 2010/11 to 2022/23

Type	2010-11	2011-12	2012-13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Bridges	2	1	23	9	10	6	5	6	1	8	2	1	1
Compliance	0	0	0	0	0	0	0	0	0	29	34	45	48
Detritus	11	19	56	60	23	12	19	30	19	4	10	16	9
Drainage	25	35	87	63	28	22	25	48	19	13	6	16	33
Footpath	19	13	17	12	13	22	18	20	13	11	23	9	14
Operational	69	51	43	43	51	25	44	49	48	25	9	7	35
Safety	12	28	12	9	3	5	5	2	5	5	2	6	4
Sealed Road	7	4	24	43	20	17	16	13	6	13	10	13	25
Signage	12	15	37	27	29	16	20	18	24	20	33	19	12
Street Lighting	23	21	29	22	21	20	30	32	6	12	37	2	3
Unsealed Road	8	18	133	89	25	20	35	85	29	33	20	18	41
Vegetation	0	13	25	36	10	8	21	18	12	12	10	9	11
State Highway	0	0	0	0	0	8	8	3	6	2	7	5	15
Total	**188**	**218**	**486**	**413**	**233**	**181**	**246**	**324**	**188**	**187**	**203**	**166**	**251**

Figure 5.15 - Roading Customer Service Requests by Year (2010/11 to 2022/23)

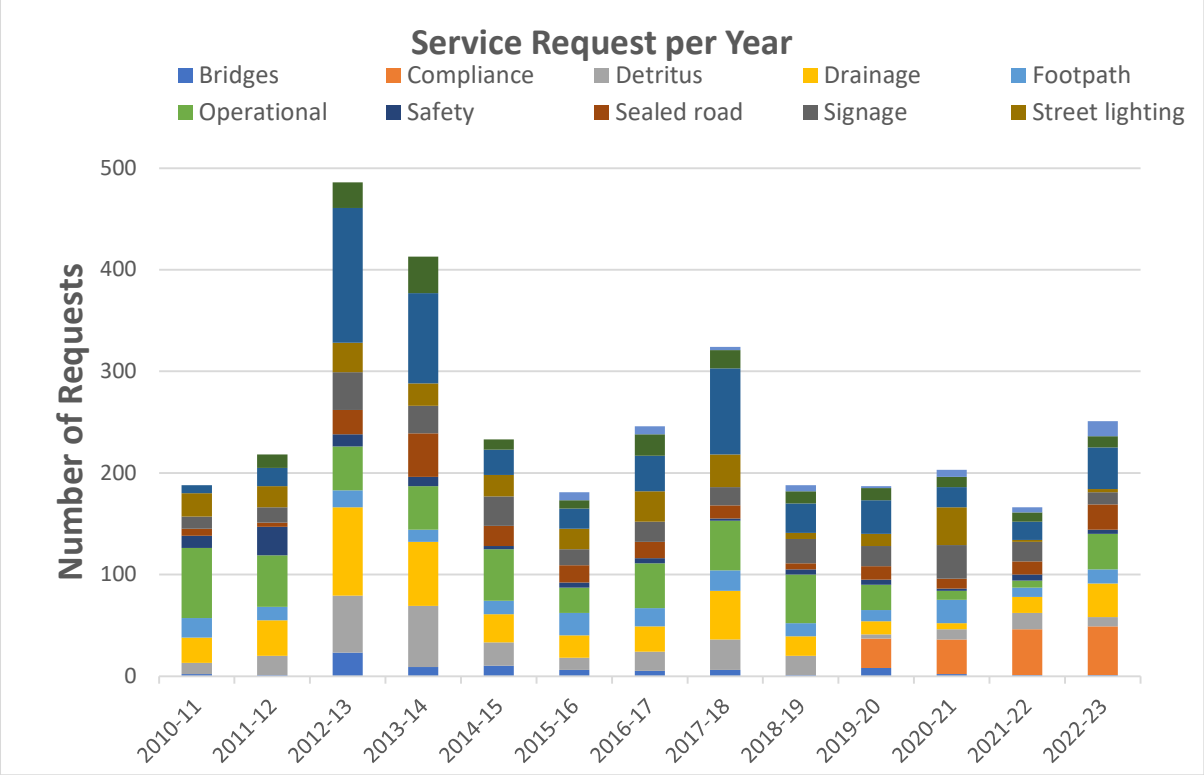
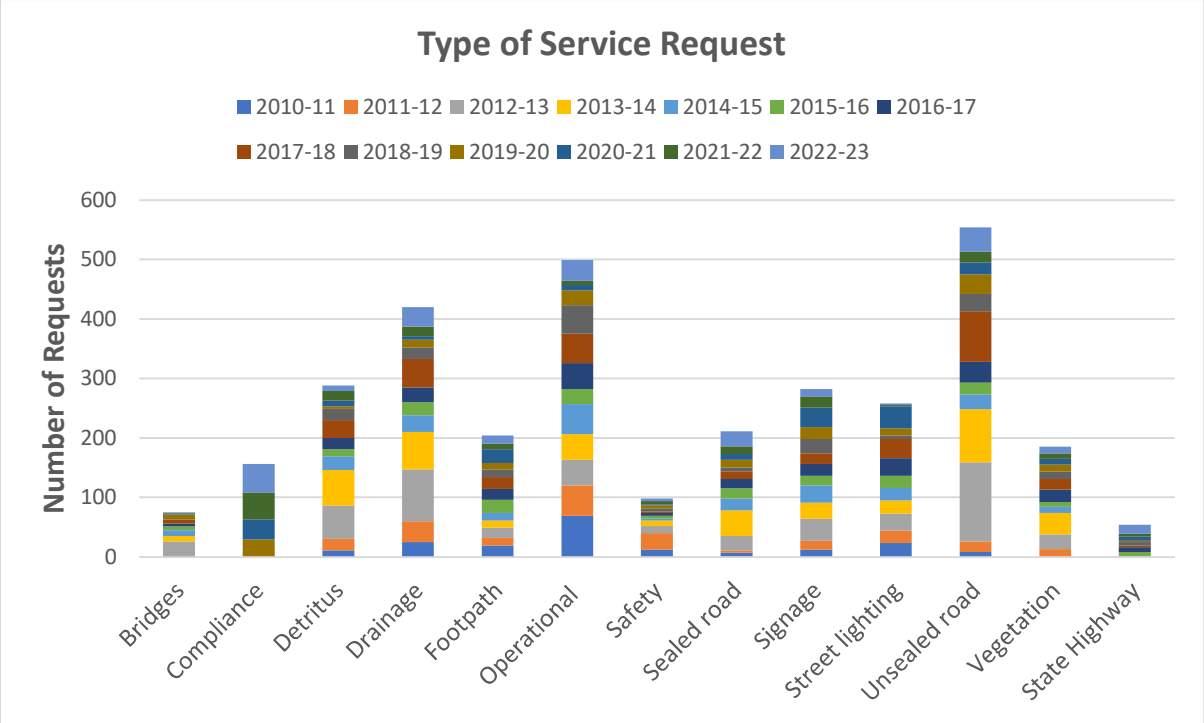


Figure 5.16 - Roading Customer Service Requests by Type of Service Requests (2010/11 to 2022/23)



Road users want roads that are operational, resilient, accessible, and safe. Adjacent landowners/ occupiers want minimum impact on their properties but retain maximum benefit for the access and convenience of the roads provided. Flooding is often an issue that is raised and requires to be carefully considered especially as there are limitations on Council's responsibility for surface water on State Highways and private properties.

"Unsealed Roads" obtain large numbers of customer service requests, and it can be for a range of reasons. Performance of unsealed roads can rapidly change due to changes in demand, type of road user's activities, weather patterns, and contractor performance. Council will continue to balance value-for-money with performance in maintaining a suitable programme to provide a fit-for-purpose unsealed road network. Council has noticed that some residents expect to see a grader on a regular basis and on a prescribed circuit, regardless of if grading is required.

"Customer expectations" is one of the key considerations used to determine the fit-for-purpose levels of service prescribed for Roading in the Waimate District. The community's expectations can be summarised as being:

- Roads address the needs of network continuity.
- Roads serve demands for access consistent with the needs of the time.
- Roads can be traversed at a level of safety, comfort, and speed appropriate with their use.
- Roads are constructed and maintained to avoid unjustified or avoidable expenditure.
- Minimal interruption to use of roads.

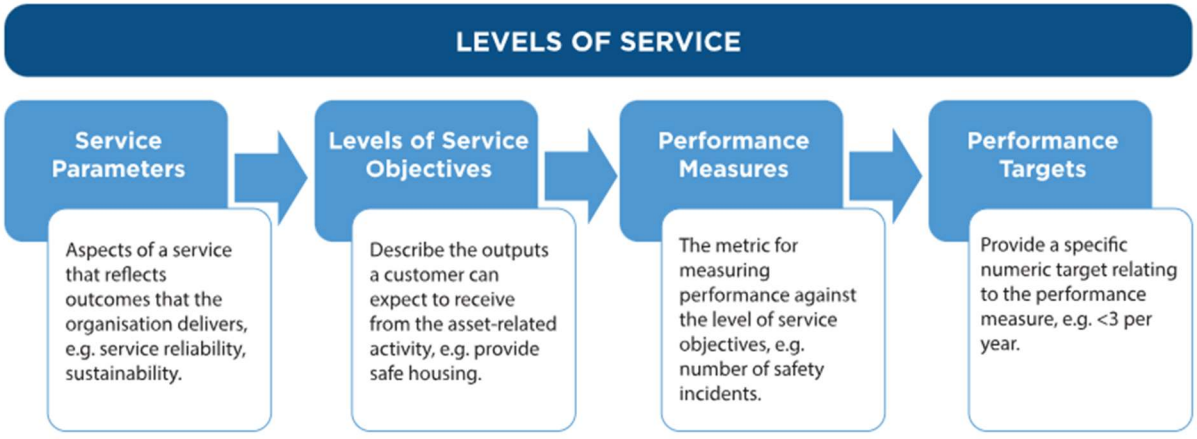
5.5 Current and Target Levels of Service

Levels of Service (LoS) cover a number of key service attributes (parameters), such as accessibility, affordability, efficiency, quality, reliability, responsiveness, and safety. For this AMP, LoS measures are expressed in terms of both.

- "Customer Performance Measures" that measures the service received by the user, and
- "Technical Performance Measures" that measures how the organisation provides the service.

The design and layout of the LoS is based on the terminology and recommendations in the *2020 International Infrastructure Management Manual (IIMM2020)*, Figure 5.17.

Figure 5.17 - Level of Service Framework (IIMM2020)



The Levels of Service Objectives (previously known as Levels of Service Statements) typically focuses on describing the output rather than an outcome and is supported by one or more performance measures. Performance Measures (Customer and Technical) are the means of monitoring whether the

assets and/or services provided are achieving the defined LoS Objectives. Performance Targets are specific, planned level of results to be achieved within a specific timeframe, which should have been planned, implemented, and controlled carefully by asset managers, and all within Council's defined constraints, such as budgetary and resources.

Council's Community Outcomes and Roading Rationale are shown in Table 2.3.

5.5.1 Mandatory Performance Measures

Established by the Department of Internal Affairs in 2013, *The Non-Financial Performance Measures Rules 2013* are to be reported by Council on an annual basis. The aim of these mandatory performance measures "*was to help the public to contribute to discussions on future levels of service for their communities and to participate more easily in their local authority's decision-making processes.*"[18] The mandatory performance measures for the provision of roads and footpaths are:

- **Performance Measure One (road safety):**
  The change from the previous financial year in the number of fatalities and serious injury crashes on the local road network, expressed as a number.
- **Performance Measure Two (condition of the sealed road network):**
  The average quality of ride on a sealed local road network, measured by smooth travel exposure.
- **Performance Measure Three (maintenance of a sealed local road network):**
  The percentage of the sealed local road network that is resurfaced.
- **Performance Measure Four (condition of footpaths within the local road network):**
  The percentage of footpaths within a territorial authority district that fall within the level of service or service standard for the condition of footpaths that is set out in the territorial authority's relevant document (such as its Annual Plan, Activity Management Plan, Asset Management Plan, annual works program or Long Term Plan).
- **Performance Measure Five (response to service requests):**
  The percentage of customer service requests relating to roads and footpaths to which the territorial authority responds within the timeframe specified in the Long Term Plan.

All of these measures can be accommodated within existing Council processes, and some existing measures have been aligned to reflect the Non-Financial Performance Measures Rules 2013, which are inflexible. These performance measures are integrated into the Customer Levels of Service and the linkages between are shown in Table 5.6 and Table 5.7.

The purpose of the Roading Activity is to provide for the safe, convenient, and efficient movement of people and goods around and through the District. This is achieved by providing a network of roads, footpaths, bridges, signs and markers, street lights, and associated drainage systems. The Roading Activity is managed by Waimate District Councils Roading Team, who manage most aspects of the activity internally, although the physical maintenance of the Roading assets is externally contracted. NZ Transport Agency Waka Kotahi (NZTA) is Council's co-investment partner for roading and the works programme that is approved on a three-yearly cycle as part of the National Land Transport Programme (NLTP).

[18] Local Government Policy - dia.govt.nz

Table 5.6 - Customer Levels of Service and Performance Measures (as reported in Annual Reports)

1. Providing Quality Roads and Footpaths			
How we do it	• Planned and reactive maintenance • Replacement (renewal) of assets • Manage inspection and condition rating of network assets. • Manage Road Assessment and Maintenance Management (RAMM) data. • Work collaboratively with neighbouring councils. • Undertake activity management planning to demonstrate that the roading assets are operated and maintained in a sustainable and cost effective manner. • Investigate improvement projects and long term network needs		
How we measure performance	**Performance Measure** (M) = Mandatory level of Service and measure	**Years 1–3 Target**	**Years 4-10 Target**
	Resident satisfaction with sealed roads	≥50%	≥50%
	Resident satisfaction with unsealed roads	≥50%	≥50%
	Average quality of ride on sealed local roads (M)	Smooth travel exposure ≥ 93%	Smooth travel exposure ≥ 93%
2. Respond to Customer Complaints and Requests in a Timely Manner			
How we do it	• Provide customer service request system 24 hours a day, 7 days a week. • Investigate and rectify roading and footpath complaints		
How we measure performance	**Performance Measure** (M) = Mandatory level of Service and measure	**Years 1–3 Target**	**Years 4-10 Target**
	Percentage of customer service requests relating to roads and footpaths responded to within 10 working days (M)	≥ 95%	≥ 95%
3. Provide a Safe Transport Environment			
How we do it	• Conduct safety audits on aspects of the district's roading network • Deliver quality community road safety campaigns with Timaru and Mackenzie Districts to improve road behaviour and awareness. • Monitor road accident statistics and locations. • Ensure traffic management plans are in place for all road works sites which affect roads and footpaths. • Ensure that private activities undertaken on the road corridor don't adversely compromise road safety or the road condition. • License and monitor all cow crossings		
How we measure performance	**Performance Measure** (M) = Mandatory level of Service and measure	**Years 1–3 Target**	**Years 4-10 Target**

	The change from previous year in the number of fatalities and serious injury crashes on local road network (M)	Number of fatalities and serious injury crashes is less than the previous year on an annual basis	Number of fatalities and serious injury crashes is less than the previous year on an annual basis
4. Provide Well Maintained Footpaths			
How we do it	• Inspection and condition rating of footpath assets • Manage footpath renewals and maintenance projects. • Determine future footpath projects based on defined prioritisation approach and future demand		
How we measure performance	**Performance Measure** (M) = Mandatory level of Service and measure	**Years 1–3 Target**	**Years 4-10 Target**
	Resident Satisfaction with footpaths	≥58%	≥58%
	Percentage of footpaths that fall within a condition rating of fair, 1-3 (M) (as detailed in the Roading Asset Management plan)	≥ 85%	≥ 90%
5. Provide Adequate Asset Renewal			
How we do it	• Plan renewals based on the asset's age, condition, and performance information. • Renewals implemented at the right time with the right treatment		
How we measure performance	**Performance Measure** (M) = Mandatory level of Service and measure	**Years 1–3 Target**	**Years 4-10 Target**
	Percentage of the sealed local road network that is resurfaced (M)	≥ 5 %	≥ 5 %

Council aims to tie-in the performance measures and define appropriate target Levels of Service for the assets and services that is currently provided, but to do so, the following (but is not limited to) are to be taken into account:

- Establish current levels of service by measurement and align Contract Specifications with the target LoS
- Align current customer levels of service to Council's combined One Network Classification, Waimate ONRC ONF Combination, Section 4.1.3
- Establish target levels of service through consultation
- Extend levels of service targets to cover 3-year and 10-year periods. These will identify Council's aims for long-term improvement, managed reduction of service levels (for affordability) or maintaining the same levels of service.

Some of the measures suggested are conceptual only and require further definition, such as crash severity and signs visibility. More work is required in developing corresponding customer and technical performance measures, as part of improvement planning. The following technical levels of service will

remain in place as the One Network Roading Classification (ONRC) / One Network Framework (ONF) technical levels of service are implemented, providing consistency in measurement for the interim

Resident Satisfaction Performance Measures

- Sealed Roads: 50%
- Unsealed Roads: 50%
- Footpaths: 58%

These targets set by the Council are somewhat aspirational due to reduced NZTA funding and constrained Council resources. However, the latest survey results indicate that the Council ranks highest for both sealed and unsealed roads and is at the average level compared to other councils for footpaths. Additionally, the Council spends the lowest amount per kilometre of all rural councils.

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Table 5.7 - Service Attribute Linked to Technical Levels of Service

Rationale	Service Attribute	Technical Level of Service	Technical Performance Measure	Measurement Procedure	Target Level of Service	Current Level of Service
Efficient and safe roading networks are part of the essential infrastructure for economic growth and development	Safety	Structural integrity of structures is not diminished by lack of maintenance.	Percentage of structures inspected and faults remedied within appropriate timeframe	Scheduled bridge inspections.	≥ 95%	
	Safety	Adequate provision of traffic services.	Signs, edge marker posts raised pavement markers and road markings will be provided in acceptance with Council traffic Service Standard.	Network Audit	≥ 90%	
	Safety	Adequate maintenance of traffic services.	Compliance with maintenance contract	Network Audit	≥ 90%	
	Quality Safety	Minimise the surface defect on unsealed roads.	Compliance with road grading schedule when condition are appropriate	Monthly Contractor's report	≥ 90%	90%
Safe and well maintained roads, footpaths and road verges promote safety of all road users, including pedestrians	Safety	Carriageway lanterns are maintained in effective operational condition to ensure road safety.	Percentage of defective or non-operating lanterns	Streetlight Contract Inspection Report	≤ 5%	
	Quality	Provide smooth roads	Smooth travel exposure.	Annual RAMM NZTA Report	All Rural: ≥ 95% All Urban ≥ 82%	All Rural: 98% All Urban: 85%
	Asset preservation	Maintain good pavement condition	Surface Condition Index (CI) Pavement Condition Index (PII)	Annual RAMM NZTA Report	SCI: ≥98% PII: ≥96%	All roads, SCI: 98% All roads, PII: 96%
	Asset Renewal	Adequate metal cover is maintained.	Adequate metal replacement for unsealed roads is programmed.	Annual quantity of metal spread	Metal spread is equal to estimated loss	11,500 m^3
A well-managed roading network minimises the adverse	Quality	Road drainage system Flood design capacity	Culvert shall cater for a ARI of 10 years.	Roading Manager approval of all new works.	100% (compliance for new works)	

Rationale	Service Attribute	Technical Level of Service	Technical Performance Measure	Measurement Procedure	Target Level of Service	Current Level of Service
effects on the Environment	Quality		Bridges shall cater for a ARI of 100 years.	Roading Manager approval of all new works.	100% (compliance for new works)	
Roads and footpaths are an important element in both the residential and rural environment for physical exercise, leisure activities and social contact	Efficiency	Adequate destination and directional signs	Compliance with schedule of road names and destination signs.	Network manager annual audit.	≥ 95%	

5.5.2 Road Efficiency Group Te Ringa Maimoa (REG) – Transport Insights

The Road Efficiency Group Te Ringa Maimoa (REG) is an enduring partnership that supports Road Controlling Authorities (RCAs) to improve activity management, make smarter investment decisions, and continuously enhance the transport sector performance. The vision of the group is to "*An enabled transport sector that supports connected communities to thrive*."

REG started the Transport Insights in 2015 to report on the One Network Road Classification (ONRC) Performance Measures. Transport Insights is a web portal consolidating roading, financial, and other statistical information from a range of sources to provide the insights into the performance of the transport sector in New Zealand. Some of the initiatives include:

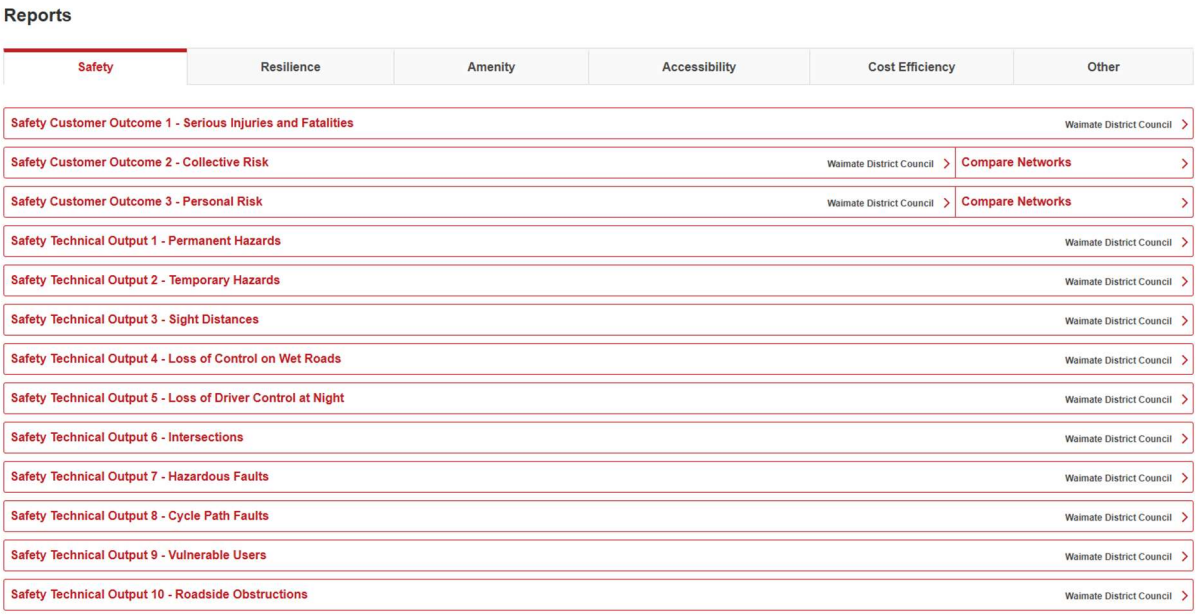
- One Network Framework performance measure reporting
- One Network Road Classification performance measure reporting
- Road Controlling Authority (RCA) performance reporting
- Asset Condition reporting
- The data quality framework
- Procurement smart buyer self-assessment form
- Asset management competency framework
- Procurement competency framework
- Activity Management Plan reviews and exemplars
- Traffic count estimation.

Transport Insights is expected to expand further to support new initiatives.

5.5.2.1 One Network Road Classification Performance Measure Reporting

As introduced in Section 4.1.1, ONRC is a joint initiative between NZTA and Local Government New Zealand. A set of performance measure indicators were developed and as part of Transport Insights, these are extracted from data sources and reported, Figure 5.18

Figure 5.18 - Transport Insights ONRC Performance Measure Report

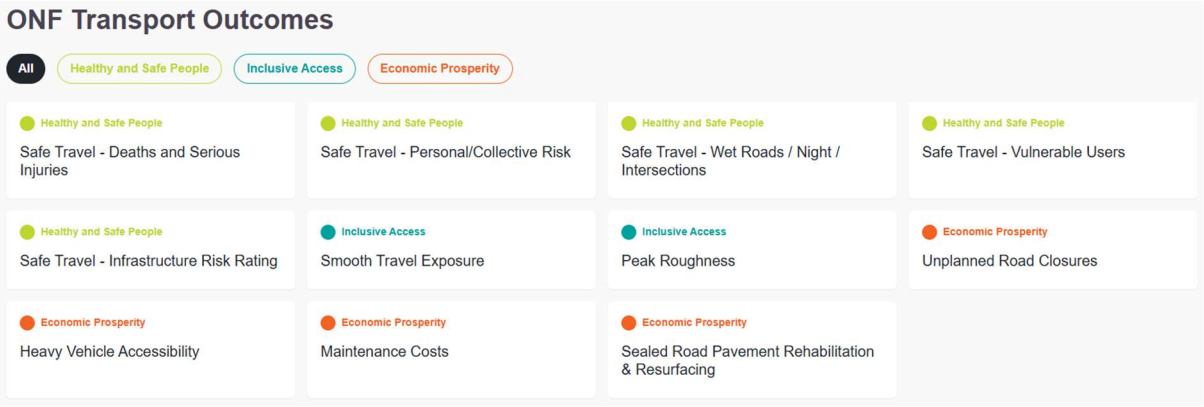


As with the Mandatory Performance Measures, these levels of service are now integrated into Council's suite of Customer Levels of service (publicly reported) and the technical levels of service (for internal management).

5.5.2.2 One Network Framework Performance Measure Reporting

As introduced in Section 4.1.2, ONF is an updated classification. A set of ONF Transport Outcomes (performance measure indicators) were identified and reported in Transport Insights, Figure 5.19

Figure 5.19 - Transport Insights ONF Transport Outcomes Report



The ONRC performance measures are listed below along with a commentary on achievement.

The REG ONRC Summary report is appended to this document.

Table 5.8 - ONRC Performance Measures

Measures	Measure	Primary Collector	Secondary Collector	Access	Low Volume	Comments
Safety Measures						
Safety Customer Outcome 1 – Serious Injuries and Fatalities	Injury Counts	↓	↓	↑	↑	Reduction over time
Safety Customer Outcome 2 – Collective Risk	Injures per km	Low	Low	Low	Low	Very low
Safety Customer Outcome 3 – Personal Risk	Injuries per 100M Vehicle km	Low	Medium-High	High	High	Access and low volume high due to low volumes
Safety Technical Outcome 1 – Permanent Hazards	Permanent hazards not marked in accordance with national standards					Data collection process to be established
Safety Technical Outcome 2 – Temporary Hazards	% audits compliant with COPTTM					Data collection process to be established
Safety Technical Outcome 3 – Sight Distances	% locations where sight distance or signs are obstructed					Data collection process to be established
Safety Technical Outcome 4 – Loss of control on Wet Roads	Trend of serious and fatal injuries due to loss of control in the wet.					Only two incidents recorded on 2012, no trend available
Safety Technical Outcome 5 – Loss of Driver Control at Night	Trend of serious and fatal injuries due to loss of driver control at night					6 records in 2014/15 only , no trend available

Measures	Measure	Primary Collector	Secondary Collector	Access	Low Volume	Comments
Safety Technical Outcome 6 - Intersection	Trend of serious and fatal injuries at intersections	↓	↑			One or two records per annum for some classifications, no trend available
Safety Technical Outcome 7 – Hazardous Faults	Number of hazardous faults which require evasive action by road users					Data collection process to be established
Safety Technical Outcome 8 – Cycle Path Faults	Number of cycle path hazards requiring evasive action by cyclists					Data collection process to be established
Safety Technical Outcome 9 – Vulnerable Users	Trend in the number of serious and fatal injuries to vulnerable road users.					Data incomplete due to CAS/RAMM issues
Safety Technical Outcome 10 – Roadside Obstructions	Number of locations where there are unauthorised items placed within the road reserve.					Data collection process to be established
Resilience Measures						
Resilience Customer Outcome 1 – The Number of Vehicles Impacted by Unplanned Events	Number of unplanned road closures and the number of vehicles affected by those closures annually					Data collection process to be established
Resilience Customer Outcome 2 – The Number of Instances Where Road Access is Lost	Number of unplanned road closures and the number of vehicles affected by those closures annually					Data collection process to be established
Amenity Measures						
Amenity Customer Outcome 1 – Smooth Travel Exposure (STE)	% Journeys on smooth roads	100%	97%	98%	97%	Network smoother than peers

Measures	Measure	Primary Collector	Secondary Collector	Access	Low Volume	Comments
Amenity Customer Outcome 2 – Peak Roughness (Urban)	NAASRA Counts per km	118	180	152	140	Network similar to peers except secondary collectors that are worse
Amenity Customer Outcome 2 – Peak Roughness (Rural Sealed Roads)	NAASRA Counts per km	80	96	95	96	Network similar to/smoother than peers
Amenity Technical Outcome 1 – Roughness of the Road (Median)	NAASRA Counts per km					Considerable variation between urban and rural roads
Amenity Technical Outcome 2 - Aesthetic Faults	The number of aesthetic faults that detract from the customer experience					Data collection process to be established
Accessibility Measures						
Accessibility Customer Outcome 1 – Proportion of Network not Available to Heavy Vehicles					No class I access 16km 50MAX (and HPMV) restricted routes total 11km.	Need to take an alternative route of ten minutes or more
Accessibility Technical Output 1 - Wayfinding						Data collection process to be established

5.6 Levels of Service Gaps

To establish the levels of service (LoS) gaps that the District faces, Council requires to undertake an analysis between the required LoS against the current LoS provided. Once established, the required LoS and performance measures will require integrating into Council's documentations and contracts. This is expected to lead into amendments to the maintenance specification, public information and the development of business cases for future funding submissions.

Currently, an identified significant LoS gap exist in the provision of footpaths and drainage. A prioritisation process has been developed for footpath and is expected to take ten to fifteen years to implement. For drainage, much of the network is located on difficult soils that are poorly drained. The detail of this process is included in the Section 9.20, Footpath Maintenance, and Section 0,

Drainage Control Assets Maintenance.

5.7 Monitoring Achievement

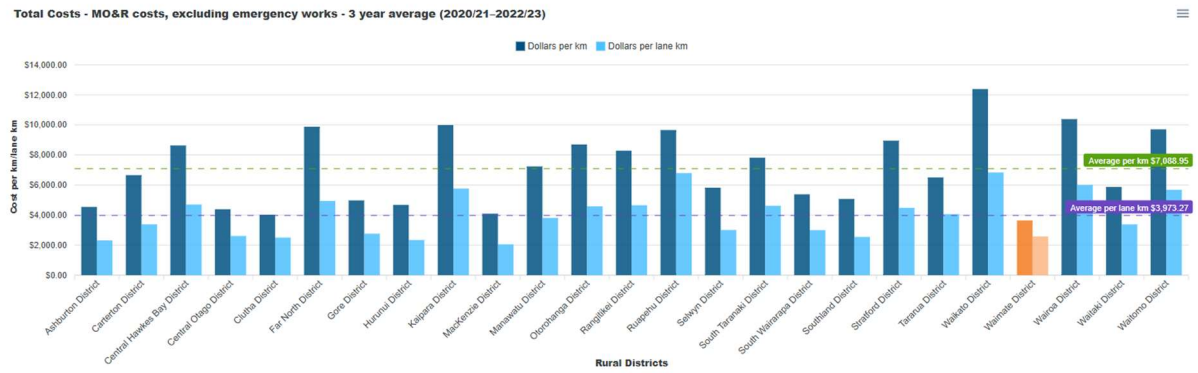
There are multiple monitoring requirements that Council requires to achieve. These are, and are not limited to:

- Mandatory Performance Measures – Department of Internal Affairs (DIA)
- Council's Annual Report Measurements - Table 5.6
- NZTA ONRC and ONF Measurements – Section 5.5.2, Transport Insights.

It is important to ensure the 'work on the ground' is contributing to echeloning the outcomes sought by the community. Figure 3.1 "*Waimate District Council Roading Services Key Problem Statements*" illustrates the alignment from the Government Policy Statement for Land Transport through to the Council's Community Outcomes, and the Key Council's Land Transport Problem Statements. From Table 3.1, Table 3.2, and Table 3.3, Council is able to identify that the measures is sufficient to ensure the objectives sought are monitored and the work that Council has identified contribute Nationally and Regionally.

Tracking "*Value for Money*" will be undertaken as part of ONRC/ONF measurements, once finalised and using the normalised costs provided by NZTA. Based on Transport Insights, comparing Waimate District Council Total Costs with the Peer Group, Figure 5.20 displays how Council is currently well at the "Value for Money", and have been as Council aims to provide a fit-for-purpose network rather than an over-engineered network.

Figure 5.20 - Total Costs - MO&R Costs, Excluding Emergency Works - 3 Year Average (2020/21-2022/23)



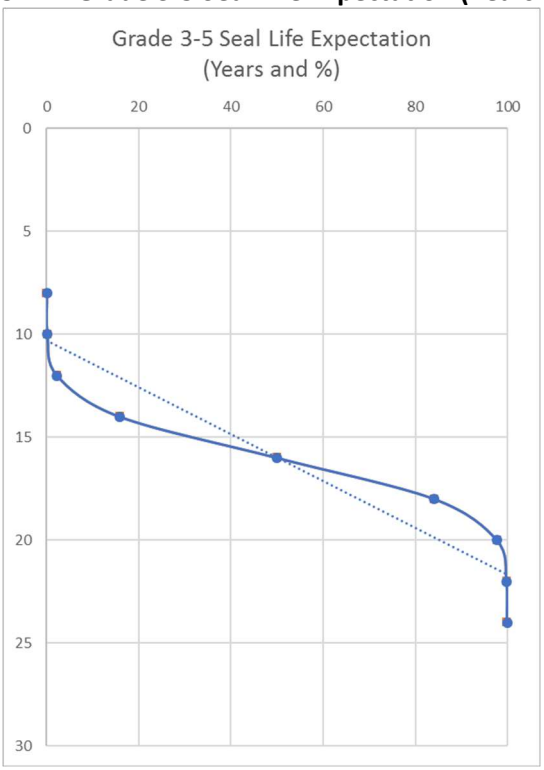
5.8 Service Life of the Network

The service life of the network is the period over which the assets are expected to be available for use. There is limited confidence in the service life information currently held by Council. This data requires to be reviewed and additional information needs to be gathered to better determine the service life of the assets.

In the 2022 Roading Valuation Report, each asset (component, sub-component) was assigned a base life (estimate of average useful life). An assessment of remaining life was calculated as the difference between economic life and age of the asset. Where information is available further adjustments are then made to the useful life estimate taking into account condition and use of the asset.

A review of achieved lives was undertaken in 2017 based on observations of the network. The analysis indicated that grade 3-5 surfacing (the most common surfacing on the network) can regularly achieve 20 years, however the average life expected is only 16 years, Figure 5.21.

Figure 5.21 - Grade 3-5 Seal Life Expectation (Years and %)



5.9 Future Improvements

In Table 5.7, the Performance Measures (including mandatory ones) and Targets levels may require further refinement. Some of these future improvements include but are not limited to:

- Linkages and alignment to current documentation
  - Establishing current LoS by measurement
  - Contract Specifications
- Refine target levels of service through community and stakeholders consultation
- Identify future LoS based on improve, reduce (for affordability), or status quo
- Assess the validity of technical LoS for the purpose of supporting Customer LoS.

5.9.1 Levels of Service Development with Community and Stakeholders

The current and target Levels of Service (LoS) have not been developed in consultation with the community and stakeholders. Community communication and engagement (consultation) is a vitally important step required to support the LoS Council is providing. Options to further examine this could include:

- Monitor and interpret customer feedback through customer feedback and complaints (customer service requests).
    - This information can be analysed for any trends or common factors related to current service levels (e.g. number of complaints received from identified road sections can be compared to current conditions.)
- Review agreed (with Stakeholders) Levels of Service on other local authority road networks as a means of benching these on this network as there may be opportunities to consider some reduction in service levels where any reduction would result in savings or enable some reallocation of expenditure between activities, and vice versa.
- Engage customers in a formal process.
    - There are a number of mechanisms to achieve this from public meetings to surveys, to focus groups.
    - This may include the use of documented feedback processes.
    - In all methods the clear description of different Levels of Service options, fully costed, and identified risks, is a prerequisite to meaningful feedback. (E.g., increase in LoS equal higher cost.)
- Engagement with key stakeholders.
    - These include the Regional Council, NZTA, transport operator groups, Automobile Association, businesses, and others.
    - Good input information to these engagements will produce valuable feedback.

5.9.2 Affordability and Willingness to Pay

Hand in hand with the “Current Levels of Service” vs. “Desired Levels of Service” is the issue of cost. This needs to be addressed at two levels:

- Cost for different Levels of Service options within the Roading Activity (possibly differential LoS)
- Cost of the Roading activity within the total Council programme.

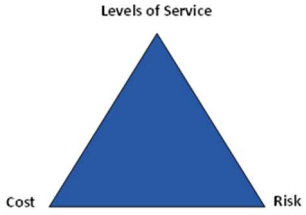
The first level can be addressed using the options outlined in Section 5.9.1, where a clear described levels of service options, associated risks and benefits, and related costs are used to consult with the community and stakeholders.

The second level requires to be addressed as an assessment of the relative contribution the Roading Activity makes towards the achievements of Community Outcomes at the current level vs. greater or lesser levels of service.

There is a need to balance levels of service (LoS), as normally, the

- ↑ Increase in LoS = ↑ Increase in Cost = ↓ Reduce in Risk
- ↓ Decrease in LoS = ↓ Decrease in Cost = ↑ Increase in Risk

Figure 5.22 - Levels of Service Balance



6 GROWTH AND FUTURE DEMANDS

6.1 Drivers for Demand

The significant future demands affecting the roading asset/activity in Waimate District are:

- **Growth Trend (Section 6.1.1)**
  - Trends in population growth/decline give a good indication of future growth and in turn transport demands on the roading network.
- **Economic Changes (Section 6.1.2)**
  - Changes in land use, industry, freight movements, and tourism can all affect the demand on the roading network.
- **Vehicle Mix and Use Changes (Section 6.1.3)**
  - Available modes of transport including options, vehicle ownership, and heavy vehicle trends can all impact on future demand on the roading network.
- **Improvements To Levels of Service (LoS) (Section 6.1.4)**
  - Continual demand for improvements in the levels of service. This can result from:
    - Advances in technology and Innovation
    - A greater understanding of customers' perceptions and expectations
    - A higher level of road safety conscientiousness
    - Changes of legislative and regulation requirements
    - Co-investment organisation setting higher standards.
- **Funding Constraints for Growth and Future Demands (Section 6.1.5)**
  - Changes to Government strategic direction may change the focus of where funding is to be spent
  - Development and community's expectations and willingness to pay contribute towards growth and future demands on the network.

Table 6.1 indicates how these factors are expected to be reflected in changes in use of the roading network.

Table 6.1 - Roading Demand Drivers

Transport Demand Drivers	Urban		Rural	
	Sealed	Unsealed	Sealed	Unsealed
Growth	Population changes	Not significant	Not significant	Not significant
Economic	Not significant	Not significant	Changes in land use	Changes in land use
Vehicle Mix and Use	Changes in vehicle ownership	Not significant	Increased heavy vehicle usage	Increased heavy vehicle usage
Improvements to Levels of service	Expectation to maintain current standards			
Funding Constraints for Growht and Future Demands	Expectation to maintain or increase current standards (even with constrained funding)			

6.1.1 Growth Trend

6.1.1.1 Population Growth

Population growth (or decline), age structure and distribution (spread), and the number and type of households and families in our District affects:

- Demand for local services
- The willingness and ability of ratepayers to pay for local services.
- Representation and participation in local democracy
- Interactions between human activity and the environment.

It is therefore an essential for asset management planning that sound information is used regarding population, demographic, and geographic change.

6.1.1.1.1 Methodology

Rationale was engaged and had developed the previous set of growth projections for Waimate District Council in 2020. These projections were developed using a bottom-up approach. Individual growth drivers for each Statistical Area 2 (SA2) were developed using migration for employment and lifestyle as the basis of the modelling. The modelling was based off 2019 data, which was the most up to date at the time.

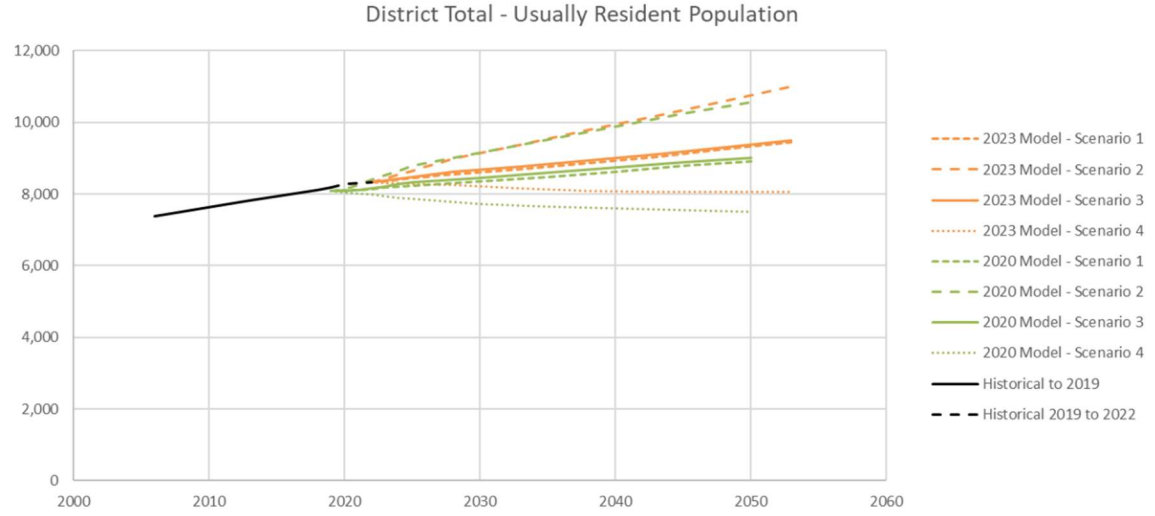
Council approached Rationale to update the projections to ensure their continued relevance, check for any significant changes including the actual impact of COVID-19, and to inform the 2024 to 2034 Long Term Plan. Rationale and Council completed a review of the 2020 projections, comparing the forecast growth to 2022 with the actual growth that has occurred.

The 2020 projections generally tracked the actual growth, and it was decided that a "light update" of the projections will be appropriate. For the light update, the following items were updated:

- Historical usually resident population estimates to 2022.
- Historical filled jobs to 2022
- Current number of rating units
- Removal of any assumptions relating to the Covid-19 pandemic
- Migration and growth assumptions for the Morven-Glenavy-Ikawai SA2.

All other assumptions and inputs remain unchanged from the 2020 projections.

Figure 6.1 - Comparison Between the 2020 Projections and the 2023 Predictions



6.1.1.1.2 Growth Scenarios

Four growth scenarios have been modelled for each parameter, representing different levels of ambition in terms of the District's growth over the next thirty years (2023-2053).

Table 6.2 - Summary of the Four Growth Scenarios (as from Rationale Report, June 2023)

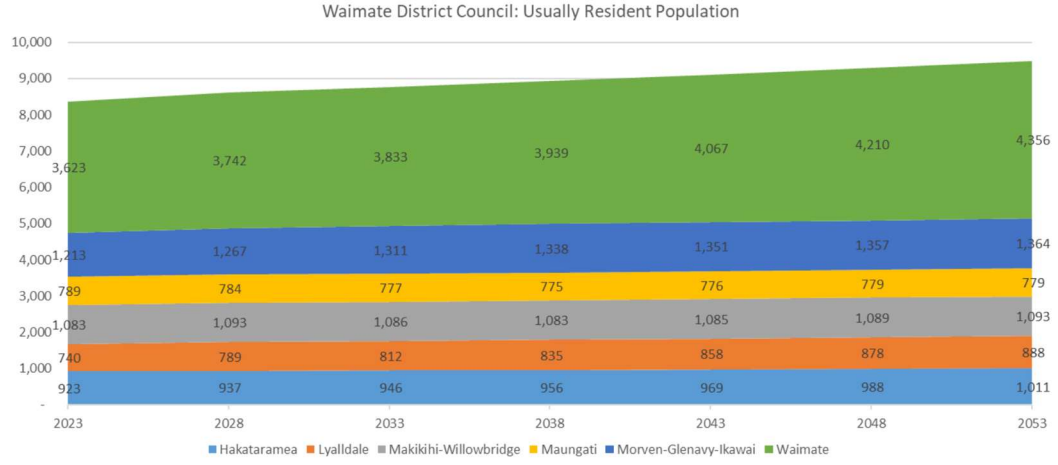
	Scenario	Description
Scenario 1	Baseline	Used as a baseline to build the other three scenarios. It is derived from historical migration and employment trends.
Scenario 2	High	Migration drivers and assumptions are increased by 20% above the baseline which means more people will move to Waimate and less people will leave. Employment levels are increased by 10% above the baseline by 2053. Investment in the town centre of Waimate is expected to generate an additional 20 long term jobs per year, from 2023 to 2028 (120 total). The Oceania Dairy plant continues to employ people at a rate of 4% (twice the MBIE forecast for food productions) through to 2053.
Scenario 3	Medium	Migration drivers and assumptions are set to the baseline. Employment levels are set to the baseline, with the exception of Waimate Town Centre. Investment in the town centre of Waimate is expected to generate an additional 10 long term jobs per year, from 2023 to 2028 (60 total). The Oceania Dairy plant continues to employ people at a rate of 2% (matching the MBIE forecast for food productions) through to 2053.
Scenario 4	Low	Migration drivers and assumptions are reduced by 20% which means less people will move to Waimate and more people will leave. Employment levels are decreased by 10% below the baseline by 2053. The Oceania Dairy plant stops expanding and ceases to employ people from now until 2053.

It is recommended that Council adopts Growth Scenario 3, "Medium" growth. Unless otherwise stated, all growth charts and tables in this AMP refer to Scenario 3.

6.1.1.1.3 Demographic Changes

Over the next thirty years, the usually resident population of Waimate District is predicted to increase.

Figure 6.2 - Population Projections (Usually Resident Population)



The "Estimated Resident Population" as at 30 June 2023 for Waimate District is 8,400[19]. The recommended medium growth scenario projects the District's population to increase to 9,500 by 2053. Based on the medium projection, the population of the Waimate District is projected to grow by, on average, 0.4% a year between 20223 and 2053. This is less than the projected 0.8% a year growth rate of the Canterbury region and New Zealand's total population. These regional and national growth projections may change over time given current (2023) high rates of immigration.

The high projection would see Waimate District population reach close to 11,000 by 2053. This is not the recommended growth scenario but does demonstrate the upper bound of modelled growth.

With a low base population, significant industrial projects are capable of having an impact of the District's population.

- Expansions of both Oceania and Fonterra Dairy Factories has been occurring in the last few years and could still expand in the next few years that could increase job opportunities in the District.[20]
- The potential future Hunter Downs Irrigation Scheme will not go ahead (September 2018) could have seen an increase in on-farm jobs in the District and the creation of secondary jobs as a result of increased agricultural production in wider South Canterbury, but due to the lack of investors and buy-in from land owners, this is not going forward.
- Project Kea – Glenavy Waste-to-Energy plant has been included in the Government's "Fast-track" project list to massively speed up resource consents. This facility may benefit the local economy, with an expected 359 workers annually over the two-year construction period, and once operational, another 165 jobs. Therefore, increasing passenger and transport vehicles from the towns to site.

Should all of these projects proceed the District may see population growth trending more towards the high projection. While this may appear conservative, it is important that Council does not over-estimate population growth and the associated infrastructure provision required. Also reflects that a considerable number of employees from both dairy factories live in either the Waitaki or Timaru Districts.[21] Given the close proximity of both Timaru and Oamaru to these sites, increased job opportunities may not necessarily equate to comparable population increase in the Waimate District. Population growth over the next 30 years of between 1,000 and 2,000 people is likely.

6.1.1.1.4 Natural Decrease

As New Zealand's population continues to age, more and more areas will consistently experience a natural decrease, i.e. more deaths than births (16 territorial authorities experienced this between 2022-2023[22], year ending 30 June 2023). For areas that have traditionally relied on a natural increase for population growth (including Waimate), a natural decrease will mean a shrinking population unless offset by net international migration gains, which has been observed. Within the Waimate District, natural decrease is projected to occur by 2038. Without net migration gains, the population proper will decrease. For Waimate District, the natural increase has been zero (0) for the last two years.

[19] Subnational population estimates: At 30 June 2023 | Stats NZ
[20] Oceania Dairy : Milking New Zealand's Potential - 02 December 2022, "Fonterra has a resource consent for a second dryer at the Studholme dairy factory", Fonterra expects biotech products to drive future growth
[21] Employment data provided by Fonterra shows approximately a third of staff live in the Timaru District. Oceania Dairy report that 79% of their staff live outside of the Waimate District.
[22] Subnational population estimates: At 30 June 2023 | Stats NZ (Table 6)

6.1.1.1.5 Ageing Population

The average age of Waimate District's population is 44.9 years, this is older than the national average of 39.4 years (Stats NZ). Looking across the District, Waimate township has a significantly older average age of 49.7 years in 2022 when compared to the outlying rural areas. This suggests that people are living and working on farms then moving into Waimate for retirement later in life.

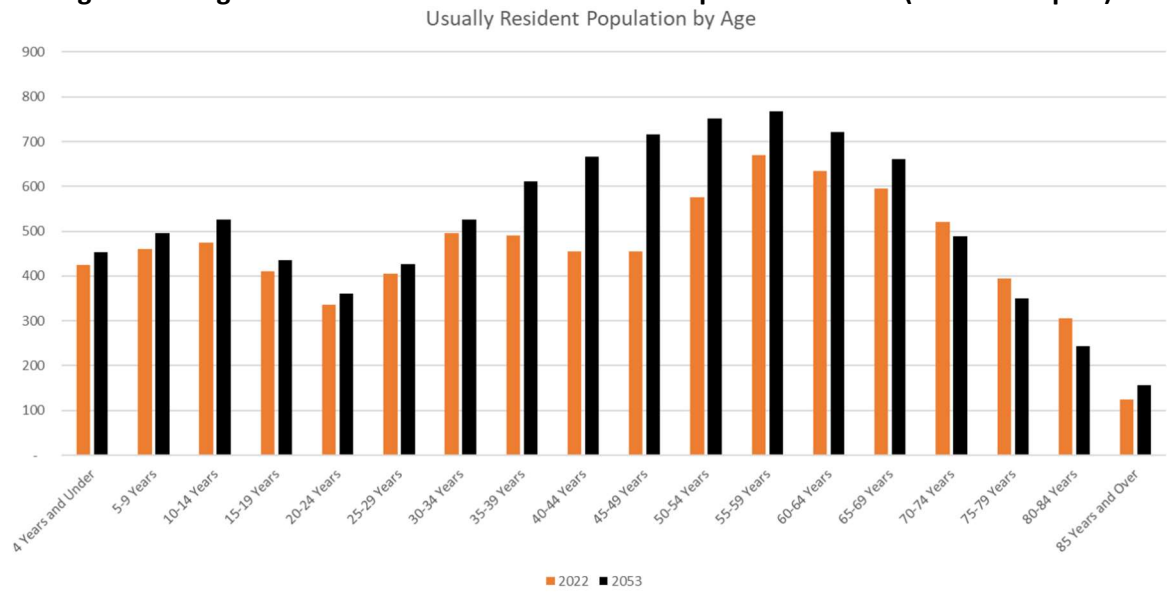
Table 6.3 - Average Age of District Population

	2022	2023	2033	2043	2053
District Wide	44.9	44.9	44.5	44.2	44.6
Hakataramea	41.9	41.9	41.8	40.8	40.6
Lyalldale	42.5	42.8	44.5	45.2	46.3
Makikihi-Willowbridge	44.0	44.1	43.9	43.3	43.7
Maungati	39.0	39.2	40.3	40.5	41.8
Morven-Glenavy-Ikawai	38.6	39	42.2	44.1	45.1
Waimate	49.7	49.5	46.9	45.8	45.7

Under all projection series (high, medium and low), all 67 territorial authorities in New Zealand are projected to have a highest growth proportion of older people (aged 65 and over) for New Zealand and across all regions. The number of people 65 and over in 2028 is likely to be 19% and 23% in 2048[23]. For Waimate District, this number is expected to reach 2,550 in 2048, a 26.2% higher than 2023 figures.

In 2013, 22.0% of the Waimate District population was aged 65 and older, and in 2023, it is 24.2%. Using the medium projection series, by 2043, 30.3% of the Waimate District population will be aged 65 and over (Stats NZ).

Figure 6.3 - Age Distribution of Waimate District's Population in 2053 (Rational Report)



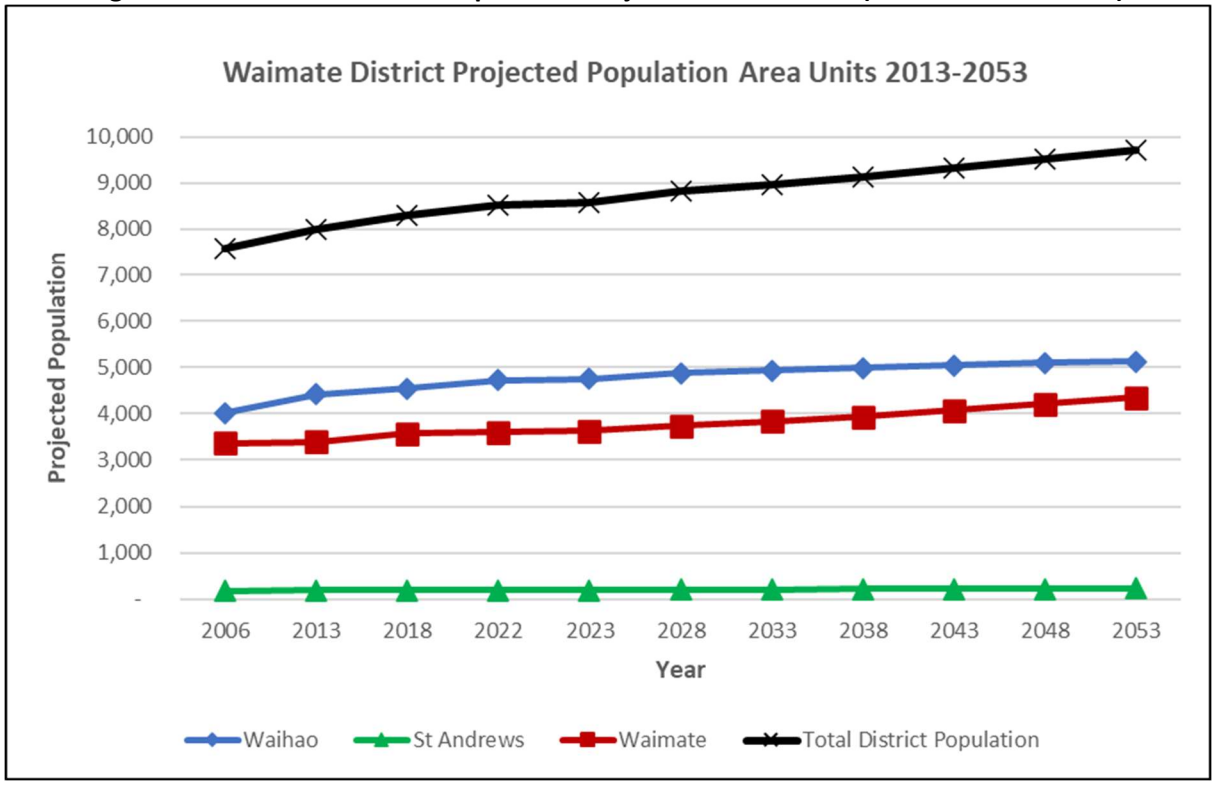
[23] Subnational population projections: 2018(base)–2048 update | Stats NZ

6.1.1.1.6 Population Location

Statistics New Zealand provides population breakdowns for area units within territorial authority boundaries for the period 2013-2053. For the Waimate District the area units provided are for urban Waimate, St Andrews township, and Waihao (covering the rest of the District).

The graph below shows gradual growth in the Waimate and Waihao areas, with growth flattening from 2038 onwards. Council will continue to monitor growth trends though subsequent Census periods to confirm these trends.

Figure 6.4 - Waimate District Population Projections 2013-2053 (Based on Area Units)



6.1.1.2 Key Migration Drivers

The key characteristics of Waimate District's population are:

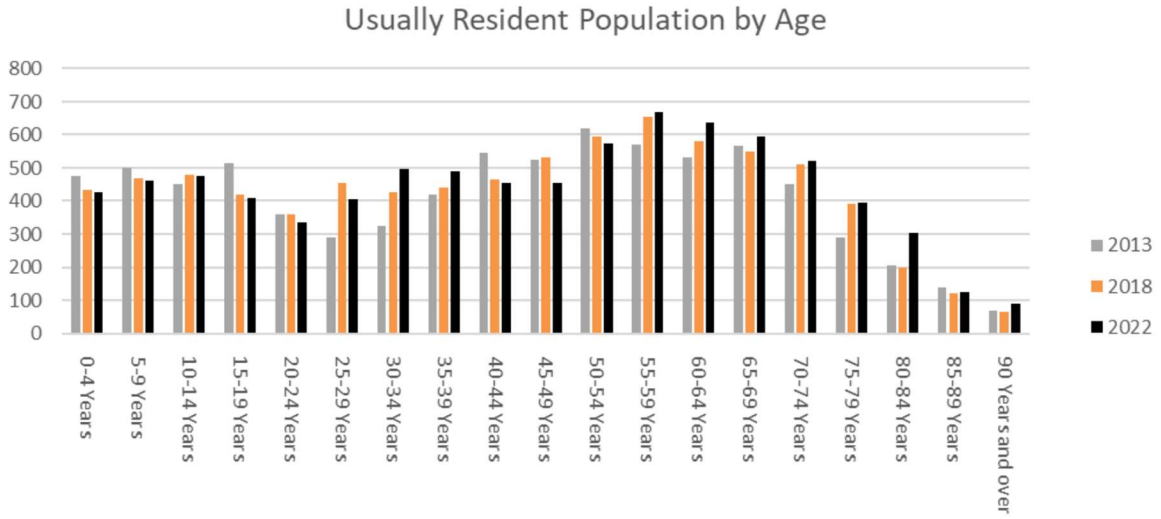
- Younger people leave the area for education and employment opportunities.
- People later in their working lives or early retirement are moving to the area for the lifestyle, affordability and/or retirement.
- Older people (over 70) are moving from the rural areas of the District to Waimate township, or leaving the area, likely in search of better healthcare or to be closer to family.

International migration contribute to the migration numbers into the Waimate District with the employment opportunities available.

6.1.1.3 Growth Story from 2019 to 2022

Council has experienced steady population growth over the past three years with an average yearly growth of 50 people per year. This is similar to long term historical trends. The average age in the Waimate District has increased from 43.8 to 44.9 years, and there is now a larger population in both the 30 to 39 years and 60 to 84 years age groups.

Figure 6.5 - Waimate District's population by Age – 2013, 2018, 2022 (Source: NZ Stats)

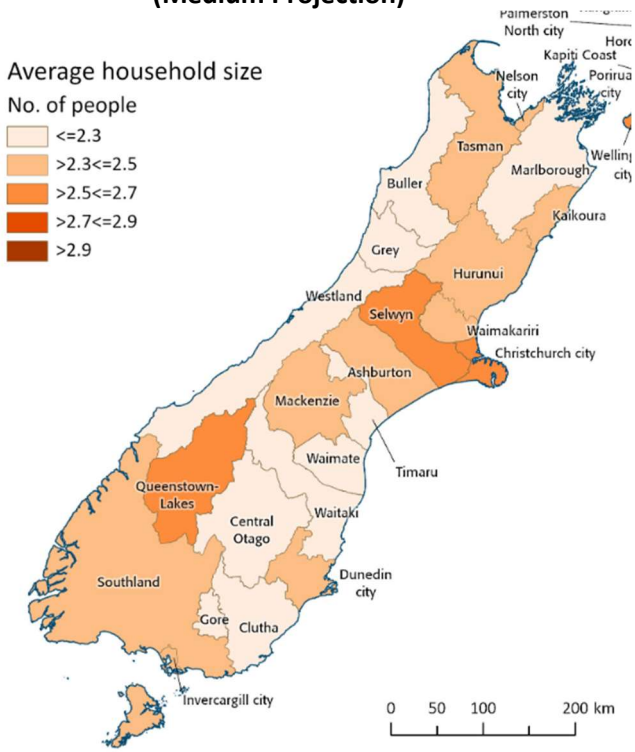


6.1.1.4 Households

The number of households in the District is projected to increase by an average of 0.2% a year between 2023 and 2043 (2018 base), lower than the national and Canterbury Region 0.9% increase at medium scenario (Stats NZ).[24]

The average household size in the Waimate District is set to remain at 2.3 people to 2043. This is lower than the Canterbury Region's 2.5 average household size and a decrease nationally from 2.7 to 2.6 people between 2018 and 2043[25].

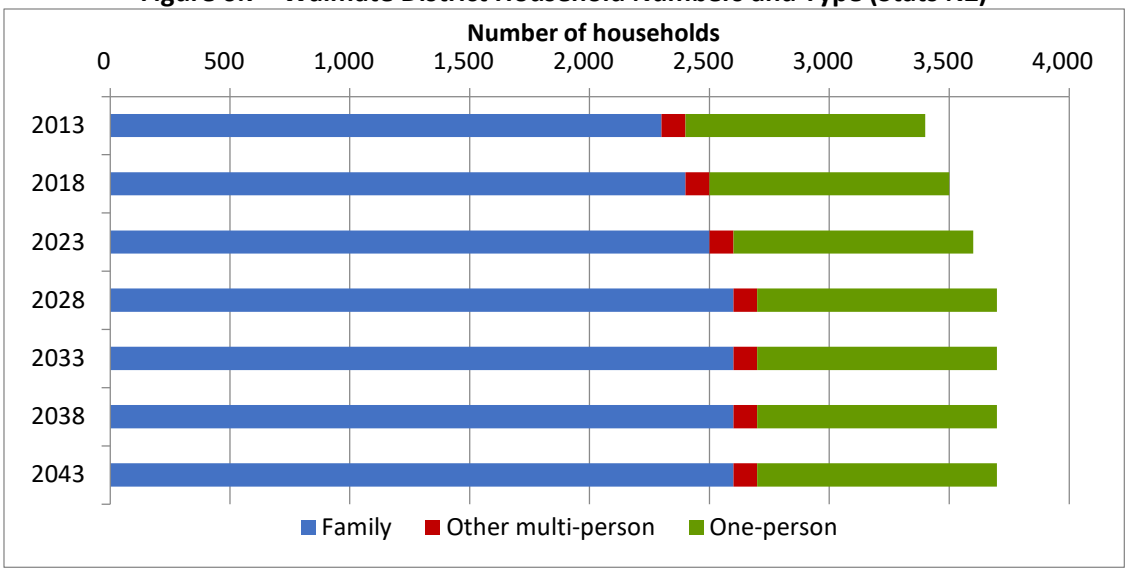
Figure 6.6 - Projected Average Household Size by Territorial Authority and at 30 June 2043 (Medium Projection)(Stats NZ)



[24] Family and household projections: 2018(base)–2043 | Stats NZ
[25] Subnational household projections, by household type, 2018(base)-2043 (stats.govt.nz)

The number of new dwellings consented has decreased from last year[26] (38 to 29, Year ended September 2023), but over the years, the number of dwellings will increase. New dwellings consents records indicate that on average, around 30 new dwellings since 2018. This is similar to long term trends and aligns with expectations considering the levels of population growth.

Figure 6.7 - Waimate District Household Numbers and Type (Stats NZ)



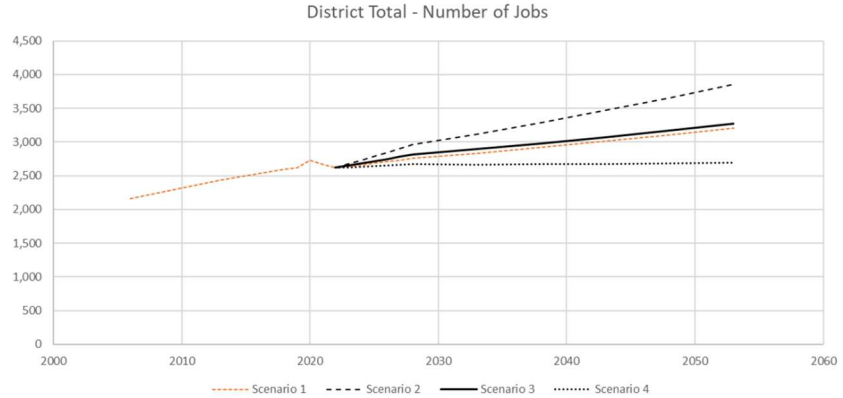
The number of one-person (1,000) and other multi-person (100) households is expected to remain the same over the years, but the family household type is expected to increase from 2,400 (2018) to 2,600 in 2043. This is from a 68.6% to 70.3% over the whole Waimate District[27].

6.1.1.5 Employment

Council is a mostly rural district with agriculture being the prominent employer. The number of agriculture jobs has dropped since 2019, with a decline in orchards and livestock farms in Makikihi-Willowbridge, and dairy farm jobs in Morven-Glenavy-Ikawai.

The fastest growing sector is food manufacturing, driven by the expanding Oceania Dairy plant in Morven. The other prevailing sectors are secondary supporting services including education, construction, and retail. These industries have remained relatively steady. Whilst jobs have decreased since 2019, it is not believed that this is a long-term trend.

Figure 6.8 - WDC's Employment Predictions in the Next Thirty Years (Rational Report)



[26] Building consents issued: September 2023 | Stats NZ
[27] Family and household projections: 2018(base)–2043 | Stats NZ

6.1.2 Economic Changes

6.1.2.1 Changes in Land Use, Practices, and Resource Use

There are numerous changes in land use and practices that may affect the performance of the network. These include:

- Forestry development
- Dairying development
- Project development including irrigation schemes, Project Kea (Waste-to-Energy Plant).
- Changes in agricultural land use
- Changes in industrial activity
- Changes in tourism.

The nature of each change and its impact on the roading network are difficult to monitor and predict. Each change will affect the type and volume of goods transported on the network, thus altering the impact on the road pavements in the network.

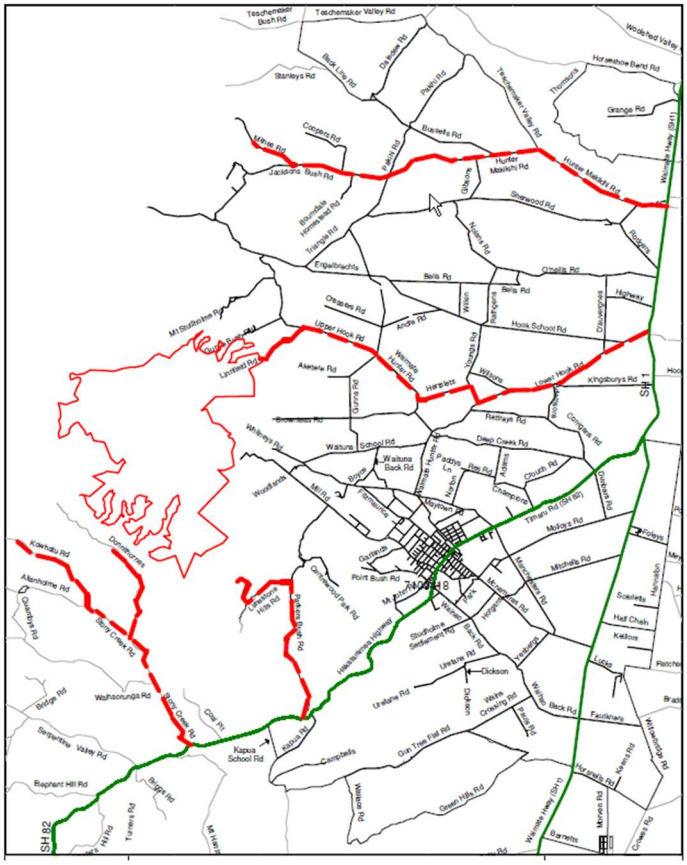
6.1.2.2 Forestry

The District's forestry is primarily owned by Blakely Pacific Limited after Council sold its forestry interests in 2010. Blakely Pacific was founded in 1993 and is a subsidiary of Port Blakely Limited. Just in June 2023, "*A large sheep and beef farm in Waimate has been sold to US company Port Blakely Limited – 312 hectares farm will be planted into rotational forestry by end of next winter. The land adjoins 1,785 hectares of the company's existing forest known as Waimate Forest.*" (30 June 2023)[28]

Over the last few years, the majority of forestry within the District has reached harvesting age. Since this time harvesting has continued at a steady rate. As per *Overseas Investment Office* approves sales of additional farms, additional planting in the area is expected, and existing forestry areas that are harvested are likely to be replanted. There are a limited number of District roads that are impacted by harvesting, and a higher level of maintenance is required on these roads. Figure 6.2 identifies the current roads that are affected by the current District's forestry.

[28] https://www.rnz.co.nz/news/country/492937/overseas-investment-office-approves-sales-of-four-farms-for-conversion-to-forestry

Figure 6.9 - Roads Used by Current District's Forestry Traffic



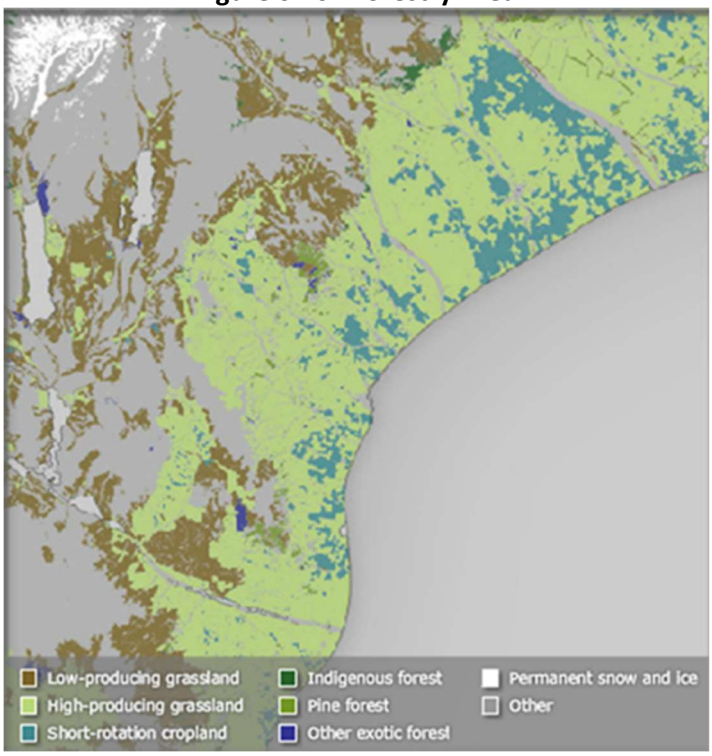
Most logging trucks travel to processing facilities outside of the District using the same road for travel to the State Highway, so limited change in demand on the District local road. There are large areas of forestry in the District. Some of the access roads receive minimal attention, but Council needs to work with logging operators to ensure roads are adequate for trucks and other users.

In October 2023, Laurie Forestry Ltd's Monthly Report advised that "*For the first time in a long-time, log prices across both domestic and export log trade segments are stable and demand is just OK, but OK.*"[29] This is an improvement in the market compared to that reported in their June 2023 report where it was one of their lowest log price since 2015[30], and had been slow moving over the last couple of years, due to the effects of Covid-19.

Waimate Timber was the largest timber processor in the Waimate District that only processes a small amount of timber with approximately three heavy vehicle movements a day. This mill is close to the State highway so has limited direct impact on District roads.

[29] https://www.laurieforestry.co.nz/news/monthly-reports-october-2023/
[30] https://www.laurieforestry.co.nz/news/monthly-reports-june-2023-6/

Figure 6.10 - Forestry Area



According to a forecast report produced for Environment Canterbury, the Log Harvest in Waimate District is expected to decrease from 188,000 tonnes pa in 2017 to 167,000 tonnes pa in 2027 and then to 64,000 tonnes pa in 2037[31].

Table 6.4 - Forecasts of Vehicle Movements Carrying the Selected Commodities by District (Heavy vehicle movements pa) (Richard Paling Consulting and GHD. 2012)

Area	Logs		Liquid Milk		Arable Products		Total		
	2009	2041	2009	2041	2009	2041	2009	2041	Growth 2009-2041
Kaikoura District	300	100	3700	4500	1700	4900	5700	9400	65%
Hurunui District	15300	28200	22100	76500	12600	53200	50000	157900	216%
Waimakariri District	2700	3200	18300	22300	7600	22000	28600	47600	66%
Christchurch City	3300	1800	3000	3700	16100	46700	22400	52200	133%
Selwyn District	2500	1400	52000	112600	20600	78200	75100	192200	156%
Ashburton District	1600	1400	95500	157500	16800	64100	113900	223100	96%
Timaru District	1300	1800	36900	54800	9300	30600	47400	87200	84%
Mackenzie District	1900	3600	4000	12500	4100	14400	10000	30500	205%
Waimate District	7200	5000	28000	62800	5800	30500	40900	98300	140%
Total	36000	46400	263500	507300	94500	344500	394000	898200	128%

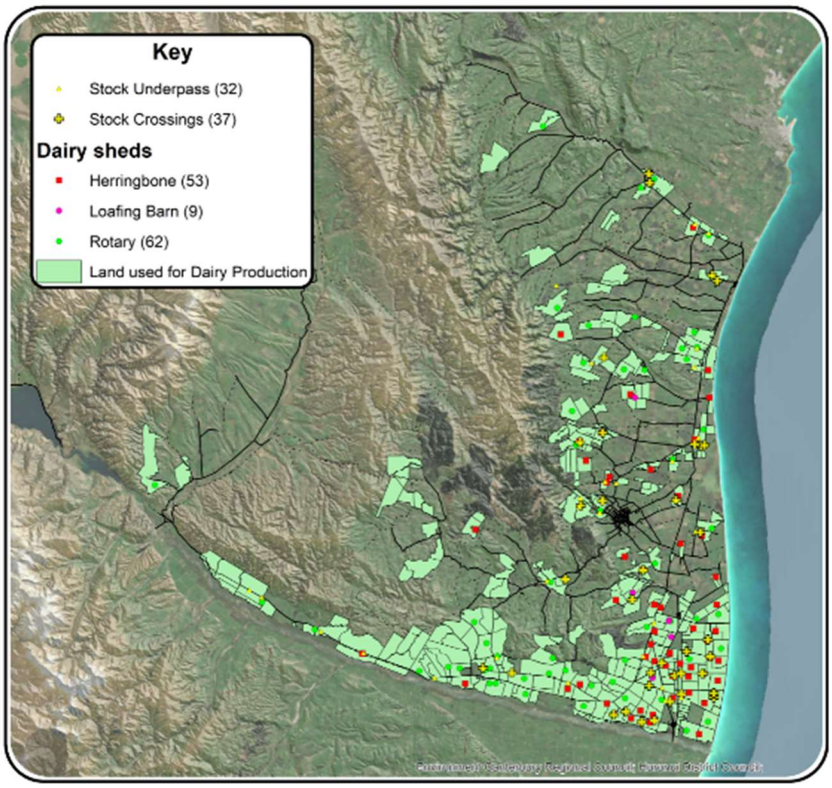
Legend: increasing and decreasing traffic loading

[31] South Island Freight Study - June 2019

6.1.2.3 Dairy

6.1.2.3.1 Dairy Conversion

Figure 6.11 - Dairy Farmland in the Waimate District



As irrigation is improved throughout the District, more land is being converted for dairy farming. Over the years, dairy conversions have been happening North of Waimate and subject to further irrigation projects going ahead this trend will continue. However, dairy conversions can only continue at a slow rate until there is any further increase in irrigation.

Dairy conversions have a large impact on the roading network during construction of the conversion due to carting gravel. There is then an ongoing increase in freight traffic to and from each new dairy farm (i.e. milk tankers, increase in fertiliser, feed requirements). There is also a significant increase in use of agricultural vehicles on the roading network as many other District farms support the dairy farm by harvesting and transporting grass for feed. Some dairy conversions are using loafing barns with cows fed inside during winter and requiring all feed to be carted in. This will require intense road use at certain times of the year.

Dairy conversions do not currently require any resource consent so there is often no warning that the conversion is going to go ahead until a building consent request is lodged. Each conversion is variable in terms of impacts, which are dependent on feed and freight cartage routes. Therefore, maintenance and renewals associated with an increase in demand are very reactive. Generally, the impact is on shoulder issues and general pavement maintenance.

At present the is no additional expansion of Dairy Farming in the District.

6.1.2.3.2 Studholme Dairy Factory

New Zealand Dairies' Ltd plant at Studholme was opened in October 2007, and in 2013 it was purchased by Fonterra. To date the majority of heavy traffic movements generated by the plant enter via the State Highway and only impact upon roads immediately adjacent to the facility.

In 2016 Fonterra obtained a resource consent for an expansion on the site to a new drier to process an extra 4.5million litres of milk. The number of vehicles, mainly trucks, serving the site would rise from 162 per day to 529 per day. There is no timeframe announced for the development, but this development is expected to increase the numbers and of heavy vehicle movements on District's local roads, especially the Pareora River, Pareora Gorge, and the Old Ferry routes.

Fonterra is expanding the Studholme site, to create a hub for high-value proteins creating six (6) new roles at the plant, and production is expected to start in 2026.

Figure 6.12 - Studholme Dairy Factory

6.1.2.3.3 Glenavy Dairy Factory

The Oceania Dairy Factory at Glenavy opened in November 2014 with suppliers in the South Canterbury and North Otago region. Oceania Dairy Limited is a wholly-owned subsidiary of Inner Mongolia Yili Industrial Group (Yili). Stage one delivered more than 70 jobs, and the recent expansion of the factory had seen the factory "*employing 400 permanent staff, 50 temporary staff, and myriad contractors to support the business…*"[32]

The Glenavy Processing Plant has a capability of producing 47,000 tonnes of milk powder per year, from standard whole milk powders through to speciality powders including infant formulae. On site, there is still room for expansion. This plant currently handles more than 630 million litres of milk per year[33], and therefore number of heavy vehicle movements on our District local roads have increased, especially the Pareora River, Pareora Gorge, and the Old Ferry route.

Figure 6.13 - Oceania Dairy Factory (Cooneys Road, Glenavy)

[32] https://www.apacoutlookmag.com/company-profiles/575-oceania-dairy
[33] https://oceaniadairy.co.nz/plant/

6.1.2.4 Hunter Downs Irrigation Scheme (Development SUSPENDED)

September 2020 Status – development of the scheme has been suspended.

Hunter Downs Irrigation Scheme (HDI) was an irrigation proposal to take water from the Waitaki River and deliver the water by a series of canals, pipes, and pump stations to the north of Waimate. The scheme was redesigned to irrigate up to 12,000 hectares. It will provide opportunities for land use diversification, including horticulture, sheep, beef, and dairy farming.

The impacts on demand from this project are expected to be sustained in the long-term. There will be a short-term increase in the usage of the network as the infrastructure is constructed. A sustained increase in economic activity driven by the improved water resource will bring an increase in traffic volumes. It is possible that there would be further dairy conversions meaning higher heavy traffic volumes to transport increased production.

This section has been left in the AMP for future reference, and potential future development.

6.1.2.5 Project Kea – Glenavy Waste-to-Energy Plant

In October 2024, the Government released its long-awaited list of "fast-track" projects designed to speed-up resource consents to get projects more quickly built. The Glenavy Waste-to-Energy Plant (aka Project Kea) was identified in this list.

In 2021, South Island Resource Recovery Ltd (SIRRL) announced their plan to build a $350 million waste incinerator near Glenavy. The proposed facility would burn up to 1,000 tonnes per day of everyday rubbish and convert it into renewable electricity.

In 2022, the company purchased a 15 hectare piece of land for the proposed plant, and in 2023 the company's resource consent applications was "called in", as requested by Waimate District Council and Environment Canterbury.

Figure 6.14 - Glenavy Waste-to-Energy Plant design

It is assumed that there would be approximately 70 trucks movements per day via the State Highway 1, as the main road transport corridor and minimise the traffic movements on local roads where

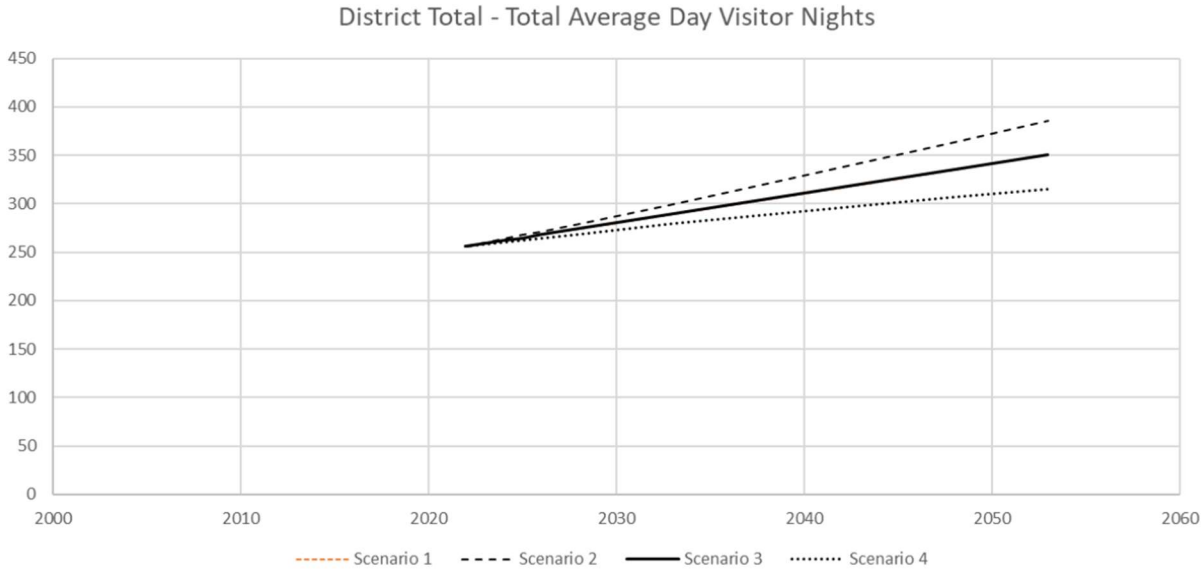
possible. and transport via rail is intended for the medium term. Refer to the Transportation Assessment Report 2022 for Project Kea for more information.

This plant is expected to involve 359 workers annually over the two-year construction period, and once operational, resulting in 165 jobs, with 100 of those at the plant itself, as reported by Infometrics[34].

6.1.2.6 Tourism

Tourism makes up a small component of traffic and roading demand within the District. According to Council's Rational Growth Projections report, the total "Visitor Nights" and "Visitor Numbers" are expected to increase in the coming years.

Figure 6.15 - Average Visitor Nights in Waimate District



Covid-19 had a severe effect on tourism and since lockdown has lifted, national tourism has increase and now that the international border has opened, international tourism is starting to pick up. The main type of vehicles used are light vehicles, and with such small traffic volumes, these have minimal impact on the roading asset in terms of pavement quality. However, safety will be a higher priority for tourist traffic. Some tourist attractions[35] in the Waimate District are, but is not limited to:

- EnkleDooVery Korna Wallaby Park
- Collectable Model Car Museum
- Bushtown Heritage Park
- The White Horse Monument
- Waimate Museum and Archives
- Waimate 50 – Street race
- Walking and Bike tracks
- Street Art.

6.1.3 Vehicle Mix and Use Changes

6.1.3.1 Traffic Count Data

Council is implementing a Traffic Counting Strategy to improve the quality of our traffic count estimates. Council has increased and replaced its traffic counting equipment, which has allowed for

[34] Economic Impact of proposed Waste to Energy facility – For South Island Resource Recovery Limited – September 2022
[35] Waimate District Official Visitor Guide

regular annual traffic counts to be completed on at least a representative sample of local Council roads, particularly highly trafficked roads. These traffic counts will allow historic comparisons, and support evidence on future growth.

Analysing existing records shows a steady increase in heavy traffic, as seen in the figures on our highly trafficked roads:

- Lower Hook Road, Figure 6.16
- Grays Crossing Road, Figure 6.17
- Hakataramea Valley Road, Figure 6.18
- Horsnells Road, Figure 6.19
- Ikawai Middle Road, Figure 6.20
- Old Ferry Road, Figure 6.21
- Pareora River Road, Figure 6.22.

Figure 6.16 - Lower Hook Road Traffic Counts

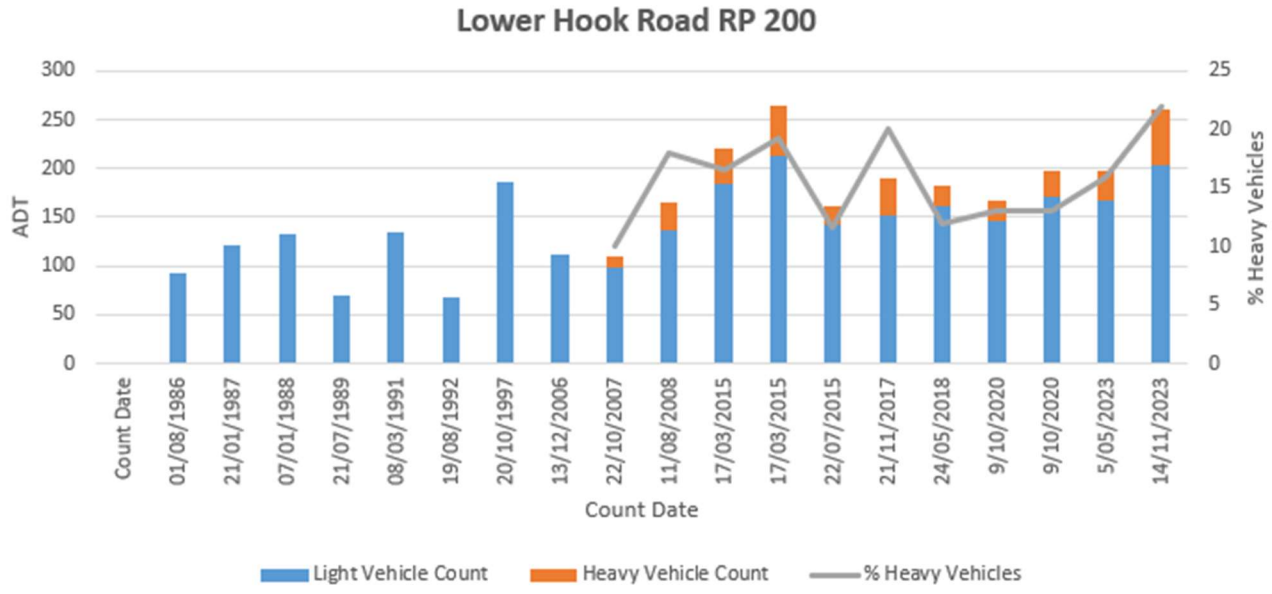


Figure 6.17 - Grays Crossing Road Traffic Counts

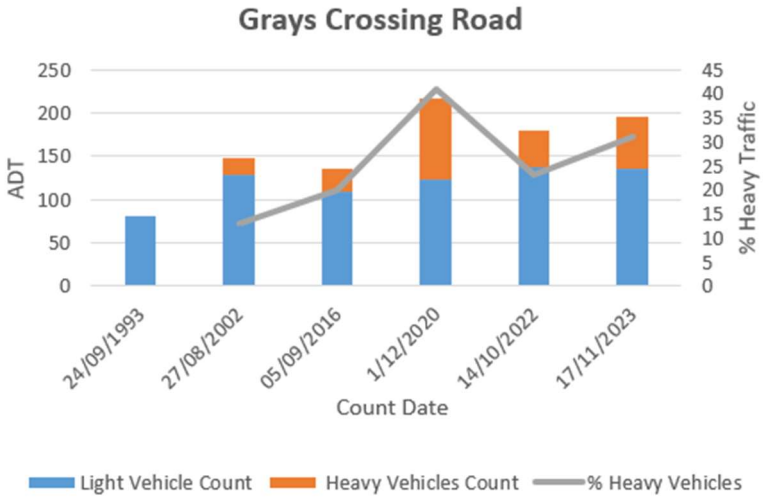


Figure 6.18 - Hakataramea Valley Road Traffic Counts

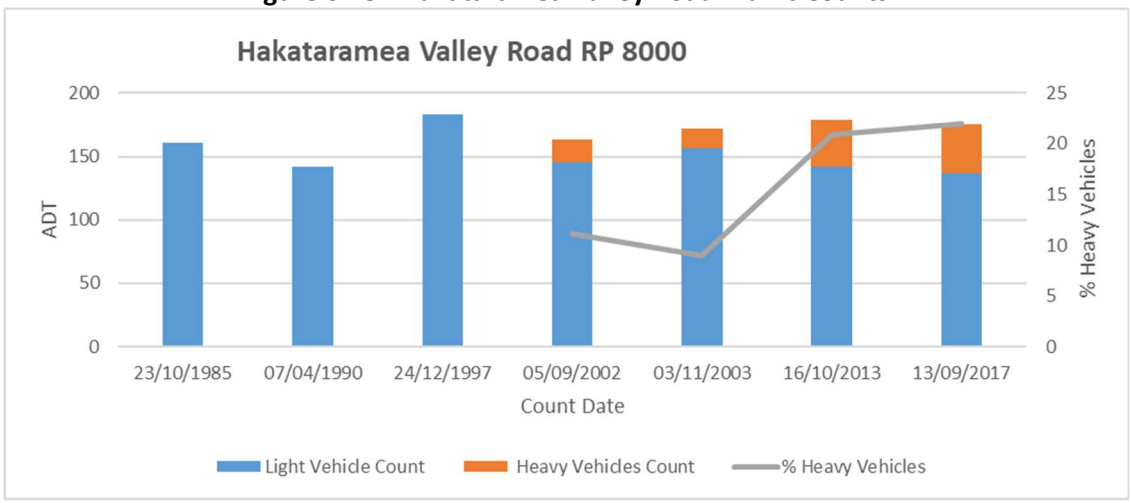


Figure 6.19 - Horsnells Road Traffic Counts

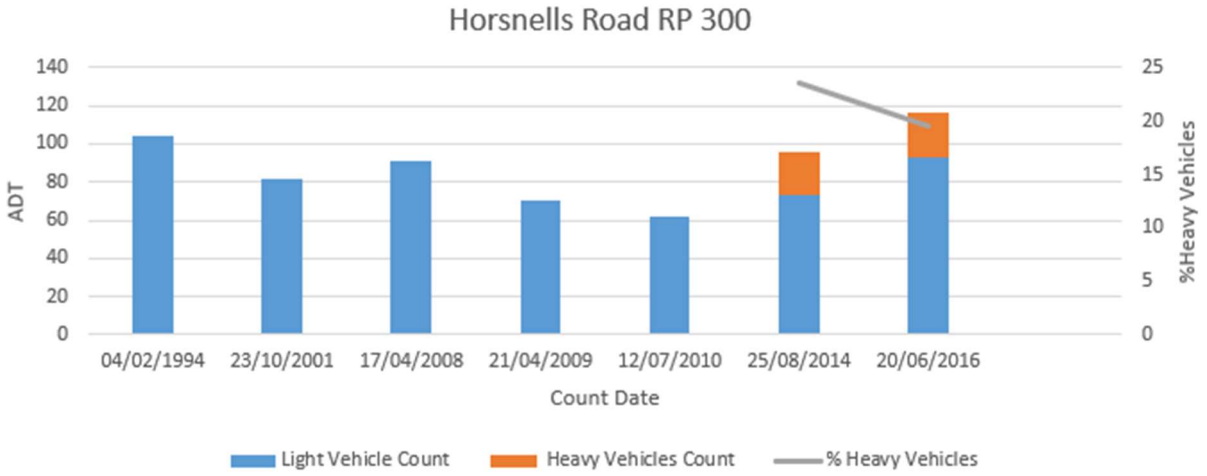


Figure 6.20 - Ikawai Middle Road Traffic Counts

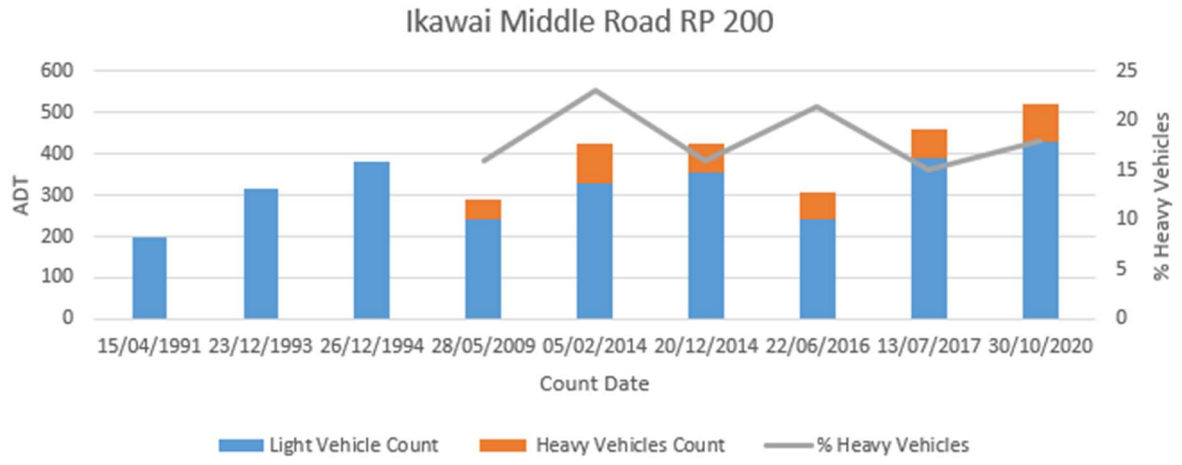


Figure 6.21 - Old Ferry Road Traffic Counts

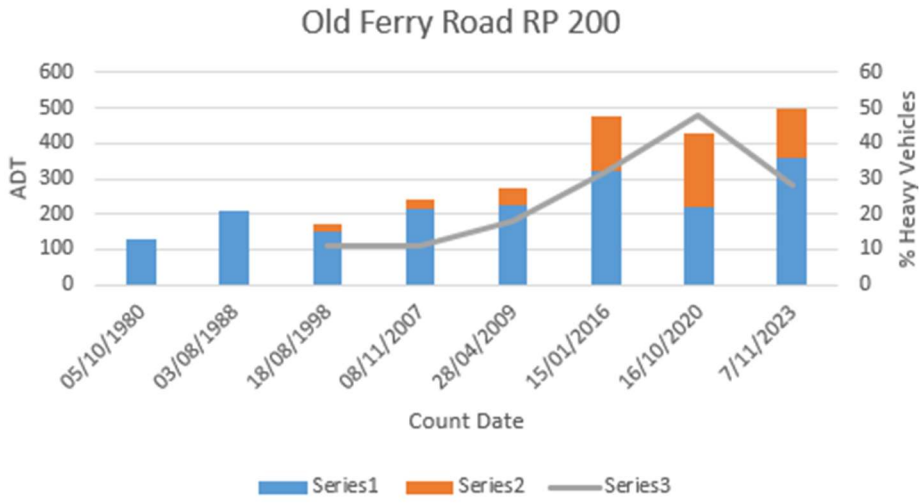
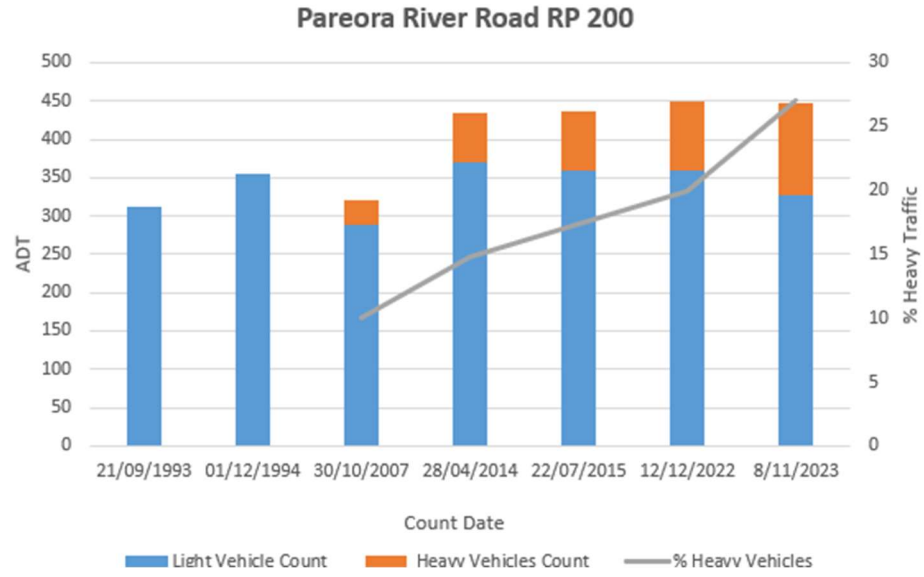


Figure 6.22 - Pareora River Road Traffic Counts



6.1.3.2 High Productivity Motor Vehicles (HPMVs)

The Land Transport Rule, "*Vehicle Dimensions and Mass Amendment 2016*" (VDaM Rule Amendment), allows for High Productivity Motor Vehicles (HPMVs) to travel on approved roads within New Zealand. The VDaM Rule Amendment makes changes to both the 2002 and 2010 Rule for some heavy vehicles requirements and allows for long-term permits to be issued for HPMVs to operate (with divisible loads) on approved roads. The main changes affecting the road network are:

- All standard vehicles can operate as-of-right at an increased gross mass of 46 tonnes without a permit.
- HPMVs can operate by permit at a gross mass above 44 tonnes up to a maximum of 62 tonnes.
- HPMVs can operate by permit at lengths greater than 20m.

Specific HPMV routes have to be approved with input from road controlling authorities, Council has some control over the impacts of this rule change on the District's roading network, by selecting which

route a specific HPMV can or cannot travel on. However, there is likely to be increased pressure in the future from local industries to approve some routes within the District.

Trucks with a gross mass of 50 tonnes (known as 50MAX vehicles) are permitted on roading networks unless limitations on bridge capacity are identified. The axle configuration results in little change in terms of Equivalent Standard Axles (the measure of loading affecting road pavements) but has an impact where the entire load is supported by a bridge structure. An evaluation of bridges is therefore essential. NZTA has a 50MAX book of maps, which is updated regularly. This map provides road users with the bridges that are 50MAX restricted[36].

Overweight and over-dimension vehicles are still subject to individual permits issued by the Road Controlling Authority (Council), or under delegation.

Figure 6.23 - 50MAX Book of Maps - Waimate District (November 2023)

Table 6.5 - Waimate District 50MAX HPMV Non Accepted Bridges

Road Name	RP	Bridge Name	Reason
Bridges with No Ford			
Armstrongs	1055	Armstrongs	Condition
Bluecliffs	13696	Drinnans	Condition
Brasells Bridge	1372	Brasells	Condition
Champions	125	Champions No 1	Condition
Champions	635	Champions No 2	Condition
Davidsons	4463	Parrys	Uncertain Design

[36] 50MAX book of maps – Canterbury (nzta.govt.nz)

Road Name	RP	Bridge Name	Reason
Deep Creek	3685	Adams	Posted bridge
Dons	3390	Dons	Condition
Flemings	3360	Kanes	Condition
Galways	7710	Galways	Uncertain Design
Hakataramea Downs	470	Hakataramea Downs	Posted bridge
Hannatons	581	Cunninghams	Condition
Hook Beach	1825	Hook Beach	
Kaiwarua	1780	Lanes	Condition/alignment
Meyers Pass		Meyers Pass	Inappropriate route
Molloys	5340	Molloys	Uncertain Design
Morven	1060	Murphys	Condition
Old Horseshoe Bend	462	Old Horseshoe Bend	Posted bridge
Otaio Cemetery	70	Otaio Cemetery	Condition
Pakihi	420	Hunter	Posted bridge
Poigndestres	1250	Poigndestres	Posted bridge
Woodlands	276	Becketts	Condition
Bridges with a Ford			
Bournedale Homestead	690	Bournedale Homestead	Posted bridge
Bridge	1970	Ponsonbys	Posted bridge
Cliffs	2905	McKenzies	Posted bridge
Crowes	7082	Lundys	Posted bridge
Esk Bank	2515	Ryans	Posted bridge
Farm Road	2904	Farm Road	Posted bridge
Fletchers	1008	Scarletts	Posted bridge
Forrests	678	Forrests No 2	Condition
Gunns	1995	Meyers	Posted bridge
Homestead	5160	Hakataramea Station	Posted bridge
Hursts	1150	Hursts	Posted bridge
Menzies	2110	Frazers	Posted bridge
Menzies	2450	Menzies	Posted bridge
Milne	11270	Cleeves	Posted bridge
Milnes	180	Jacksons	Posted bridge
Moores	126	Frewens	Posted bridge
Pareora River	1220	Holme Station Corner	Posted bridge
Pareora River	9562	Maidens	Other
Redcliffs Back	2063	Waihuna	Posted bridge

Road Name	RP	Bridge Name	Reason
Waihaorunga Back	6750	McKees	Posted bridge
Waitaki Valley	104	Rickmans	Posted bridge
Whites	158	Whites	Posted bridge
Woolshed Valley	1287	Spring Bank	Posted bridge
Woolshed Valley	12984	Taylors	Posted bridge
Youngs	1356	Crouches	Posted bridge
Total Number of Bridges = 47 (22 Without Fords, 25 With Fords)			

6.1.3.3 Agricultural Vehicles

The size and number of agricultural vehicles on the roading network is increasing and this is causing a unique set of issues, such as:

- Vehicle weight and configuration
  - vehicles are not subject to or actively in compliance with normal requirements for road-going vehicles.
- Vehicle width
  - dual wheeled tractors and trailer (fodder wagons/implements etc.) are often oversize and create safety and road damage issues (e.g. edge break)
- Distance and frequency of travel.
  - distances travelled are greater than in the past, particularly given the higher speeds modern tractors are capable of
  - intensive farms are using roads for regular (daily) access.
- Mud on road.
  - an even greater issue with larger and more frequent use by agricultural machinery making driving unsafe.
- Remoteness of location
  - sometimes unacceptable use of the road may go unnoticed by staff or contractors and therefore there is no opportunity for timely intervention.
- Limited funding
  - due to the agricultural licencing rules, the contribution to the funding is limited.

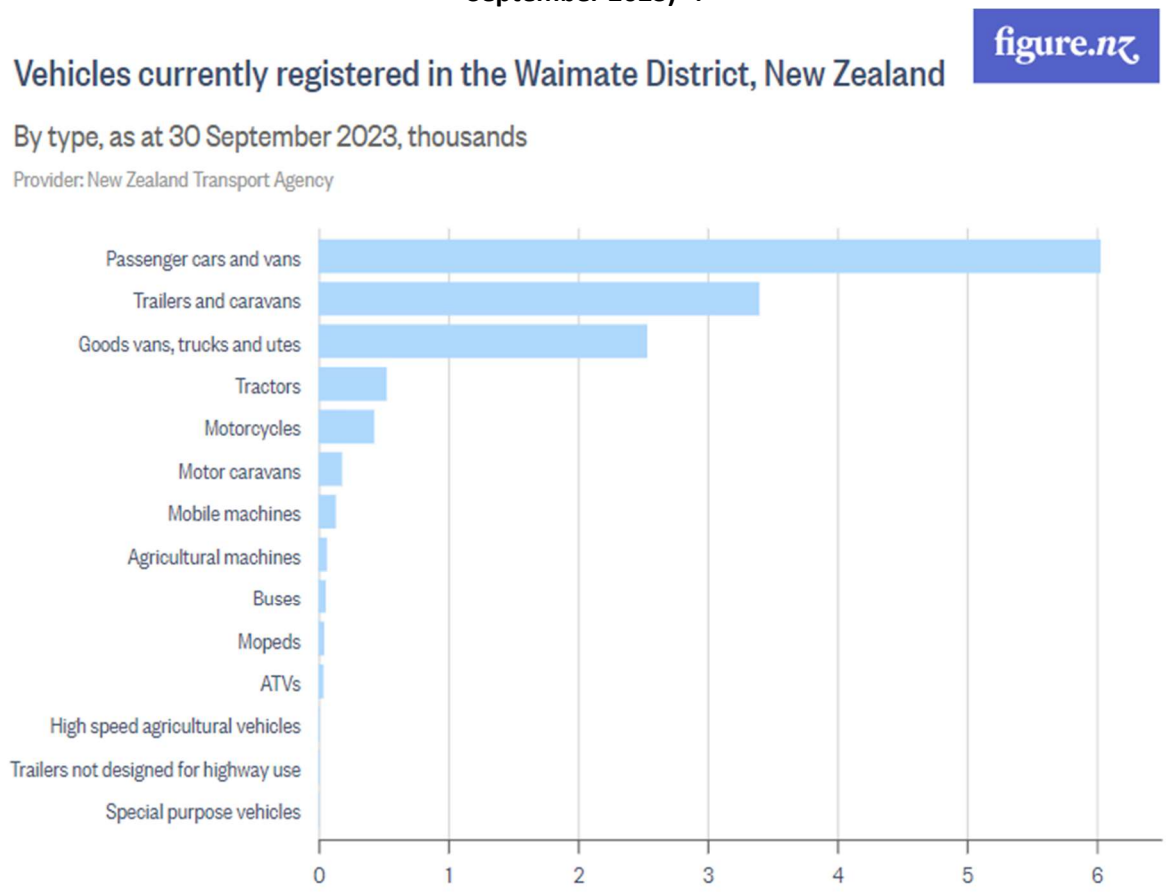
Council may opt to provide controls on such vehicles through education and Council's Bylaws if the current regime is insufficient.

Figure 6.24 - Large Agricultural Vehicles Using the Roading Network

6.1.3.4 Vehicle Ownership and Use Changes

Although the population is effectively static, people are tending to use their cars more, and there are more vehicles per household, and more households with vehicles. It is apparent that people are prepared to travel longer distances to and from work and therefore contributing to higher traffic volumes. Such an increase is expected to be constrained in the medium to long-term by an ageing population and increased roading and fuel costs.

Figure 6.25 - Vehicles Currently Registered in the Waimate District, thousands (By type, as at 30 September 2023)[37].



[37] https://figure.nz/chart/UxIYw4oXZ9BBIydk-Zj0U1hXnrJhdhohe

Figure 6.26 - Vehicle Currently Registered in Waimate District, Thousands (As at 30 September 2023)

VEHICLE TYPE	NUMBER OF VEHICLES
Agricultural Machine	66
ATV	38
Bus	56
Goods Van/Truck/Utility	2,534
High Speed Agricultural Vehicle	8
Mobile Machine	133
Moped	43
Motor Caravan	183
Motorcycle	430
Passenger Car/Van	6,032
Special Purpose Vehicle	4
Tractor	526
Trailer Not Designed For Highway Use	5
Trailer/Caravan	3,399

6.1.4 Improvements To Levels of Service (LoS)

Continual demand on the roading assets for improvement in levels of service (LoS) is a balancing act. The intended LoS for Council's roading assets is defined in Section 5 of this plan and is a representative of the service demands of the current and the future community.

6.1.4.1 Advances in Technology and Innovation

Technology and innovation can be considered in relation to road construction, changes in the vehicle fleet, changes in transport mode options. The following are considered the most likely technology advancements affecting future demand on the District's roading network:

- Stabilising and recycling for road construction and maintenance
    - Where there is sufficient pavement depth this will reduce the need for heavy vehicles to carry aggregate and waste material over the network.
- Changes in vehicle fleet in New Zealand will have an effect on road user expectations or road performance, included:
    - Increased power of trucks leads to greater potential pavement damage on steep hills and intersections as trucks change gear, accelerate, and decelerate.
    - Larger agricultural machinery for harvesting and feeding out fodder crops.
    - The improvements to power steering leads to greater damage with turning vehicles entering and leaving the roadway and at intersections.
    - Larger trucks require wider intersections and corners to accommodate increasing turning circles.
    - Cars with thinner metal on the body that are more prone to damage from loose metal and lower chassis requiring unsealed roads to be graded more frequently.
    - Autonomous vehicles (smarter vehicles) requiring higher delineation standards.
    - Electric Vehicles (EVs) users expecting charging infrastructure availability.
    - Newer technologies in heavy vehicles
- Changes in transport mode options
    - Expectation that roading infrastructure is available, safe, and accessible.

With some of these changes, road users expect a higher standard of road infrastructure with fewer changes in LoS across the roading network.

6.1.4.2 Changes in Customer Perceptions and Expectations

In recent years there has been an increasing awareness on the part of road users with respect to safety. It is anticipated that toad safety will become an increasing priority for Council in determining design, and maintenance and operational standards, such as and is not limited to:

- Increase carriageway and shoulder widths.
- Improve surface condition of unsealed roads.
- Upgrade intersection controls.
- Bridge end protection
- Improve drainage to provide road resilience.
- Destination signage for tourists
- Appropriate delineation.

From the 2023 Waimate District Council Residents' Survey, there is a slight decrease in satisfaction for most of the measures related to Roading and Footpaths, Table 6.6.

Table 6.6 - Satisfaction (Satisified and Very Satisified) by Reporting Period (2023)

	Overall roading and footpaths	Footpaths	Sealed roads in the district	Unsealed roads in the district
2023	38%	44%	40%	35%
2021	43%	50%	42%	33%

The highest five dissatisfaction areas mentioned in the survey by respondents are:

- Potholes / corrugations / uneven surfaces (36%)
- Roads are not maintained / Roads are in a bad state / dangerous (28%)
- Gravel roads are not maintained properly / not graded regularly (22%)
- Footpaths are not maintained / covered in moss / slippery / tree roots (21%)
- Footpaths are uneven and dangerous (15%).

6.1.4.3 Legislative and Regulation Requirement Changes

Changes in Council's roading policies may be driven from a number of directions, (refer to Section 5 for more details):

- internally driven
    - Development Impact Levy policies
    - Council direction
    - Spatial planning
- externally driven.
    - Changes driven by NZTA.
    - Legislative and regulation changes
    - Change of government.

These are just some examples of what could affect and change the levels of service requirements for Council. Monitoring and being aware of possible implications of these changes enables the impacts of such changes to affect Council and the assets less, and better received. While there is no certainty, it is important to consider them when developing asset management risk, forecasts, and strategies.

6.1.5 Funding Constraints for Growth and Future Demands

Funding for roading is covered by multiple investment organisation, mainly from our co-investor, NZTA (on behalf of central government) and locally. Locally, Council has a little more control yet with constraints over the local funding, and through NZTA, this is part of the National Land Transport Funding (NLTF) process.

According to Local Government New Zealand (LGNZ)[38] media release in March 2023, "*… the share of investment in road maintenance and improvement has reached the lowest levels in more than 10 years.*". Despite the government spending more money than ever on transport (as co-investor through NZTA), the nation is not keeping up with the basic as inflation has increased and roading construction costs have sky-rocketed and the distance our road users are covering are more than ever before. Council requires the minimum funding to keep with basic costs such as road maintenance that will future proof our transport network.

6.1.5.1 Community's Willingness to Pay

As seen in Section 6.1.4.2, the customers' perception and expectations changes and in time, these will always tend to be great expectations of the roading network. Wanting the roading network to be more accessible, more reliable, safer, more resilient, and more of everything, therefore increasing levels of service wants, but the willingness to pay is not there, or may not be as high to meet the expectations, especially with the increasing costs of the current days. In order to manage this, Council has a few options to that we can take:

- Customer education and engagement
    - Informing the community of what the LoS options are and the associated costs, benefits, and risks.
- Reduce maintenance on low-trafficked roads.
- Disposal of asset components not being significantly use, such as bridges, sections of roads.

Also with the minimal growth within the District, therefore the lack of growth in the rating base, Council require to consider carefully how funds and assets/activities are managed.

6.1.5.2 Government Policy Statement on Land Transport 2024-34 (GPS)

The Government Policy Statement on Land Transport 2024-34 directs how funding for the New Zealand land transport is prioritised. The current GPS has considered priorities across New Zealand's diverse communities acknowledging that urban, regional, and remote communities have very different needs. The GPS has four key strategic priorities:

- Economic Growth and Productivity
- Increasing Maintenance and Resilience
- Safety
- Value for Money.

"*The Economic Growth and Productivity strategic priority is the overarching strategic priority for the direction of this GPS. Increased maintenance and resilience, safety, and value for money are all equally weighted and important priorities that collectively support the delivery of a transport system that drives economic growth and productivity.*" Refer to the GPS for more information.

[38] Funding for roads at lowest levels in a decade | Ko Tātou LGNZ

6.1.5.3 Council Development Contributions

Development Contributions could be another means of funding network infrastructure, reserves, or community infrastructure. Council does not currently have a Development Contributions Policy. A contribution policy should include a methodology for calculating the cost of the impact a development will have on existing community infrastructure including roads. This should ensure that the negative impact of development is part funded by the developer rather than the community ratepayer.

Failure to develop this policy will impact on future development within the District, as the roading infrastructure may not meet Council standards and/or a portion of ratepayer funding in excess of the developer's contribution may be required to upgrade asset components to the desired standard. Having a Development Contributions Policy will allow for the correct calculation and in turn the funding required to improve the infrastructure to the defined levels of service to support the development of the District.

6.2 Demand Impacts on Assets

The overall implications on the roading network as a result of population growth, continual demand for improvement in levels of service, change in transport mode options, and potential increases in the frequency, weights and dimensions of heavy vehicles on the roading infrastructure are:

- An increased rate of deterioration on road pavements
- An increased rate of deterioration on our structures (e.g. bridges)
- An increased focus on road user safety
- An increased level of expenditure to attain the desired levels of service.
- An increased focus on network resilience
- An increased focus on community accessibility
- An increased in ratepayer base to fund Council's contribution to the roading budget.

Given the level of growth and demand data available, future levels of demand in the Waimate District is made with qualitative projections, and any projections made must be based on an understanding of the composition of the District's roading network. With the growth and demand knowledge, an expectation on the increase in mainly heavy vehicles are expected, and with only 4.2% of the roading network being urban environment, this demand will mostly affect the rural portion of the network.

Current demand issues are focused on the standard of roading and in particular the sealing of unsealed roads to remove dust nuisance and to provide a better level of roading service. Satisfying this demand through seal extensions is being carried out to the greatest extent that Council can manage. It is limited by the availability of NZTA financial assistance and the affordability of matching those funds locally. Whilst the Council is committed to continue with seal extension projects, problems with obtaining the local funding may impede this endeavour.

The majority of the District's roads were originally constructed with thin pavements and were not expected to carry the level of heavy vehicles they presently do nor any projected increases. There is little understanding of the rate of failure of these pavements under heavy loading, as most analyses are based on the assumption of strong pavements constructed to best practice. Many local rural roads only carry a small volume of heavy traffic and small changes can result in rapid deterioration. In the case of on-farm development projects, in particular dairy conversions, close monitor of individual developments is required. The location of aggregate sources and the route to the farm must be known so that maintenance can be undertaken prior to the development rather than more expensive remedial work that would be needed after the heavy traffic has damaged the road.

As identified in the Canterbury Regional Land Transport Plan 2024-34 as a key problem within the Canterbury Regional that need to be addressed within the next 10 years, "*Land use change, and increased freight and tourism demand, can result in inefficiency and reduce the condition and suitability of infrastructure.*"

6.3 Demand Management

There are three recognised components to a Demand Management Strategy:

- **Transport Demand Management**
  - A transport system approach that seeks to achieve modal shift (i.e. to low impact modes such as cycling and walking)
- **Traffic Demand Management**
  - A single network approach that seeks to optimise or reduce traffic flows.
- **Travel Demand Management**
  - Focuses on the individual travellers and seeks to change travel behaviour through various initiatives (such as education and marketing).

6.3.1 Asset Based Demand Management

Asset Based Demand Management encompasses Traffic Demand Management, and for our road network it is managed through "Pavement Use" Hierarchy. The adoption of a roading hierarchy that identifies a tiered roading system based on road function and planned levels of service, is important to enable the effective management of traffic. The hierarchy of Council roads is defined and classified in Table 4.1, and has been further developed through the implementation of the One Network Road Classification (ONRC) categories, which includes the numbers of heavy vehicles as a parameter.

Table 6.7 - Design Width Standards and Some Traffic Services Requirements

ONRC Category	Traffic Volume Range (ADT)	Desired Width (m)	Length (km)	Other Requirements
Rural				
Primary Collector	> 1,000	7.0	4	• Reflective 100mm centreline • Raised Reflective Pavement Markers (RRPMs)
Secondary Collector	> 200	6-7	134	• Centreline marking
Access	< 200	4-6	375	• Partial centrelines on hills/corners as appropriate
Low Volume	< 50	4-5	80	-
Urban				
Primary Collector	> 3,000	12	2	-
Secondary Collector	> 1,000	12	3	-
Access	< 1,000	10	19	-
Low Volume	< 200	6	29	-

The adopted ONRC categories needs to be physically implemented to ensure that traffic patterns match traffic planning. Therefore, in order to manage traffic demand on the network, design standards

and a level of service is set against the road hierarchy classification. Road design widths and traffic services requirements (delineation) provide us with a mechanism for providing an appropriate standard for the use of these various road sections. Table 6.7 sets out the design widths and traffic services requirements to be used for the different ONRC road hierarchies in the District.

As with any design standard there is an economic and cost implication of achieving it. It is important where physical or other constraints exist that impedes Council's ability to meet a standard, that there is a rational mechanism for the use of lower standards.

As defined in Section 4.1, the One Network Roading Classification (ONRC) has now has been "replaced" by One Network Framework (ONF), and the combination of both ONRC and ONF seem to be a better tool for the District's roading network, refer to Section 4.1.3 for more details. The define infrastructure assets design standard, traffic services requirements, and delineation is currently under development and has not been completed as yet.

6.3.2 Non-Asset Based Demand Management

Non-asset based solutions for managing demand are available as alternatives to asset based solutions and generally fall into the Transport and Travel Demand Management categories. Proposed non-asset based solutions for the District are:

- Traffic Bylaws[39] on heavy commercial vehicles on sub-standard roads within the District
- Threshold and speed hump installation
- Education communication programmes targeted at stakeholder expectation.
- Manage road user's expectations (via education and communication)
- Speed Management Plan[40] and restrictions.
- Subdivision Bylaws restricting development from existing roads that are of sub-standard width and safety.
- Update Waimate District Plan to make it a requirement on developers to upgrade infrastructure to meet current required standards to support propose developments.
- The use of development impact fees (DIF)
- Development Contribution on new developments
- Manage failure of roads to disposal.

National non-asset based demand management solutions include alternative transport modes. Although vehicle ownership and usage are high in Waimate District due to the rural nature of the District, it is important to consider the use of other modes of transport as ways to manage demand on the network where possible.

Public transport systems, car-pooling or alternative transport mode options (including cycling and walking) are sustainable and environmentally friendly and can reduce reliance on motor vehicles. However, low volumes of population, combined with dispersed communities, means that public transport is not a cost effective option at present and is unlikely to be so in future due to the relatively low growth of population in the District.

[39] Bylaws - Waimate District Council (waimatedc.govt.nz)
[40] Interim Speed Management Plan - Waimate District Council (waimatedc.govt.nz)

6.4 Future Demand Management Improvements

In order to have a more accurate idea of the impacts of growth and demand on the roading network and managing them, Council should review and investigate in the following areas:

- Traffic Counting Policy – Section 6.4.1
- Development Contributions Policy – Section 6.4.2
- Land Use and Customer Demand Study – Section 6.4.3
- Post Pandemic Economic and Behavioural Demand Changes 6.4.4
- Climate Change Risk and Adaptation 6.4.5.

6.4.1 Traffic Counting Policy

Council requires to review their Traffic Counting Policy and develop a Traffic Count Strategy to allow for regular annual traffic counts to be completed on at least a representative sample of Council's local roads, particularly highly trafficked roads. This will allow historic comparisons and from this data captured, the prediction for future growth. Council will then be able to assess and report on utilisation of the roading asset and review whether the correct levels of service has been provided for current and future use.

Reviewing the vehicle classification of the traffic count is also required to provide an accurate representation of the traffic that uses the road[41].

6.4.2 Development Contributions Policy

A Council Development Contributions Policy needs to be developed to ensure that the negative impact of a development is part funded by the developer rather than wholly on ratepayers. The Development Contributions was introduced by Government (Local Government Act 2002), are fees charged to developers to cover a share of the cost of bring infrastructure up to standard for new development, so that Councils could recover some growth infrastructure costs from developers. This should cover (but is not limited to):

- Transport, footpaths, roads, intersections, road drainage.
- Drainage, water, stormwater (utilities) systems
- Parks and reserves
- Community facilities.

This is a corporate initiative.

6.4.3 Land Use and Customer Demand Study

Council should be conducted a study to review current and future land use changes that may impact on demand on the roading network. This study should include:

- A review of the impact of Council's District Plan changes and future predictions of development and asset creation within the Waimate District on the roading infrastructure
- Engage and build relationships with key stakeholders and land users, to obtain information on any future plans and changes (such as expansions, harvesting years) that may affect the roading network.

[41] New Austroads vehicle classification scheme to reflect the evolving mix of vehicles on Australian and New Zealand roads | Austroads

- Our District's (urban and rural) customer's growth and demands need to be obtained (possibly through a survey or could be done via community engagement workshop), to establish any changes in customer expectations as they relate to demand on the network. This could be use.

This study will allow Council to support the land use changes that may be occurring in the future. During the engagement sessions, this could work as an educational session to the community on levels of service.

6.4.4 Post-Pandemic Economic and Behavioural Demand Changes

The September 2023 release of the New Zealand Treasury Pre-election Economic and Fiscal Update (PREFU) advised of a "*slow economic growth is forecast to continue over the next 18 months as high inflation necessitates high interest rates.*"[42] With economic growth average 0.4% over the next year, and unemployment rate expected to rise 5.4% before starting to fall from mid-2025.

Consumer, tourist, road users, and community behavioural demand changes may be more wide ranging following the Covid-19 pandemic. There will potentially be more communication/working remotely, online purchases, and other changed behaviours. Council will require to continue monitoring any changes in demand and behaviour changes and adjust network management strategies as necessary.

6.4.5 Climate Change Risk and Adaptation

More adverse weather events and major variations in the climate have caused disruptions for the roading network with more intense weather events. Council has data that will support the evidence of climate change and the works (including emergency works) that have been required to rectify the issues the District's roading network faced in the last few years. Council's climate change assumption is:

"*The effects of climate change are expected to manifest in three categories:*

a) gradual change in meteorological conditions (for example, change in temperature, fluctuating weather conditions and events, rising of sea level, coastal and inland erosion, among others), and

b) general socio-economic consequences of such changes, and

c) socio-economic consequences of policies/measures designed to curb the adverse effects of climate change."

The identified risk is:

"*Environmental changes may accelerate at a rate higher than predicted, and/or the socio-economic consequences of adaptation measures may exceed the anticipated range.*"

Council's management of risk is:

"*Council will monitor the operational and socio-economic effects of environmental changes and adapt its response where required, if possible.*

Adaptive planning."

Council aims to work with the community and partner organisations and Iwi to focus our work and decisions that will lessen the environmental impacts and promote ecological use and care for the

[42] Pre-election Economic and Fiscal Update 2023 - 12 September 2023 (treasury.govt.nz)

environment. Council has recently (September 2023) employed a Climate Change Officer who has "*a plan to facilitate a climate change strategy for the area by 2025.*"[43] Council is taking a step in the direction to advance Council's strategy, public engagement and actions on climate change. Refer to Section 7.6 for more information on how climate change is affecting the Waimate District.

[43] Community engagement primary focus for Waimate District's climate change officer | Stuff.co.nz

7 SUSTAINABILITY

Sustainability can be defined as meeting the needs of the current generation without compromising the ability of future generations to meet their own needs.

7.1 Transport Sustainability

Transport legislations and policies in New Zealand call for an affordable, integrated, responsive, safe, resilience, and sustainable land transport network. The Resource Management Act (RMA) 1991 is the guiding piece of legislation in New Zealand for the sustainable management of natural and physical resources.

A sustainable transport system should provide for our own economic and social wellbeing in a way that will not prevent our children and grandchildren from being able to provide for theirs.

The transport sector has an impact on every aspect of life and business. It directly affects quality of life through its movement of people, goods, and services. However, transport systems can both enhance and detract from quality of life, and the quality of physical and natural environments. For the Ministry for the Environment, sustainable transport means finding ways to move people, goods, and information in ways that reduce its impact on the environment, the economy, and society.

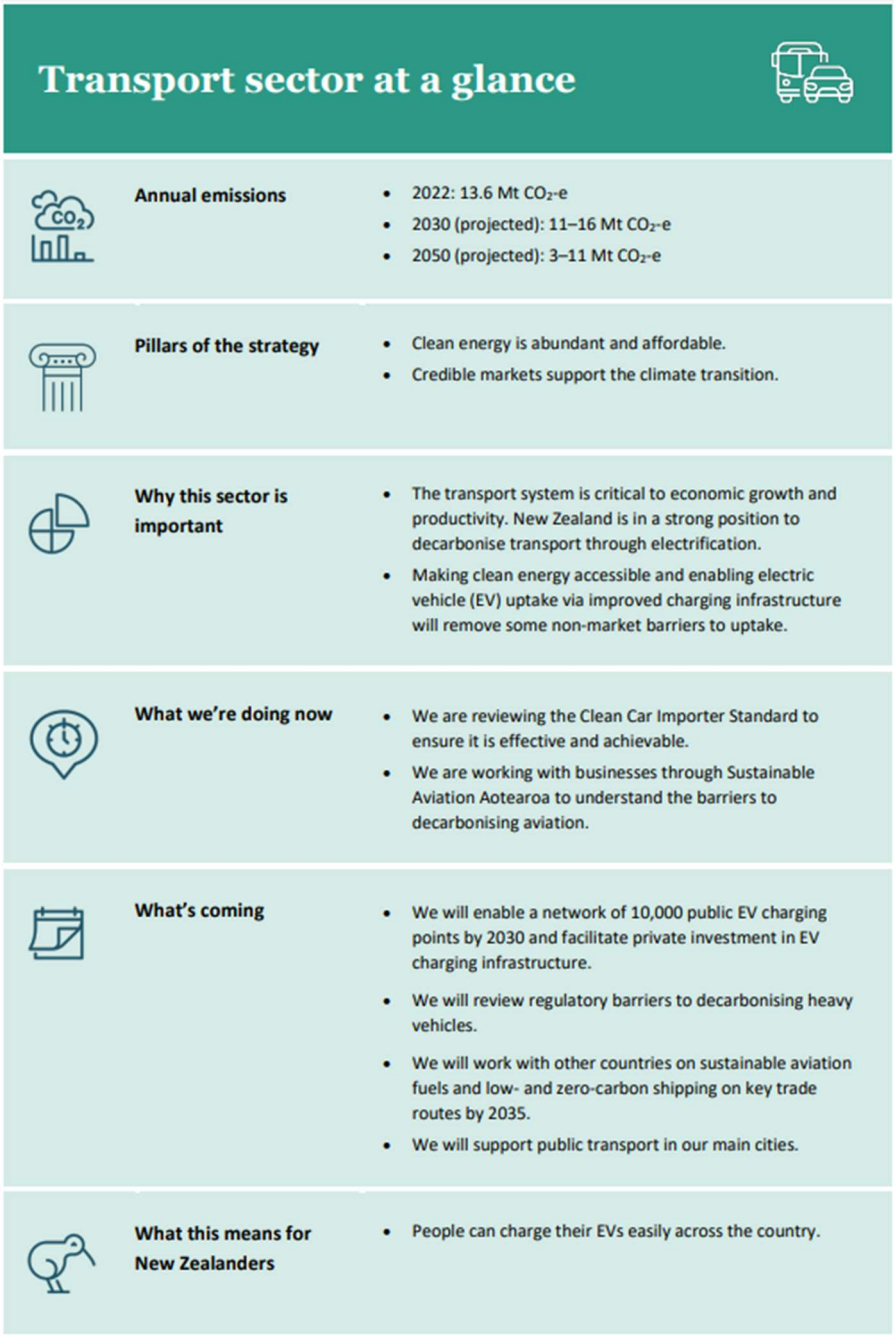
In 2022, *Aotearoa New Zealand's First Emissions Reduction Plan* (ERP) was released. A whole chapter, Chapter 10 Transport, identifies why reducing transport emissions is important and what are the key actions moving forward. Contributing to New Zealand's Long-term Vision for emission reduction,

"*By 2035, Aotearoa New Zealand will have significantly reduced transport-related carbon emissions and have a more accessible and equitable transport system that supports wellbeing.*"

With the change in Government, planning is currently underway on the second Emission Reduction Plan that will cover the emission budget for the years 2026 to 2030, and is expected to be published by the end of 2024. Refer to Section 5.2.2.7 for more information.

The Section Emissions Reduction Plan will identify targeted actions to reduce New Zealand's emissions across the five main sectors; Energy, Transport, Agriculture, Forestry and wood processing, and Waste.

Figure 7.1 - Second Emissions Reduction Plan Transport Sector at a Glance (July 2024)



A number of issues and concepts form the building blocks of a sustainable land transport system. These sustainable 'building blocks' represent the outcomes sought to achieve a sustainable land transport system and can be summarised as:

- environmental sustainability
- accessibility
- improved health
- functional transport networks
- economic development
- integrated urban form
- resilience
- safety.

Council has made their step towards sustainability and climate change by employing a Climate Change Officer, which will no doubt contribute greatly towards a more transport sustainable direction for Council.

7.2 Sustainability and Asset Lifecycle

Asset management is designed to improve decision-making for our assets, and to enable better management of existing and future assets and achieve sustainability goals. Effective asset management ensures that agreed levels of service are met and risks, including public health, financial, and environmental are minimised, while costs are optimised. Therefore, having accurate asset information and good data management is important to support the decision making process. An asset's whole of life (lifecycle) costs makes up part of and supports asset management and sustainability.

Asset management practises include actions that recognise the need for sustainability and well-beings, that are:

- Environmental
  - The natural environment needs to be preserved for future generations and not degraded as a result of Council's asset management operations and development projects.
- Economic
  - Financially, there is a limit to what ratepayers, developers, NZTA (co-investors, central government), and therefore Council, can afford. Expenditure needs to remain within this limit and the costs need to fall equitably on the generations that derive the benefits.
- Social
  - Social relationships between individuals, interest groups, community, and local government are valuable. Council needs to facilitate and encourage this by providing appropriate infrastructure to support this.
- Cultural
  - Our history, customs, and creativity are valuable to us. Their preservation and enhancement over time is facilitated by providing venues where they can be practiced, preserved, displayed, and embraced.

When considering the lifecycle of the land transport asset, Council do have to carefully consider the different areas of sustainability.

7.3 Sustainable Development

Opportunities exist to complete road asset development and management services in a manner that reduces the negative impact of roading on the environment and simultaneously enhances economic, social, and cultural outcomes. Table 7.1 identifies some sustainability elements that Council could address on roading projects through planning, design, construction, operations and maintenance.

Table 7.1 - Sustainability Elements

Environmental	Economic	Social	Cultural
• Emissions • Run-off (erosion and water quality) • Resource efficiency (recycled aggregates and fuel efficiency) • Ecosystems and habitat • Climate change adaptation • Urban design • Land use	• Congestion • Health • Safety • Lifecycle cost (cradle to grave of the construction) • Climate change adaptation • Economic development • Access	• Access • Community cohesion • Safety • Health (air quality, noise, vibration, lighting and providing access for non-motorised transport modes) • Visual amenity • Community viability • Urban design	• Heritage • Local and regional culture • Indigenous cultural values

7.3.1 Energy Strategies for New Zealand

"*The government's energy strategies set the policy direction and priorities for the New Zealand energy sector and focus on transitioning to a net zero carbon emissions by 2050, while building a more productive, sustainable and inclusive economy.*"[44]

Currently, "*the government is developing the New Zealand Energy Strategy to support the transition to a low emissions economy, address strategic challenges in the energy sector, and signal pathways away from fossil fuels.*" Energy is required for transport and in everyday life (health and wellbeing). In 2023, the Ministry of Business, Innovation & Employment (MBIE) consulted and are working in a collaborative process to get the Strategy finalised and published by the end of 2024.

The New Zealand Energy Efficiency and Conservation Strategy (NZEECS) expired in mid-2022. A new strategy is to be developed and will replace the existing strategy and will better align with Government's clime change and energy system priorities. It is intended that the new strategy will complement and integrate with the broader government-led national energy strategy.

These strategies have yet to be released, but the strategies will follow the direction of the Second Emission Reduction Plan.

7.3.2 Canterbury Land and Water Regional Plan

On the 1st Of September 2015, the Canterbury Land and Water Regional Plan (LWRP) was made operative and this plan replaces the Natural Resources Regional Plan (NRRP). This plan aims to provide a clear direction on how land and water are to be managed in the Canterbury region, and to achieve the purpose of the Resource Management Act 1991.

This plan provides a framework for sustainability, identifying the policies and rules needed to achieve the objectives. In regard to land transport, this plan identifies the requirements of Council to manage the road discharge stormwater to remove sediment and contaminants. These should be incorporated into urban design for stormwater treatment from roads and into the design of effluent treatment facilities, as direct discharges to water are inappropriate.

Plan Change 3 and Section 15/15A: Waitaki and South Coastal Canterbury of the LWRP identifies some policies and rules that Council must meet.

[44] Energy strategies for New Zealand | Ministry of Business, Innovation & Employment (mbie.govt.nz)

7.3.3 Waimate District Climate Resilience Strategy Pathway

As part of Council's efforts to Sustainability, Council have collaborated with Timaru District Council on World Environment Day. Climate change is the biggest challenge of our time, and it is already affecting our weather, health and wellbeing, natural environment, biodiversity, food production, biosecurity, infrastructure, and our economy.

In March 2024, the Waimate District Climate Resilience Strategy Pathway document was released, where details of Climate Change and its impact for the District, Council's objectives and draft principles, etc have been outlined. In the Transport Action Plan (one of seven action plans identified), some potential sub-action points are:

- Reduce reliance on cars and support people to walk, cycle and use public transport.
- Rapidly adopt low emissions vehicles.
- Begin work now to decarbonise heavy transport and freight.

Council is currently working with the community and hopes to publish the Strategy in September 2025.

7.4 Significant Negative Effects

Table 7.2 identifies the negative effects for the Waimate Community that the Roading Activity may have on the social, economic, environmental, or cultural wellbeing of the community. It indicates how the existing approaches mitigates these negative effects or highlights proposed action to address these in the future Whilst there are no significant (critical) negative impacts assessed as resulting from the Council's roading activity, opportunities exist to deliver roading infrastructure development and management services in a manner that reduces the negative impact for the Waimate Community.

Table 7.2 - Negative Effects – Roading Activity

Effects	Status of Effect		Impact on Wellbeing (existing situation)				Existing Approach or Proposed Action to Address
	Existing	Potential	Environmental	Economic	Social	Cultural	
Pavements							
Run-off from Sealed Roads	Increasing	Increasing	Moderate	Minor	Minor	Nil	• Capture run-off. (e.g. capture concrete cutting or bitumen before it enters the waterways, especially sumps in urban areas • Temporary erosion and sediment control during works, including weed matting, hydro-seeding, silt traps, and settling ponds. • Comply with Regional Council rules and/or Consents for working within waterways
Dust from Unsealed Roads	Remain the same	Decreasing	Moderate	Minor	Moderate	Nil	• Sharing the cost of sealing all/part of the road. 50:50 with any property owner who wishes to reduce the effects of dust on their property • Requiring developers whose projects will significantly increase adverse effects of vehicle to seal road.
Noise in urban situations	Increasing	Increasing	Nil	Nil	Minor	Nil	• Comply with District rules, e.g. working hours and maximum noise levels. • Size of chip, type of resurfacing. (Thin asphalt concrete is quieter).
Drainage							
Undersize culverts causing flooding	Increasing	Increasing	Minor	Minor	Moderate	Nil	• Replace undersize culvers with appropriate size to flood event frequency, agreed by Council.

7.5 Sustainability within Council

In addition to managing the infrastructure in an economically sustainable way, Council will also manage its internal operations to optimise their cost, efficiency and effectiveness, so that in the long-term the costs of administering the infrastructure are sustainable. While the overall view of this is not a subject for this plan, the management of the asset services delivery unit is relevant.

7.5.1 Staffing Levels

Currently the Roading Group has 5.5 Full Time Equivalent (FTE) employees.

- Roading Manager
- Roading Technician (Vacant)
- Senior Roading Officer
- Roading Officer
- Road Asset Information Technician
- Technical Support Officer – Roading – Part-time

The greater emphasis being placed on the responsible management, distribution, operation and maintenance of existing and future resources will add to the tasks of the Roading Group. Compliance with the requirements of the Local Government Act requires a great deal of effort and prudent decision making from the Roading Group staff.

The current staffing levels are supplemented by outsourcing. However, outsourcing still requires scoping, input, and supervision from Council staff and does not exonerate staff from outsourced work. Assessment of staffing requirements is required to be done annually to ascertain the appropriate requirements for the increased workload is well supported. This assessment requires to consider the level of staffing coverage that is required to implement all of the Roading Group functions, including internal management, information systems management, data management, project management, design, procurement, supervision, construction, operations and maintenance.

7.5.2 Skills, Knowledge, and Training

In addition to staffing levels (numbers), the annual assessment of staffing requires to consider the skills and knowledge requirements to meet the current and future demands of the roading infrastructure that Council currently and will own and operate. A review of Council's policy on resourcing the operations and maintenance is required to ascertain the most appropriate method for delivery of the required levels of service should be considered.

Training of staff is presently on an ad-hoc basis with no structured long-term development plans for individual staff members in the asset management field. The link between asset life, and the ability to deliver of levels of service with the skills and knowledge of the staff who plan, design, install, operate and maintain the assets is inevitable. It is crucial that the skills and knowledge gaps of staff, contractors, and service providers are identified.

Council requires to have a structured training programmes available for staff to gain the skills and knowledge required and close the identified gaps. The training effectiveness and staff individual training programmes should be reviewed annually. In the last few years, staff have underwent performance review annually, where individual development has been identified. Council has developed a training schedule and records to ensure all key qualifications/certificates are up-to-date (such as first-aid, working at heights, temporary traffic management, etc.). Council has also created an organisation and on-site induction process for any new staff.

7.5.3 Succession Planning

Succession planning within any business is considered necessary, to reduce the risk associated with the departure of staff. Succession planning allows institutional knowledge to be passed on and assists in ensuring continuity of organisational culture. Local Authorities have traditionally not been particularly successful at implementing succession planning techniques and practices.

In previous decades, the pool of experienced local authority and ex-public service engineers available meant that the negative effects of poor succession planning were not experienced. With a shrinking pool of experienced engineers, and near full employment these effects are now being experienced by more local authorities. Whilst there is always potential for staff in key positions to move on to further their careers or even their lives (retirement). Succession planning can help to mitigate the effects of this.

Succession planning techniques can include:

- Sourcing replacement staff from within the organisation wherever possible
- Comprehensive personal career development plans in place for all relevant staff.
    - This can include identifying weaknesses in training and experience, and attempting to address those weaknesses by use of mentoring, relevant projects, and continuing professional development programmes etc.
- Identifying likely staff retirements, promotions, resignations, or position changes on an annual basis.
    - Identifying potential internal staff to fill those positions, providing those staff with projects that extend them, and giving them relevant experience for filling the future position.

No formal succession planning is implemented at present by Council.

7.6 Climate Change

Climate change is currently affecting us and the roading infrastructure. Climate change presents significant opportunities, challenges, and risk to our communities, our District, our Region, nationally and internationally. Temperatures are warming and weather patterns are shifting. The District is experiencing more frequent and more intensive weather events (such as rain), and higher temperatures.

In 2020, Environment Canterbury commissioned research from National Institute of Water and Atmospheric Research (NIWA) about the situation for Canterbury now and into 2100, New Climate Change Projections for Canterbury.

On 22 November 2023, Council request residents to help create a District-wide Climate Change Strategy by engaging in a survey[45] to gauge the sentiment around climate change within the District, therefore allowing for a fit-for-purpose strategy to be developed. In March 2024, Council released a *Waimate District Climate Resilience Strategy Pathways* document with information to assist the discussions and engagement with wider communities, refer to Section 7.3.3 for more information.

[45] Residents input for Climate Change Strategy

7.6.1 New Climate Change Projections for Canterbury

The following information has been extracted out from the Environment Canterbury (ECan) information available.

Environment Canterbury "*are committed to helping our communities to understand and be resilient to natural hazards risk, including climate change, and we asked the National Institute of Water and Atmospheric Research (NIWA), to analyse projected climate changes for our region.*

Published in 2020, NIWA's report looks at how aspects of our climate such as temperature, precipitation (rain, snow, drought potential), wind and sea levels might change between now and 2100. It is based on global climate model simulations from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment, scaled down for New Zealand, with a focus on Canterbury."

7.6.1.1 Understanding Emissions 'Scenarios'

"*Assessing future climate change due to human activity is difficult because projections depend on greenhouse gas concentrations, which in turn depend on how we respond as a society. Climate scientists have dealt with those dependencies by developing different possible 'scenarios', based on different amounts of greenhouse gases in the atmosphere. These scenarios are called Representative Concentrations Pathways (RCPs), abbreviated as RCP2.6, RCP4.5, RP6.0, and RCP8.5. RCP8.5 is the highest level.*

The NIWA report looks at two scenarios: RCP4.5 (which could be realistic if immediate global action is taken towards mitigating climate change) and RCP8.5 (sometimes called the 'business-as-usual', where emissions continue at current rates)."

7.6.1.2 Projections for Canterbury

The following are some projections for the Canterbury Region, extracted from ECan.

7.6.1.2.1 Average Temperatures

- Increase with time and greenhouse gas concentrations.
- By 2040, annual mean temperature up 0.5 to 1.5°C.
- By 2090, up 0.5 to 2°C (if we cut emissions) or up 1.5 to 3.5°C (if we don't).

7.6.1.2.2 Maximum Daytime Temperatures

- By 2040, annual mean maximum temperature up 0.5 to 2°C.
- By 2090, up 1 to 3°C (if we cut emissions) and up 2 to 5°C (if we don't).
- By 2090, western Canterbury's alpine and sub-alpine areas could be 5 to 6°C warmer in spring and summer (if we don't).

7.6.1.2.3 Maximum Night-time Temperatures

- By 2040, annual mean minimum temperature up zero to 1°C.
- By 2090, up 0.5 to 1.5°C (if we cut emissions) and up 1 to 2.5°C (if we don't).
- The difference between a day's high and low increases with time and greenhouse gas concentrations.

7.6.1.2.4 Hot Days (25°C or more)

- By 2090, expect 20 to 60 more hot days in most of Canterbury (if we don't cut emissions).
- Inland areas feel it the most, particularly the southern Mackenzie Basin, which could have 60 to 85 more hot days.

- Most of these hot days would happen in summer.
- Our warmer season could get longer in relatively low-elevation areas, with 5 to 10 more hot days in autumn and spring.

7.6.1.2.5 Cold Days (Frosts)

- Expect fewer frost days throughout the region.
- Inland areas and higher elevations warm the most, with 10 to 30 fewer annual frost days by 2040, and 20 to 50 fewer by 2090.
- The frost season (the time between a year's first and last frost) will likely get shorter.

7.6.1.2.6 Rainfall

- Most of the region can expect small changes in annual rainfall, up or down 5%.
- By 2040, autumn might be dryer in the Mackenzie Basin, with up to 10% less rain.
- By 2090, winters could be wetter in many eastern, western and southern parts of the region, with 15 to 40% more rain.
- By 2090, Banks Peninsula and many inland areas might get 5 to 15% less rain (if we don't cut emissions).

7.6.1.2.7 Snow

- Expect fewer snow days everywhere, especially in the mountains.

7.6.1.2.8 Drought

- Expect more potential for drought across most of Canterbury.

7.6.1.2.9 Windspeed

- Annual mean wind speeds up slightly, by nil to 5%.
- By 2090, winter and spring could be windier (up 5 to15% if we don’t cut emissions).
- That seasonal change might be more keenly felt in inland areas north and west of Rangiora (up 15 to 25%).

7.6.1.2.10 Sea Level Rise

- Sea level rise projections for Canterbury are the same as for New Zealand.
- Up by 0.4m in the next 50 years and up 0.6 to 0.7m in 100 years (if we cut emissions).
- Up 0.5m in 50 years and up 1.2 metres in 100 years (if we don't).
- High tides get higher. At 0.65 metres of sea level rise, every high tide is above the spring tide mark (compared to 10% now).

7.6.2 It’s Time, Canterbury

It’s Time, Canterbury – Our Climate Change Conversation is a website that provides information to the Canterbury region and to look at how the community is working together to restore their local environment and to be understand, prepare, manage and adapt to the impacts of climate change in our region. “*No matter where you live or what you do, climate change affects us all.*”

To curb the worst impact of climate change, reduction of greenhouse gas emissions is required on a global scale. “*There are many things that we can do to improve the long-term sustainability of our region as well as make a difference in terms of climate change.*” These include but is not limited to:

- reduce the amount of water we use.
- have more urban greenspace (plants)
- insulate our homes.
- shop locally.

- active transport, public transport, car-pooling, instead of individual motor vehicle users.

7.6.3 Aotearoa New Zealand's First National Adaptation Plan and Local Government

"*Our first national adaptation plan will help New Zealanders adapt to the effects of climate change now, and better protect us against changes to come.*

Many impacts are already with us, with unstable and unpredictable weather, worsening floods, droughts and storms, and rising sea levels. We can expect more changes will happen. Lowering emissions can reduce the impacts of climate change but won't eliminate them all.

The national adaptation plan sets out what actions the Government will take over the next six years to help all New Zealanders adapt and thrive in a changing climate. It has actions relevant to every sector and community in New Zealand and addresses the priority risks that need action now.

Climate change risks and the costs of adapting will need to be shared across society, but through the actions in the plan we can reduce the long-term costs across the motu."

Some examples of the risks faced include the risks to people's health and property, our infrastructure (such as roads, water supplies) and even our natural environments. "*Councils have statutory responsibilities to avoid or mitigate natural hazards and to have regard to the effects of climate change when making certain decisions. They are also responsible for civil defence and emergency management, as well as improving community resilience through public education and local planning.*"

In the land transport area, the following are the actions that is relevant:

Homes, buildings and places

Action 7.4 - Update regulatory requirements to ensure buildings are designed and constructed to withstand more extreme climate hazards.

Infrastructure

Action 8.6 - Invest in public transport and active transport.

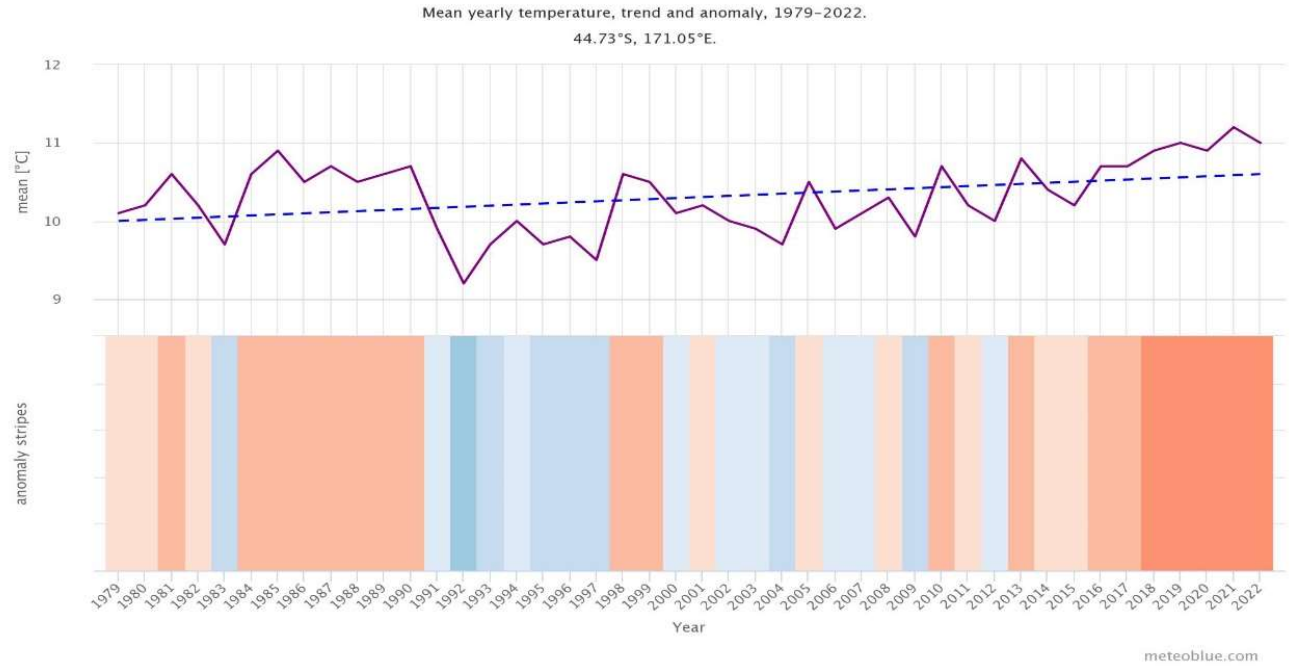
Action 8.8 - Support knowledge sharing and the implementation of adaptation actions across the sector.

7.6.4 Meteoblue Information

7.6.4.1 Temperature

Figure 7.2 shows an estimate of the mean annual temperature for Waimate. The dashed blue line shows the linear climate change trend of increasing temperature and Waimate is getting warmer. The bar "anomaly stripes" is called the warming stripes, where each colour strip represents the average temperature for a year where blue is colder and red is for warmer years.

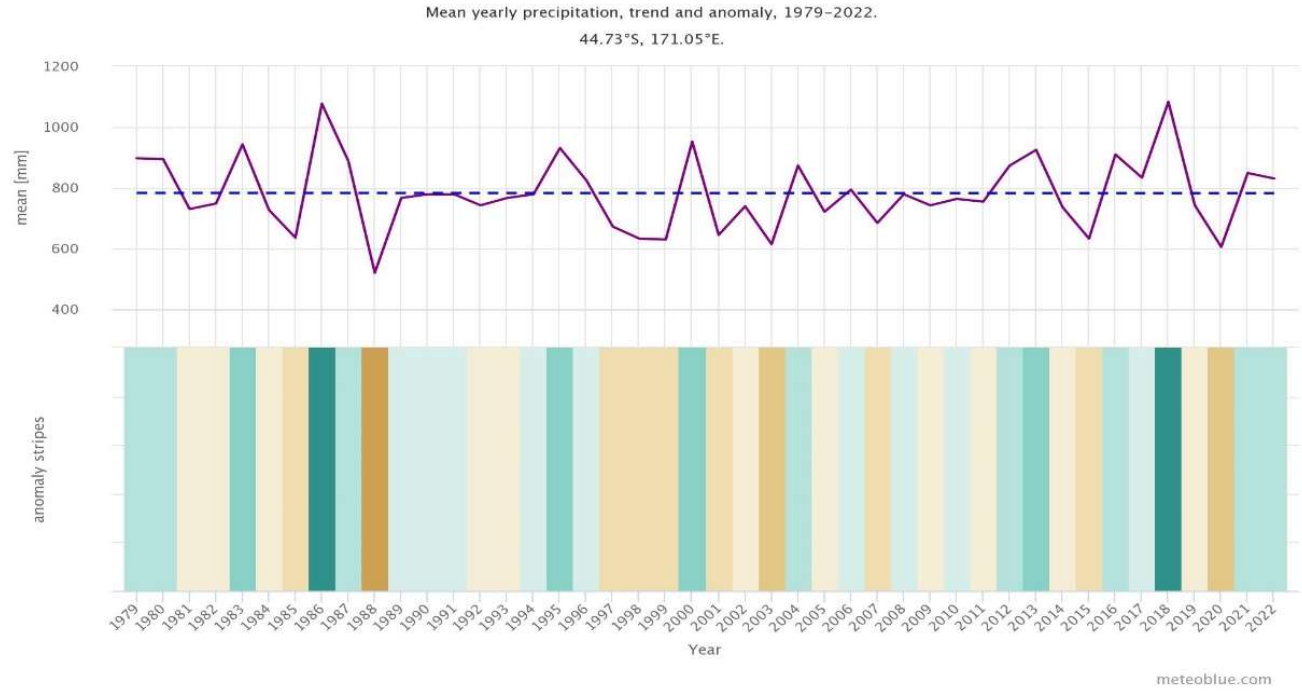
Figure 7.2 - Yearly Temperature Change



7.6.4.2 Precipitation (Rainfall)

Figure 7.3 shows an estimate of mean total precipitation (rainfall) for Waimate, where the dashed blue line shows the linear climate change trend that shows there is no clear trend can be seen. In the bar (precipitation stripes), where the green is for wetter and brown is for drier years.

Figure 7.3 - Yearly Precipitation (Rainfall) Change



7.6.5 Extreme Climate Changes

The average climate change will be affected most greatly by changes at the extreme end of the range of weather experienced. Projections for extreme climate changes are outlined as follow:

- **Daily temperature extremes**
  Modelling suggests a significant decrease in the number of frost days experienced in the region, and an increase in the number of hot days, or those days exceeding 25°C.
- **Extreme rainfall**
  A warmer atmosphere can hold more moisture (about 8% for every 1°C increase in temperature). Therefore, there is likely to be increased rainfall depth and intensity associated with climate change. In addition, the heat that comes from the condensation of this increased moisture will make storms more intense.
- **Drought**
  The modelling indicates that by the 2080s, there will be a significant increase in the average water deficit across Canterbury, with increases of between 2 weeks and over 6 weeks of pasture deficit as an average climate condition. By the 2030s, current drought events that are so severe that they only occur in 1 out of 20 years are projected to occur more frequently.
- **Fire**
  Studies and modelling suggest that there is likely to be an increased fire risk. This will include longer fire seasons, increases in fuel drying, easier ignition, and faster fire spread due to wind. Potential increases in thunderstorms and lightning may also play a role.

In July 2023, it was reported that "*Waimate District 'driest' so far in 2023 and breaks temperature record.*"[46] From NIWA's report, the District only received 33% of its normal rainfall in the first six months of 2023, therefore as seen on NIWA's report, the soil moisture anomaly (mm) is slightly drier than normal, relative to this time of the year.

7.6.6 Climate Change Effects

Specific effects that may impact on the roading activity are set out below along with potential mitigation options.

- **Dust from Unsealed Roads**
  Hotter temperatures and associated drought conditions could have detrimental effects in terms of increased dust from unsealed roads. This may mean that in future areas of unsealed roads need to be sealed, particularly close to residential properties. Higher temperatures potentially have an impact on the timing of both grading and metalling activities that will require to be monitored over time.
- **Changes in Demand**
  An overall decrease in the mean rainfall for the District could impact on land use and in turn change demand on certain areas of the road network. More intense rainfall events have the ability to damage crops, and this may manifest in changing farming practices, and therefore could result in changing traffic volumes.
  Regular traffic counts and optimised renewal pf drainage assets are required to support any nuisance flooding and changes experienced.
- **Drainage Capacity**
  Extreme rainfall events in a generally dry region may cause surface flooding affects due to poor capacity of drainage assets. The cost of upgrading drainage assets for these extreme events is likely to be prohibitive for Council.
  Monitoring and providing a level of protection that ratepayers and users can expect to mitigate the events, and any extremes will be managed through overland flow paths and defined areas for detention and improved stormwater management practices.

[46] https://www.stuff.co.nz/timaru-herald/132491404/waimate-district-driest-so-far-in-2023-and-breaks-temperature-record

- **Increased Flood Damage Repair Work**
  Extreme rainfall events in a generally dry region may cause surface flooding effects and in turn increase requirements for flood damage repair works. Consideration will need to be given to design and location aspects for Council assets to reduce the risk of damage or loss of service due to extreme weather events.
  Council is continually monitoring the financial effects associated with flood events and are currently monitoring if existing programmed works are starting to be adversely affected.
- **Water availability for Construction**
  Increasing demand for water is currently an important issue for Canterbury. This increased demand is likely to become increasingly critical in a future characterised by drier average conditions, and an associated increase in both drought frequency and intensity. This may mean, as an example, that it will be more difficult to obtain the required water to complete construction works.
  Council will continue to monitor Council's water supplies for optimised future renewals that address the location of demand within the schemes, therefore also allowing to plan and support District growth.

Council will continue to maintain a weather eye on the effects of climate change within the District.

7.7 Future Improvements

A full assessment of negative effects created by the roading network should be completed. Details of resulting strategies and operations to enable greater sustainability in both the short and long-term can then be developed for use. The assessments should consider the following available information (but not limited to):

- Ministry for the Environment – First National Climate Change Risk Assessment for New Zealand, August 2022
- Ministry for the Environment – National Adaptation Plan
- Ministry for the Environment – Climate Change and Local Government, August 2022
- Ministry for the Environment – Role of Councils in Preparing for Climate Change, June 2022
- NIWA – Climate information
- NIWA – Climate change projections for the Canterbury Region, February 2020

Climate change is a critical consideration of Council as we work towards understanding how it affects our community, facilities, and infrastructure. An independent report commissioned by Council in early 2021 reported that Council was making a positive contribution overall towards emissions, with its activities removing more greenhouse gases from the atmosphere than they emit. Council has now employed a Climate Change Officer, who will assist the Waimate District and Council into moving in the right direction for Climate Change.

As part of future improvements on sustainability for Council, the following are some work that is required:

- planning for climate change adaptation
- network resilience
- emergency management response and recovery
- insurances of assets
- Council staff succession planning.

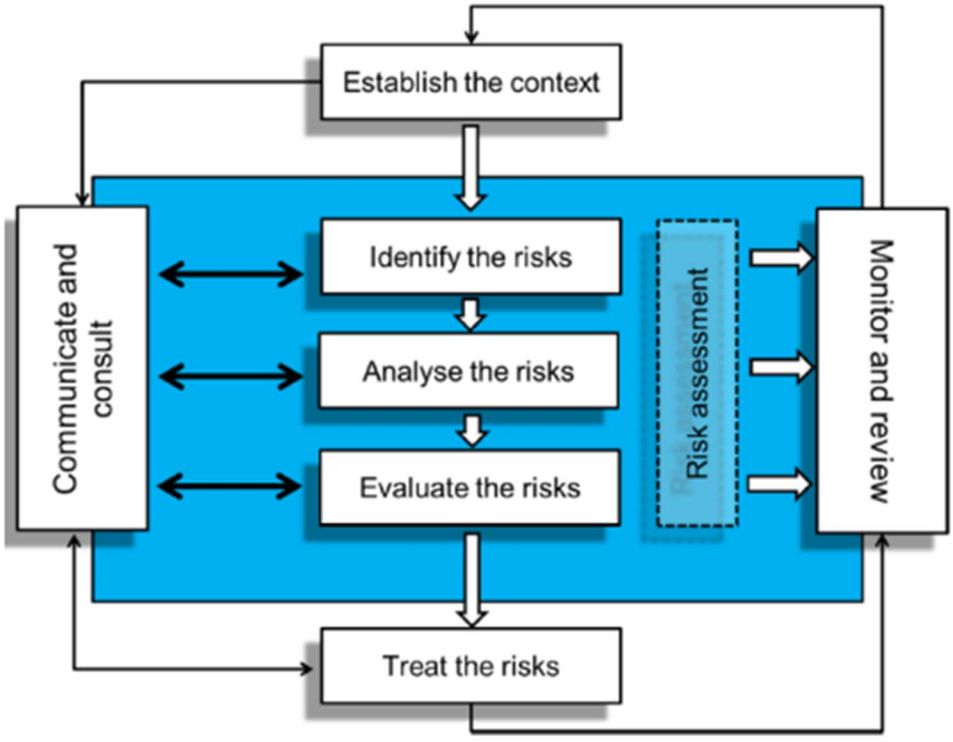
8 RISK MANAGEMENT

Risk management is "*the systematic application of management policies, procedures and practices to the task of identifying, analysing, evaluating, treating and monitoring those risks that could prevent a Local Authority from achieving its strategic or operational objectives or plans, of from complying with its legal obligations.*"[47]

In the roading activity, the risk approach taken in the 2015 AMP has been advanced due to the collaborative effort of Aoraki Roading Collaboration (ARC). As well as undertaking a risk management assessment jointly, critical routes were identified. These have been review and updated where required over the last revisions.

On 22 March 2022, Council adopted their Risk Management Policy 302. The purpose of the policy is to explain Council's underlying approach to risk and risk management. It also assigns specific responsibilities to specific roles within Council. The policy also defines the risk management process that should be embedded in the culture and practices of the organisation and tailored to its business process.

Figure 8.1 - Waimate District Council's Risk Management Process



8.1 Understanding the Context

The context for the application and development of risk must be set to ensure that risk development is not completed in isolation, as the identification analysis and treatment of risk will impact all levels of asset management, from community outcomes through to service level delivery, strategic goals and operational delivery.

[47] Risk Management Process Manual, Transit New Zealand, September 2004.

8.1.1 Strategic Context

This AMP for Roading sets out the strategic context as it relates to risk management. It outlines the relationship to identified community outcomes, activity rationale, strategic result, and strategic action. The plan sets out the relationship to other plans, legal requirements, financial strategies, regulatory and policy obligations of the roading activity.

8.1.2 Organisational Context

The organisational context is approached through the identified activities of managing the roading assets, as the activity identifies the risk associated with staffing, the elected representatives, and work areas, location and IT systems.

8.1.3 Risk Management Context

The risk management context refers to the risk-related activities undertaken within the roading activity. The remainder of this section sets out the risk management context in terms of risk management activities, likelihood scale, and consequence scale. A risk assessment matrix and risk register are introduced, as are the required analysis and format for a risk treatment plan.

8.1.4 Considered Risks

The risks considered in this edition of the AMP was originally a reflect from the framework discussed in NZTA's *Research Report 415: Case studies and best-practice guidelines for risk management on road networks*. This approach identifies risk groups/areas and provides a thorough representation of the type of risks that should be considered.

Figure 8.2 - Specific Risks for Each Risk Area (Extracted from NZTA Research Report 415)

Under each of the risk groups/areas, risks that are relevant for Council have been identified.

8.1.4.1 Planning Risks

The Council relevant planning risks identified are (and are not limited to):

- Insufficient business continuity planning for disruptive events.
- Ineffective input into regional strategic planning
- Risks associated with Council-owned roads, bridges, and structures (retaining walls - minor) on private land.
- Underestimating the effects of climate change (adaptation, network resilience, emergency management response and recovery, and insurances of assets)
- Lack of transport alternatives – e.g. cycleways and walkways
- Moderate natural hazards
- Dust nuisance.
- Hazardous materials
- Surface water contamination (minor)

8.1.4.2 Management Risks

The Council relevant management risks identified are (and are not limited to):

- Lack of staff resources (limited)
- Loss of system knowledge – e.g. inability to retain knowledge, loss of institutional knowledge; insufficient systems in place to manage data/information and processes.
- External economic influences
- Inability to utilise funding options.
- Diminishing funding allocation
- Insufficient technology (minor)
- Lack of political alignment (minor)
- Handover of low-quality assets from property developers or Council (limited)

8.1.4.3 Delivery Risks

The Council relevant delivery risks identified are (and are not limited to):

- Inadequate project management
- Inadequate portfolio management
- Inadequate maintenance contract management
- Inadequate capital works contract management (limited)
- Non-compliance with legislation and legal requirements
- Inadequate procurement practices

8.1.4.4 Physical Risks

The Council relevant physical risks identified are (and are not limited to):

- All assets
    - Damage to infrastructure through vandalism.
- Roads/pavements
    - Inadequate road design
    - Inadequate road maintenance
    - Low-lying road inundated by floods during heavy rainfall events.
    - Loss of amenity and visibility caused by roadside vegetation.
    - Road-user conflicts
- Streetlights

  - Inadequate street lighting
  - Damage to streetlights
- Footpaths/accessways
  - Inadequate footpath quality
  - Inadequate accessibility
  - Inadequate footpath
- Signage
  - Inadequate signage/markings causing accident/damage.
  - Vandalism
- Guard rails/medians
  - Guard rails/medians damaged and/or missing.
- Drainage
  - Flooding affecting roads.
- Bridges and structures
  - Wall failure resulting from a natural hazard.
  - Bridge collapse/damage/deterioration/erosion/blockage
  - Structure damage from overloading/over dimension.

8.2 Risk Assessment

8.2.1 Risk Consequences and Likelihood Definition

A review of the risk types, jointly undertaken, is shown in the following tables.

Table 8.1 - Consequences Rating

Consequences	Score		1	2	3	4	5
	Rating		Insignificant	Minor	Moderate	Major	Extreme / Catastrophic
Interpretation	**Corporate Image (Image, Reputation, Public Trust, and Council Trust)**		No media attention or damage to reputation.	No media attention, but minor damage to image to a small group of people.	Negative local media coverage, community concerned about company performance.	Negative national media coverage, major decrease in community support.	Negative international media coverage, Significant political outfall, loss of community support, loss of several key staff.
	Financial/ Economic (Sum of)	**Financial Direct Costs (Repair Lost Revenue, 3rd Party Damage, Legal Costs)**	< $10,000	$10,000 to $50,000	$50,000 – $200,000	$200,000 – $1,000,000	>$1,000,000
		Economic Impacts on Users and Businesses	Equivalent to < $10,000	Equivalent to $1,000 to $50,000	Equivalent to $50,000 – $200,000	Equivalent to $200,000 – $1,000,000	Equivalent to > $1,000,000
	Environmental		No breaches	Minor breaches affecting very small part of the network	One-off major breach, affecting a small part of the network	Several major breaches affecting a significant part of the network	Widespread and major breaches of standards, failure to meet legislative requirements over most of system area / network
	Health and Safety (Public)		No health or safety impact.	Minor safety impact on small number of people.	Serious safety impact on small number or minor impact on large number of people.	Extensive injuries or significant safety impacts, single or several fatalities.	Widespread safety impacts; large numbers of fatalities.
	Service Level / Effectiveness		One-off minor failure to meet levels of service	Minor failures to meet levels of service.	One-off major failure or widespread minor failures.	Some major performance failures.	Major, widespread, unacceptable performance failure.

Table 8.2 - Likelihood Rating

Likelihood		Interpretation	Probability
Score	Rating		
5	Frequent	Is expected to occur several times a year. 90% or greater chance of occurring in next 12 months. Expected to occur in 9 or next 10 years. Certain to occur at least once in next 5 years. It would be unusual if this didn't happen	0.8
4	Often	Could occur once a year. 60% to 90% chance of occurring in next 12 months. Expected to occur at least once in next 5 years. Will occur more often than not	0.6
3	Likely	Could occur at some time in the next 10 years. 25% to 60% chance of occurring in next 12 months. Expected to occur in 4 or next 10 years. Likely will occur at least one in next five years (>80% chance) Not likely, but don't be surprised	0.4
2	Possible	Could occur at some time in the next 50 years. 2% to 25% chance of occurring in next 12 months. Expected to occur a maximum of once every 5 to 20 years. 50% chance of occurring in next 5 years A surprise, but not beyond the bounds of imagination	0.2
1	Rare	Could occur only in exceptional circumstances (unlikely next 50 years) Up to 2% chance of occurring in next 12 months. Could occur once every 50 or more years. Less than 10-% chance of occurring in next 5 years. Will only occur in exceptional circumstances	0.05

8.2.2 Scoring Risks Definition

Figure 8.3 - Risk Score (Extrracted from Risk Management Policy)

Likelihood		Consequence				
		Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Frequent	(5)	5	10	15	20	25
Often	(4)	4	8	12	16	20
Likely	(3)	3	6	9	12	15
Possible	(2)	2	4	6	8	10
Rare	(1)	1	2	3	4	5

Risk Score	Level of Risk	Action Required	Attention Of / Assigned To
15-25	Extreme risk	Requires immediate assessment of actions	Audit and Risk Committee / Council / Chief Executive (as required), statutory bodies
8-12	Significant risk	Requires remedial assessment and action via the annual planning process	Chief Executive / Leadership Team
4-6	Moderate risk	Address via new procedures and/or modification of existing practices and training	Group Manager, programme manager, work stream leaders
1-3	Low risk	No formal requirement for further action, unless escalation of risk is possible	Work stream leaders, project mangers

8.2.3 Risk Management Process

Roading assets' risks are identified, analysed, evaluated, mitigated, and recorded in a risk register. Council's risk register for the roading asset is defined in Appendix, Section 13.2.

8.2.3.1 Mitigation

There are lots of mitigation that Council could put in place, but sometimes putting lots of mitigation may not improve the risks much, therefore Council requires to work "smarter" with the mitigations. The following are some of the Council mitigations:

8.2.3.1.1 Waimate District Council Contract Procedures Manual

This manual advises and addresses the importance of specific documentation that is required for contracts. The various contracts that Council have, including contracts for the operation and maintenance of the roading activity requires contractors to provide Quality Plans for execution of the contract requirements. The Quality Plans include procedures for work to be carried out as part of the contract. The identified risk is that Council's and/or Contractors' procedures are not followed.

8.2.3.1.2 General Health and Safety Risks

Health and Safety risk is an important risk to mitigate for Council. Generally, the Health and Safety risk is mitigated by (but is not limited to):

- Council's Health and Safety Programme for its operations
- Roading activity contractors have Health and Safety Programmes for their organisation.
- Roading activity contractors have specific Health and Safety Plans and procedures for their contracts.
- Work site inspections are undertaken to ensure that the Health and Safety Plans requirements are carried out on site.
- New Zealand Guide to Temporary Traffic Management (NZGTTM), which replaces the Code of Practice for Temporary Traffic Management (CoPTTM), "*outlines how to use a risk-based approach to plan and mitigate the risks to road workers and road users to keep them safe.*" Is working towards adoption by Council and all Council's contractors, working within the District Council's road reserve, are transitioning towards using this document.

8.2.3.1.3 General Management Risks

General management risks identified include:

- Insufficient contract monitoring
  - There is currently insufficient contract monitoring on various contractors, therefore all aspects of the contracts may not be carried out or met.
- Legislative compliance
  - Council staff practitioners, supported by their experiences and training, believed that all legislative requirements that have an impact on roading activity are being complied with.
- Financial resources
  - The defined financial provisions shown in the AMP is assumed to be sufficient to provide the levels of service required for this activity.
- Service agreements.
  - There are no specific service agreements in place between each Council departments to ensure staff are aware of their roles in this activity. Being a small Council with small staffing levels, interdepartmental discussion in relation to any facet of this activity is normal practice.
- Clear Council Polices
  - Council's policies are held in Council's Policy Manual.
  - Council's Consolidated Bylaw (2018) has some roading policies defined in the document, especially in Chapter 11: Roading.

8.2.3.1.4 General Financial Risks

General financial risks identified include:

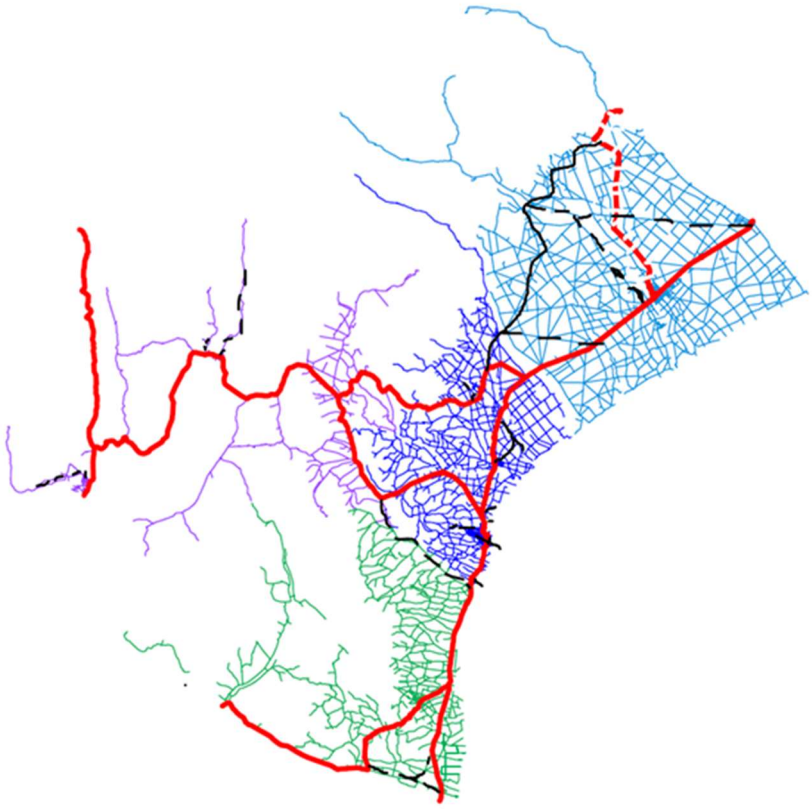
- Cost overruns
  - These are mitigated by Council staff through.
    - requesting for work to be undertaken if financial resources are available and approved.
    - reviewing expenditures and budgets monthly
    - reporting on exceptions.
- Ensuring True Costs
  - ensuring that costs are not manipulated.
  - financial forecasts that have been made portray the true cost of the activity, and assumptions made to be identified.

- Financial Assistance
    - The roading activity is financially assisted by NZTA at a rate of 68% for 2024-27 and calculated as per NZTA's formula for Emergency Works (WC141).

8.3 Critical Assets

In 2015, jointly with the Aoraki Roading Collaboration (ARC), critical routes for Mid-South Canterbury were identified. These were predominantly the major State Highways, supported by key resilient routes, Figure 8.4.

Figure 8.4 - Key Critical Routes Identified for Mid-South Canterbury – Developed by ARC



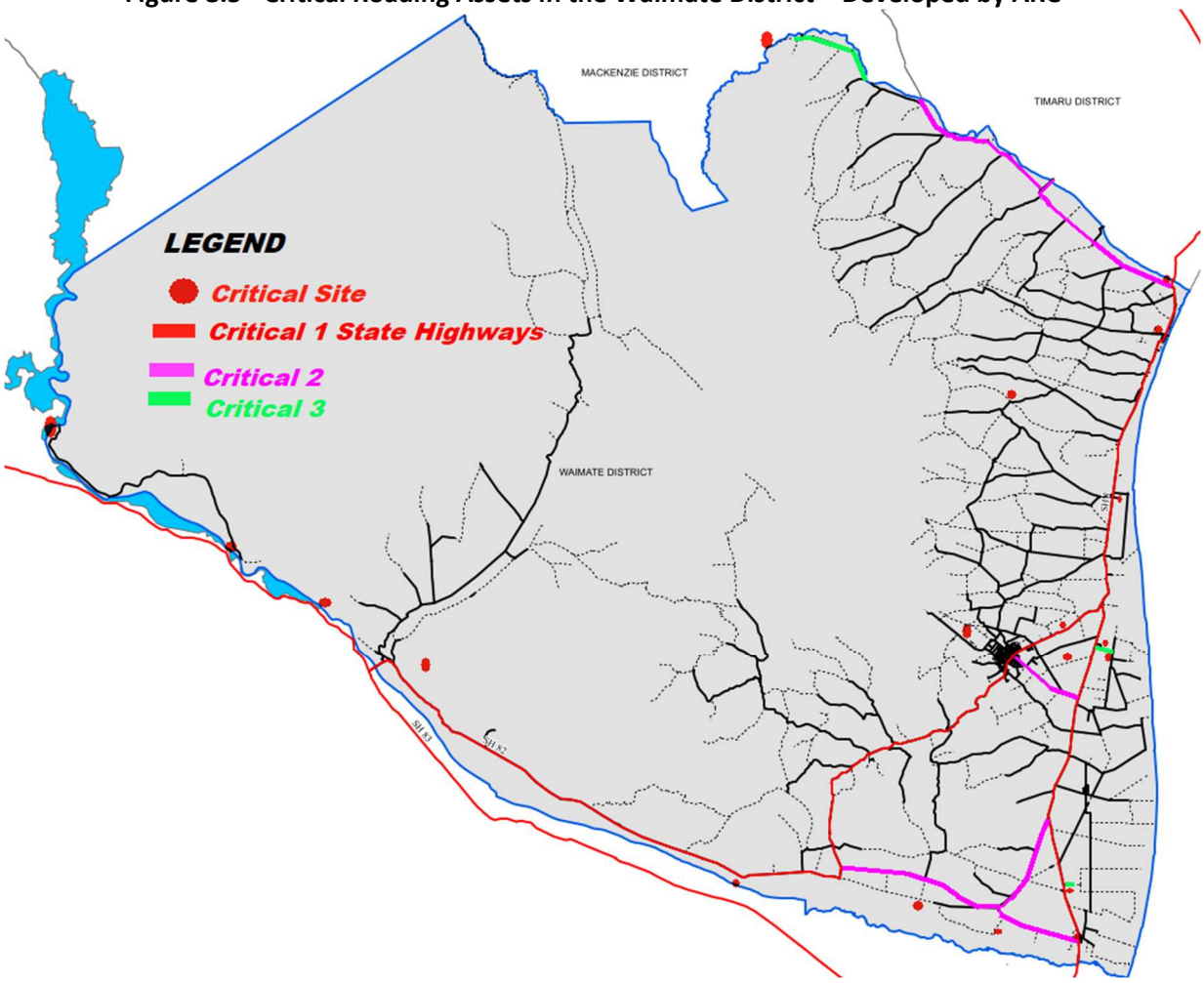
Within the Waimate District, the critical routes identified are seen in Figure 8.4, and Figure 8.5 displays the critical roading assets in the Waimate District that have been identified through this first analysis process.

Table 8.3 - Key Critical Routes in the Waimate District – Developed by ARC

District	RCA	Criticality Level	Description
Waimate	NZTA	Critical 1	SH1
Waimate	NZTA	Critical 1	SH82
Waimate	WDC	Critical 1	Pareora River Road Pareora Gorge Road Old Ferry Road Tawai Ikawai Road Ikawai Middle Road Glenavy Tawai Road

District	RCA	Criticality Level	Description
Waimate	WDC	Critical 2	Cannington Road Foleys Road Cooneys Road

Figure 8.5 - Critical Roading Assets in the Waimate District – Developed by ARC



Council's roading infrastructure critical assets are based on:

- Essential Services and Utilities (e.g. Police station, fire station, medical centres, hospitals, airports)
- Vulnerable people (e.g. Rest homes)
- Welfare centres (e.g. Schools, halls, community centres)
- Critical road (e.g. ONRC 'value')
- Critical State Highway detour roads.

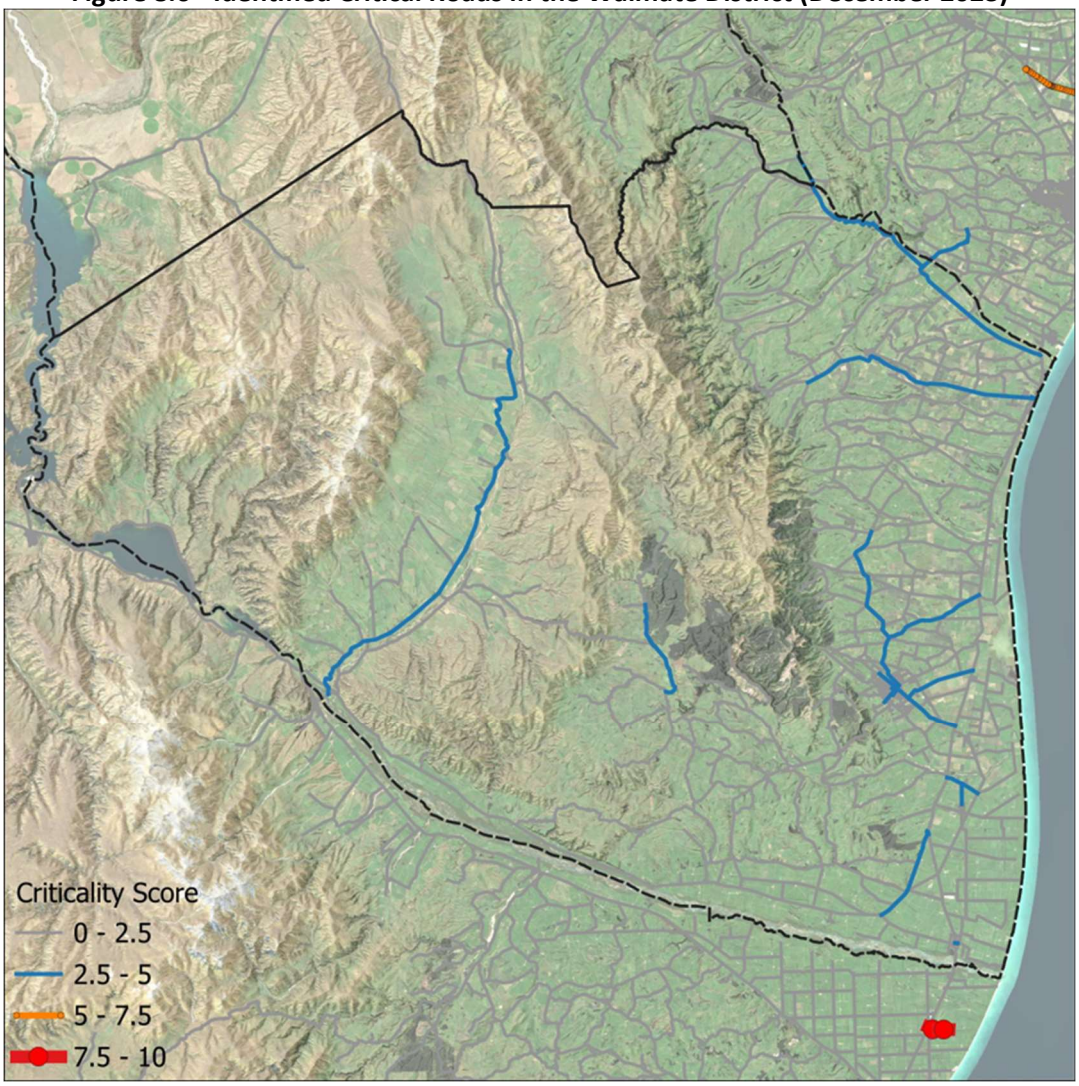
The criticality methodology is being developed in the RAMM database, and the following locations has been identified to have multiple Essential Services:

- Timaru (Timaru District)
- St. Andrews
- Makikihi
- Waimate

- Glenavy
- Kurow (Waitaki District)
- Oamaru (Waitaki District).

Other criticality assessment was done on the Waimate District, Figure 8.6. A list of road names can be found in Appendix Section **Error! Reference source not found.**.

Figure 8.6 - Identified Critical Roads in the Waimate District (December 2023)



Council has acknowledged that bridge structures are the determining factor in the resilience of the network. Through different resilience works and the knowledge of the Council staff, 38 bridges have been identified, where no alternative routes are available, Table 8.4. Of these bridges, only one bridge is rated as "High-Risk" in terms of consequences and likelihood, O'Briens Bridge on Hakataramea Road. The options for addressing the resilience for this part of the road network are limited as sections of the road within this valley are also prone to flooding.

Table 8.4 - List of Bridges with no Alternative Routes available

Bridge #	Bridge Name	Road Name	Risk Likelihood	Risk Consequence	Overall Risk
52	Ryans	Esk Bank	Rare	Minor	Low

Bridge #	Bridge Name	Road Name	Risk Likelihood	Risk Consequence	Overall Risk
59	Forrests No 2	Forrests	Rare	Minor	Low
81	Bournedale Homestead	Bournedale Homestead	Rare	Minor	Low
90	Hook Beach	Hook Beach	Rare	Minor	Low
104	Frewens	Moores	Rare	Minor	Low
116	Cunninghams	Hannatons	Rare	Minor	Low
117	Poigndestres	Poigndestres	Rare	Minor	Low
130	Lundys	Crowes	Rare	Minor	Low
135	Glenavy	Te Maiharoa	Rare	Minor	Low
148	Dons	Dons	Rare	Minor	Low
153	Whites	Whites	Rare	Minor	Low
172	Cleeves	Milne	Rare	Minor	Low
186	Menzies	Menzies	Rare	Minor	Low
51	Church Hill	Church Hill	Rare	Moderate	Low
80	Coopers	Coopers	Rare	Moderate	Low
92	Hook Gap	Upper Hook	Rare	Moderate	Low
129	Sinclairs Creek	Māori	Rare	Moderate	Low
157	Hursts	Hursts	Rare	Moderate	Low
160	Bursens	Pentland Hills	Rare	Moderate	Low
161	Meyers Creek	Kaiwarua	Rare	Moderate	Low
163	Lanes	Kaiwarua	Rare	Moderate	Low
170	Farm Road	Farm Road	Rare	Moderate	Low
174	Hakataramea Station	Homestead	Rare	Moderate	Low
176	Hurstlea	McHenrys	Rare	Moderate	Low
181	Mt Florence	Mt Florence	Rare	Moderate	Low
185	Frazers	Menzies	Rare	Moderate	Low
192	Scour Stream	Moorland Farm Settlement	Possible	Moderate	Low
156	Rickmans	Waitaki Valley	Possible	Minor	Moderate
79	Jacksons	Milnes	Possible	Moderate	Moderate
74	Stanleys	Stanleys	Likely	Moderate	Significant
175	Wrights Crossing	Hakataramea Valley	Often	Moderate	Significant
177	Station Creek	Hakataramea Valley	Rare	Major	Moderate

Bridge #	Bridge Name	Road Name	Risk Likelihood	Risk Consequence	Overall Risk
178	Little McKay	Hakataramea Valley	Rare	Major	Moderate
179	Middle McKay	Hakataramea Valley	Rare	Major	Moderate
180	Big McKay	Hakataramea Valley	Rare	Major	Moderate
182	Rocky Point	Hakataramea Valley	Rare	Major	Moderate
169	O'Briens	Hakataramea Valley	Likely	Major	Significant

8.4 Insurance

There is no current insurance cover for roads or bridges within the Waimate District. There is an expectation that Council will use funds from NZTA Emergency Works (WC141) and Council's reserves and/or loans for local share. This is a risk in itself, as funds from NZTA is not a guarantee.

8.5 Emergency Management

8.5.1 Operational Emergency Management

Operational Emergency Risks are those associated with the day-to-day operation of the District, including incident response and winter maintenance. Initial response to all these events is managed through the Road Maintenance and Operations Contract and is covered in the contract specifications. The specification identifies incident response times, liaison, notifications, plant, and personnel requirements. Snow/debris clearance requirements ensure high risk/use areas are cleared initially with the lower priority areas to follow.

Where the size of an event extends beyond the capability of the maintenance contractor (generally requires more than six (6) staff to respond/manage) Council staff will take over management of the event. Where necessary Council will engage additional resources directly to manage and respond to events.

8.5.2 Civil Defence and Emergency Management

8.5.2.1 Community Response Plans

In 2018, Council started the development and implementation of tailored Community Response Plans in the Waimate District. This is aimed to help local communities be more resilient and be better positioned to respond to civil defence emergencies. These plans acknowledges how important it is for local knowledge to be used during a civil defence emergency. A total of eight plans have and will be developed for local communities and every household will receive a copy of their respective plan:

- Cannington and Maungati
- St Andrews, Southburn and Otaio
- Makikihi, Hunter and Hook
- Hakataramea- Cattle Creek
- Willowbridge, Studholme and Morven

- Glenavy & Ikawai
- Waihaorunga and Waihao Downs
- Waimate Township.

8.5.2.2 National Disaster Resilience Strategy

The National Disaster Resilience Strategy came into effect in 2019 and is to last for 10 years, and is to be reviewed when necessary. The Strategy outlines the vision and long-term goals for civil defence emergency management in New Zealand. Figure 8.7 defines the Strategy's Vision, Goals, and Main Priorities.

Figure 8.7 - National Disaster Resilience Strategy Vision, Goal, and Main Priorities

8.5.2.3 Canterbury Civil Defence Emergency Management (CDEM) Group Plan

In Canterbury, there is a joint committee that comprises of the Mayors of each of the Territorial Authorities in the Region, and a Coordinating Executive Group (CEG).

In August 2022, the updated Canterbury CDEM Group Plan was adopted and in April 2023, the plan was published. The plan provides a strategic direction on how comprehensive, risk-based emergency management will be implemented across the Canterbury Region.

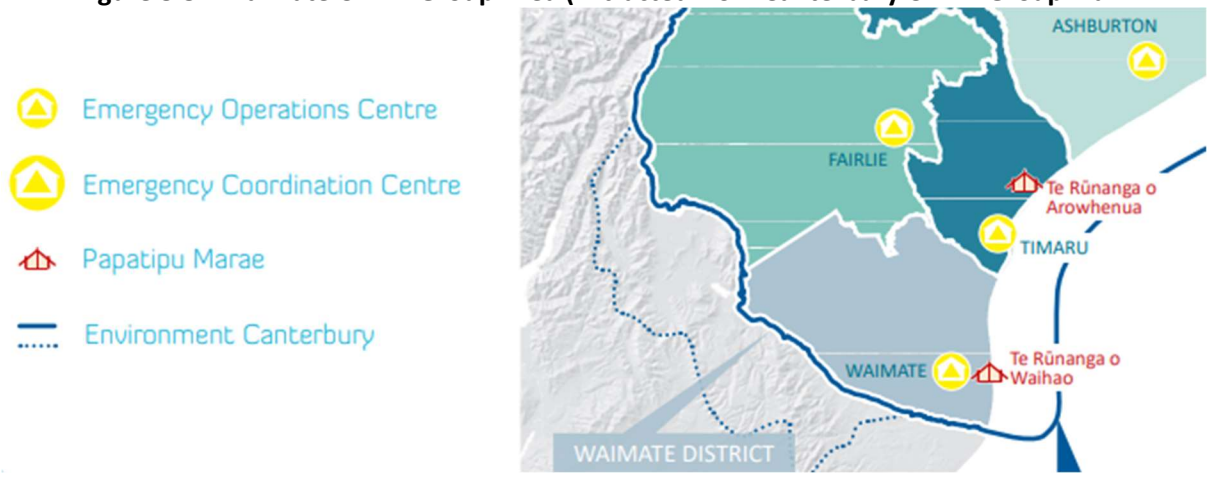
The Canterbury CDEM Vision is:

"A resilient Canterbury will exist when communities have reduced their risks, increased their readiness, and are ready to respond to and recover from any emergency."

The Goals are:

"The Canterbury CDEM Group has identified goals involving collaboration and community to support its vision of a resilient Canterbury."

Figure 8.8 - Waimate CDEM Group Area (Extracted from Canterbury CDEM Group Plan.



"*Infrastructures have a high level of interdependency. Most networks depend on electricity supply, and emergency recovery is heavily dependent on the communications network and transport routes.*" Roads are critical in ensuring that the communities' basic needs are met.

Figure 8.9 - Waimate District Risk Profile identified by Canterbury CDEM (Extracted from Canterbury CDEM Group Plan)

WAIMATE	ISO 31000			Impact					Manageability														
Annex B — Risk Profile Hazard	Likelihood	Consequence/ Impact	Level	Social	Infrastructure	Economic	Natural/Environmental	weighted mean	Readiness			Response			Recovery			Reduction			Total 4Rs Manageability	Growth	Total
Natural Hazard																							
Earthquake Alpine fault	C	major	H	4	4	4	1	7.4	h	m	4	h	m	4.00	h	m	4.00	m	m	3.00	15	1	23
Earthquake /local	C	major	H	4	4	3	1	7.1	h	m	4	h	m	4.00	h	m	4.00	m	m	3.00	15	1	23.1
Tsunami	C	insignificant	L	1	2	1	0	2.3	l	l	3	l	h	1.0	l	h	1.0	l	h	1.0	6	2	10.3
Flooding - Eastern/foothill rivers	A	moderate	VH	3	2	3	1	5.1	m	h	2	m	h	2.0	l	h	1.0	l	m	2.0	7	1	13.1
Flooding - Alpine rivers	A	insignificant	M	1	1	2	1	2.3	l	m	2	l	h	1.0	l	h	1.0	l	m	2.0	6	2	10.3
Heavy rainfall	A	moderate	VH	3	2	2	1	4.8	l	h	1	m	h	2.0	l	h	1.0	l	m	2.0	6	1	11.8
Urban fire	C	minor	M	3	1	2	0	4.1	l	h	1	l	h	1.0	l	h	1.0	m	h	2.0	5	0	9.1
Wildfire/ruralfire	B	minor	M	2	1	2	0	3.1	l	m	2	h	h	3.0	l	h	1.0	l	m	2.0	8	1	12.1
Land instability	D	insignificant	VL	1	1	1	1	2	l	l	3	l	m	2.0	l	h	1.0	l	h	1.0	7	1	10.0
High winds	A	minor	H	2	2	2	0	3.6	l	m	2	l	l	3.0	l	h	1.0	l	m	2.0	8	1	12.6
Snow (Ice)	B	minor	M	2	3	2	0	4.1	l	m	2	m	m	3.0	l	h	1.0	l	m	2.0	8	1	13.1
Hail	C	insignificant	L	1	0	2	0	1.6	l	l	3	l	h	1.0	l	h	1.0	l	l	3.0	8	1	10.6
Tornado	C	insignificant	L	1	0	2	0	1.6	l	m	2	l	h	1.0	l	m	2.0	l	m	2.0	7	0	8.6
Electrical storms	A	minor	H	1	3	1	0	2.8	l	h	1	l	h	1.0	l	h	1.0	l	h	1.0	4	0	6.8
Drought	C	minor	M	2	1	3	2	3.8	l	l	3	l	l	3.0	l	l	3.0	l	l	3.0	12	2	17.8
Extreme Temperature (hot/cold)	D	minor	L	2	2	2	0	3.6	l	m	2	l	h	1.0	l	h	1.0	l	l	3.0	7	0	10.6
Coastal erosion/inundation	A	insignificant	M	0	2	2	2	2	l	l	3	l	h	1.0	l	l	3.0	m	m	3.0	10	1	13.0
Volcanic eruption - ash fall	E	insignificant	VL	1	1	1	0	1.8	l	h	1	l	h	1.0	l	h	1.0	l	h	1.0	4	0	5.8
Human disease pandemic	B	major	VH	5	1	4	0	6.7	l	l	3	h	l	5.0	m	m	3.0	m	h	2.0	13	1	20.7
Animal disease epidemic	D	moderate	M	4	1	5	0	6	l	l	3	l	l	3.0	m	l	4.0	l	l	3.0	13	0	19.0
Biological pests and new organisms	D	moderate	m	4	0	5	3	6.1	l	l	3	l	l	3.0	m	l	4.0	l	l	3.0	13	0	19.1

Figure 8.9 identifies the following Natural Hazards as a High to Very-High level of risk:

- Earthquake Alpine Fault
- Earthquake / Local
- Flooding – Eastern / foothill rivers
- Heavy rainfall
- High winds
- Electrical storms

- Human disease pandemic.

8.5.3 Earthquake Hazard Assessment

In September 2008, an Earthquake Hazard Assessment for Waimate, Mackenzie and part Waitaki District was published (ECan Report No. U08/18). The purpose of the report was to define and characterise earthquake hazards in the Districts and to place the earthquake hazard in context on the vulnerability or exposure of some engineering lifelines.

Figure 8.10 and Figure 8.11 should be read in conjunction with Sections 6, 7, and 8 of the report. Section 9 of the report outlines three earthquake scenarios, and it is recommended that these also be read to provide a perspective on the contents of Assessment Charts.

Figure 8.10 - Earthquake Assessment Chart for Structures (Extracted from Earthquake Hazard Assessment Report)

A - Structures

IMPORTANT: Refer notes page 1

Zone	Shaking Intensity	Structures	Fixings designed for seismic loads	Equipment not fixed or fittings not designed for seismic loads
1	MM VI	Slight damage to Type I buildings	Little to no damage	Movement probable, 10% failure
	MM VII	Minor damage except for poorly constructed weak material Type I buildings	Minor damage	Movement expected, 30% failure
	MM VIII	Well designed structures serviceable, but with at least minor damage. Many non seismically designed structures damaged and unserviceable. Some settlement damage possible	Considerable damage, 30 - 40% failure	80% failure
	MM IX	Damage and distortion to even modern, well designed structures, some may be unserviceable. Non seismically designed structures likely to be seriously damaged and poorly constructed weak material structures collapse. Settlement damage probable.	Widespread damage 50 - 60% failure	90 - 100% failure
2	MM VI	Slight damage to Type I buildings	Little to no damage	Movement probable, 10% failure
	MM VII	Minor damage except for poorly constructed weak material Type I buildings	Minor damage	Movement expected, 30% failure
	MM VIII	Well designed structures serviceable, but with at least minor damage. Many non seismically designed structures damaged and unserviceable.	Considerable damage, 25% failure	70% failure
	MM IX	Damage and distortion to even modern, well designed structures, some may be unserviceable. Non seismically designed structures likely to be seriously damaged and poorly constructed weak material structures collapse.	Widespread damage 40% failure	90% failure
3	MM VI	As for Zone 2, with some small reduction in severity possible		
	MM VII			
	MM VIII			
	MM IX			

Figure 8.11 - Earthquake Assessment Chart for Transport
(Extracted from Earthquake Hazard Assessment Report)

C - Transport IMPORTANT: Refer notes page 1

Zone	Shaking Intensity	Roading	Railway	Bridge Structure	Bridge Abutments
1	MM VI	Little to no damage	Little to no damage	Refer section A - Structures	Little to no damage
	MM VII	Minor damage to kerbs and cracking of seal	Minor damage to alignment		Minor slumping
	MM VIII	Some damage to kerbs. Some distortion and cracking of seal.	Distortion of rail lines, some fissuring and spreading of embankments		Some slumping of abutment fill common
	MM IX	Widespread damage to kerbs, Distortion and cracking of seal, some ground fissuring. Permanent ground distortion and settlement.	Marked distortion of rail lines, both horizontal and vertical, significant embankment damage		Slumping of abutment fill at nearly all bridges, many of significant magnitude. Translational or rotational movement at some abutments.
2	MM VI	Little to no damage	Little to no damage		Little to no damage
	MM VII	Minor damage to kerbs and cracking of seal. Small slips on steep batters.	Minor damage to alignment		Minor slumping
	MM VIII	Some damage to kerbs. Some distortion and cracking of seal. Slips in batters	Distortion of rail lines, some spreading of embankments		Some slumping of abutment fill common
	MM IX	Damage to kerbs, distortion and cracking of seal, Landsliding in steep slopes and batters, cracking of ground	Distortion of rail lines, both horizontal and vertical, significant embankment damage		Slumping of abutment fill at most bridges, many of significant magnitude. Translational or rotational movement at some abutments.
3	MM VI	Little to no damage	Little to no damage		Little to no damage
	MM VII	Rockfall and small slips on steep batters.	Minor damage to alignment		Minor slumping
	MM VIII	Rockfall and slips in steep batters	Distortion of rail lines, some spreading of embankments		Some slumping of abutment fill common
	MM IX	Landsliding in steep slopes and batters, cracking of ground, large volume rockfall possible	Distortion of rail lines, both horizontal and vertical, significant embankment damage		Significant slumping of abutment fill at most bridges. Translational or rotational movement at some abutments.

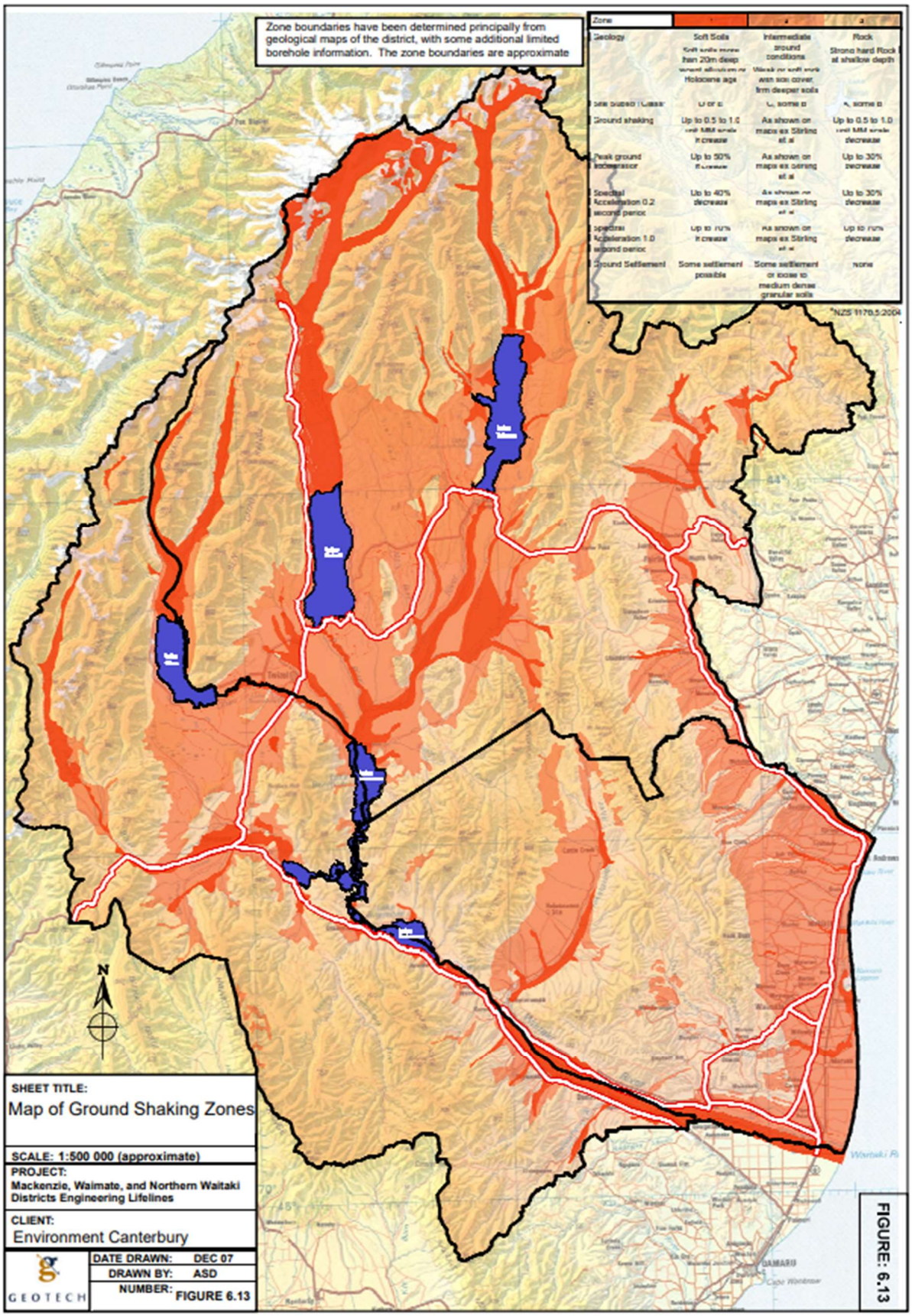
Figure 8.12 defines the three Ground Shaking Zones that are defined in Figure 8.10 and Figure 8.11. Due to the large area of the Districts, and the range of expected earthquake shaking intensities for any single earthquake event, or on a probabilistic basis, indicative damage is shown for a range of shaking intensities for each zone. The damage is indicative only and a wide variation can be expected within each zone due to variations in subsurface conditions, geology, terrain and orientation of the site with respect to the earthquake source.

The Assessment Charts are an indicative guide only and are derived from a similar chart originally prepared for the Christchurch Engineering Lifelines Study (Risks and Realities, 1997). It is based on damage reports from historical earthquakes in New Zealand and overseas. There is little information on damage ratios for structures or infrastructure other than buildings, (this particularly applies to in ground pipework) and the relative damage is necessarily somewhat subjective. The damage to structures should be read in conjunction with the description of damage in the "*Modified Mercalli Intensity Scale*", Appendix C of the Assessment Report. It may be used for coarse screening of effects, but must not be used as the basis for any design. Any decision involving expenditure or engineering design requires a more detailed evaluation of the conditions pertaining at that particular site.

The Assessment Chart does not include reference to liquefaction. Areas of significant liquefaction hazard in the Districts are limited. The majority of the areas are underlain with alluvium are older Pleistocene surfaces. Both the relatively old age and the predominantly coarse grading of this gravel make widespread liquefaction very unlikely. Liquefaction is more likely to occur within the ground shaking Zone 3 areas. If liquefaction occurs, the damage outlined in the chart could be significantly greater. For an indication of the effect of liquefaction, refer to Table 2.2: Damage Assessment Chart, page 28 of *Risks and Realities*, a report of the Christchurch Engineering Lifelines Group, CAE, 1997[48].

[48] Risks & Realities

Figure 8.12 - Map of Ground Shaking Zones
(Extracted from Earthquake Hazard Assessment Report)



8.5.4 Potential Flood Zone Assessment

Council's operative District Plan provides information for potential flood zones within the Waimate District. The flood zone information included within the February 2014 operative District Plan is being used by the transportation team to support Asset Management processes around maintenance and renewals for sealed roads – particularly with identification of pavements which may have their condition and useful lives impacted by the effects of flooding.

Figure 8.13 - Map of Potential Flood Zones (operative District Plan)

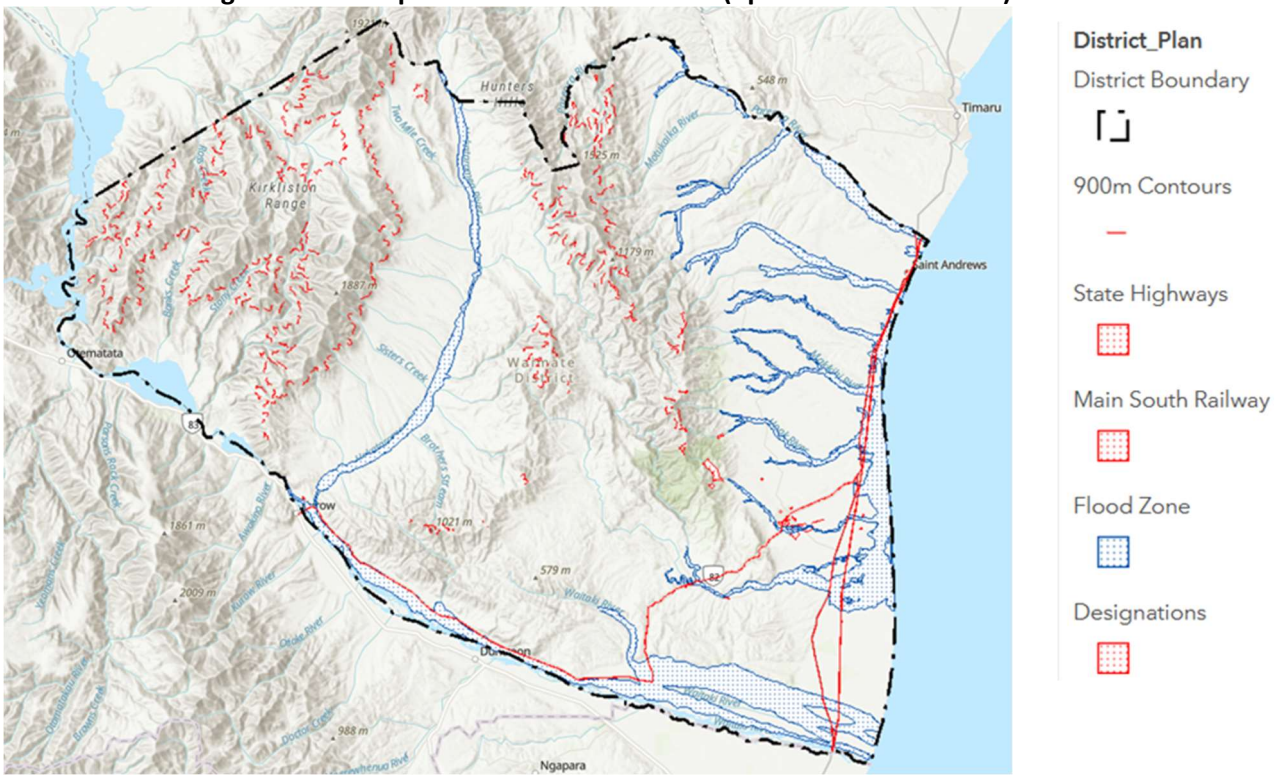
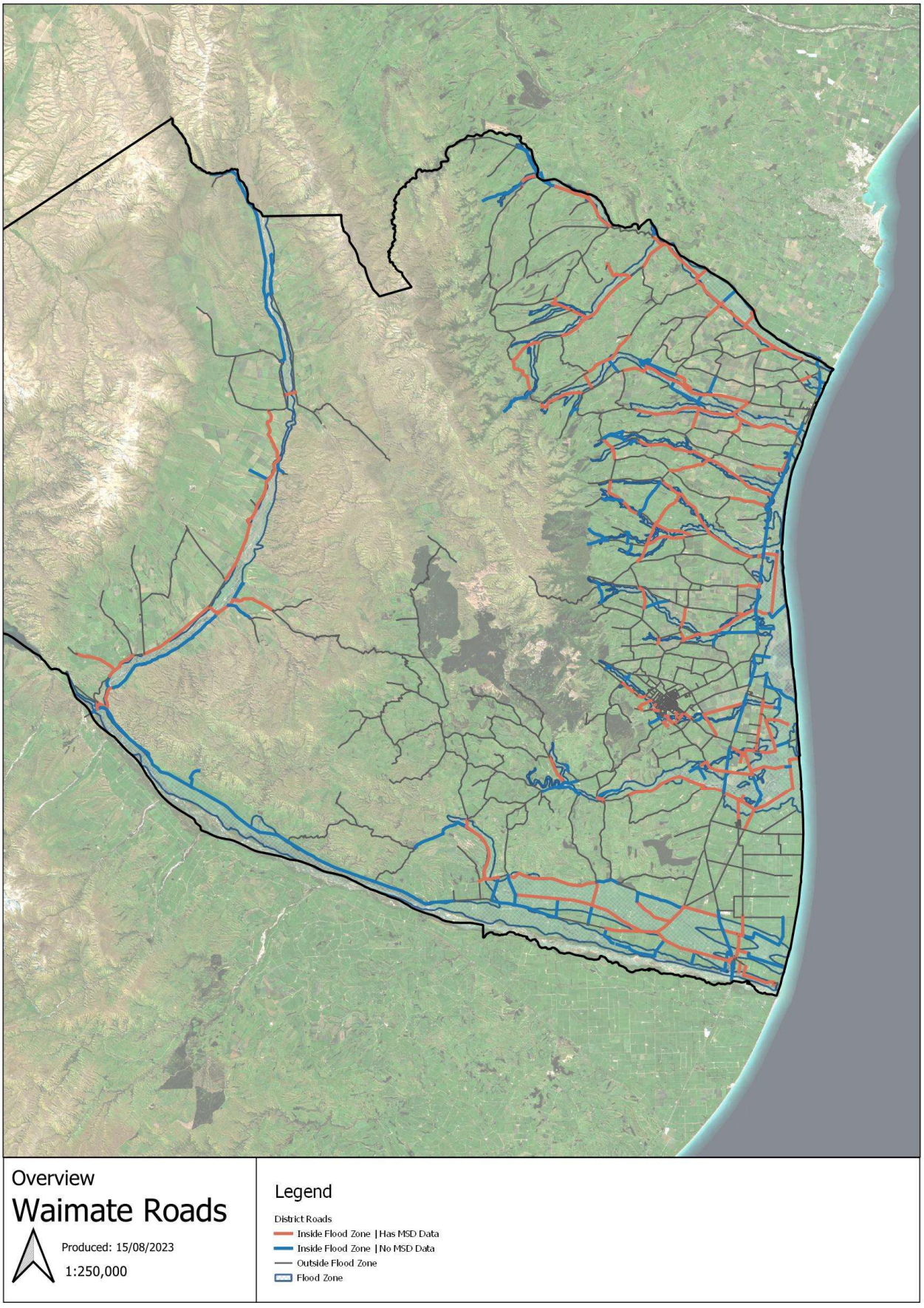


Figure 8.14 - Map of Waimate Roads Located Within Potential Flood Zones



8.6 Assumptions and Uncertainties

Waimate District faces a similar level of risk from natural hazards as other Canterbury local Authorities. Flooding is the most common issue and Council is well-prepared for these events. It is assumed that Council will be able to manage the vast majority of events through normal business practices and beyond that there will be access to emergency works funding.

Council will also mitigate identified risks through normal business practices, where possible.

8.7 Future Improvements

In March 2022, Council adopted their Risk Management Policy 302. The corporate level risk management and register is required to support the workings of the Council.

To ensure that emerging risks are identified and captured and that the Risk Management documents are monitored for effectiveness over time, both the register and management plans must be reviewed on a regular basis by Council and other stakeholders. The frequency for these reviews should be agreed and included in the Councils Operating Procedures.

Any significant additions or changes to the risk register should be noted as they occur through regular reporting procedures. It is recommended that the risk register should have a comprehensive update at each AMP review.

9 LIFECYCLE MANAGEMENT PLAN

This section of the AMP outlines what work is planned to keep the assets operating at the current levels of service defined in Section 5 while optimising lifecycle costs. The overall objective of the Lifecycle Management Plan is:

To maintain performance measures to ensure that the current strategies do not consume the asset leading to an unexpected increase in maintenance / renewal expenditure in the future.

This Lifecycle Management Plan covers the following:

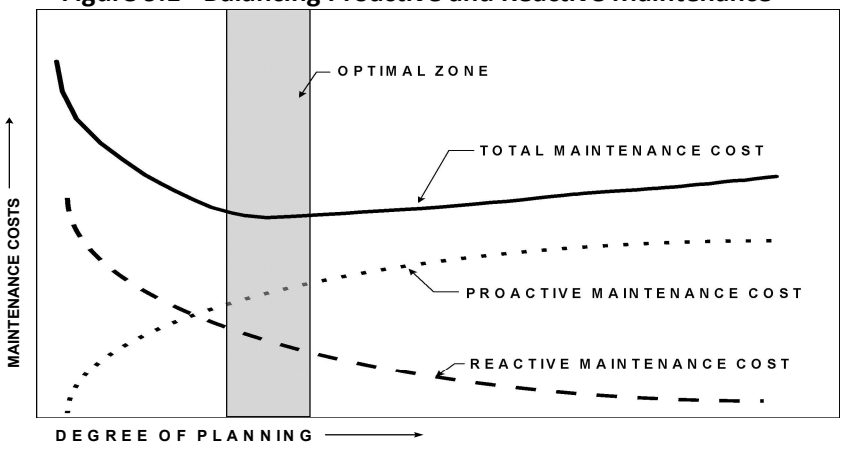
- **Background Data** identifying where possible:
  - Physical parameters of the assets
  - Current capacity and performance of the asset relative to the levels of service defined in Section 5 and growth and demand projections of Section 6
  - Current condition of assets
  - Asset valuations
  - Historical data.
- **Operations and Maintenance Plan**: This covers planning for on-going day-to-day operation and maintenance to keep assets serviceable and prevent premature deterioration or failure. This plan includes:
  - Current trends and issues
  - Maintenance decision making process.
  - Strategies required to meet levels of service.
  - How tasks are prioritised
  - Summary of future costs
  - Any deferred work and associated risks.

Two categories of maintenance are carried out:

- **Unplanned Maintenance**:
  - Reactive work carried out in response to reported problems or defects.
  - e.g. pothole repair, dig-outs.
- **Planned Maintenance**:
  - Proactive work carried out to a predetermined schedule.
  - e.g. metalling, grading, bridge inspections.

A key element of asset management planning is determining the most cost effective blend of planned and unplanned maintenance as illustrated in Figure 9.1.

Figure 9.1 - Balancing Proactive and Reactive Maintenance



Some other plans that contribute to the Lifecycle Management Plan are as follows:

- **Renewal/Replacement Plan**:
  - This covers Major work that restores an existing asset to its original capacity or its required condition (e.g. resurfacing, rehabilitation, or footpath reconstruction.)
  - This plan includes:
    - End-of-life projections
    - Renewal decision making process
    - Renewals strategies and methods to meet required Level of Service
    - How renewals are identified, prioritised, and to what standard they are replaced
    - Summary of future costs.
- **Asset Development Plan**
  - This section of the plan covers the creation of new assets (including those created through subdivision and other development) or works which upgrade or improve an existing asset beyond its existing capacity or performance in response to changes in usage or customer expectations (e.g. forestry harvesting routes).
- **Disposal Plan**
  - This covers activities associated with the disposal of a decommissioned asset.
  - Assets may become surplus to requirements for any of the following reasons:
    - Under utilisation
    - Obsolescence
    - Provision exceeds required level of service
    - Uneconomic to upgrade or operate
    - Policy change
    - Service provided by other means (e.g. private sector involvement)
    - Potential risk of ownership (financial, environmental, legal, social, vandalism).

9.1 NZ Transport Agency Waka Kotahi (NZTA) Work Categories

NZTA's Work Categories (WCs) are outlined in their Planning & Investment Knowledge Base on their website. Table 9.1 defines the WCs that are used for subsidised roading financial reporting. This Lifecycle Management Plan reports on work within these subsidised WCs and those Council only funded works (such as car parks). For clarity we have identified the WC numbers for the work within each section of the Lifecycle Management Plan. (only WCs that Waimate District use are included)

Table 9.1 - NZTA Work Category Structure (Revised March 2024)

Work Category Code	Work Category Name	Work Category Description
Local Road Operations Activity Class		

114	Structures Maintenance	The routine work necessary to maintain the function, structural integrity and appearance of:
		• road bridges
		• retaining structures
		• guard rails
		• tunnels
		• stock access structures
		• vehicular ferries
		• cattle stops
		• footpaths on road structures:
		  ○ pedestrian overbridges/underpasses
		  ○ bridge waterways, when the bridge itself is directly affected.

Work Category Code	Work Category Name	Work Category Description
121	Environmental Maintenance	The routine care and attention of the road corridor to maintain safety, aesthetic and environmental standards.
122	Network Services Maintenance	The routine care and attention of road features that support the safety performance and functional use of the network including: • road furniture • pavement markings • carriageway and pedestrian crossing lighting.
123	Network Operations	The operation, maintenance and power costs of traffic signals and other traffic management equipment and facilities.
131	Level Crossing Warning Devices	For approved organisations and NZ Transport Agency Waka Kotahi (NZTA; for its own activities) to share the costs associated with the maintenance and renewal of rail level crossing warning devices carried out by the relevant rail track authority where the crossing is part of the road controlling authority's road, cycle or footpath network. This includes public access links to rail stations and interchanges.
140	Minor Events	Enables funding from the National Land Transport Fund (NLTF) for response and recovery addressing minor, short- duration, sudden events that cause urgent safety and access problems on part(s) of the transport network.
151	Network and Asset Management	The general management and control of the road network and management of road infrastructure, including public footpaths and cycleways and associated facilities. Funding assistance is subject to the condition of funding set out on the website.
215	Structures Component Replacements	The like-for-like replacement renewal of components of: • road bridges • retaining structures • guardrails • tunnels • stock access structures • cattle stops • footpaths on road structures • pedestrian overbridges/underpasses.
221	Environmental Renewals	The renewal of existing environmental control facilities related to roads.
222	Traffic Services Renewals	The renewal of existing: • road furniture, lighting, signs and markings • traffic management equipment and facilities.

Work Category Code	Work Category Name	Work Category Description
141	Emergency Works	New NZTA Policy 20 year return period requirement For response and recovery works to address the impact of major, short-duration, sudden events that cause urgent safety and access problems on part(s) of the transport network and that result in unforeseen, significant expenditure.
Local Road Pothole Prevention Activity Class		
111	Sealed Pavement Maintenance	The routine care of sealed pavements to maintain their structural integrity and serviceability.
112	Unsealed Pavement Maintenance	The routine care of unsealed pavements to maintain their structural integrity and serviceability.
113	Routine Drainage Maintenance	The routine care of drainage facilities to maintain their function.
211	Unsealed Road Metalling	The planned periodic renewal of pavement layers, including top surface metal, on unsealed roads.
212	Sealed Road Resurfacing	The planned periodic resurfacing of sealed roads.
213	Drainage Renewals	The like-for-like replacement of drainage facilities that is not routine in nature, but to maintain the desired level of service and reduce future maintenance costs.
214	Sealed Road Pavement Rehabilitation	The replacement of, or restoration of strength to, sealed pavements where other forms of maintenance and renewal are no longer economic.
Local Road Improvement Activity Class		
216	Bridge and Structures Renewals	The like-for-like replacement of bridges and structures that are at the end of their serviceable life.
324	Road Improvements	For: • improvements to or upgrading of existing roads and intersections 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.
325	Seal Extension	The sealing of existing unsealed roads.
341	Low-Cost Low-Risk	The construction/implementation of low-cost, low-risk improvements to a maximum total approved cost per project of $2 million.
357	Resilience Improvement	For non-routine work to increase the resilience of the existing road network (including roads and road structures). This work category also provides for non-routine work to minimise the threat of road closure from natural phenomena.
Walking and Cycling		
124	Cycle Path Maintenance	The operation and maintenance of cycle and shared path facilities, including the operation of associated lighting.

Work Category Code	Work Category Name	Work Category Description
125	Footpath Maintenance	The maintenance of public footpaths and facilities associated with public footpaths, such as pedestrian network connections, including stairs, alleyways and off-road connections.
224	Cycle Path Renewal	The renewal of existing cycle paths and shared path facilities, associated street lighting and traffic management equipment and facilities.
225	Footpath Renewal	The renewal of public footpaths and facilities associated with public footpaths such as pedestrian network connections, including stairs, alleyways and off-road connections.
Safety Activity Class		
432	Safety Promotion, Education, and Advertising	For safety promotion, education and advertising activities that promote the safe use of the land transport network through education, advertising, awareness raising and by public information to users of the transport network. Safety promotion, education and advertising activities have the following objectives: • advance the focus areas, priorities and actions identified in the Road to Zero strategy and its action plans • Road to Zero • achieve safer outcomes by working with communities to identify and address regional and local road safety issues • develop national, regional and local road safety partnerships to ensure an integrated and connected approach to achieving road safety outcomes.

9.2 Management Programme and Background Data

9.2.1 Council's Procurement Strategy

Waimate District Council seeks to procure goods and services to support the community in an affordable and efficient manner. The Waimate Long Term Plan puts a focus on infrastructure renewal, water services improvements, and the local economy.

"It is Council's view that we can deliver and maintain the levels of service and additional demands that you have come to expect within the district – a place we can all be truly proud to call home."
(Mayor Craig Rowley, Waimate District Council - Long Term Plan 2021-31)

The Waimate District Council Procurement Strategy was revised in 2023. The Strategy aligns with Council's Procurement Policy 316, which was adopted in October 2019. The principles and objectives in the policy provide linkages for the strategy to Council's overall objectives and outcomes targeted. The following principles have informed the development of the strategy and will continue to guide its users.

- **Value for money**: selecting the best possible outcome for the total cost of ownership.
- **Transparency**: being open in the administration of funds.
- **Accountability**: ability to provide complete and accurate records of the use of public funds.
- **Fairness**: acting reasonably and impartially to all parties involved in the procurement process.

These objectives align closely with Council's funding partner for transportation, NZTA's objectives:

- Value for money
- Competitive and efficient markets
- Fair competition among suppliers.

In general, Waimate District Council will utilise the guidance provided by the NZTA Procurement Manual Procurement for activities funded through the National Land Transport Programme (NLTP). However, a departure to this is where Council has varied the limit for closed contests (selected tender) to $250,000.

Figure 9.2 - Procurement Policy Procedures

Supplier Selection Process				
Method	**Contract $ Value**			
	$0 to 40,000	**$40,001 to $100,000**	**$100,001 to $250,000**	**Over $250,000**
Direct Appointment	✓	✓	✓	✗
Lowest Price Conforming Tender	✓	✓	✓	✓
Purchaser Nominated Price (Professional Services only)	✓	✓	✓	✓
Price Quality (e.g. Weighted Attributes)	✗	✓	✓	✓

KEY	✓ Most Appropriate	✓ Appropriate	✓ Less Appropriate	✗ Generally Not Appropriate

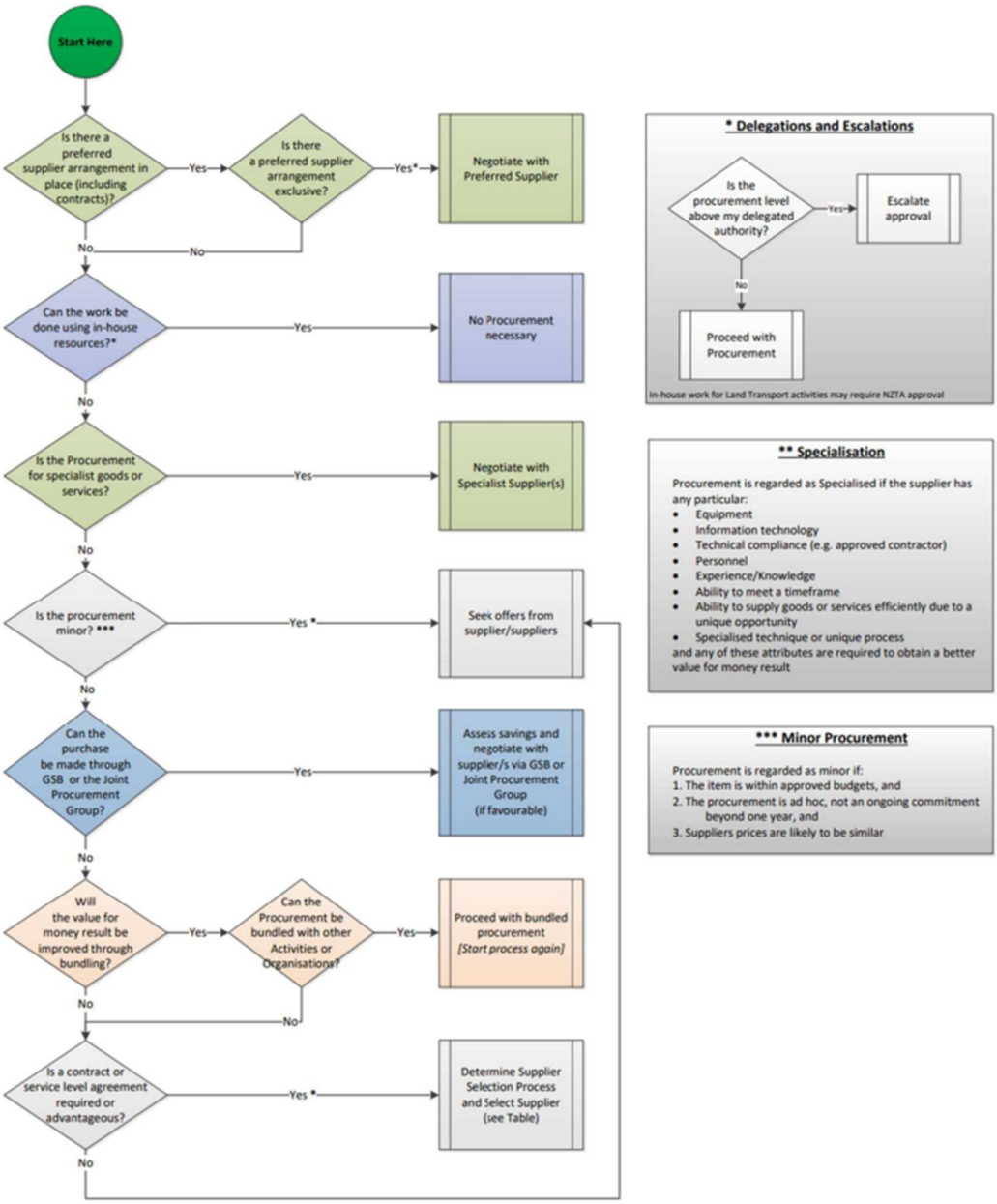
NZTA Rule 10.9 (modified)	Direct Appointment		
	Closed Contest		
	Open Contest		

Direct appointment between $100,000 and $250,000 shall only be where there is a demonstrated case that Procurement Manual, Section 10.9 Direct Appointment and Closed Contest of low dollar value contracts, or Section 10.10 Direct Appointment of a Monopoly Supplier, or Section 10.11 Direct Appointment where Competition will not help obtain best value for money are fulfilled.

Within this approach Council will consider the most appropriate bundling of work for maintenance and capital/construction (renewal and improvement) in terms of Council's objectives and the market's ability, capacity, and competitiveness. While retaining scope for in-house teams and small local suppliers along with the benefits to the local economy they can provide, Council also has a responsibility to recognise the efficiencies and benefits derived from larger and longer term maintenance and capital/construction contracts. Competitive tendering where price and quality are evaluated will be used to select suppliers for road maintenance and capital projects.

In some cases, direct appointment may be the most effective approach, and this will be considered in terms of specialisation, market competitiveness, and the overall cost and efficiency to Council.

Figure 9.3 - Procurement Flow Chart



9.2.2 Method of Service Delivery

Council staff manage the road network with some assistance from consultants. The road operations and maintenance on the network is completed through a competitively tendered multi-year contract. Other works such as resealing and large renewal projects are let as competitively priced contractors on an annual basis. The current contracts let are included in Table 9.2.

Table 9.2 - Roading Physical Works Contracts

Activity	Delivery Model	Competition Process	Supplier Selection	Next Tender Date	Contract Term	Current Supplier	Annual Value (Approx.)
Road Network Operations and Maintenance	Outsourced term contract *Collaboratively with Timaru District.*	Open	Price Quality Method with conditional combination tenders	July 2026	5 years (7 years if extension approved by WDC and NZTA)	Rooney Earthmoving Ltd	$3.1 Million
Reseal	Outsourced term contract Joint contract with TDC Ended June 2024	Open	Price Quality Method	October 2024 Tender WDC only	2 Years Extended to 3 years	Fulton Hogan	$1.2 Million
Street Light Maintenance	Outsourced term contract	Negotiation	Direct appointment	Annually		Netcon Limited	$2,000
Street Light Power	Via All of Government Contract					Genesis	$15,000
Footpath Construction and Resealing*	Delivered under the "Road Network Operations and Maintenance Contract"					Rooney Earthmoving Ltd	N/A
Pavement overlay and rehabilitation	Delivered under the "Road Network Operations and Maintenance Contract"					Rooney Earthmoving Ltd	N/A
Bridge Maintenance*	Delivered under the "Road Network Operations and Maintenance Contract" and specialist contractors.					Rooney Earthmoving Ltd	N/A
Street Cleaning	Outsourced term contract	Negotiation	Direct appointment	July 2025	5 Years	Trevor Joyce Property Maintenance	$75,000
Other Minor Maintenance Contract	Kerb and Channel Replacement – Various delivery models and suppliers (Project based)						$100,000
	Bridge Renewals and Component Replacement -Various delivery models and suppliers (Project based)						$150,000
Capital Works	Various delivery models (Project based)						

* With options to direct appoint.

There are several other outputs that are carried out on the roading network each year that are not listed above. They are outputs that have a variable quantum each year but still form an essential part of the maintenance regime. They are outputs such as river control works at bridges and seal extensions.

9.2.2.1 Roading Network Operations and Maintenance Contract

There was extensive collaboration between Timaru District Council and Waimate District Council staff on development of this collaborative contract. This included a re-development of the Management Specification and revision of the Technical Specification for the contract. The Councils went to market with similar documentation and going forward it will mean we have a similar framework being applied to the management and supervision of our road maintenance contracts.

This contract was awarded to Rooney Earthmoving Ltd. In year five of the contract term, Council will assess the performance of the contract and if favoured have discussion of potential extension for a two-year period.

9.2.2.2 Collaborative Contract for Road Resurfacing

Four collaborative contracts for the road resurfacing in the Waimate, Timaru, and Mackenzie Districts has been awarded, Downer NZ Ltd. (Dunedin) for a two-year period 2015-17, Fulton Hogan Ltd for two-year period 2019-21, and 2019-21, and Fulton Hogan Ltd for two-year period 2021-24 (Timaru and Waimate District).

Timaru District Council have tendered their resealing independently for 2024-25 year, and Waimate District Council Road Resealing Contract is currently in the tender process, and closes on 4th November 2024.

The result of the collaboration between ARC Councils has provided a range of benefits. To continue to access these benefits Council is working towards having common contract documentation with Mackenzie and Timaru District Councils.

9.2.3 Forward Works Programmes (FWPs)

Information obtained from network inspections, RAMM condition rating, RAMM roughness surveys, pavement strength surveys using Multi-Speed Deflectometer (MSD), and maintenance inputs are used to develop Forward Works Programmes for the pavement asset. Specific details of individual component FWPs is as follows:

Reseals – Intervention is primarily based on age, condition, and maintenance history. RAMM data is used to develop an inspection list, which is then used as the basis for a detailed inspection once a year of aged seals. A detailed rolling three-year programme has been developed for Years 1, 2, and 3. Future work requirements beyond this period are based on historical needs.

Pavement rehabilitation and reseals - Use of MSD survey data provides additional recommendations of road sections, which exhibit levels of pavement strengths below set trigger levels for the Structural Pavement Number (SNP). These are then validated in the field to support the development of the rolling three-year work programme and future works sealed pavement renewal and reconstruction requirements (see Section 9.6 and Section 9.7).

Unsealed Road Metalling – This is generally treated as a maintenance operation. The FWP is based on historical quantities and inspection, which have used set spread rates. Extending the use of MSD survey to identify higher-use unsealed roads where the pavement strength may be impacting on surface condition and renewal need is currently being investigated (see Section 9.8).

Bridges – A Bridge Replacement and Upgrade Strategy has been developed. The priority of this work is indicated in Table 9.28.

Drainage Assets – Council has assessed condition of all accessible culverts on the roading network verifying infrastructure data and estimating construction dates and condition of culvert itself. This information is being used to form a replacement programme. Other asset groups do not have formal FWPs recorded for use in programming future works.

9.2.4 Asset Valuation

Asset valuation is undertaken every three years in order to assess the value of the road network, the depreciated value, and the annual depreciation. Details on Asset Valuation and Depreciation are held in Section 10.2.

9.2.5 Historical Data

9.2.5.1 Network Condition

Historical data is used to make an assessment on past performance and to see if future trends can be applied. At a network level, these trends can indicate if the condition of the network is deteriorating or improving. The different forms of historical data and their location are outlined in Table 9.3.

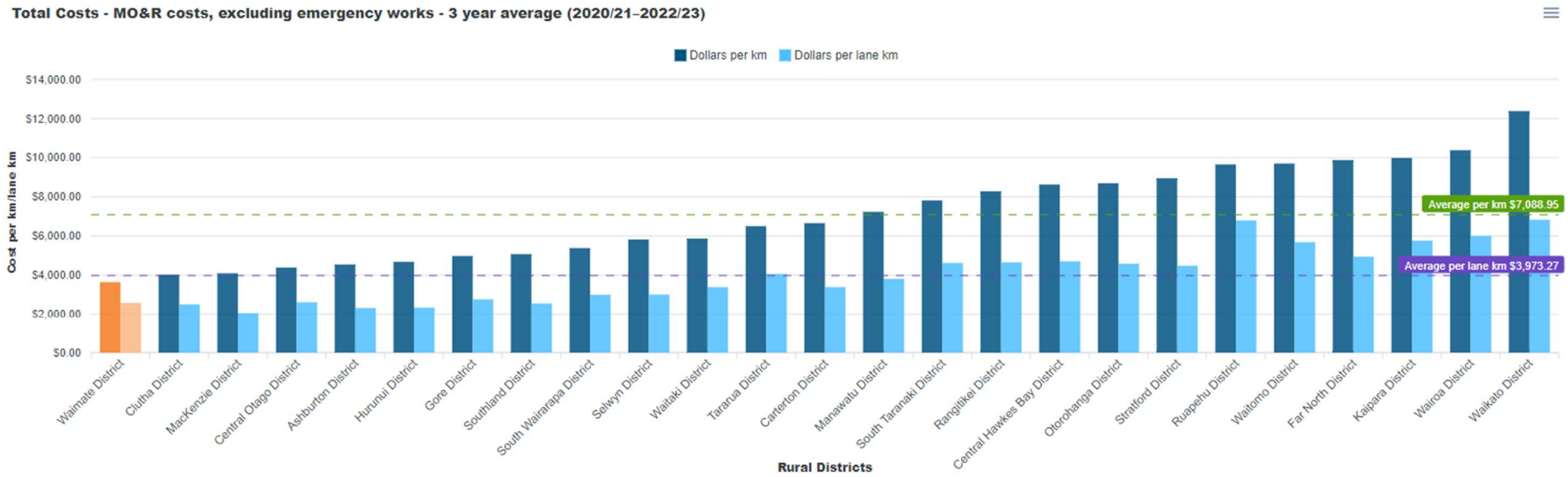
Table 9.3 - Assets Historical Data

Data Type	System Location	Description
Roughness	RAMM	Survey every 2 year from 1990
Sealed Rating Data	RAMM	Visual condition rating
Carriageway Surface Data	RAMM	Holds surfacing history for all roads
Maintenance Costs and Quantities	Roading Office	1995 to 2021
Maintenance Costs and Quantities	RAMM	From July 2012 to present
As-Built Drawings	Roading Office	Road projects and bridge plans
Pavement Strength	RAMM	Holds pavement history for all roads
Pavement Strength	Geosolve Pavestate	2022 MSD survey records underlying pavement strength data for 96% of sealed roads, and 28% of unsealed roads

Historic expenditure summaries have been produced by NZTA via the Transport Investment Online (TIO) platform. The most useful comparisons are made with other areas or authorities with similar characteristics, rather than with the whole country.

The data for Council is compared with a peer group of similar Council authorities. Other data can be obtained from NZTA's Te Ringa Maimoa – Transport Insights Platform. An example of that is Total Maintenance, Operations and Renewal Costs 3 year average, Figure 9.4. As shown, Waimate District Council had the lowest Cost per km of $3,638 compared to our peer group, Rural Districts.

Figure 9.4 - Total Maintenance, Operations and Renewal Costs 3 year average Rural Districts



9.3 Road Safety

Safety Activity Class	*WC432: Safety Promotion, Education, and Advertising*

Council's involvement in Road Safety and the national Road to Zero programme involves:

- Ongoing maintenance of the road network in appropriate condition
- Small improvement projects (NZTA WC341: Low Cost Low Risk Improvements)
- Road Safety Promotion and Education programme, combined with Timaru and Mackenzie District Councils. (WC432: Safety Promotion, Education, and Advertising)

Council also meets and coordinate operations with other Councils, agencies, and the private sectors where appropriate (e.g. NZTA, NZ Police, Mid-South Canterbury Road Safety Liaising Group, MoT, AA, and ACC) to improve road safety outcomes.

In the past five financial years (2018/19 – 2022/23), on the State Highway, there were 11 fatal, 31 serious Injury, and 121 minor injury crashes. On the local roads, there were 7 fatal, 51 serious Injury, and 66 minor injury crashes.

For the past ten financial years (2013/14 – 2022/23), on the local roads, the main contributor to fatal crashes were. 8 Lost Control, 4 Alcohol or Drugs, 3 Inappropriate speed, 2 Position on road, and 1 Inexperience. For all types of crashes (including non-injury crashes) over the past ten financial years (2013/14 – 2022/23) on local roads, the top five contributing factors are: Alcohol or Drugs (81), Lost Control (53), Position on road (42), Inappropriate speed (41), and Diverted Attention (20).

For the past ten financial years (2013/14 – 2022/23), on the local roads, the top give main contributing factor for all crash severity were: Lost of Control (at Bend) (236), Lost of Control (Straight Road) (109), At crossing not turning (52), Head on Crashes (48), and Obstruction (39).

Figure 9.5 - Crash Types Local Road of Waimate District for the Last Five Years (Death and Serious Injury Crashes Only, As at July 2023)

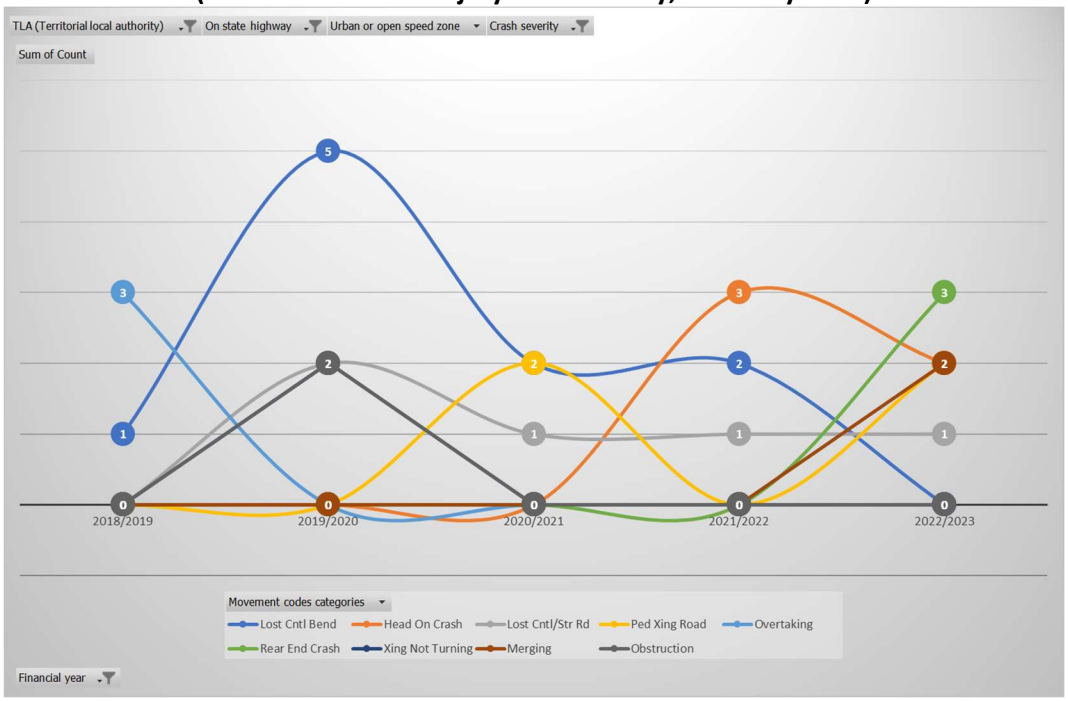


Figure 9.6 - Crash Types in the Rural Local Road of Waimate District for the Last Five Years (Death and Serious Injury Crashes Only, As at July 2023)

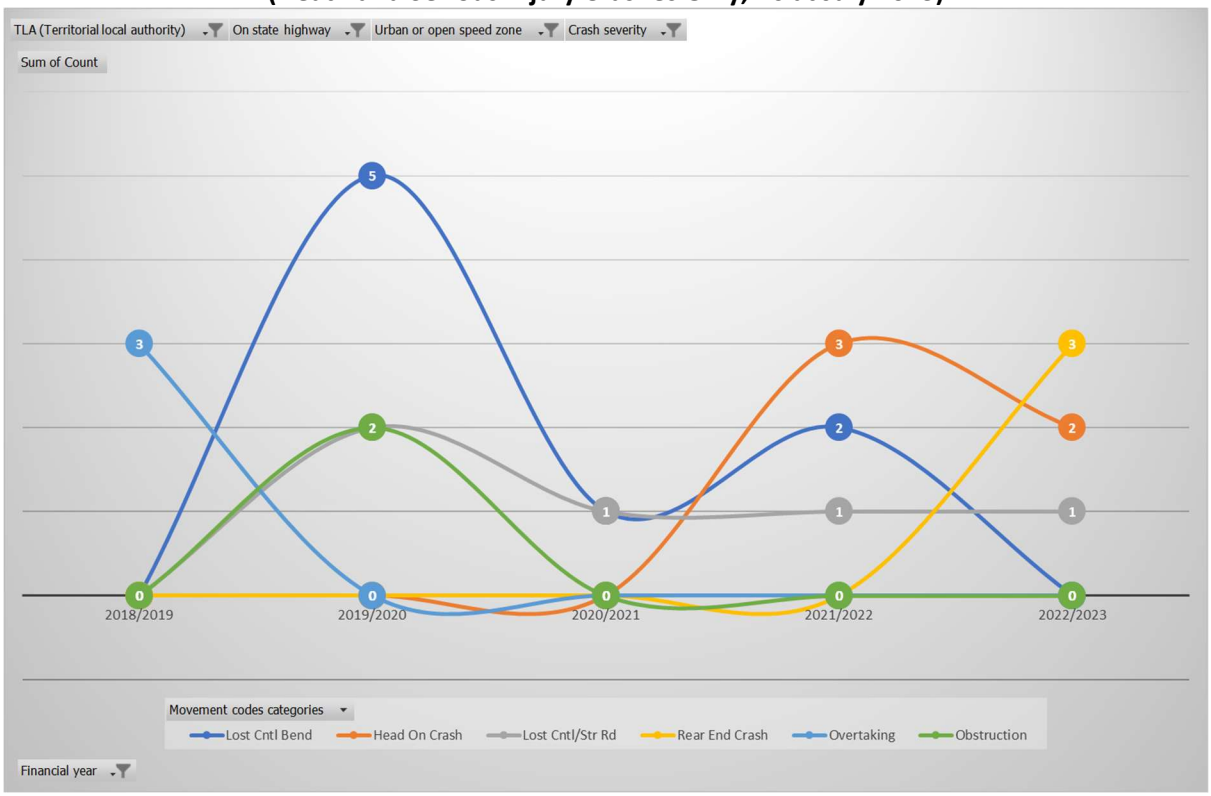


Figure 9.7 - Crash Types in the Urban Local Road of Waimate District for the Last Five Years (Death and Serious Injury Crashes Only, As at July 2023).

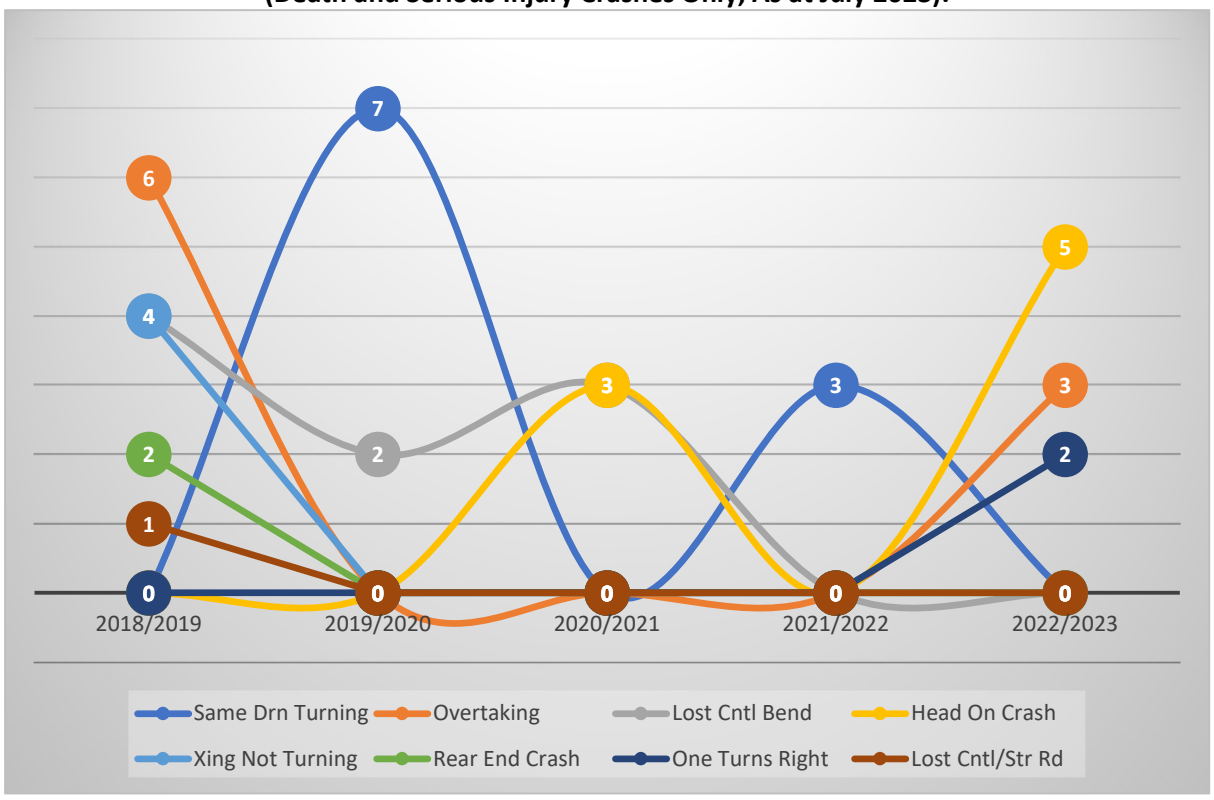
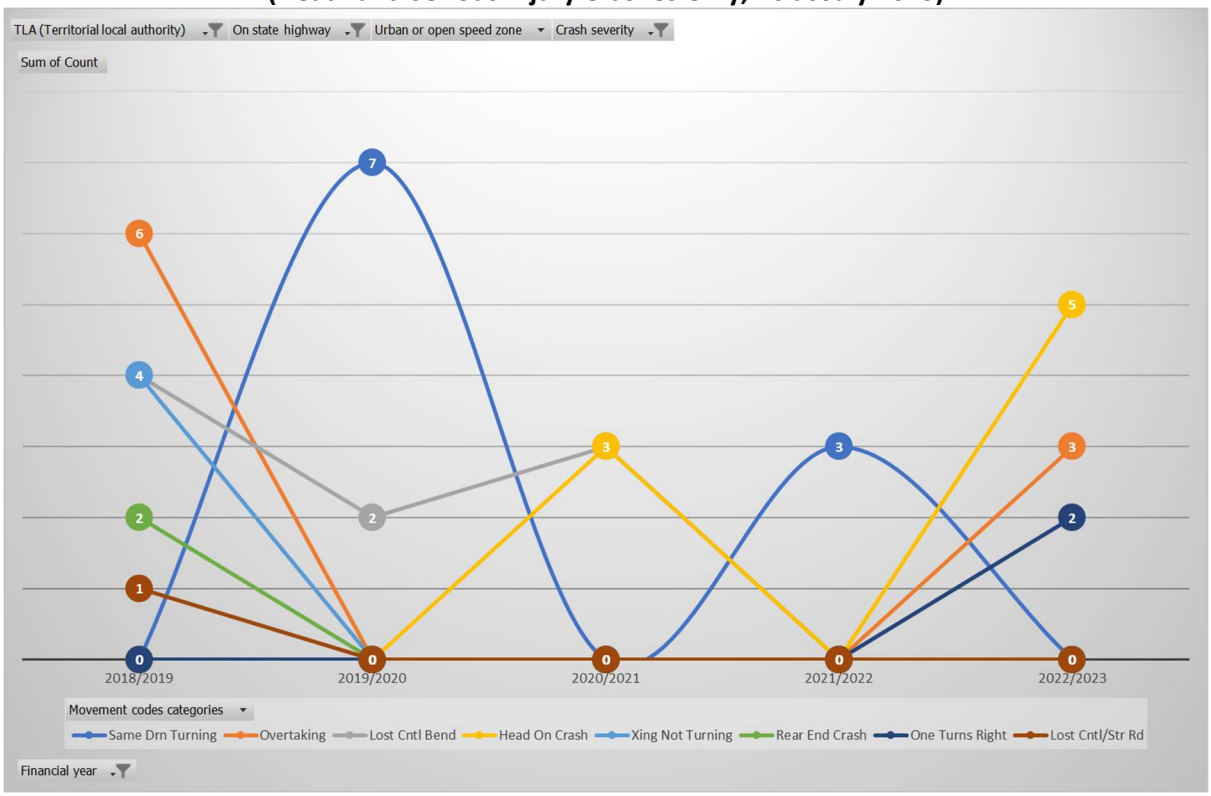


Figure 9.8 - Crash Types in the Whole State Highway of Waimate District for the Last Five Years (Death and Serious Injury Crashes Only, As at July 2023)



9.4 Operations and Maintenance Plan

9.4.1 In Perpetuity Maintenance

The Maintenance and Operations Plan sets the level of work that needs to be carried out for "in perpetuity" maintenance. "In perpetuity" maintenance is defined as maintenance, which is of such a nature that it does not allow the physical deterioration of the road, hence the condition of the road is maintained. It does not consider changes in service requirements (e.g. increase or decrease in traffic, enhanced safety standards, consent requirements, changes in legislative requirement and standards, etc.). These other factors may require capital/construction works to create a higher service level asset. In effect, "in perpetuity" maintenance incorporates incremental and sustained asset renewal into the maintenance function and therefore will indefinitely provide the current levels of service.

Yearly, the monetary value of work carried out will be affected by the following:

- Actual contract prices received for the work specified.
- The scheduled length of resealing for the next year. As Council's proactive maintenance strategy is to attend to all pavement maintenance in reseal sites the year prior.
- The effect of deferred resurfacing work from previous years, therefore deferred maintenance
- Inflation (Cost escalations).

Therefore, each year the expenditure for the same volume of work may differ. An annual reconciliation of physical work done against the in perpetuity level of work will indicate either deferred maintenance is being accrued, or improvements are being made to the network. The cost of t The level of maintenance described in the Operations and Maintenance Plan is adequate for normal climatic events

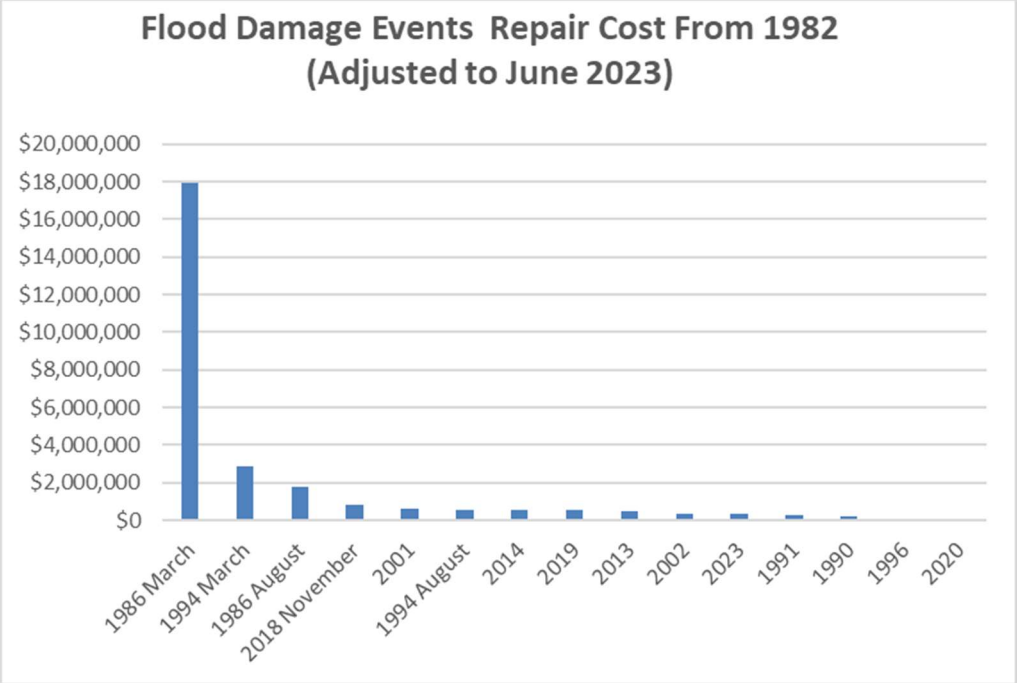
in Waimate District. The remedial works required after emergency events will be assessed at the time. Council does not have an adverse event fund.

The recent changes to NZTA's emergency work funding policy will have several impacts on council.

- Increased Financial Pressure: The new policy raises the threshold for qualifying weather events from a one-in-10-year event to a one-in-20-year event. This means council may face increased financial responsibility for more frequent, less severe events.
- Potential Service Reductions: Councils, , may struggle to maintain current levels of service. This could lead to longer-term or permanent road closures and loss of access, which can have negative social and economic consequences.
- Enhanced Funding Assistance Rates (FARs): While the policy includes adjustments to FARs to provide greater financial support during significant events, smaller and more frequent events may not qualify, potentially leaving councils to cover more cost.
- Focus on Resilience: The emphasis on resilience and adaptation encourages councils to invest in more robust infrastructure. This proactive approach can help mitigate the impact of future emergencies, although it may require upfront investment. These variations can then be determined and used in Council's balance sheet.

9.4.2 Storms and Other Events

Figure 9.9 - Flood Damage Events Repair Cost from 1982 (Adjusted to June 2023)



9.5 Renewal / Replacement Plan

Renewal expenditure is major work that does not increase the assets design capacity but restores, rehabilitates, or renews an existing asset to its original capacity. The activity and NZTA Work Category requirements included in this Renewal/Replacement Plan are as shown in Table 9.1.

Renewals may be impacted by other stakeholders wanting to utilise the roading corridor, particularly Council water and wastewater assets and other utilities buried in road reserve. The Roading Group

need to collaborate with other stakeholders to ensure that the timing of all works is optimum and presents the lowest cost option to ratepayers.

9.5.1 Base Asset Lives

As outlined in Section 4, better optimisation of the asset lifecycle can be achieved by improving knowledge of the current age and remaining life of all assets. As this is currently not well understood, the base asset lives used in the 30 June 2022 Road Asset Valuation detailed in Table 9.4 have been used throughout the Renewal/Replacement Plan.

Table 9.4 - Asset Base Life (Extracted from Roading Imfrastucture Valuation (30 June 2022)

Asset	Base Life (Years)	Comment on Actual Asset Life
Unsealed Pavement	35	Highly trafficked roads may have significantly lower life
Basecourse	100	Review due to increased traffic loading
Pavement Subbase	100	
First Coat Seals	5	Dependent on seal type
Second Coat Seals / Reseals	12-18	Dependent on seal type
Bridges	70-100	Dependent on bridge structure type
Large Culvert Bridges	100	Some existing steel Armco culverts are 50 year old and in good condition
Concrete Fords	40	
Drainage (steel, concrete culverts)	20-100	Helcor steel pipes have significantly lower life
Surface Water Channels	50-100	Depending on SWC type
Footpaths	25-50	Dependent on surfacing type
Signs (including posts)	14-30	Many will achieve less life due to damage out of Council's control
Street Lighting (including brackets, lights, poles)	25-50	
Traffic Facilities	15-50	Edge Marker Posts will probably achieve less life due to damage out of Council's control.

9.6 Sealed Roads

Local Road Pothole Prevention Activity Class *WC111: Sealed Pavement Maintenance*

9.6.1 Current Trends and Issues

9.6.1.1 Scope and Nature of Asset

The purpose of a sealed road is:

To provide a paved network suitable for the efficient movement of vehicles and people, with an all-weather surface appropriate to its location and function in terms of skid resistance, noise reduction and smoothness, and that has a structure suitable for legal traffic loading requirements.

Only 651km or 49.1% of the Districts roads are sealed – 49.1km of urban roads and 601.9km of rural roads.

The key issues relating to the sealed pavements are:

- Setting Levels of Service that align financial restrictions with road user expectation.
- Optimising the use of limited funds to maintain the condition of the asset.
- Deterioration of sealed pavements due to use by Agricultural industry including machines on road, stock on road, and others.
- Pavements constructed within potential flood-prone areas, or on sections of roads where draining water away from the pavement layers is less effective.
- Ageing pavements.

9.6.1.2 Current Condition

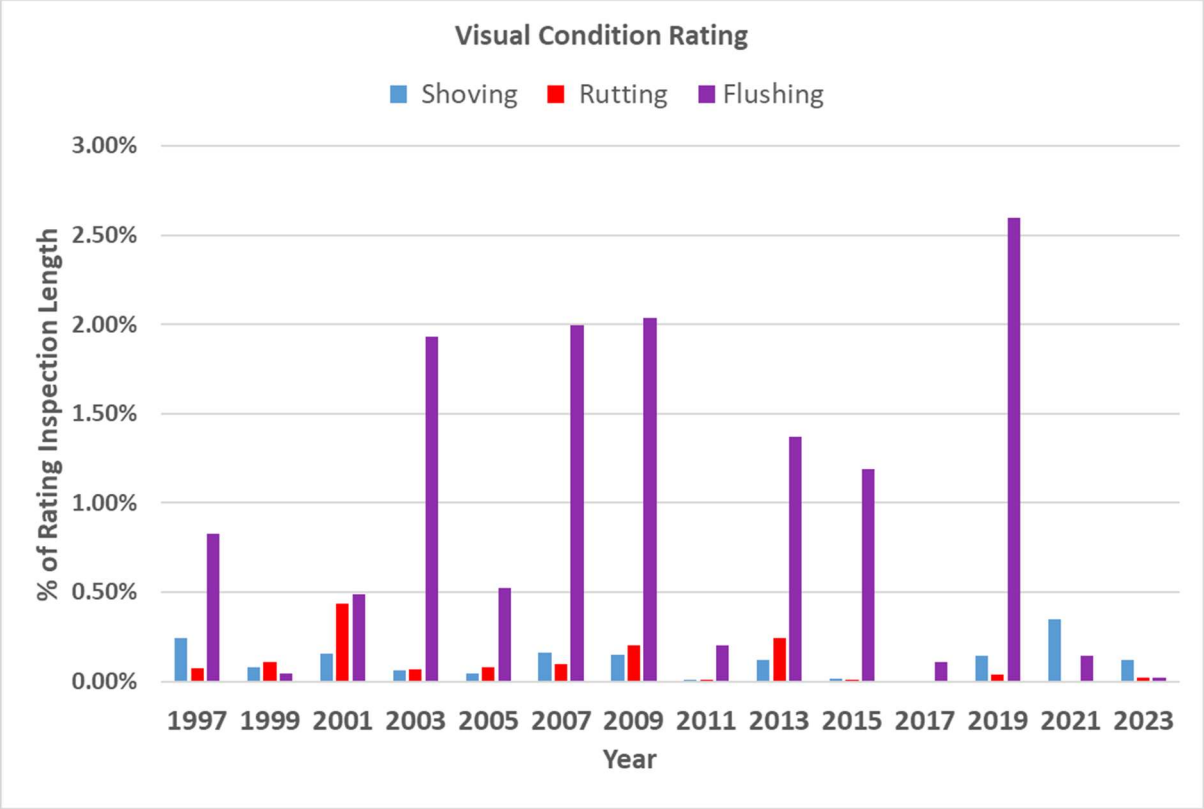
9.6.1.2.1 Sealed Road Surface Condition

Many of the District's roads evolved from tracks to unsealed roads that were constructed to absolute minimum standards in terms of pavement strength, width, and drainage facilities. As traffic volumes increases, individual roads were widened, extra metal added as considered appropriate and then sealed. Construction consisted of river run gravel subbase under a thin layer of crushed aggregate basecourse with a single coat chip seal surface. The metal courses were often laid over silty clay subgrade of unknown bearing capacity with little or no consideration given to whole of life strength requirements needed to satisfactorily carry the expected traffic loads over the roads expected life. It has only been since the 1970's that pavements have been designed to carry expected traffic loading over a projected 25-year design life. The condition of this sealed road network is currently monitored by:

- Regular routine inspections by Council and contractor personnel with any defects found included in the proposed programme of works to be undertaken by the maintenance contractor. The number and location of defects are logged to provide a measure of conformance with key performance measures required within the contract.
- A formal bi-annual road condition rating survey. The information from this survey is recorded in RAMM and used to:
    - Assist with the development of a forward reseal and reconstruction work programme.
    - Provide surface and pavement condition data for the "Treatment Selection Algorithm" in RAMM
    - Calculate surface condition indices that provide a measure of the performance of the sealed surface.

- Bi-annual roughness surveys of the sealed network to ascertain the current condition and provide a measure of performance against the required levels of service.
- Annual maintenance costs per kilometre for work types are calculated from the costs recorded within the maintenance contract and the trends used to establish relative network surface condition.
- The safety of the network is gauged by recording accident information, analysing accident trends and the statistical data produced by the South Canterbury Road Safety Coordinator.

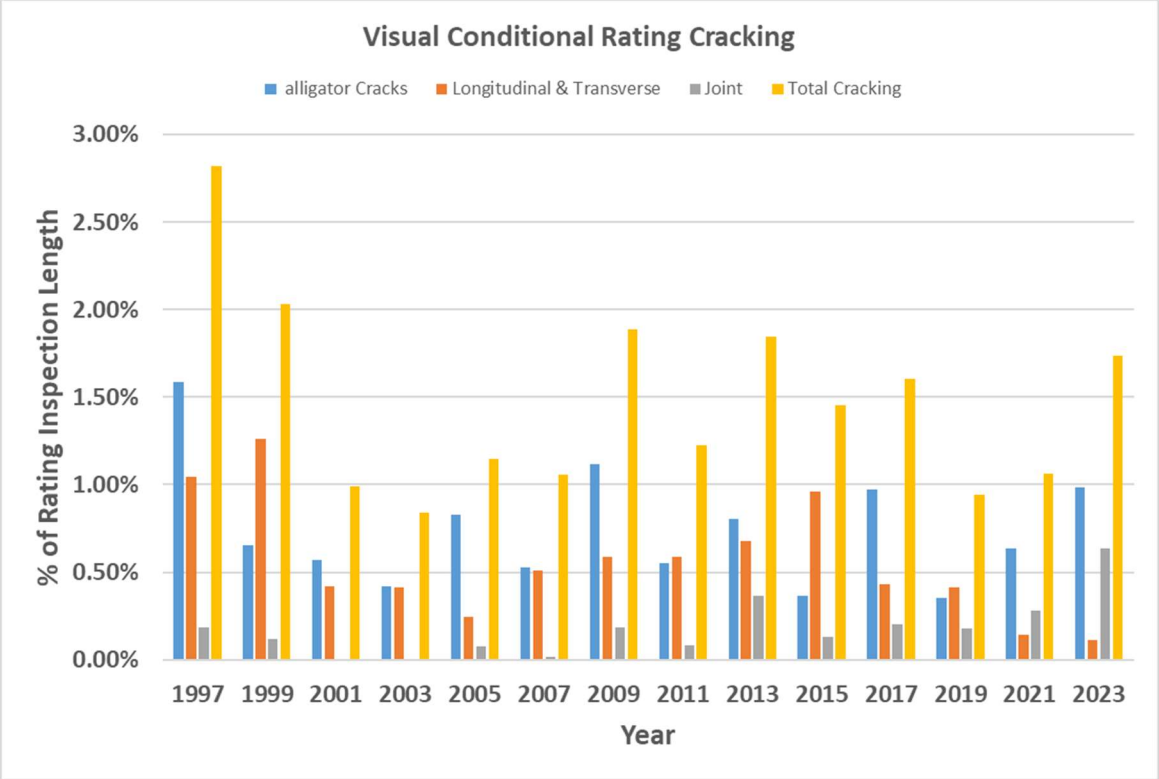
Figure 9.10 - Visual Condition Rating Data for Sealed Roads



The observed overall trend for the last years are:

- The rates per kilometre for shoving has increased in 2021, and flushing has increased more prominent in 2019, compared to the previous 4 rating years.
- Compared to 2017, results show that in general the road condition has improved. There were increases in average rates per kilometre in five out of the eleven fault types with flushing having the most significant increase.

Figure 9.11 - Visual Condition Rating - Cracking Data



Reviewing individual faults:

- Alligator cracking showed a large improvement in 2019, only to have increased to 2017 levels again in 2023. Alligator cracking is generally load related and often results from insufficient road strength. The reduction in alligator cracking may be due to resurfacing and rehabilitation works being completed, and/or efficient maintenance programming. Alligator cracking is the primary driver for surface renewal in the NZ IDS dTIMS template.
- Longitudinal and transverse cracking improved by quite a bit since 2015, which is in contrast to the historic steady increase from 2011 to 2015. Transverse cracking is typically due to thermal factors or reflection of older cracks. These types of faults may not be load related.
- Joint cracking has increased over there years since 2015. These faults are often caused by poor service trench reinstatement or poor construction.
- Flushing increased significantly since 2017. Some of the contributing factors to flushing are aggregate abrasion and breakdown, compaction and reorientation of the seal layer under traffic, binder to stone ratio affecting layer instability, and water venting and sub-surface stripping in seal layers. Other factors include thermal expansion of bitumen, excess bitumen application and binder viscosity.
- Scabbing increased in 2019. This fault may occur if there is not enough binder, or if the binder does not adhere to the chip due to poor material or construction practices. Chip loss can also occur on older surfacing when the binder oxidises or becomes hard and loses its grip on the chips.

Figure 9.11 shows the Alligator, Longitudinal and Transverse (L&T), and Joint cracking separately and combined. Some cracking that starts out as L&T can later turn into alligator type cracks. Looking at the total cracking, the quantities have decreased in the last few years and has increased in 2023.

Figure 9.12 - Visual Condition Rating – Shoving, Rutting Alligator, and Flushing Data

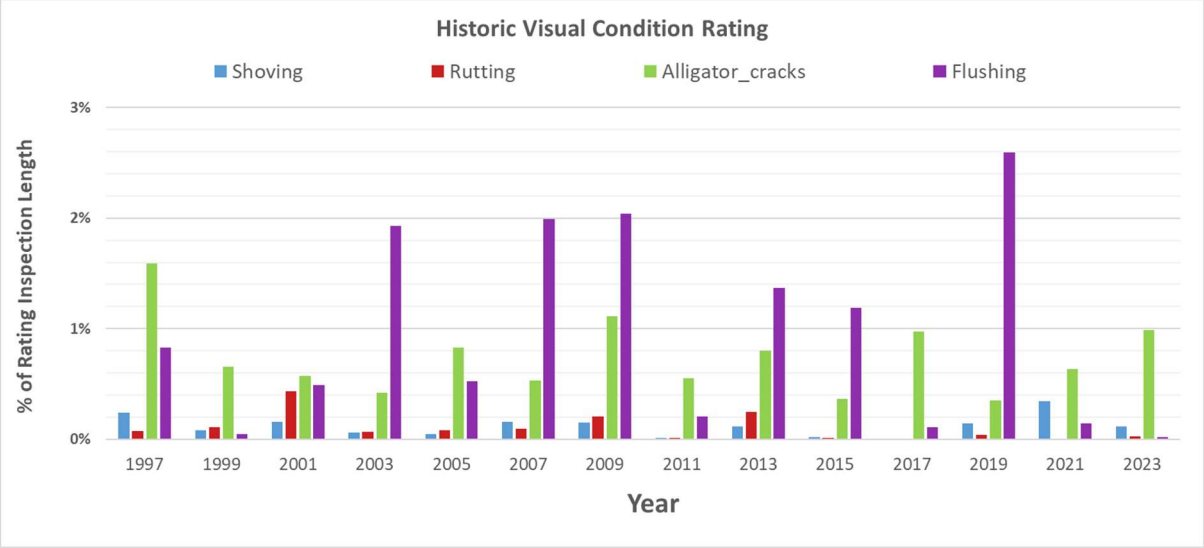


Figure 9.12 shows that rutting on the network appears to be minimal, with the 2013 survey showing an exception. Shoving is another measure of pavement failure that can sometimes be mistaken for rutting. Where shoving is recorded, there were no other faults identified. Shoving was relatively high in 2021 as compared to all the other surveyed years and numbers decreased in 2023.

Figure 9.13 - Road Roughness Distribution by Length

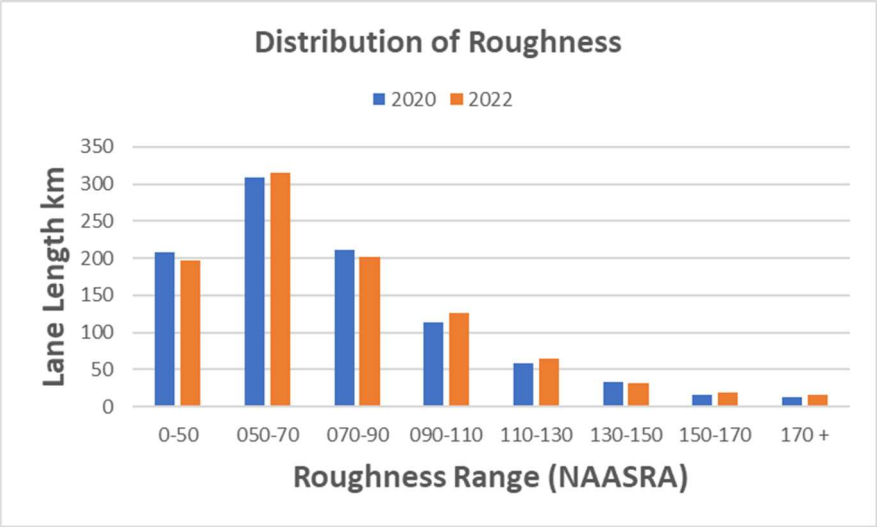
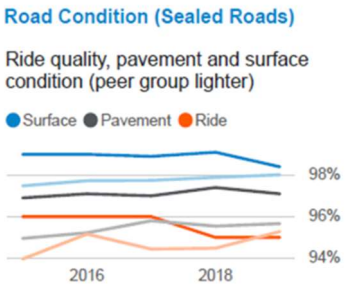


Figure 9.13 displays the distribution of roughness across the road network for two different surveyed years. The network generally shows low roughness, with 50% of the length having a NAASRA index of less than 70. This advises that the roads in Waimate District is relatively smooth.

Figure 9.14 - Sealed Road Condition Against Peer Group



9.6.1.2.2 Sealed Road Basecourse and Sub-base Condition

In 2017, Council undertook a Falling Weight Deflectometer (FWD) survey across key rotes to ascertain the pavement strength and identify where there may be pavement risk should there be a change in demand or ground conditions. This survey methodology was replaced by a Multi-Speed Deflectometer (MSD) survey, completed in 2022, across 97% of the sealed road network. Analysis carried out by Waimate District Council has confirmed that the previous FWD and current MSD surveys produce comparable results. The MSD data is now used to report the Structural Pavement Number (SNP) for road sections on the network, and areas where stronger pavements may be needed (such as rehabilitation) or where attention should be given towards drainage provision.

Table 9.15 -Categorisation of Pavement Strength Rating

Recommended Maintenance Approach	SNP	Description of Performance
Strong sections.	>4.5	Strong pavement, likely to perform as per the design, only apply routine maintenance to be considered only when needed.
Business as usual (BAU) maintenance application	3.5-4.5	The pavement has sufficient strength. Apply resurfacing as an asset preservation strategy when required.
Prioritise resurface	2.5-3.5	Pavement is at risk of failure with increased loading, irrespective of displaying current failures.
Rehabilitation	<2.5	Pavement is at high risk for failure and resurfacing may be sub-optimal

Pavements experiencing higher heavy vehicle traffic loading, pavements constructed within potential flood-prone areas, or on sections of roads where draining water away from the pavement layers is less effective, are considered to be at greater risk of surface conditions deteriorating, and some of the work undertaken following the 2022 MSD surveys include identification of road sections where prioritised forward works in-line with Waimate's current maintenance and renewals strategy (Section 9.5.3) are recommended for inclusion in the programmes developed for the 2024-2027 period.

The following graphs illustrate the SNP of the roads surveyed and the lifecycle strategy that will involve protecting vulnerable routes and rehabilitating those where the SNP indicates that the existing maintenance strategy, or priorised resurfacing, will not maintain the required level of service.

The distribution of SNP reflects all the survey measurement points (i.e. not aggregated data). It shows that approximately two-thirds of the road network is of adequate strength, which is expected for a network of this nature and geographical location.

Figure 9.15 - Pavement Strength – Sealed Roads SNP Distribution (2022)

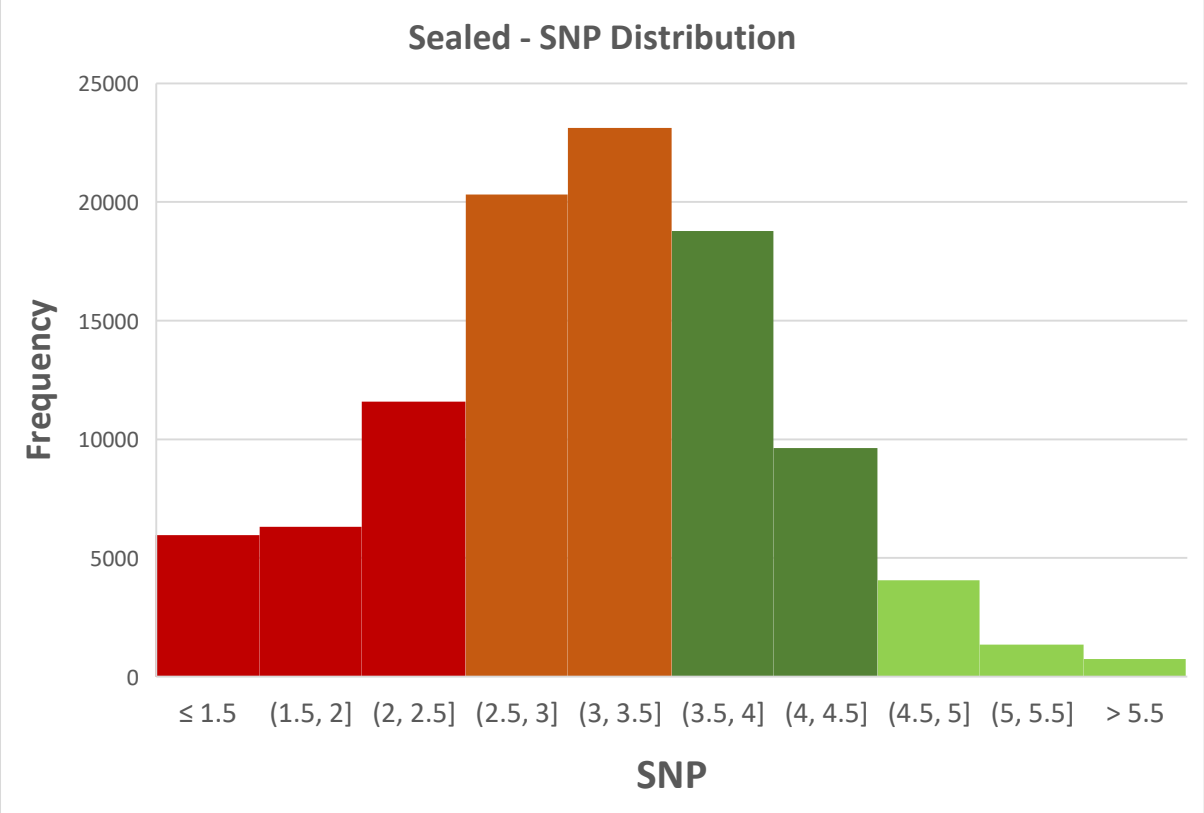


Figure 9.16 - Pavement Strength – Composite of all Sealed Roads Surveyed and Recommended Maintenance Approach from MSD Tests (2022)

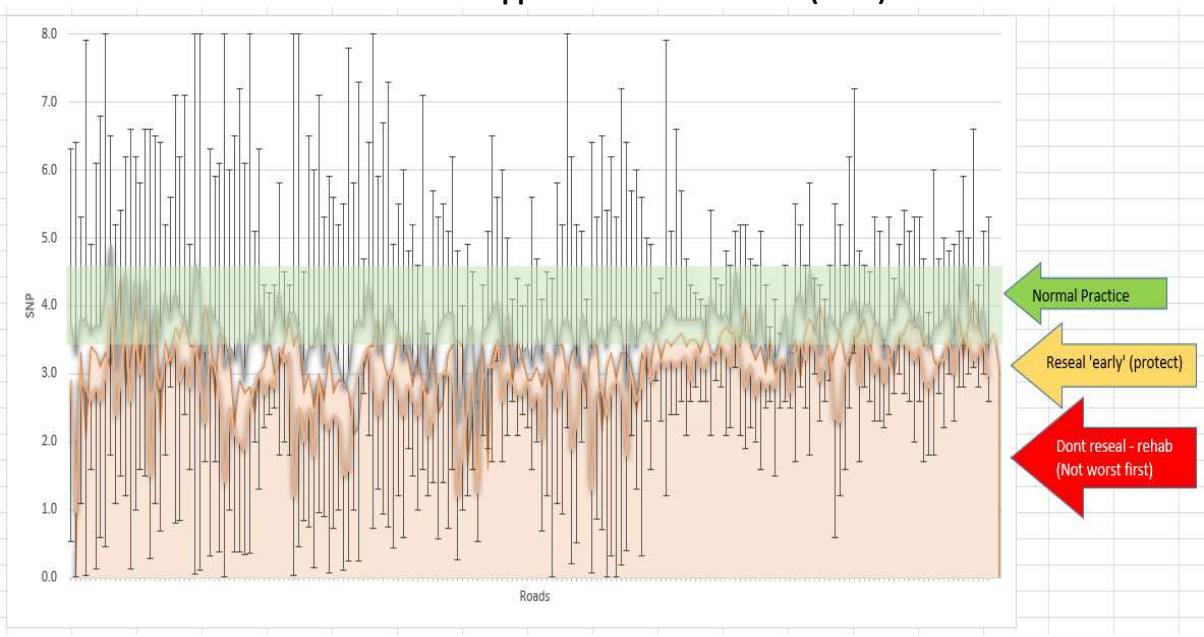


Figure 9.17 - Profile of Structural Pavement Number for roads with Reseal Prioritised from MSD Tests (2022)

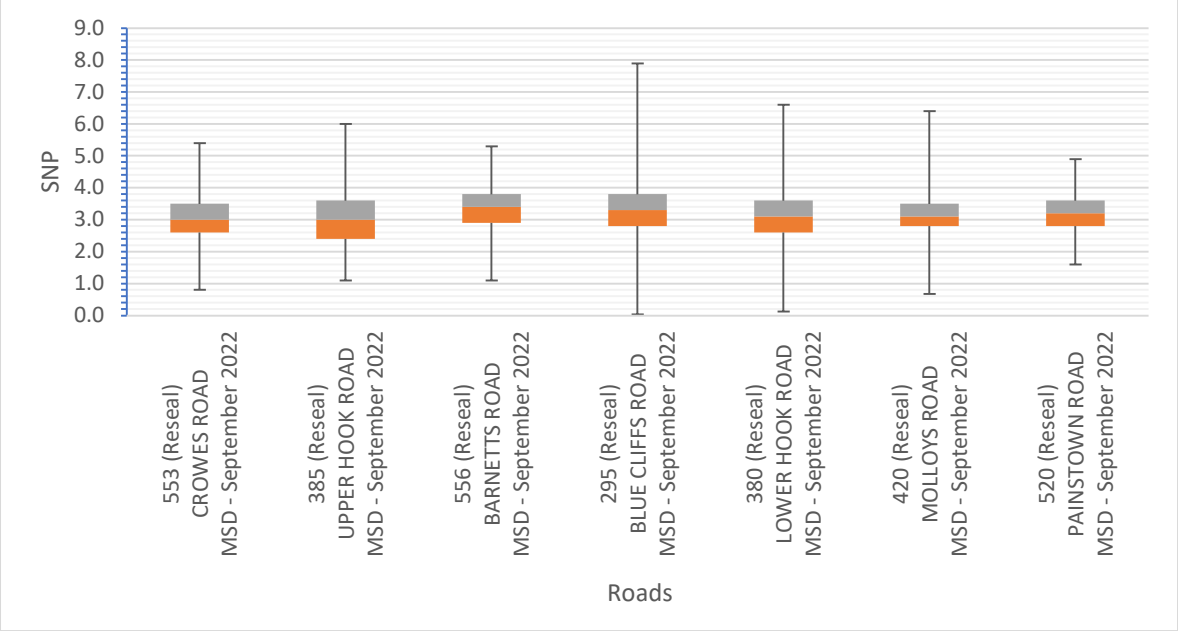
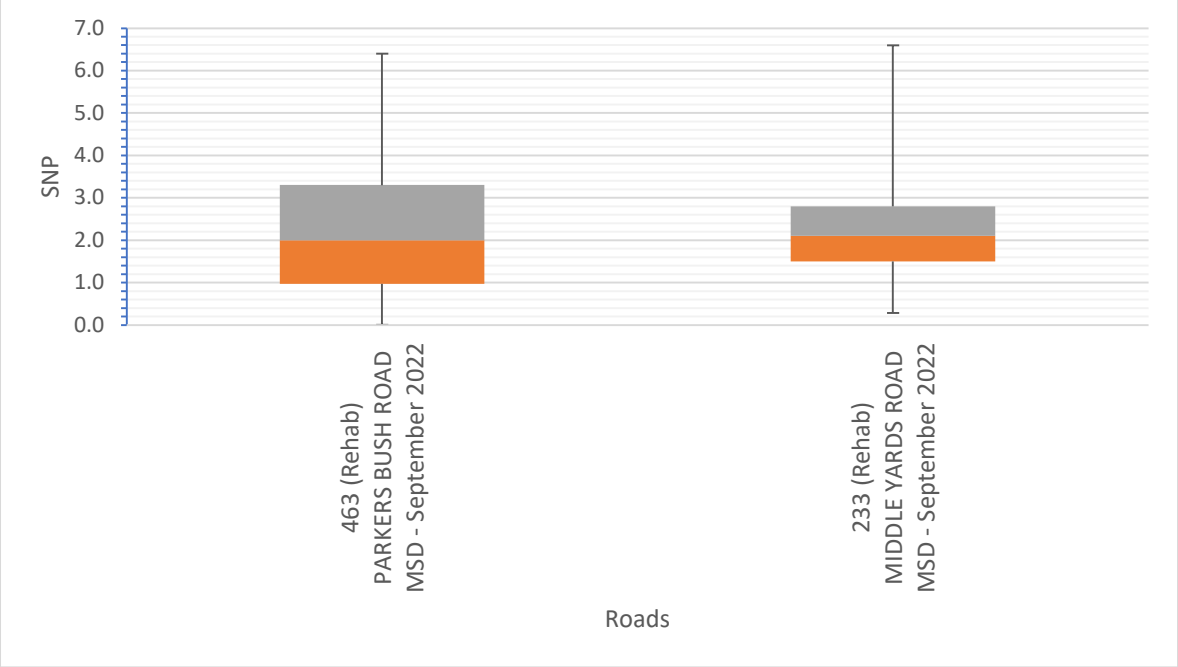


Figure 9.18 - Profile of Structural Pavement Number for roads with Rehabilitation Need from MSD Tests (2022)



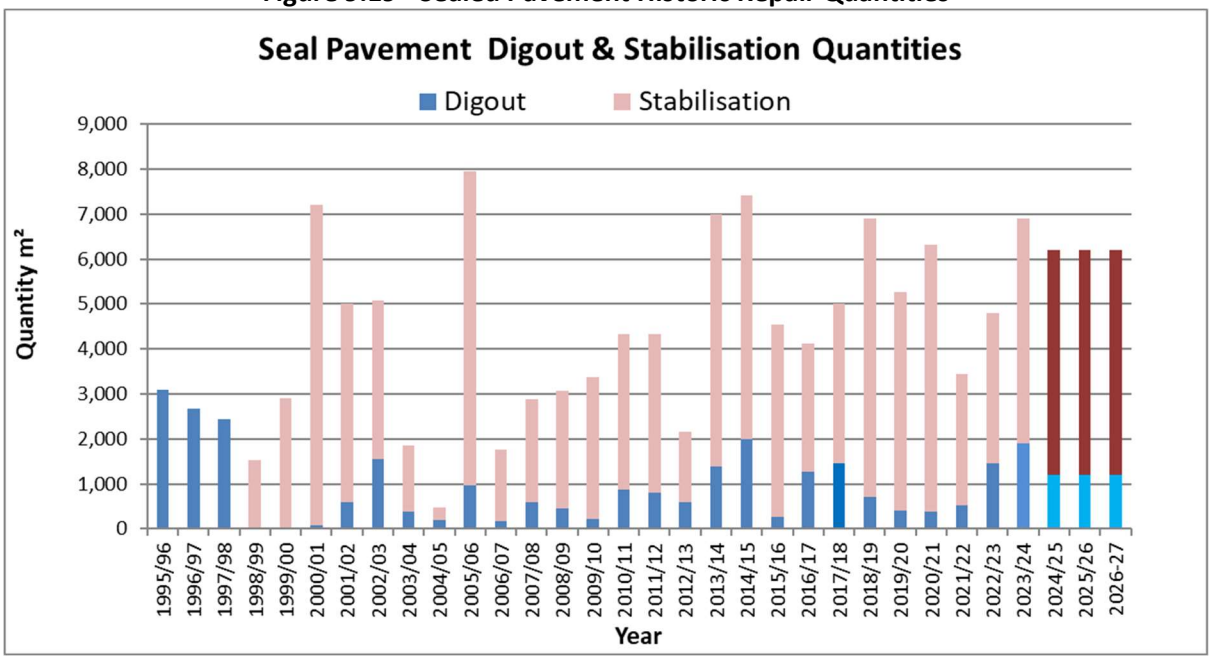
9.6.1.3 Current Capacity and Performance

The assets' capacity and performance are a measure of its ability to meet its design standard, agreed levels of service, and any perceived future demand that may be placed on the asset. As the levels of service are currently being developed, there are limited information to show whether the current assets are providing sufficient capacity and performance, or not.

9.6.1.4 Historic Maintenance Data

Historic repair quantities and costs have been accurately tracked and recorded over a period of 28 years. Figure 9.19 shows the trends in Pavement Digout and Stabilisation repair quantities for the last 28 years, and what is planned for the next 3 years. This average quantity over 28 years is 4,176m², over the last five years the average is 5,345m². The assessed ongoing (future) annual Pavement Digout and Stabilisation repair quantity is 6,200m².

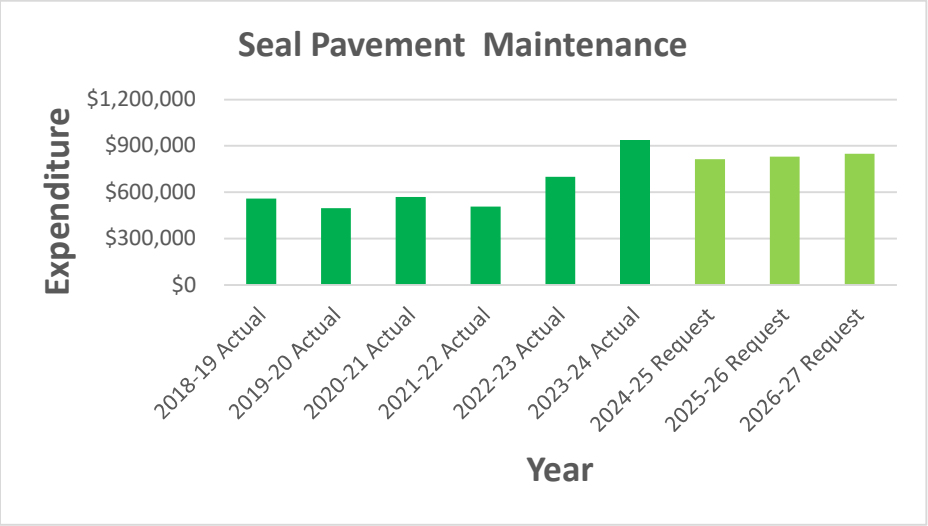
Figure 9.19 - Sealed Pavement Historic Repair Quantities



9.6.1.5 Historic Maintenance Costs

In the previous four years, the historical sealed pavement maintenance spent was below $600,000, with a slight increase in spent in 2022/23 to over $600,000. Based on inspections, accurate pavement data records, and asset knowledge, quantities required to maintain the current levels of service and the related investment has been worked out to be slightly increasing over the years. This is to also keep up with the new operational and maintenance contract and inflation (effects of Covid19).

Figure 9.20 - Sealed Pavement Historic Repair Expenditure



9.6.2 Maintenance Decision Making Process

Council's current practice is to apply a combination of "reactive" condition driven and network lifecycle depreciation techniques to determine the work necessary to maintain the network within pre-determined financial constraints. These methods rely heavily on:

- Council's Roading Manager's and Roading Officer's knowledge of the road network
- annual or biennial network condition inspections (data entered into RAMM)
- accurate base inventory
- life and cost information of each asset component.

9.6.3 Strategy to Meet Levels of Service

The maintenance standards to be achieved and response times required are set out in Council's specifications defined in the Road Network Operations and Maintenance Contract. These standards will require reviewing over time, in light of the Levels of Service outlined by NZTA One Network Framework and customer/community survey.

Pre Seal - Maintenance work is carried out to a high level to ensure all pavement and drainage repairs are done before the reseal.

Holding - A minimum amount of work is undertaken for the one to two years preceding a rehabilitation.

Normal/General Maintenance - Network locations are inspected at regular intervals, defects identified; treatment selections agreed, prioritised and scheduled to fit within the allocated budgets.

Reseal - Road section is to be resealed. Pre-seal repairs completed in the prior year/season if possible. Programme based on the age and condition of the seal coat.

Rehabilitation - Road section is to be reconstructed. Holding strategy in place in prior years. Programme developed based on the condition of the pavement and maintenance costs.

9.6.4 How Tasks Are Prioritised

The Contractor is required to use RAMM Contractor software, for contract management tasks such as entering jobs, creating work programmes, prioritising work, entering claims, producing reports, monitoring job progress, and recording maintenance cost, and other tasks. Programmes of work are submitted by the Contractor in priority order for approval by Council roading staff.

The mechanism for prioritisation used by Contractors, as outlined in the Road Network Operations and Maintenance Contract specification, is outlined in Table 9.5.

Table 9.5 - Prioritisation of Maintenance Tasks

Priority	Description
Priority 1: Urgent Maintenance	Immediate action to ensure the safety and integrity of the road network. Upon notification of a hazard the Contractor shall immediately inspect and make safe the site until permanent repair is affected.
Priority 2: Essential Maintenance	Must be completed to ensure the safety and integrity of the road network. (Generally completed within one month)
Priority 3: Less Essential Maintenance	May be delayed without unduly compromising the safety and integrity of the road network or inconveniencing road users. (Generally programmed and completed within 3 months)
Priority 4: Desirable Maintenance Works	Less urgent to be completed for the safety and integrity of the network but will potentially enhance the road environment, improve safety and the integrity of the road network.

9.6.5 Summary of Future Costs

Over the last three years, the overall maintenance budget has increased with the resulting condition showing some deterioration. This indicates that in order to keep the network at the same condition level, future maintenance cost increases will be required. However, further work would be required to analyse maintenance costs requirements at a detailed level, to ensure that maintenance works remain as efficient and effective as possible.

Future costs have been based on historic quantities and new contract rates for sealed pavement maintenance items completed under the Road Network Operations and Maintenance Contract. Pre-seal repair quantities and costs have also been estimated and included within the future funding requests. The increase is to mainly cover the new contract rates and observed inflation, Table 9.6.

Table 9.6 - Proposed Sealed Pavement Maintenance Budget for 2024-27 (As at November 2024)

111 Seal Pavement Maintenance	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Sealed Road - Potholes	12	$8,856.71	$106,281	$106,281	$108,406	$110,851	$325,537
Stabilisation	5000	$48.41	$242,048	$242,048	$246,889	$252,456	$741,393
Digouts	1200	$76.48	$91,778	$91,778	$93,614	$95,725	$281,117
Digouts Additional Depth below 400 mm (solid)	50	$45.45	$2,272	$2,272	$2,318	$2,370	$6,960
Geotextile	150	$3.81	$571	$571	$582	$596	$1,749
Subsoil Drainage	50	$79.30	$3,965	$3,965	$4,044	$4,135	$12,145
Premix Reshaping	100	$84.85	$8,485	$8,485	$8,655	$8,850	$25,990
Rip and Remake	800	$37.53	$30,022	$30,022	$30,622	$31,313	$91,957
Single coat Chipseal <200 m2	500	$16.02	$8,009	$8,009	$8,169	$8,354	$24,532
Single coat Chipseal >200 m2	1000	$16.02	$16,019	$16,019	$16,339	$16,707	$49,065
Double coat Chipseal <200 m2	1500	$16.02	$24,028	$24,028	$24,508	$25,061	$73,597
Double coat Chipseal >200 m2	1500	$16.02	$24,028	$24,028	$24,508	$25,061	$73,597
Edge Break Repair m	1800	$37.47	$67,439	$67,439	$68,788	$70,339	$206,566
Raise Low Shoulder m	3500	$10.15	$35,526	$35,526	$36,237	$37,054	$108,817
Grade,metal and Compact Shoulders day work	8000	1.00	$8,000	$8,000	$8,160	$8,344	$24,504
Localised Seal Widening	500	$33.99	$16,995	$16,995	$17,334	$17,725	$52,054
Excavation and backfill below 100mm (solid)	50	$119.30	$5,965	$5,965	$6,084	$6,222	$18,271
Priced & Day Work	$10,000	1.00	$10,000	$10,000	$10,200	$10,430	$30,630
Share of Monthly Costs inspection Programming Etc.	0.3	$328,148.72	$98,445	$98,445	$100,414	$102,678	$301,536
Administration	0.15	$95,000.00	$14,250	$14,250	$14,535	$14,863	$43,648
111 Seal Pavement Maintenance Total			**$814,125**	**$814,125**	**$830,408**	**$849,133**	**$2,493,666**

Table 9.7 - Proposed Sealed Pavement Maintenance Budget for 2027-34 (as at November 2024)

111 Seal Pavement Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Sealed Road - Potholes	$112,859	$115,910	$118,928	$121,893	$124,826	$127,813	$130,629
Stabilisation	$257,031	$263,978	$270,852	$277,605	$284,285	$291,087	$297,501
Digouts	$97,459	$100,093	$102,700	$105,260	$107,793	$110,372	$112,805
Digouts Additional Depth below 400 mm (solid)	$2,413	$2,478	$2,543	$2,606	$2,669	$2,733	$2,793
Geotextile	$606	$623	$639	$655	$671	$687	$702
Subsoil Drainage	$4,210	$4,324	$4,437	$4,547	$4,657	$4,768	$4,873
Premix Reshaping	$9,010	$9,254	$9,495	$9,732	$9,966	$10,204	$10,429
Rip and Remake	$31,880	$32,742	$33,594	$34,432	$35,261	$36,104	$36,900
Single coat Chipseal <200 m2	$8,505	$8,735	$8,962	$9,186	$9,407	$9,632	$9,844
Single coat Chipseal >200 m2	$17,010	$17,470	$17,925	$18,372	$18,814	$19,264	$19,688
Double coat Chipseal <200 m2	$25,515	$26,205	$26,887	$27,558	$28,221	$28,896	$29,533
Double coat Chipseal >200 m2	$25,515	$26,205	$26,887	$27,558	$28,221	$28,896	$29,533
Edge Break Repair m	$71,614	$73,549	$75,464	$77,346	$79,207	$81,102	$82,889
Raise Low Shoulder m	$37,725	$38,745	$39,754	$40,745	$41,726	$42,724	$43,665
Grade,metal and Compact Shoulders day work	$8,495	$8,725	$8,952	$9,175	$9,396	$9,621	$9,833
Localised Seal Widening	$18,047	$18,534	$19,017	$19,491	$19,960	$20,438	$20,888
Excavation and backfill below 100mm (solid)	$6,334	$6,506	$6,675	$6,841	$7,006	$7,174	$7,332
Priced & Day Work	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Share of Monthly Costs inspection Programming Etc.	$104,538	$107,364	$110,160	$112,906	$115,623	$118,389	$120,998
Administration	$15,132	$15,541	$15,946	$16,343	$16,737	$17,137	$17,515
111 Seal Pavement Maintenance Total	**$864,519.804**	**$887,885.205**	**$911,006.367**	**$933,720.467**	**$956,190.329**	**$979,067.254**	**$1,000,641.578**

9.6.6 Deferred Maintenance and Associated Risks

The assessed level of investment is considered adequate to maintain the current condition and levels of service of the sealed pavement roading assets as long as this is sustainable then the risk of any future accumulation of deferred maintenance is considered to be low.

9.6.7 Sealed Road Maintaince approved NLTP funding

111	Seal Pavement Maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$814,125	$830,408	$849,133	$2,493,666
NZTA Approved Funding Allocation		$801,984	$816,684	$831,384	$2,450,052
Not Funded		-$12,141	-$13,724	-$17,749	-$43,614

9.7 Sealed Road Renewals

Local Road Pothole Prevention Activity Class

WC212: Sealed Road Resurfacing
WC214: Sealed Road Pavement Rehabilitation

9.7.1 Sealed Road Resurfacing

Figure 9.21 shows the amount of road resurfacing, by length, has been achieved since 1972. The amount of resurfacing has been decreasing over the last few years. Figure 9.22 shows the amount of renewal life activity achieved since 1972, and has been observed to have decreased over the years. Figure 9.23 shows the sealed length that is over their expected life, and Figure 9.24 shows the reseal area required to remove backlog and maintain assets to the expected useful life and condition.

Figure 9.21 - Sealed Pavement Road Resurfacing Historic Length, since 1972

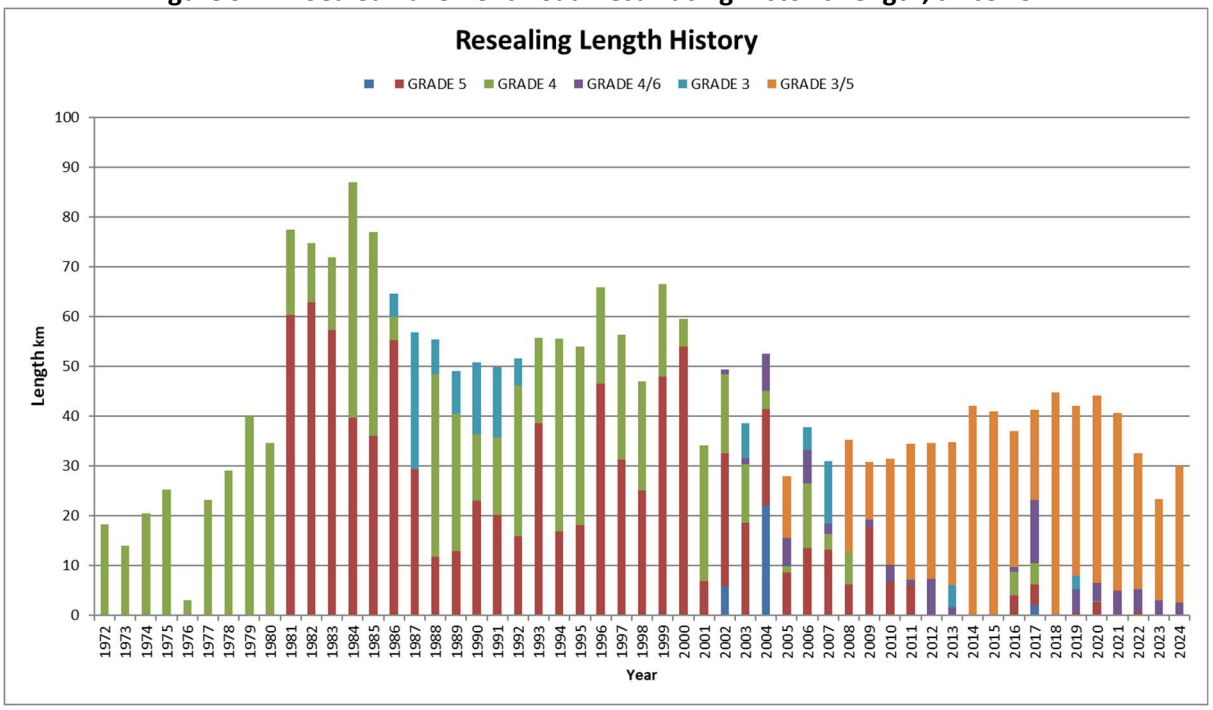


Figure 9.22 - Renewal Life Activity Achieved Since 1972

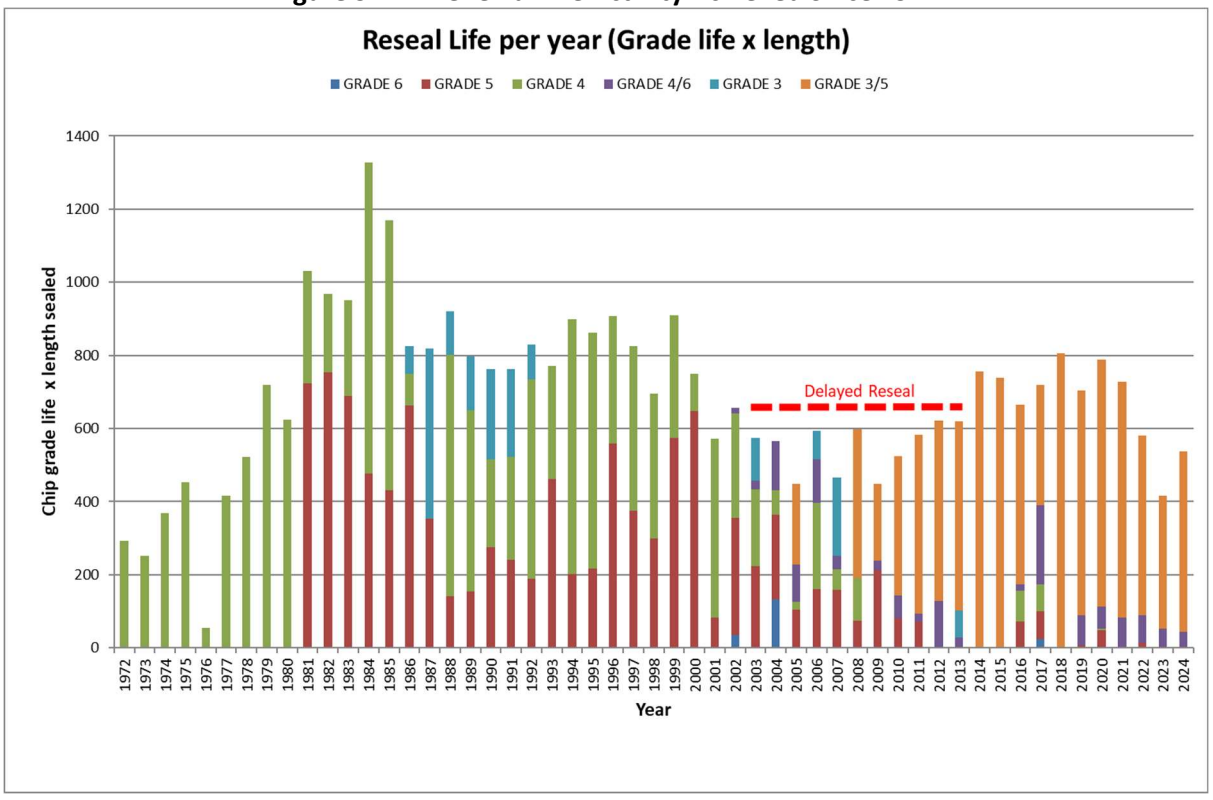


Figure 9.23 - Sealed Roads Over Expected Life (as at November 2023)

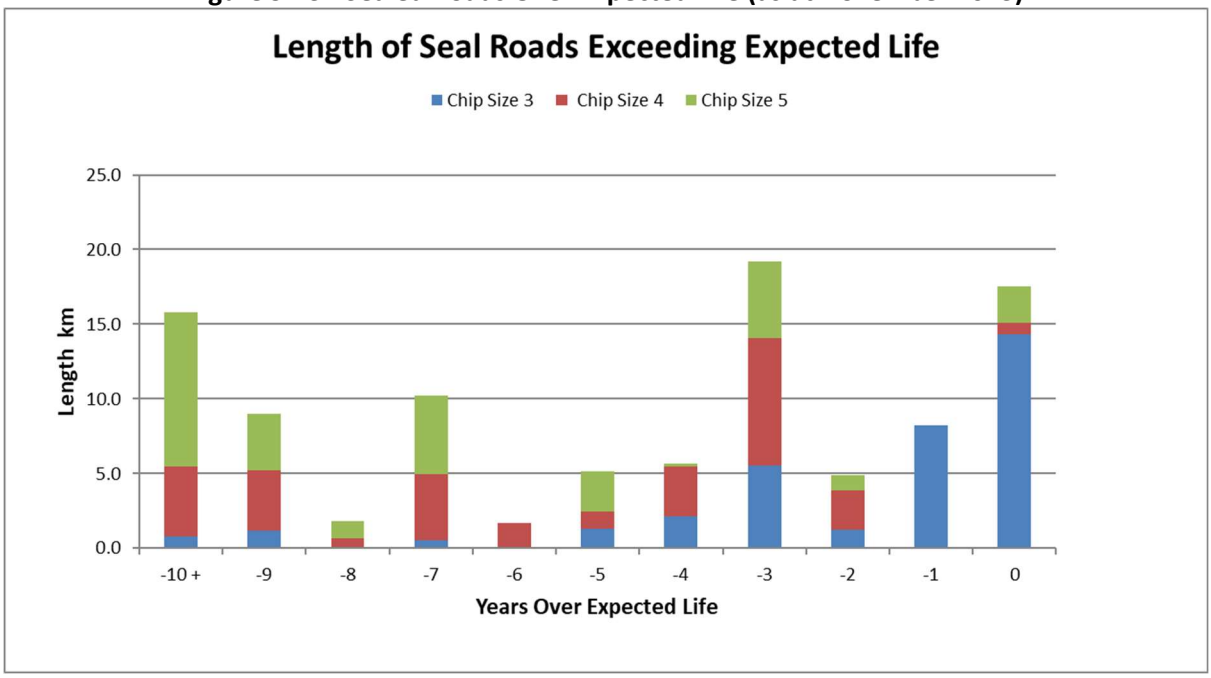
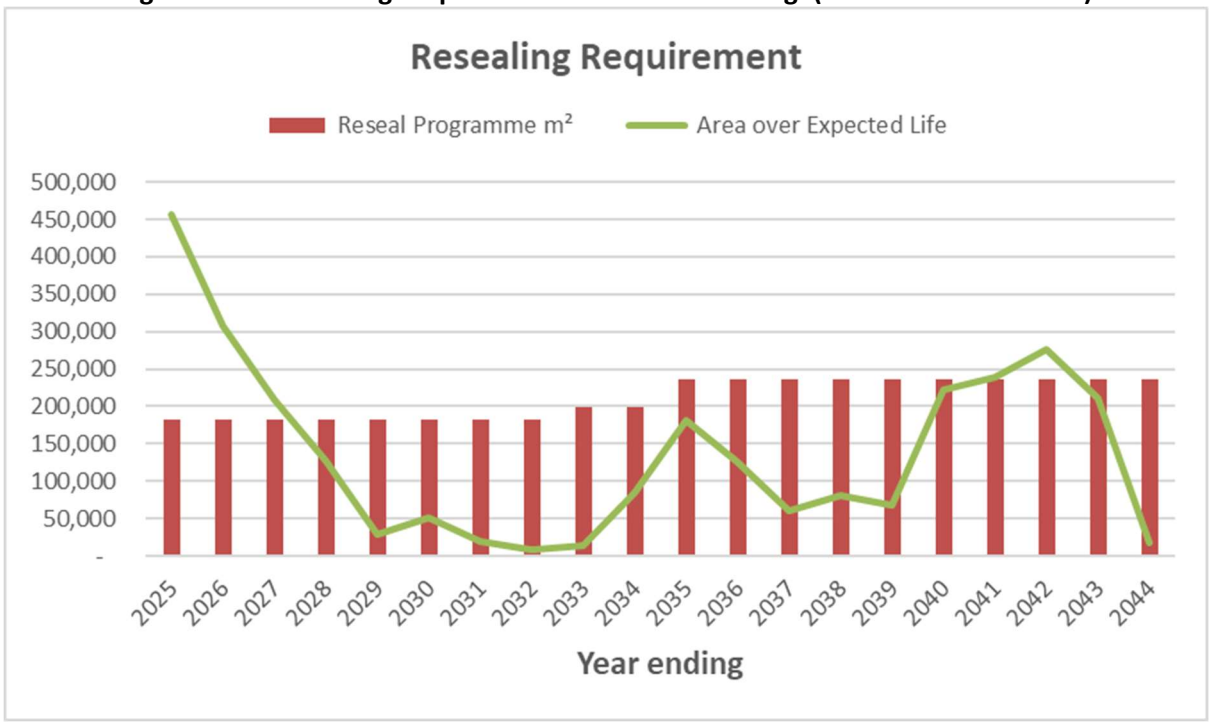


Figure 9.24 - Resealing Requirement to Remove Backlog. (As at November 2023)



Resurfacing/resealing is undertaken periodically to retain the waterproofing qualities of the sealed surface and provide good skid resistance. The type of surfacing used is determined using the NZTA *Chipsealing in New Zealand*[49] and is dependent on-site specific factors such as the existing surface texture, surface defects, traffic stresses, and traffic volumes. The types of surfacing commonly used include single and two-coat chip seals.

An annual programme of resealing is developed using seal age data and the results of field inspections to identify surface defects such as potholes, cracking, scabbing, and flushing. The programme also

[49] https://www.nzta.govt.nz/resources/chipsealing-new-zealand-manual/

includes second coat seals which are normally undertaken within five (5) years of a First Coat Seal, which are never entirely waterproof.

The average resurfacing achieved over the 10-year timeframe is 39km with the last five (5) years averaging 36km, Figure 9.21.

The amount of delayed reseal has reduced. The target reseal area is 5% of the sealed Network 181,000 m² 32.5 km. This increases to 5.5 % 200,000m² in 2033 and to 6.3 % from 2035.

Table 9.8 - Expected Useful Life of Road Seals (Extracted from Valuation Report 2022)

Grade of Chip	Expected Useful Life (Years)
Grade 3	17
Grade 3/5	18
Grade 4	16
Grade 4/6	18
Grade 5	12
First Coat Seals	5

9.7.1.1 Selection of Roads for Resealing

Road Asset Data

Each chip seal surface has an expected lifespan based on several factors:

- **Type of Seal**: First coat, second coat, or reseal.
- **Size of Chip**: Larger chips generally provide more durability.
- **Traffic Loading and Volume**: Higher traffic volumes accelerate wear.
- **Condition of the Road Pavement**: Surfacing on pavements with greater metal depth tend to last longer.

This data, along with recent maintenance and repair records, is used to identify assets nearing the end of their expected useful life and may require a surface or full payment renewal.

Network Renewal Inspection

A shortlist of road sections is created from asset and maintenance records. Experienced roading staff then conduct detailed inspections to visually assess various distress types and conditions, including:

- Existing texture and skid resistance.
- Condition of the binder (dryness/brittleness).
- Sealing chip loss.
- Surfacing cracking due to oxidation/hardening.
- Fatigue, transverse, longitudinal, and block cracking.
- Surfacing failures and required repairs.
- Bleeding/fattiness.
- Pumping of fines.

Reseal Programme

The primary reason for resealing is to arrest deterioration of the road surface and restore it to an acceptable condition and to prevent further deterioration and protect the underlying pavement.

The above visual inspection identifies which surfacing work which is warranted and the relevant need and urgency.
The timing of resealing depends on the severity of the identified conditions. If extensive pavement failures are present, pavement rehabilitation may be more cost-effective. A reseal may only provide a short duration or holding repair.

The road sections are prioritised based on their relative needs and ranked as follows.

- **Essential**
- **Needed**
- **Desirable**

Other Considerations

- **Minimum Length**: Roads are packaged with others to maximize efficiency, especially in remote areas.
- **Utility Replacements**: Proposed or likely utility replacements

  These factors can advance or delay the resealing schedule especially road not ranked essential.

The Annual programme is finalised taking into account the available budget and target quantities. See Appendix 13.6 3 Year Resel Programme

9.7.2 Sealed Road Pavement Rehabilitation

The average pavement renewal required based on the assumed expected useful life of about 75 years, is in the order of 8.5km per annum. This is significantly more than the average of 1km that has been completed for the past 10 years and about 30km of Sealed Roads have been reconstructed in the last 27 years, Figure 9.25.

Figure 9.25 - Construction Year of Sealed Road

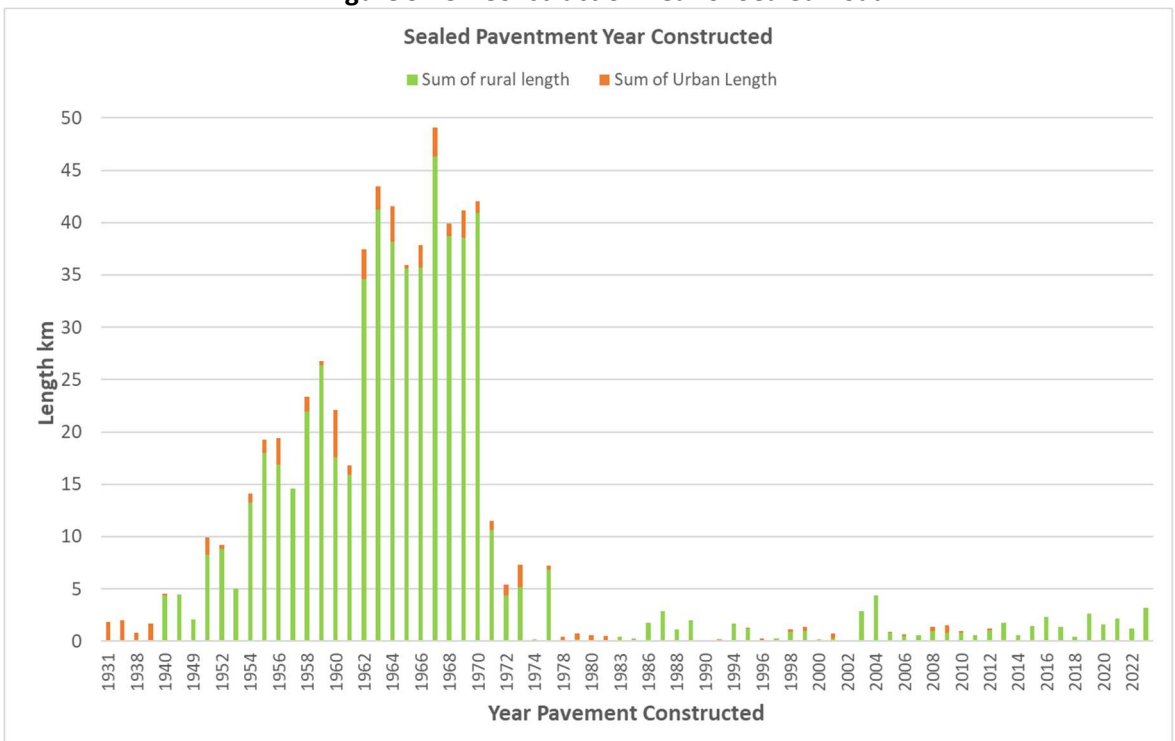


Figure 9.26 - Rural Sealed Roads Pavement Age Groups (Nov 2023)

Figure 9.27 - Urban Sealed Roads Pavement Age Groups (Nov 2023)

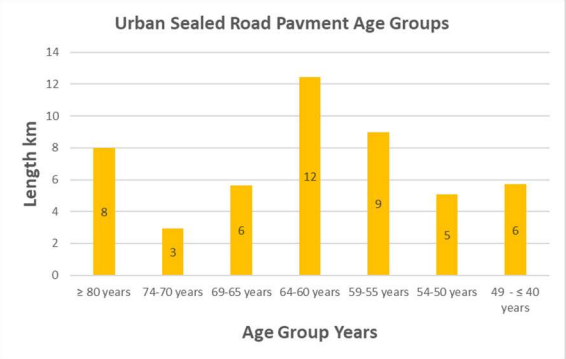
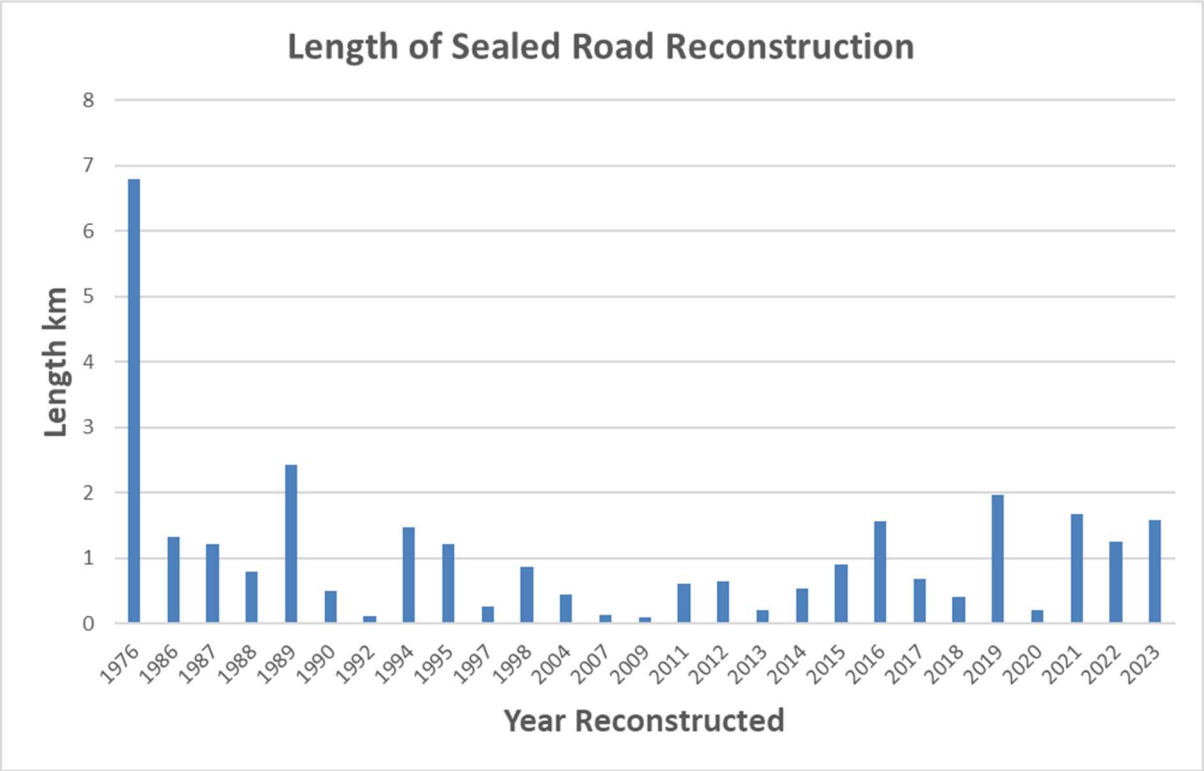


Figure 9.28 - Length of Reconstruction Sealed Roads Over the Years(Nov 2023)



The sealed road network was mostly constructed since the 1930's. The pre 1960 roads are generally higher traffic roads and were built to higher standard. In the 1960-1970's a significant portion of the unsealed network was sealed (approximately 38 km a year for about 10 years), Figure 9.25. Construction was not to such a high standard and these pavements appear to be more susceptible to traffic loading. It is expected that these pavements will start coming up for renewal in the next 10-year period (beyond 2025). For the next three (3) years, up to 3.5km per year has been budgeted and for the following 7 years, 4.5 km per year has been budgeted for renewal.

It is proposed to assess the expected lives for all pavement and surfacing treatment lengths and input this into RAMM. It would also be beneficial for Council to further develop their FWP to incorporate this information for pavement renewals as well as resurfacing.

9.7.3 Renewal Decision Making Process

The required level of renewal varies depending on:

- The age profile of carriageway surfacing and structure.
- The condition profile of the carriageways
- The deterioration of the top surface
- The level of ongoing maintenance demand
- The likely future demand on the road.

In terms of reseals, intervention is primarily based on age and maintenance history. RAMM data is used to develop an inspection list, which is then used as the basis for a detailed inspection once a year of aged seals. A detailed rolling three-year programme has been developed for Years 1, 2, and 3. Future work requirements beyond this period are based on historical requirements.

9.7.4 Renewals Strategies to Meet Levels of Service

9.7.4.1 Maintenance Chip Seals

Maintenance chip seals are pavement resurfacing where the reseal is to be applied to an established sealed road. Examples of these activities include:

- Conventional chip reseals, (including second coat seals)
- Void filling seal coats
- Texturising seals
- Other special purpose surfacing (polymer modified seals) that fall into the maintenance chip seal NZTA Work Category.

In the past, there was a trend alternating between Grade 3 and Grade 5 reseals. However, the older seals on the network are now getting varying texture and there are thicker seal layers. There are also a number of older Grade 4 seals on the network that are now getting too smooth to take another Grade 5, and some of the recent Grade 5 seals are not performing as a result. Therefore, the strategy has changed to completing more two coats Grade 3/5 on rural roads and Grade 4/6 on Urban Roads to increase texture.

Emulsion has been used for the District resealing for the last five (5) seasons with excellent results. Emulsion is safer and environmental emissions are significantly reduced (almost 50% less).

9.7.4.2 Pavement Renewals

9.7.4.2.1 Road Rehabilitations

Road rehabilitation of pavements is actioned to maintain pavement structural integrity and to benefit road users. This work category allows construction of:

- Thin asphaltic overlays
- Granular overlays
- Treatments involving ripping and/or reshaping.
- Pavement stabilisation.

Basic rehabilitation works are not to increase the existing seal width or provide a seal width greater than the standard for the traffic use of the road. Formation widening may be permitted where it is required for support or structural integrity.

From years 4-10, the length of rehabilitation is increasing to 4.5km per year.

9.7.4.2.2 Seal Widening

Seal widening allows for the widening of existing seals where this is the least cost maintenance treatment necessary to overcome edge break or to reduce shoulder maintenance. Work may include shoulder strengthening and/or formation widening where this is necessary to maintain the structural integrity of the pavement. This work may also be carried out to improve road user safety.

9.7.5 Identification and Prioritisation of Work

The identification of sealed pavement requiring renewals is brought about in a number of ways:

- Annual drive-over survey (Visual Condition Survey)
- RAMM rating surveys
- MSD surveys identifying road sections of reduced pavement strength
- Community/Ratepayer service requests
- Contractor inspections
- Annual maintenance costs.

This information is used as base data in the generation of road condition forecasts, forward works programmes, and road renewal programmes.

Proposed reseals are field checked by the Roading Engineer and current condition determines whether the reseal proceeds or is deferred. The proposed surface treatment is also verified during this field check.

In terms of pavement renewals, Council roading staff monitor problem roads. Where there is not sufficient percentage of a road failed to complete a full rehabilitation, a maintenance type area treatment will be completed. This is expected to continue, however forecast budgets allow for increased length. This may create a bow-wave of renewal work for the future. Rehabilitation sites are then analysed using NZTA simplified benefit-cost procedures, to determine the economic Net Present Value (NPV) of each project. All projects are then ranked by NPV. This procedure determines whether rehabilitation/reconstruction is a better economic solution than on-going maintenance.

Formal ranking of projects is based on either Benefit Cost Ratios (BCR) or Net Present Values (NPV) depending on the funding mechanism.

Deterioration modelling

Many roading authorities in New Zealand use modelling to investigate the investment levels on their road networks. Modelling is not considered to provide significant value for Waimate District's low volume considering the additional data requirement setup and analyst time.

Funding Consideration

Pavement rehabilitation is carried out when this provides the minimum whole-of-life cost for the pavement, i.e., intervention is indicated when the net present value (NPV) of the rehabilitation exceeds the do-minimum option. NZTA 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 NZTA funding assistance for pavement smoothing, it is necessary to establish a nationally competitive Benefit/Cost ratio.

Schedule Of Roads

Council roading staff monitor poor performing roads and have scheduled possible road rehabilitation sites to be reviewed when finalising the annual programmes. These roads are inspected when preparing the programme to establish if they have met the criteria for Rehabilitation See Appendix 13.5

9.7.6 Replacement Standards

NZTA's *New Zealand Guide to Pavement Evaluation and Treatment Design*[50] is a document that will assist with pavement replacement process.

9.7.7 Summary of Future Costs

Future costs have been based on the forward work programme and assessed need. The annual resurfacing area required is 5% of the sealed network. This will result in resealing the small backlog of seals that are over their expected useful life. 3.5km of granular overlay per year to address failed pavements and reduce future pavement repairs.

Table 9.9 - Proposed Sealed Road Resurfacing Budget for 2024-27 (as at November 2024)

212 Sealed Road Resurfacing	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Resealing Chip seals have a limited useful life, Resealing is programmed on as needed basis to arrest and prevent the deterioration of the road surface.	3,628,903						
of Network Resealed	181,445	$6.90	$1,251,972	$1,251,972	$1,277,011	$1,305,806	$3,834,789
Professional Services Resealing	$25,000	1	$25,000	$25,000	$25,500	$26,075	$76,575
Administration	0.21	$95,000.00	$19,950	$19,950	$20,349	$20,808	$61,107
212 Sealed Road Resurfacing Total			**$1,296,922**	**$1,296,922**	**$1,322,860**	**$1,352,689**	**$3,972,471**

Table 9.10 - Proposed Sealed Road Resurfacing Budget for 2027-34 (as at November 2024)

212 Sealed Road Resurfacing	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Resealing Chip seals have a limited useful life, Resealing is programmed on as needed basis to arrest and prevent the deterioration of the road surface.							
of Network Resealed	$1,329,469	$1,365,400	$1,400,956	$1,435,886	$1,470,441	$1,505,621	$1,538,798
Professional Services Resealing	$26,548	$27,265	$27,975	$28,673	$29,363	$30,065	$30,728
Administration	$21,185	$21,757	$22,324	$22,881	$23,431	$23,992	$24,521
212 Sealed Road Resurfacing Total	**$1,377,201**	**$1,414,423**	**$1,451,255**	**$1,487,439**	**$1,523,234**	**$1,559,678**	**$1,594,046**

Table 9.11 - Proposed Sealed Road Pavement Rehabilitation Budget for 2024-27 (November 2024)

214 Pavement Rehabilitation.	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Replacement / restoration of strength to pavement. Project must be the long-term least -cost option .							
3.5 km	22750	$35.00	$796,250	$796,250	$812,175	$830,489	$2,438,914
Professional Services	$15,000	1	$15,000	$15,000	$15,300	$15,645	$45,945
Administration	0.07	$95,000.00	$6,650	$6,650	$6,783	$6,936	$20,369
214 Pavement Rehabilitation Total		$0	**$817,900**	**$817,900**	**$834,258**	**$853,070**	**$2,505,228**

[50] NZ Guide to Pavement Evaluation and Treatment Design

Table 9.12 - Proposed Sealed Road Pavement Rehabilitation Budget for 2027-34 (November 2024)

214 Pavement Rehabilitation.	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Replacement / restoration of strength to pavement. Project must be the long-term least -cost option .							
4.5 km	$1,087,120	$1,116,502	$1,145,576	$1,174,139	$1,202,394	$1,231,162	$1,258,291
Professional Services	$15,929	$16,359	$16,785	$17,204	$17,618	$18,039	$18,437
Administration	$7,062	$7,252	$7,441	$7,627	$7,810	$7,997	$8,174
214 Pavement Rehabilitation Total	**$1,110,110**	**$1,140,113**	**$1,169,803**	**$1,198,969**	**$1,227,822**	**$1,257,198**	**$1,284,901**

9.7.8 Sealed Road Renewal Historic Costs

Figure 9.29 - Sealed Pavement Resurfacing Historic Expenditure

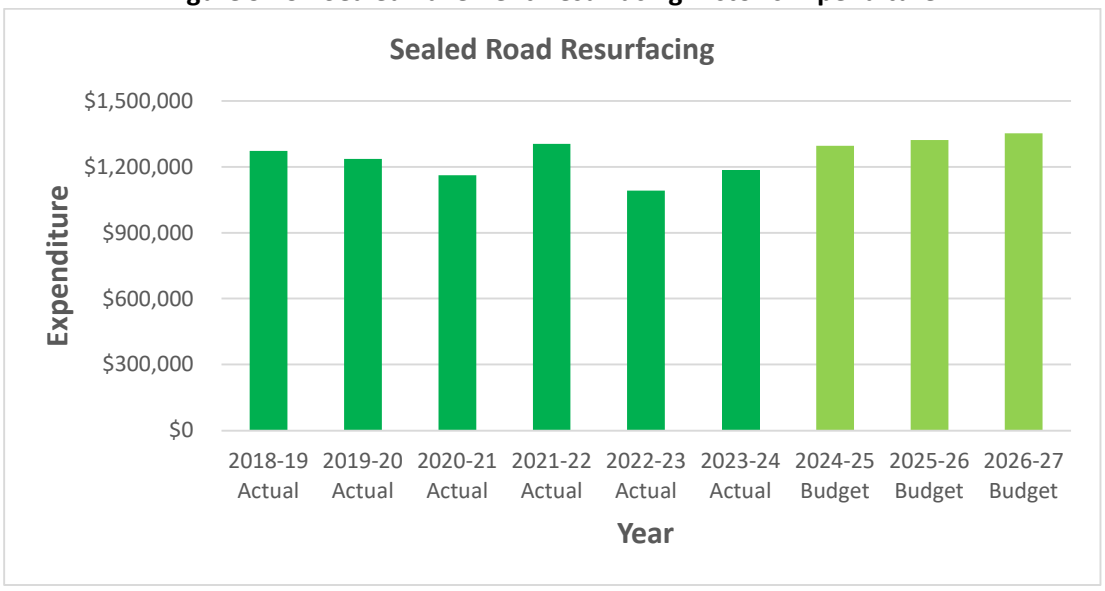
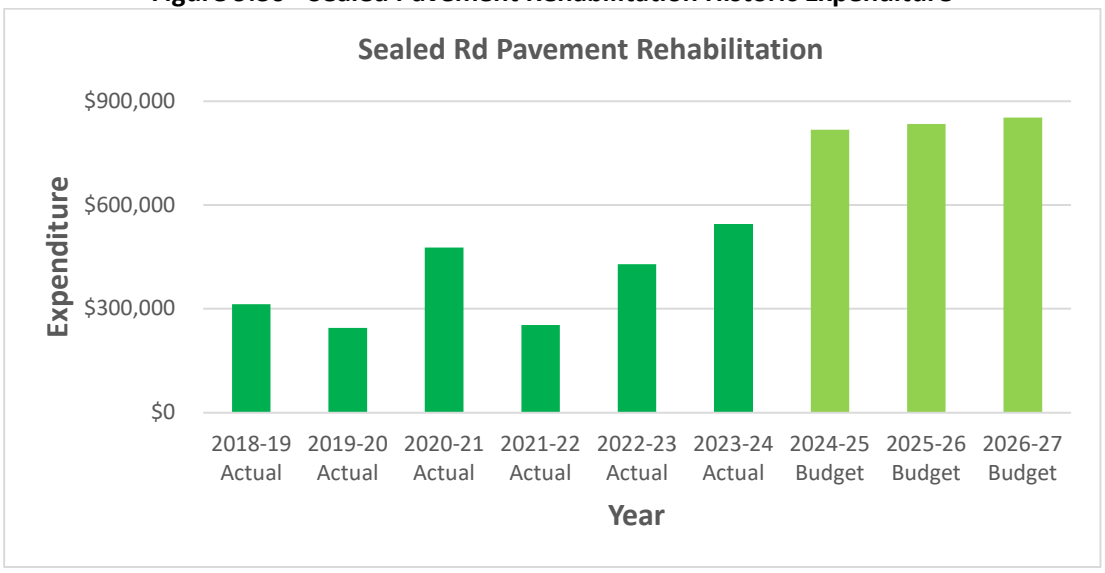


Figure 9.30 - Sealed Pavement Rehabilitation Historic Expenditure



9.7.9 Sealed Road Renewal Approved NLTP allocation

212	Sealed Road Resurfacing	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$1,296,922	$1,322,860	$1,352,689	$3,972,471
NZTA funding allocation		$1,300,350	$1,324,185	$1,348,020	$3,972,555
Fully funded		$3,428	$1,325	-$4,669	$84

214	Sealed road pavement rehabilitation	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$817,900	$834,258	$853,070	$2,505,228
NZTA funding allocation		$818,351	$833,351	$848,351	$2,500,053
Not Funded		$451	-$907	-$4,719	-$5,175

9.8 Unsealed Roads

Local Road Pothole Prevention Activity Class *WC112: Unsealed Pavement Maintenance*

9.8.1 Current Trends and Issues

9.8.1.1 Scope and Nature of Asset

Unsealed roads have generally evolved over the past one hundred years from tracks, which over time and increasing use have had vegetation removed and gravel progressively added to obtain the current road pavement width and strength.

The unsealed road network in Waimate District comprises about 50.9% of the District's road asset and carries 20% of the total vehicles travelling on the network.

Design standards have not been specifically set for the unsealed road network, as many roads were gradually developed over the years rather than specifically designed and constructed. The roads are surfaced with a range of locally obtained and imported materials. The Road Network Operations and Maintenance Contract specifications are aimed at maintaining this surface into perpetuity.

9.8.1.2 Current Condition

The unsealed road asset is in a constantly changing condition depending on traffic use, weather, position in its maintenance cycle, etc. This condition is monitored through Council's contractor and the Council's Roading Engineer inspections, as well as road user complaints and queries. No formal condition rating information is currently collected.

Use by the Agricultural industry including machines on road, stock on road, and others, these contribute to increased deterioration of condition of the asset.

Pavements constructed within potential flood-prone areas, or on sections of roads where draining water away from the pavement layers is less effective, are considered to be at greater risk of surface conditions deteriorating, and some of the work undertaken following the 2022 MSD surveys are

looking to improve identification of road sections where prioritised forward works in-line with Waimate's current maintenance strategy (Section 9.7.3) and renewals strategy (Section 9.8.3) can be included in the programmes developed in the 2027-2030 period.

9.8.1.2.1 Unsealed Road Basecourse and Sub-base Condition

Multi-Speed Deflectometer (MSD) survey, completed in 2022, covers 28% of the unsealed road network. Analysis carried out by Waimate District Council has confirmed that the previous FWD and current MSD surveys produce comparable results. The MSD data is now used to report the Structural Pavement Number (SNP) for road sections on the network, and the intention is to develop an assessment where re-gravelling as part of forward works can be prioritised, or where attention should be given towards drainage provision.

The following graphs illustrate the SNP of the roads surveyed. The distribution of SNP reflects all the survey measurement points (i.e. not aggregated data). It shows that approximately two-thirds of the road network is of adequate strength, which is expected for a network of this nature and geographical location.

Figure 9.31 - Pavement Strength – Unsealed Roads SNP Distribution (2022)

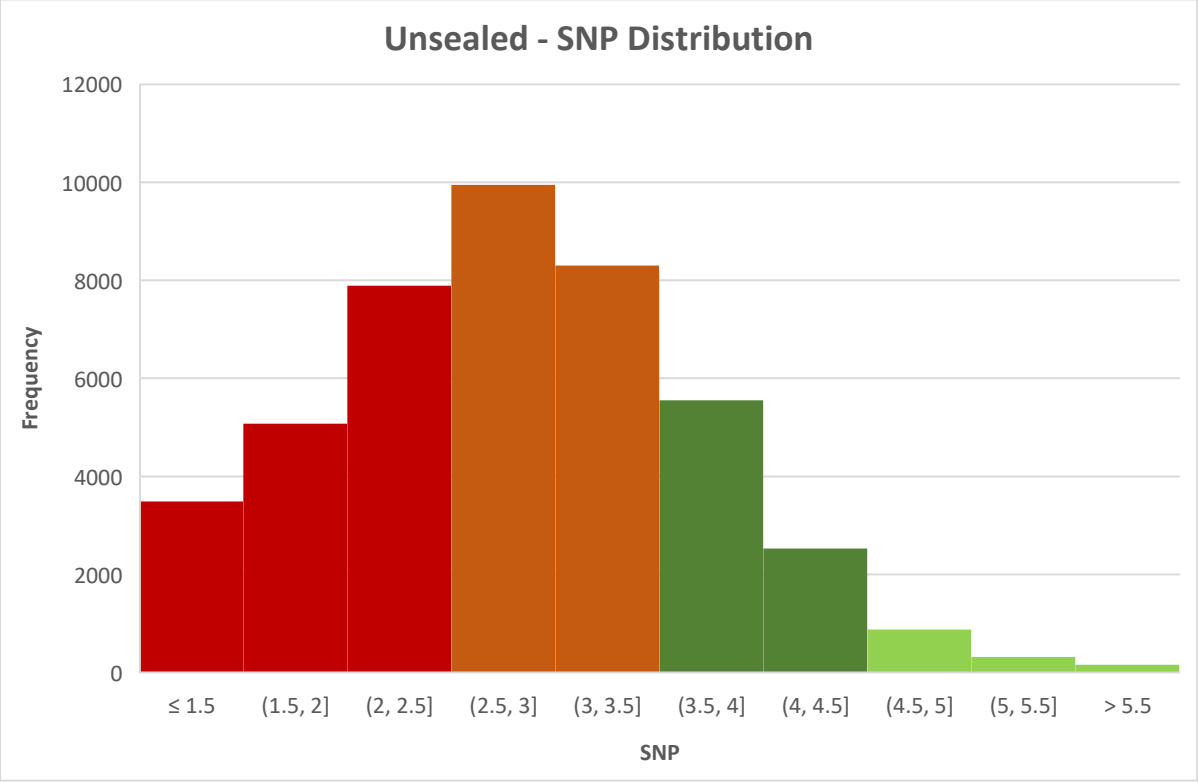
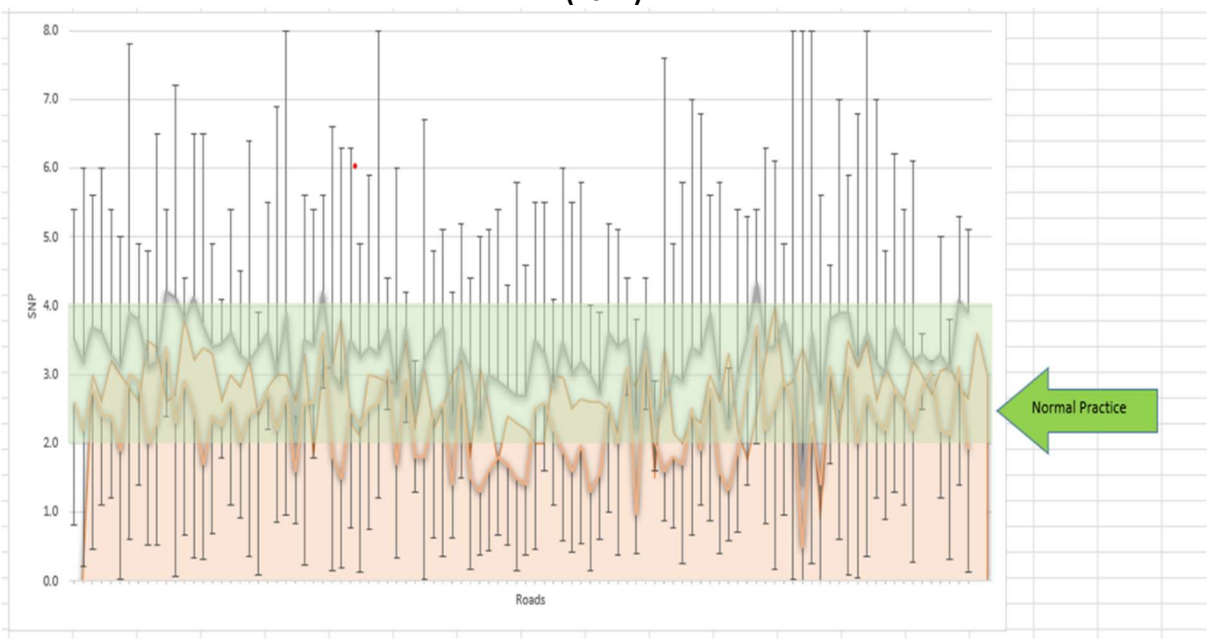


Figure 9.32 - Pavement Strength – Composite of all Unsealed Roads Surveyed from MSD Tests (2022)



9.8.1.3 Current Capacity and Performance

9.8.1.3.1 Performance

The road user perception of unsealed roads is that they are of inferior quality to sealed roads due to issues with carriageway width, roughness, dust, mud, corrugations, potholes, and soft pavement areas. These issues, except for the width of carriageway, are being continually assessed by the Council's maintenance contractor, with work programmed and executed to keep the deficiencies within acceptable limits.

Some unsealed road users may never be satisfied until their road is sealed, but this is not possible given the large network, low use and high cost involved. A sealed road costs far more to construct and maintain, therefore in lightly trafficked situation, this is not able to be justified. Despite this, there is ongoing pressure for seal extensions.

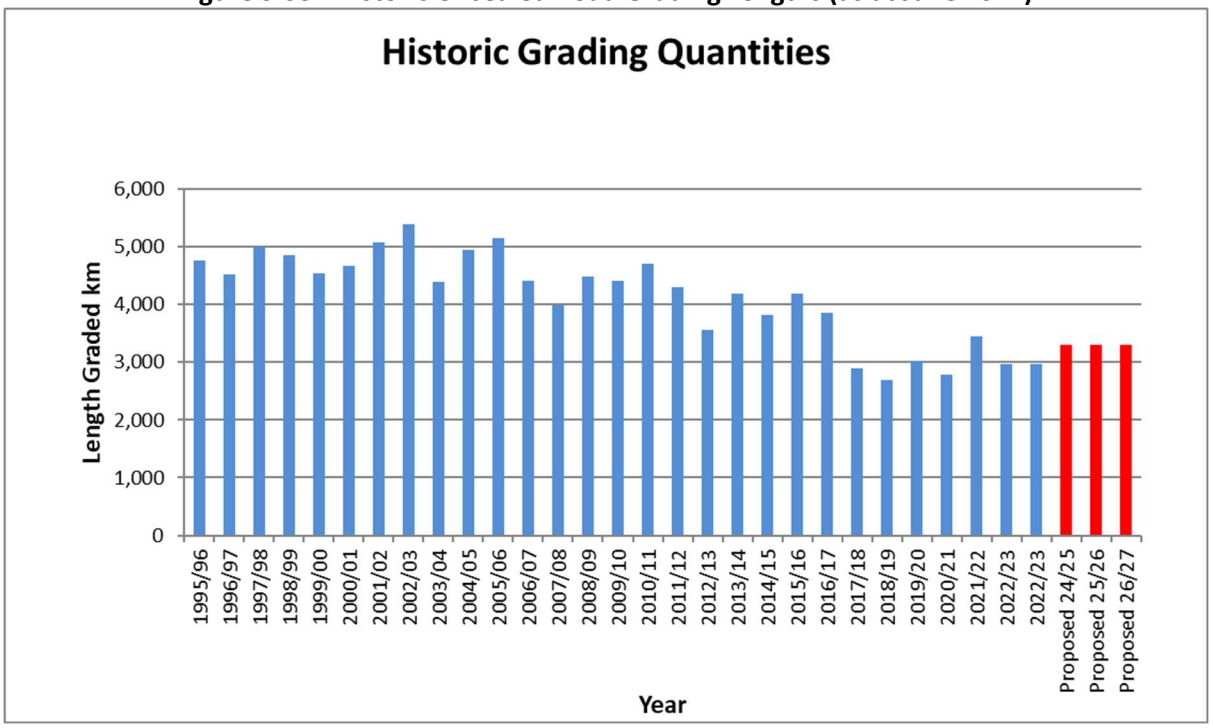
9.8.1.3.2 Capacity

The current capacity of the unsealed carriageway component of the District's road network is measured by adequate metal cover. This aspect changes over time and needs to be measured on an ongoing basis and is monitored through the Road Network Operations and Maintenance Contract.

9.8.1.4 Historic Maintenance Data

Unsealed road maintenance records for grading over the last 28 years show that this has decreased over the years. Figure 9.33 shows the annual maintenance quantities lengths over the last 28 years.

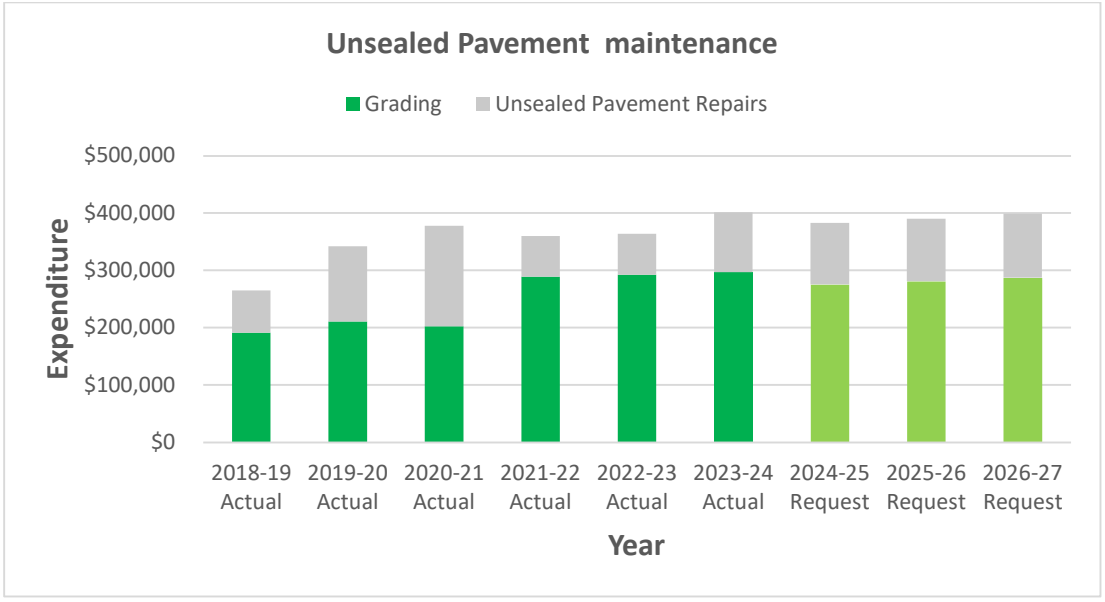
Figure 9.33 - Historic Unsealed Road Grading Lengths (as at June 2024)



9.8.1.5 Historic Maintenance Costs

Over the years 2018/21 the average expenditure spent for unsealed pavement maintenance was $328,157, and $362,995 for the years 2021/24, Figure 9.34.

Figure 9.34 - Historical Expenditure Unsealed Pavement Maintenance (As of June 2024)



9.8.2 Maintenance Decision Making Process

Unsealed road maintenance comprises of regular grading and spot metalling to mainly.

- Maintain cross-falls and pavement width.
- Remove potholes, corrugations, ruts clay spots, and exposed sub-grade.

Resources are applied to unsealed roads on an "as-need" basis. The higher trafficked roads will require most of the maintenance attention.

9.8.3 Strategy to Meet Levels of Service

The maintenance standards to be achieved are set out in Council's Road Network Operations and Maintenance Contract specifications.

9.8.4 How Tasks Are Prioritised

The grading frequency is used as a guide to the locations that will require maintenance and timing. Inspections, moisture conditions, road use, and metalling programme are all taken into account when programming unsealed pavement maintenance.

When the road conditions are very dry, grading will only loosen the pavement and the fines will be lost through dust. Timing for maintenance is important.

9.8.5 Summary of Future Costs

Future costs have been based on estimated grading requirements as well as general pavement maintenance requirements including scour repair, digouts, unsealed fords maintenance and additional grading due to storms. Rates from the existing Network Maintenance contract have been applied to estimated quantities.

Table 9.13 - Proposed Unsealed Road Maintenance Budget for 2024-27 (as at November 2024)

112 Unsealed Pavement Repairs	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Grading The grading frequency is used a guide , inspections, moisture conditions, road use, Metalling programme are taken into account when	3000	$91.77	$275,305	$275,305	$280,811	$287,143	$843,260
ı 6 to 8 Grades per Year	2200						
ı 3 to to 4 Grades per Year	710						
1 to 2 Grades per Year	90						
			$275,305	**$275,305**	**$280,811**	**$287,143**	**$843,260**
Unsealed Pavement Repairs							
Unsealed Roads - Potholes	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
s	$5,000	1	$5,000	$5,000	$5,100	$5,215	$15,315
led River Fords Maintenance	$15,000	1	$15,000	$15,000	$15,300	$15,645	$45,945
ɔnal Grading	$5,000	1	$5,000	$5,000	$5,100	$5,215	$15,315
of Monthly Costs inspection Programming Etc.	0.20	$328,149	$65,630	$65,630	$66,942	$68,452	$201,024
ıstration	0.07	$95,000.00	$6,650	$6,650	$6,783	$6,936	$20,369
			$107,280	**$107,280**	**$109,425**	**$111,893**	**$328,598**
112 Unsealed Pavement Repairs Total			**$382,585**	**$382,585**	**$390,237**	**$399,036**	**$1,171,858**

Table 9.14 - Proposed Unsealed Road Maintenance Budget for 2027-34 (as at November 2024)

112 Unsealed Pavement Repairs	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Grading The grading frequency is used a guide , inspections, moisture conditions, road use, Metalling programme are taken into account when programming	$341,071	$350,289	$359,411	$368,372	$377,237	$386,262	$394,774
350 km 6 to 8 Grades per Year							
250 km 3 to to 4 Grades per Year							
50 km 1 to 2 Grades per Year							
	$341,071.02	**$350,289.16**	**$359,410.94**	**$368,372.12**	**$377,236.95**	**$386,262.37**	**$394,773.89**
Unsealed Pavement Repairs							
Unsealed Roads - Potholes	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Digouts	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Unsealed River Fords Maintenance	$15,929	$16,359	$16,785	$17,204	$17,618	$18,039	$18,437
Additional Grading	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Share of Monthly Costs inspection Programming Etc.	$69,692	$71,576	$73,440	$75,271	$77,082	$78,926	$80,666
Administration	$7,062	$7,252	$7,441	$7,627	$7,810	$7,997	$8,174
	$113,920	**$116,999**	**$120,046**	**$123,039**	**$126,000**	**$129,015**	**$131,858**
112 Unsealed Pavement Repairs Total	**$454,991**	**$467,288**	**$479,457**	**$491,411**	**$503,237**	**$515,277**	**$526,631**

9.8.6 Deferred Maintenance and Associated Risks

Current maintenance funding levels are adequate and there is no significant backlog of routine maintenance, but there is no contingency for storm damage.

9.8.7 Unsealed Road NLTP funding allocation

113	Unsealed pavement maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$533,214	$543,878	$556,142	$1,633,233
NZTA funding allocation		$523,744	$533,345	$542,945	$1,600,034
Not Funded		-$9,470	-$10,533	-$13,197	-$33,199

9.9 Unsealed Road Renewals

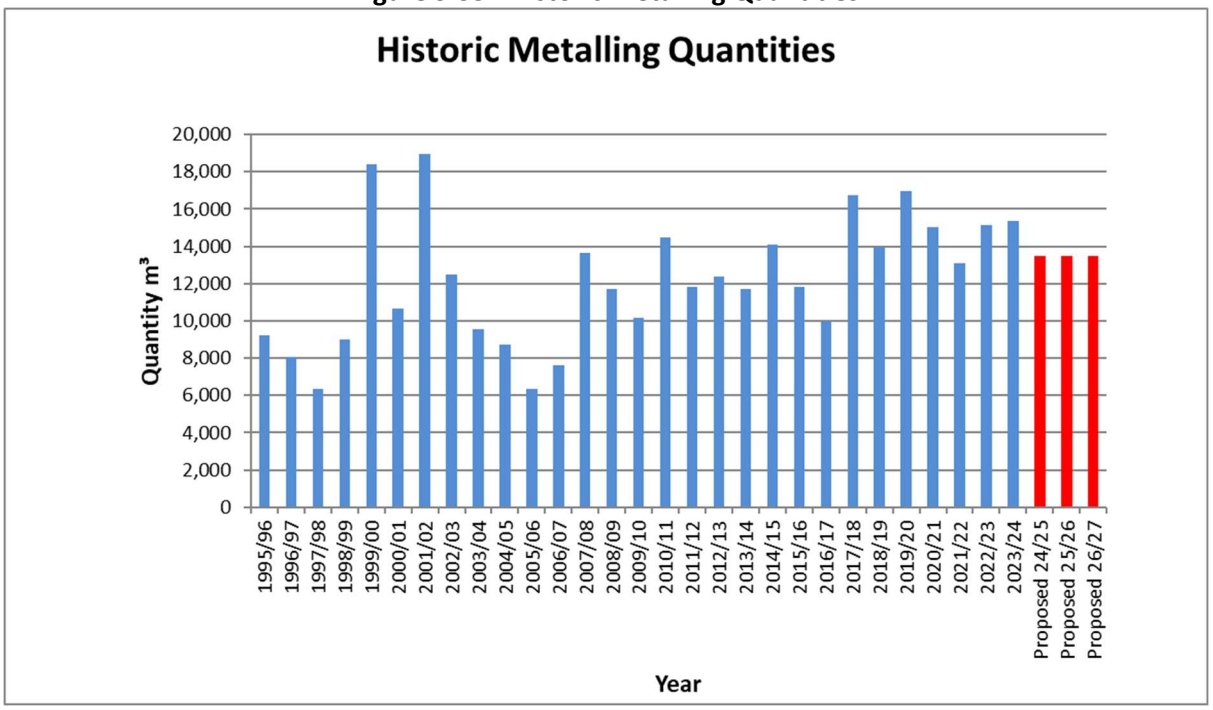
Local Road Pothole Prevention Activity Class *WC211: Unsealed Road Metalling*

Unsealed road renewals include area wide pavement treatment, unsealed smoothing, and replacement of wearing course metal. The unsealed pavements are generally renewed by replacement of wearing course (metalling). This is treated as a maintenance operation and is completed under the Road Network Operations and Maintenance Contract.

9.9.1 Unsealed Road Metalling

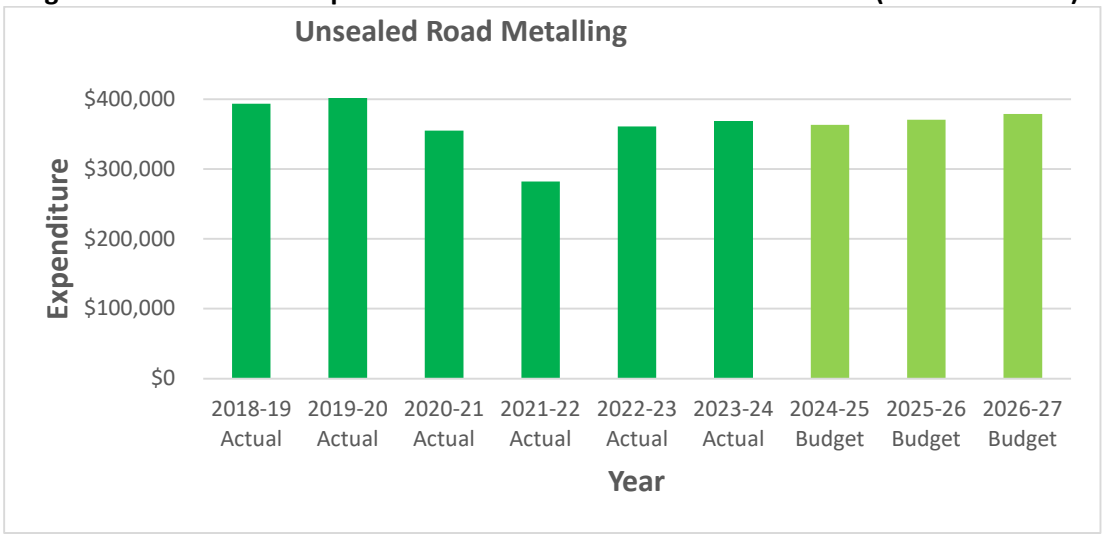
In the 2022 Valuation Report, the assumption for unsealed road pavements useful life is 35 years. However, as metalling is the main mode of renewal, rather than using end of useful life predictions to quantify future work requirements, the forward works programme (FWP) is based on historical quantities, which have used set spread rates. Figure 9.35 shows the historic trend for metalling quantities. The trendline shows that the volume quantities are increasing over the years.

Figure 9.35 - Historic Metalling Quantities



9.9.2 Historic Renewal Costs

Figure 9.36 - Historical Expenditure Unsealed Pavement Maintenance (as of June 2024)



9.9.3 Renewal Decision Making Process

Metalling is based on the requirement to ensure that there is no loss of pavement depth on any road. The work is programmed according to the effects on the safety of road users, the severity and assessed rate of deterioration of the pavement depth, and the location in relation to the carrying out of other works in the area.

9.9.4 Renewals Strategies to Meet Levels of Service

Council emphasis is on wearing course metal replacement, and this is budgeted on an annual basis. Rehabilitation and smoothing projects are included as a “as requirement” is identified basis, from regular network inspections.

The current strategy is to complete spot metalling on noticeable bare sections and then complete a thin spread over the full length to be re-metalled. The management approach is very hands-on by the inspector out on site (the road) rather than planned in the office.

9.9.5 Identification and Prioritisation of Work

Currently the identification and prioritisation of work is mostly completed by the contractor and a programme of work put forward to the Engineer for approval each month. However, work is very reactive and areas of pavement can deteriorate very quickly if intervention is delayed. Therefore, Council Roading unit has a robust overview of the metalling requirements.

9.9.6 Replacement Standards

Requirements and standards for materials and replacement methodology for the wearing course metal are specified in the Road Network Operations and Maintenance Contract.

9.9.7 Summary of Future Costs

Future costs have been based on estimated metalling requirements. Rates from the existing Road Network Operations and Maintenance Contract have been applied to estimated quantities.

Table 9.15 - Proposed Unsealed Road Metalling Budget for 2024-27 (as at November 2024)

211 Unsealed Road Metalling	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
	300 km						
Replacement of wearing and running course metal on unsealed roads. (m³ per year)	13,000	$20.13	$261,690	$261,690	$266,924	$272,943	$801,556
Heavy Metalling	1,000	$42.70	$42,700	$42,700	$43,554	$44,536	$130,790
Share of Monthly Costs inspection Programming Etc.	0.15	$328,148.72	$49,222	$49,222	$50,207	$51,339	$150,768
Administration	0.1	$95,000.00	$9,500	$9,500	$9,690	$9,909	$29,099
211 Unsealed Road Metalling Total			**$363,112**	**$363,112**	**$370,375**	**$378,726**	**$1,112,213**

Table 9.16 - Proposed Unsealed Road Metalling Budget for 2027-34 (as at November 2024)

211 Unsealed Road Metalling	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Replacement of wearing and running course metal on unsealed roads. (m³ per year)	$347,361	$356,749	$366,039	$375,165	$384,194	$393,385	$402,054
Heavy Metalling	$45,343	$46,569	$47,781	$48,973	$50,151	$51,351	$52,483
Share of Monthly Costs inspection Programming Etc.	$52,269	$53,682	$55,080	$56,453	$57,812	$59,195	$60,499
Administration	$10,088	$10,361	$10,631	$10,896	$11,158	$11,425	$11,676
211 Unsealed Road Metalling Total	**$455,061**	**$467,360**	**$479,530**	**$491,487**	**$503,314**	**$515,356**	**$526,712**

9.9.8 Unsealed Renewal NLTP approved allocation.

211	Unsealed Road Metalling	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$363,112	$370,375	$378,726	$1,112,213
NZTA funding allocation		$364,072	$370,746	$377,419	$1,112,237
Not Funded		$960	$371	-$1,307	$24

9.10 Drainage Control Assets Maintenance

Local Road Pothole Prevention Activity Class *WC113: Routine Drainage Maintenance*

9.10.1 Current Trends and Issues

9.10.1.1 Scope and Nature of Asset

Drainage is vital to the performance of pavements, as well as customer level of service for safety and resilience. Drainage control assets consist of kerb and channel, culverts of less than 3.4 m^2 cross sectional area and fords. The purpose of these assets is to provide a stormwater carrying capacity for runoff from the road carriageway, footpaths, berms, and adjacent properties to:

- allow the convenient and safe movement of pedestrians and traffic.
- protect paved areas from water ingress and resulting structural deterioration.

The use of concrete kerb and channels, as opposed to open drains, is a recognised and accepted sign of urban development. With the flat profile of the Districts urban areas, ponding and stagnant water can easily eventuate if well-formed channels are not used.

The key issues relating to drainage control are:

- Poor inlet detail capacity within areas of Waimate urban
- Blockages causing high maintenance in Waimate urban.
- Quantity of aged kerb and channel within the Waimate urban area
- Original watercourse disrupted by irrigation/border dykes causing flood prone areas.

Roadside drainage is key to maximising the life of road pavements, by protecting them from ingress of water. Better targeting of drainage maintenance and construction has a significant effect on reducing pavement renewal quantity and cost. The quantity of drainage undertaken has been reduced since the large quantities of the early 2000's. The current amount of work is too low, especially given the change in groundwater conditions arising from irrigation and the changing climate events.

Some portions of the urban kerb and channel network are at or nearing the end of their useful life. These sections will need to be replaced for pavement protection, safety, and amenity purposes.

Figure 9.37 - Very Poor Condition Rated Kerb and Channel

Figure 9.38 - New Dish Kerb and Channel

Table 9.17 - Drainage Assets (November 2023)

Drainage Type	Quantity	
	Length (m)	Quantity (No.)
Culvert		
0-300mm Dia.	22,499	2,287
300-440mm Dia.	3,900	372
450-500mm Dia.	3,153	3,395
520-600mm Dia.	4,176	337
600-950mm Dia.	1,902	152
990-1200mm Dia.	912	74
1250-2000mm Dia.	420	37
Total	**36,962**	**6,654**
Concrete Ford		
Concrete Fords	1,750	90
Total	**1,750**	**90**

Drainage Type	Length (km)
Kerb and Channel	
Kerb and Channel	41,873
Kerb and Dished Channel	5,437
Dished Channel	1,246
Kerb only	385
Mountable Kerb and Channel	105
Mountable Kerb Only	85
Total	**49,131**

9.10.1.2 Current Condition

The kerb and channel, and dished channels are inspected and classed as being in “good”, “poor” or “very poor” condition. There is also an ongoing inspection and maintenance regime under the Road Network Operations and Maintenance Contract.

Figure 9.39 - Culvert Condition (Novemebr 2023)

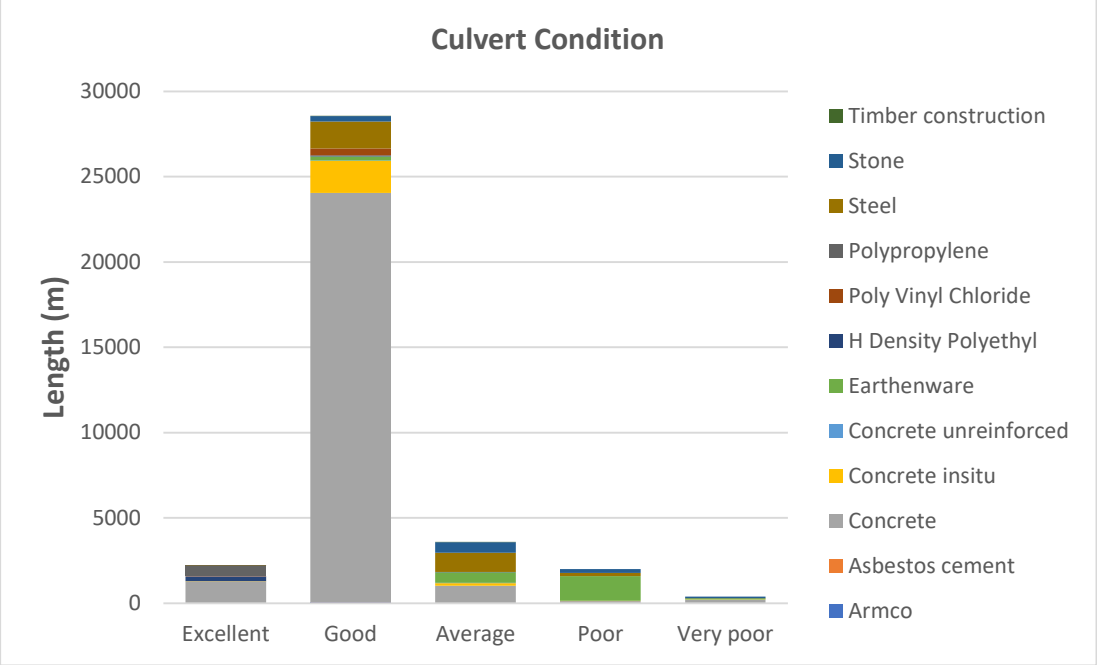
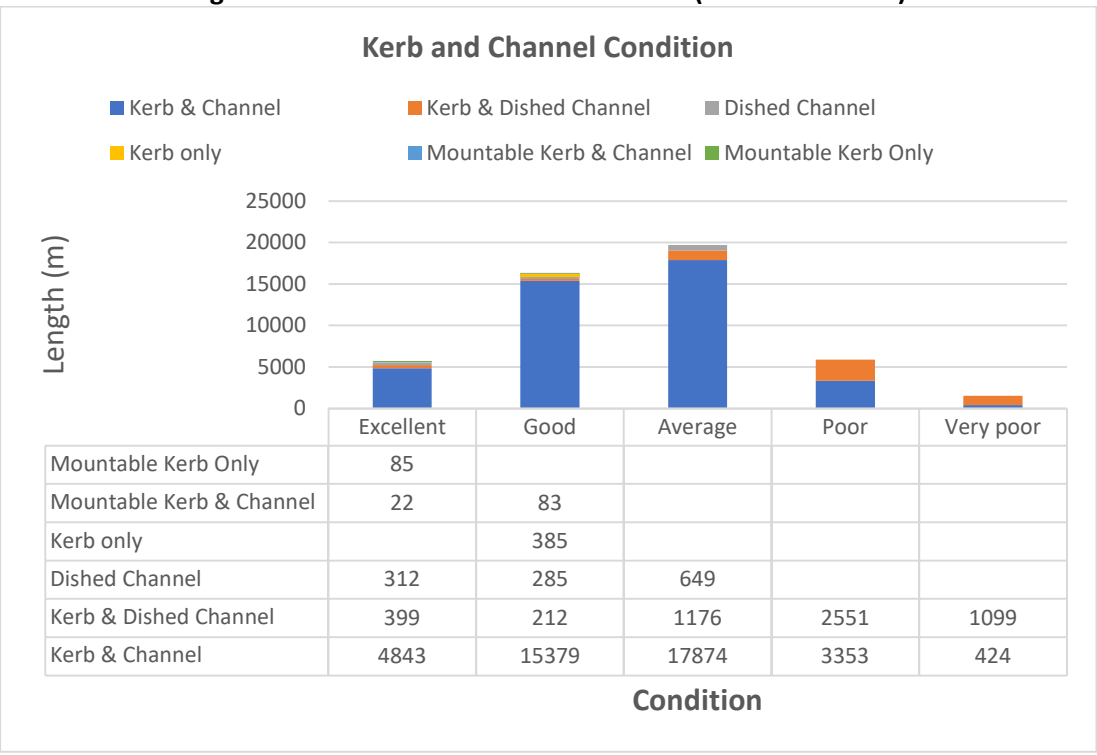


Figure 9.39 - Kerb and Channel Condition (Novemebr 2023)



	Excellent	Good	Average	Poor	Very poor
Mountable Kerb Only	85				
Mountable Kerb & Channel	22	83			
Kerb only		385			
Dished Channel	312	285	649		
Kerb & Dished Channel	399	212	1176	2551	1099
Kerb & Channel	4843	15379	17874	3353	424

9.10.1.3 Current Capacity and Performance

Performance issues for drainage control assets relate to:

- Coverage (i.e. open water tables and/or ponding areas that should be serviced by pipe drains or formed channels)
- Pavement damage (due to drainage problems)*
- Continual scour issues during storm events (Drainage problems)*
- Stormwater entrance capacity

- A large quantity of wash over culverts/fords
- River fords requiring to be closed numerous times per year.
- Conformity with standards (kerb and channel in all urban streets)

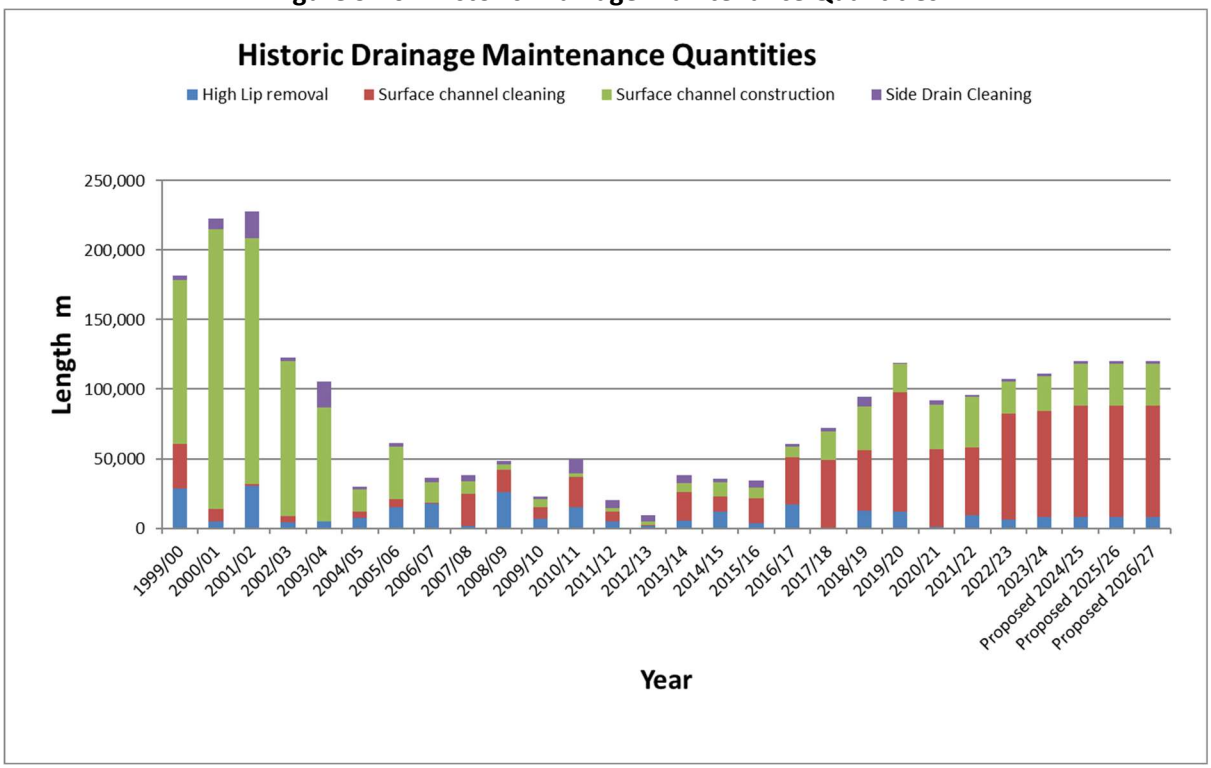
* For this plan, this is where the drainage control assets will require focus and improvements.

Surface water drainage requires regular maintenance and renewal. Recent quantities of surface water channels maintenance and renewals have been inadequate. Some of Council's surface water channels have deteriorated to a point where they require reconstruction; this will be a priority.

9.10.1.4 Historic Maintenance Data

Figure 9.40 shows the annual maintenance quantities over the last 24 years, and propose next three years ahead. Quantities of drainage work completed have reduced since 2003/04 year due to budget constraints and just slowly increasing in the last few years.

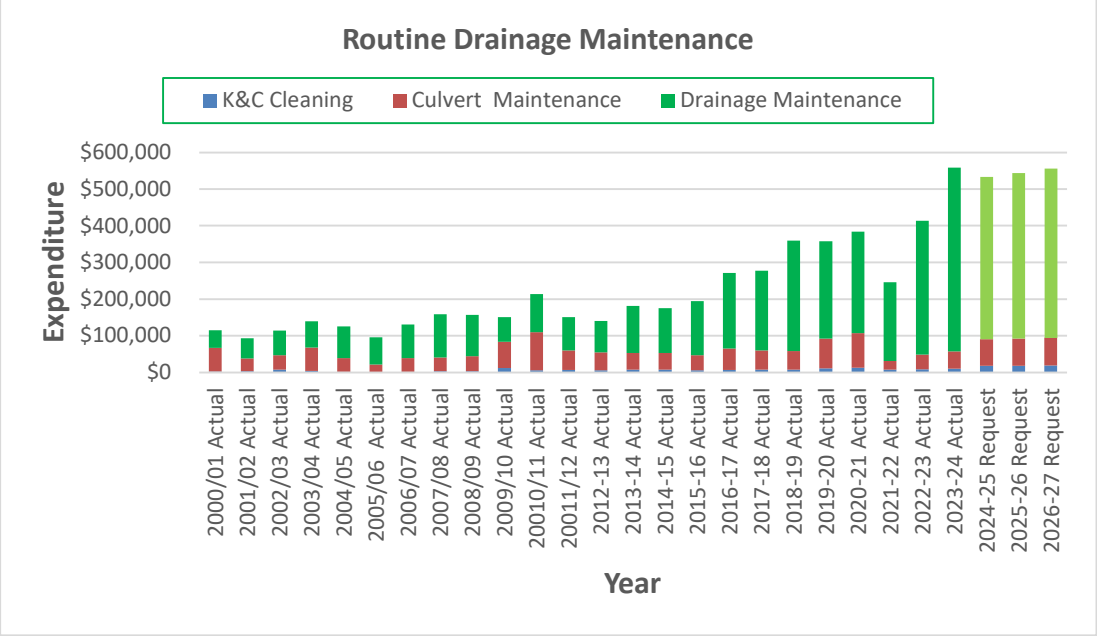
Figure 9.40 - Historic Drainage Maintenance Quantities



9.10.1.5 Drainage Maintenance Historic Costs

As seen in Figure 9.41, for drainage control assets maintenance, over the years 2015/18, the average expenditure was $248,000, and in 2018/2021, the average expenditure was $367,000. Over the years 2021/24, the average expenditure estimate is $373,000. When comparing between the quantity of work done and the related expenditure, it can be clearly seen that the amount of work completed over the recent years has been roughly consistent, while the expenditure keeps increasing.

Figure 9.41 - Drainage Control Assets Maintenance Historical Expenditure (As at June2024)



9.10.2 Maintenance Decision Making Process

Drainage maintenance is included under the Road Network Operations and Maintenance Contract covering:

- minimum maintenance standards
- frequency of routine inspections
- response times to correct defects.

Condition inspections: The maintenance contractor is required to report any defects observed during day-to-day road operations and maintenance activity.

Unplanned condition assessment of critical drainage assets is required after each storm event (heavy downpour) to assess the number of culverts, drains, and sumps affected by blockages.

The Contractor is required to maintain an effective communication system and level of preparedness to ensure emergency works are undertaken within the specified response timeframes, as defined in the Road Network Operations and Maintenance Contract specifications.

9.10.3 Strategy to Meet Levels of Service

Poor maintenance of the drainage system can lead to blocked drainage and can cause the pavement layers to be submerged with excess water leading to pavement failure. The maintenance strategy is based on identifying areas on the network where inadequate drainage can have a significant effect on the road network and to both road users and Council.

9.10.3.1 Pavement Performance

Poor drainage and moisture are the main contributor to permanent deformation issue on our roads. The most affecting factor triggering the need for pavement repairs is poor quality drainage. Improving the drainage in critical sections and maintaining the drainage in good condition has proven to increase pavement life.

9.10.3.2 Traffic Safety Risk

Poor drainage is a traffic safety risk. Water may accumulate on the road like ponds. The accumulated water creates a risk of aquaplaning during rain. A wet surface reduces friction that leads to longer braking distances required. Surface water can freeze during the night in winter causing ice on the road.

9.10.3.3 Storm Damage and Gravel Loss

All critical drainage assets are required to be inspected and cleaned following major storm events. Uncontrolled water flows on the road pavement and shoulders causes erosion and gravel loss. Improving the drainage will reduce storm damage repairs.

The maintenance standards to be achieved are set out in Council's specifications contained in the Road Network Operations and Maintenance Contracts.

Council's preference is for a minimum diameter of 300mm concrete culverts under roads. Metal culverts are not used due to premature corrosion failure.

9.10.4 How Tasks Are Prioritised

The mechanism for prioritisation used by Council's contractors is as outlined in the Road Network Operations and Maintenance Contract specification is outlined in Table 9.5. Damaged and malfunctioning drainage control assets identified by public complaint or contractor reports are programmed for repair according to the following additional priority:

- public health and safety
- accelerated deterioration of pavement likely to occur.
- inconvenience occurring to road users, pedestrians, and/ or property owners (such as accessibility)
- untidy visual appearance.

9.10.5 Summary of Future Costs

Most of the drainage maintenance are reactive therefore budgets were mainly based on historical expenditure.

Table 9.18 - Proposed Routine Drainage Maintenance Budget for 2024-27 (as at November 2024)

113 Routine Drainage Maintenance	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
rt & Concrete ford Maintenance.							
Light Cleaning of culverts Rural	500	$23.18	$11,590	$11,590	$11,822	$12,088	$35,500
ar inspections and cleaning of culverts Urban	12	$1,350.00	$16,200	$16,200	$16,524	$16,897	$49,621
ete Ford Maintenance	$15,000	1	$15,000	$15,000	$15,300	$15,645	$45,945
t Maintenance	$30,000	1	$30,000	$30,000	$30,600	$31,290	$91,890
			$72,790	$72,790	$74,246	$75,920	$222,956
Drainage Maintenance							
ation control Kerb & Channel	12	$343.13	$4,118	$4,118	$4,200	$4,295	$12,612
p removal (m)	8,000	$1.48	$11,810	$11,810	$12,046	$12,317	$36,173
e water Channel clearing (m one side)	90,000	$3.06	$275,598	$275,598	$281,110	$287,449	$844,157
rain cleaning	2,000	$5.51	$11,029	$11,029	$11,249	$11,503	$33,781
channel vegation control	200	$103.70	$20,740	$20,740	$21,155	$21,632	$63,527
Priced & Day Work Maintenance	$35,000	1	$35,000	$35,000	$35,700	$36,505	$107,205
River maintenance schemes Council share	$9,000	1	$9,000	$9,000	$9,180	$9,387	$27,567
of Monthly Costs inspection Programming Etc.	0.20	$328,148.72	$65,630	$65,630	$66,942	$68,452	$201,024
istration	0.1	$95,000.00	$9,500	$9,500	$9,690	$9,909	$29,099
			$442,424	$442,424	$451,272	$461,448	$1,355,144
& Channel Cleaning 30% of cost	12	$1,500	$18,000	$18,000	$18,360	$18,774	$55,134
113 Routine Drainage Maintenance Total			$533,214	$533,214	$543,878	$556,142	$1,633,233

Table 9.19 - Proposed Routine Drainage Maintenance Budget for 2027-34 (as at November 2024)

113 Routine Drainage Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Culvert & Concrete ford Maintenance.							
Light Cleaning of culverts Rural	$12,307	$12,640	$12,969	$13,293	$13,612	$13,938	$14,245
Regular inspections and cleaning of culverts Urban	$17,203	$17,668	$18,128	$18,580	$19,027	$19,482	$19,911
Concrete Ford Maintenance	$15,929	$16,359	$16,785	$17,204	$17,618	$18,039	$18,437
Culvert Maintenance	$31,857	$32,718	$33,570	$34,407	$35,235	$36,078	$36,873
	$77,295.70	**$79,384.77**	**$81,452.01**	**$83,482.85**	**$85,491.86**	**$87,537.25**	**$89,466.19**
Drainage Maintenance							
Vegetation control Kerb & Channel	$4,372	$4,491	$4,607	$4,722	$4,836	$4,952	$5,061
High lip removal (m)	$12,541	$12,880	$13,215	$13,544	$13,870	$14,202	$14,515
Surface water Channel clearing (m one side)	$292,658	$300,567	$308,394	$316,083	$323,690	$331,434	$338,738
Side drain cleaning	$11,711	$12,028	$12,341	$12,649	$12,953	$13,263	$13,555
Water channel vegation control	$22,024	$22,619	$23,208	$23,787	$24,359	$24,942	$25,492
Priced & Day Work Maintenance	$37,167	$38,171	$39,165	$40,142	$41,108	$42,091	$43,019
River maintenance schemes Council share	$9,557	$9,815	$10,071	$10,322	$10,571	$10,823	$11,062
Share of Monthly Costs inspection Programming Etc.	$69,692	$71,576	$73,440	$75,271	$77,082	$78,926	$80,666
Administration	$10,088	$10,361	$10,631	$10,896	$11,158	$11,425	$11,676
	$469,809.67	**$482,507.23**	**$495,072.06**	**$507,415.68**	**$519,626.57**	**$532,058.67**	**$543,782.90**
Kerb & Channel Cleaning 30% of cost	**$19,114.20**	**$19,630.80**	**$20,142.00**	**$20,644.20**	**$21,141.00**	**$21,646.80**	**$22,123.80**
113 Routine Drainage Maintenance Total	**$566,220**	**$581,523**	**$596,666**	**$611,543**	**$626,259**	**$641,243**	**$655,373**

9.10.6 Deferred Maintenance and Associated Risks

Council completing a risk assessment on culverts on the road network and verifying RAMM data. This information will be used with condition data and to form a replacement programme.

Ongoing attention will be directed to the impacts on drainage of climate change rainfall and drought changes and its effects.

9.10.7 Drainage Maintenance NLTP approved allocation.

113	Routine Drainage Maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$533,214	$543,878	$556,142	$1,633,233
NZTA funding allocation		$523,744	$533,345	$542,945	$1,600,034
Not Funded		-$9,470	-$10,533	-$13,197	-$33,199

9.11 Drainage Renewals

Local Road Pothole Prevention Activity Class *WC213: Drainage Renewals*

9.11.1 End of Life Projections

There is 37.2km of culvert length, 90 concrete fords, and 49.1km of kerb and channels on the road network. Based on an average 75-year life (Valuation assumes 40-100 years), 4,850m of drainage assets would need to be replaced every year. The requested programme is for 260m per year that will replace the poor and very poor culverts in five (5) years.

A risk assessment of culverts will be completed to provide additional data for renewal (replacement) projections. Therefore, based on end of useful life projections, Council is possibly under investing in culvert renewals.

The kerb and channel (K&C) on the network are getting very aged. A substantial amount of it are deep K&C that is very expensive to replace. The current requested programme is for 600m per year. This is a modest programme and will take Council over 15 years to replace over 8,000m of poor and very poor channel.

Table 9.20 - Culvert Condition (November 2023)

Culvert Material	Condition					
	Excellent	Good	Average	Poor	Very Poor	Total (m)
Armco		56				56
Asbestos cement		23	7			30
Concrete	1,267	23,960	1,026	121	200	26,574
Concrete in-situ	20	1,891	153	27	18	2,109
Concrete unreinforced		15	8			23
Earthenware		233	627	1,438	72	2,370
H Density Polyethyl	284	60	16			360
Poly Vinyl Chloride	21	420				441
Polypropylene	592					592
Steel	6	1,581	1,120	183	8	2,898
Stone		306	620	229	99	1,254
Timber construction		7	8			15
Total Length (m)	2,190	28,552	3,585	1,998	397	36,722

9.11.2 Renewal Decision Making Process

Drainage renewals work provides for drainage work that is not routine maintenance in nature but clearly demonstrated to reduce future maintenance costs required.

Examples of drainage works include:

- Renewal or installation of culverts with a diameter greater than 600mm but having a waterway less than or equal to 3.4m2
- Repair and replacement of kerb and channels, provided that the deterioration is likely to adversely affect the performance of the pavement.
- Installation of water channels, sub-soil drainage, or kerb and channel, where this is shown to be necessary to protect adjacent property from run-off from the road surface and the most cost-effective form of drainage control for the purpose of protecting the pavement.

9.11.3 Renewals Strategies to Meet Levels of Service

Council has a process of assessing condition of all culverts, verifying RAMM data and estimating construction dates of culvert itself so that a replacement programme can be determined. Along with the review of this asset information, the current size of the culvert is being reviewed against the waterway area need. Any culvert inlet and outlets are also being inspected to determine if they present a shoulder hazard.

With the current increase in frequency and intensity of storm events the District is facing, this strategy becomes an important factor, to make sure that the current asset meets the current levels of service. Council requires to ensure that the District remains resilient, accessible, and safe.

Figure 9.42 - Deep Type Kerb and Channel

Figure 9.43 - Shallow Type Kerb and Channel

9.11.4 Identification and Prioritisation of Work

The renewal programme is prioritised basis on the overall asset condition, road group (ONRC/ONF), proximity of street trees, and extent of adjacent carriageway failure. Full renewal of kerb and dish channel is justified economically when more than 30% of the length of the channel is broken.

Contractors and Council inspections are used to identify culverts, and kerb and channels for replacement.

9.11.5 Replacement Standards

Requirements and standards for materials and replacement methodology for culverts and kerb and channels are specified in the Road Network Operations and Maintenance Contract. All new culverts shall be installed in accordance with NZTA F/3 specification: Specification for Pipe Culvert Construction.

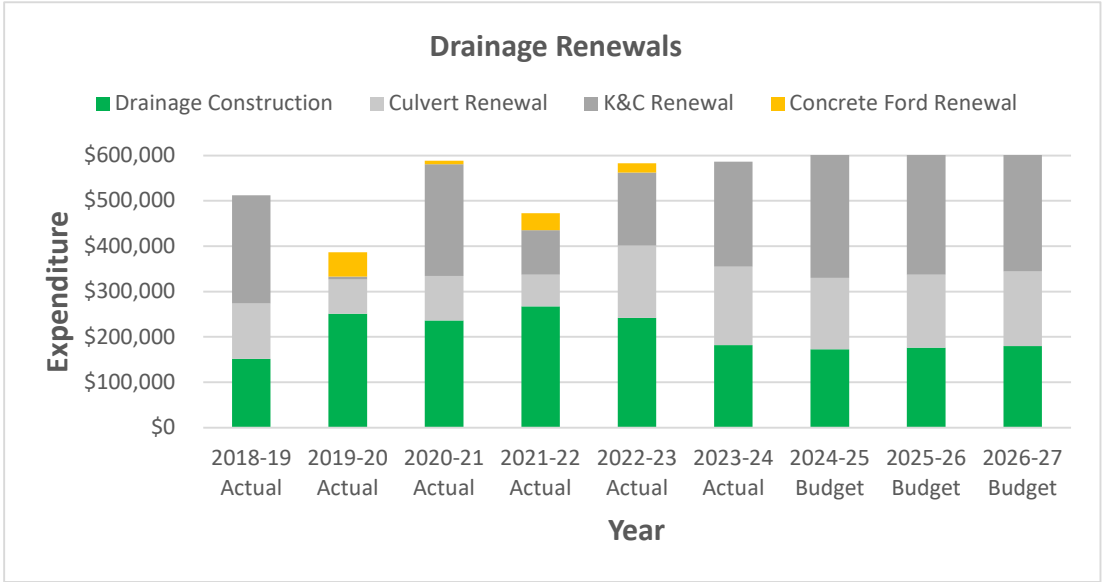
Council's preference is for a minimum diameter of 300mm concrete culverts under roads. Steel culverts are not used now, due to corrosion.

Figure 9.44 - Large Culvert Replacement - Hillboro Culvert

Figure 9.45 - Proposed Large Culvert Replacement – McNamaras Road Culvert

9.11.6 Drainage Renewals Historical Expenditure

Figure 9.46 - Drainage Assets Renewal Historical Expenditure (As at June2024)



9.11.7 Summary of Future Costs

Future proposed costs have been based on estimated renewal requirements. Rates from the existing Road Network Operations and Maintenance Contract have been applied to estimated quantities.

Increase level of Drainage Renewal have been identified to provide additional proactive drainage to provide network resilience and kerb and channel renewals due to assets that has already failed.

Table 9.21 - Proposed Drainage Renewal Budget for 2024-27 (as at November 2024)

213 Drainage Renewals	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Drainage Construction							
Surface water Channel Construction m	19,000	$6.27	$119,145	$119,145	$121,528	$124,268	$364,942
Soak Pit Construction	7	$1,500.00	$10,500	$10,500	$10,710	$10,952	$32,162
Misc. drainage Construction Side drains etc.	$30,000	1	$30,000	$30,000	$30,600	$31,290	$91,890
Professional Services	$8,000	1	$8,000	$8,000	$8,160	$8,344	$24,504
Administration	0.05	$95,000.00	$4,750	$4,750	$4,845	$4,954	$14,549
			$172,395	**$172,395**	**$175,843**	**$179,808**	**$528,046**
Concrete Ford Renewal	$40,000	1	$40,000	$40,000	$40,800	$41,720	$122,520
Professional Services	$5,000	1	$5,000	$5,000	$5,100	$5,215	$15,315
			$45,000	**$45,000**	**$45,900**	**$46,935**	**$137,835**
Culvert Replacement - Renewal or installation of culverts							
225/'300/375 mm diameter m 150 road crossings	150	$393.31	$58,997	$58,997	$60,177	$61,534	$180,707
450/600 mm diameter m 4 road crossings	40	$829.99	$33,200	$33,200	$33,864	$34,627	$101,690
>600 mm die 2 road crossings	24	$1,464.00	$35,136	$35,136	$35,839	$36,647	$107,622
Large culvert < 3.5 m² 1 crossing	12	$2,500.00	$30,000	$30,000	$30,600	$31,290	$91,890
Additional work	$20,000	1	$20,000	$20,000	$20,400	$20,860	$61,260
Administration	0.04	$95,000.00	$3,800	$3,800	$3,876	$3,963	$11,639
Professional Services	$12,000	1	$12,000	$12,000	$12,240	$12,516	$36,756
			$193,132	**$193,132**	**$160,987**	**$164,617**	**$518,736**
Kerb & Channel Renewal Inc. renewal of sumps	800	$350.00	$280,000	$280,000	$285,600	$292,040	$857,640
Administration	0.03	$95,000.00	$2,850	$2,850	$2,907	$2,973	$8,730
Professional Services	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
			$292,850	**$292,850**	**$298,707**	**$305,443**	**$897,000**
213 Drainage Renewals Total			**$703,378**	**$703,377**	**$681,437**	**$696,803**	**$2,081,617**

Table 9.22 - Proposed Drainage Renewal Budget for 2027-34 (as at November 2024)

213 Drainage Renewals	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Drainage Construction							
Surface water Channel Construction m	$266,359	$273,557	$280,681	$287,679	$294,602	$301,651	$308,298
Soak Pit Construction	$11,150	$11,451	$11,750	$12,042	$12,332	$12,627	$12,906
Misc. drainage Construction Side drains etc.	$37,167	$38,171	$39,165	$40,142	$41,108	$42,091	$43,019
Professional Services	$8,495	$8,725	$8,952	$9,175	$9,396	$9,621	$9,833
Administration	$5,044	$5,180	$5,315	$5,448	$5,579	$5,712	$5,838
	$328,214	**$337,085**	**$345,863**	**$354,486**	**$363,017**	**$371,702**	**$379,893**
Concrete Ford Renewal	$42,476	$43,624	$44,760	$45,876	$46,980	$48,104	$49,164
Professional Services	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
	$47,786	**$49,077**	**$50,355**	**$51,611**	**$52,853**	**$54,117**	**$55,310**
Culvert Replacement - Renewal or installation of culverts							
225/'300/375 mm diameter m 150 road crossings	$83,532	$85,789	$88,023	$90,218	$92,389	$94,599	$96,684
450/600 mm diameter m 4 road crossings	$45,831	$47,070	$48,295	$49,500	$50,691	$51,904	$53,047
>600 mm die 2 road crossings	$55,966	$57,479	$58,976	$60,446	$61,901	$63,382	$64,778
Large culvert < 3.5 m² 1 crossing	$63,714	$65,436	$67,140	$68,814	$70,470	$72,156	$73,746
Additional work	$31,857	$32,718	$33,570	$34,407	$35,235	$36,078	$36,873
Administration	$4,035	$4,144	$4,252	$4,358	$4,463	$4,570	$4,671
Professional Services	$12,743	$13,087	$13,428	$13,763	$14,094	$14,431	$14,749
	$297,678	**$305,723**	**$313,685**	**$321,506**	**$329,243**	**$337,120**	**$344,548**
Kerb & Channel Renewal Inc. renewal of sumps	$334,499	$343,539	$352,485	$361,274	$369,968	$378,819	$387,167
Administration	$3,026	$3,108	$3,189	$3,269	$3,347	$3,427	$3,503
Professional Services	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
	$348,144	**$357,553**	**$366,864**	**$376,011**	**$385,060**	**$394,272**	**$402,960**
213 Drainage Renewals Total	**$1,021,822**	**$1,049,438**	**$1,076,767**	**$1,103,614**	**$1,130,172**	**$1,157,211**	**$1,182,711**

9.11.8 Drainage Renewals NLTP approved allocation.

213	Drainage Renewals	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$703,378	$717,445	$733,623	$2,154,446
NZTA funding allocation		$703,782	$716,682	$729,582	$2,150,046
Not Funded		$404	-$763	-$4,041	-$4,400

9.12 Bridges Maintenance

Local Road Operations Activity Class *WC114: Structures Maintenance*

9.12.1 Current Trends and issues

9.12.1.1 Scope and Nature of Asset

The purpose of road bridges is to provide continuous all weather access over rivers and streams. These include culverts with a waterway area greater than or equal to 3.4m^2.

The key issues relating to the management of road bridges are:

- Council's lack of available funds to replace bridges.
- The need to develop a Council Policy on disposal of uneconomic bridges.
- Ensuring the bridge foundations are protected against scour, degradation, and aggradations.
- Maintaining the structural integrity of the bridge.

Table 9.23 - Council's Bridge Assets (November 2023)

Bridge Asset Type	Quantity	Council's Bridge Assets (November 2023)	% of Length
Major Culvert			**5.4%**
Concrete Box Culvert	9	Council's Bridge Assets (November 2023)	1.2%
Concrete Precast Box Culvert	10	Council's Bridge Assets (November 2023)	1.4%
Conc. pipes Culvert	6	Council's Bridge Assets (November 2023)	1.1%
Steel multi-plate Culvert	12	Council's Bridge Assets (November 2023)	1.7%
Concrete			**19.1%**
Concrete, HC units	11	Council's Bridge Assets (November 2023)	15.1%
Concrete, I beam	1	Council's Bridge Assets (November 2023)	1.5%
Concrete	11	Council's Bridge Assets (November 2023)	2.5%
Steel and Concrete			**55.4%**

Bridge Asset Type	Quantity	Council's Bridge Assets (November 2023)	% of Length
Steel , Precast Conc. Deck	75	Council's Bridge Assets (November 2023)	46.3%
Steel, Insitu. Conc. Deck	8	Council's Bridge Assets (November 2023)	9.1%
Steel and Timber			**13.5%**
Steel, Timber deck	21	Council's Bridge Assets (November 2023)	13.8%
Steel			**0.1%**
Steel, Steel deck	1	Council's Bridge Assets (November 2023)	0.1%
Timber			**6.2%**
Timber	16	Council's Bridge Assets (November 2023)	5.5%
Timber light truss	1	Council's Bridge Assets (November 2023)	0.7%
Stone Arch			**0.3%**
Stone Arch	1	Council's Bridge Assets (November 2023)	0.3%
Total	**182**	Council's Bridge Assets (November 2023)	**100%**

In the District, Council has 17 timber (excluding deck), and their expected useful life of timber structures is 70 years. Some of these bridges have had major strengthening or bridge component replacement works completed within the last 30 years. Structure Component Replacement (WC215) is planned for some of Council's structures, refer to Section 9.13 for more information.

Table 9.24 - Timber Bridges, Excluding Deck

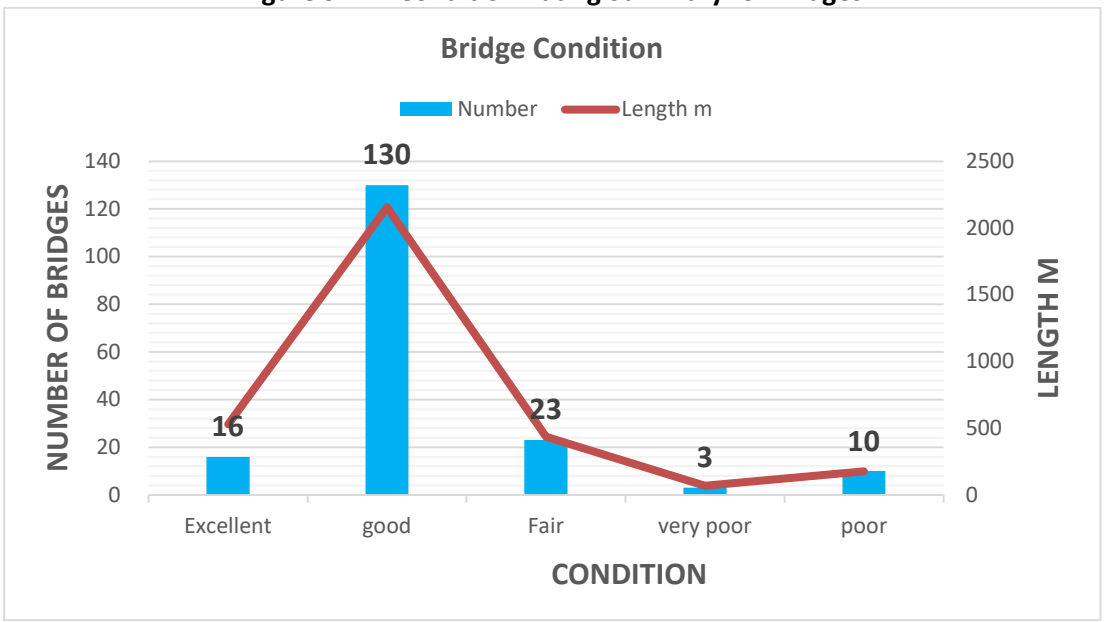
Bridge No.	Bridge Name	Kerb Width	Length (m)	Spans	Year	Beams Year	Deck Year	Single Lane	Posted Bridge	Timber Structural Element
29	Holme Station Corner	2.62	22.40	3	1924	1924	1994	Yes	Yes	Beam
41	Drinnans	3.70	66.40	9	1924	1988	1988	Yes		Piles
52	Ryans	2.03	11.90	2	1986			Yes	Yes	Beam
66	Old Horseshoe Bend	4.57	7.90	1	1920	1920	1980	Yes	Yes	Beam
81	Bournedale Homestead	2.54	14.60	3	1930	1930	1930	Yes	Yes	Beam
99	Adams	5.03	4.80	1	1890	1990	1980	Yes	Yes	Beam
106	Golf Course	7.00	2.00	1	1920		1985			Beam
108	Becketts	3.80	20.10	3	1930	1992	1992	Yes		Piles
115	McNamaras	9.50	5.50	2	1898					Beam

Bridge No.	Bridge Name	Kerb Width	Length (m)	Spans	Year	Beams Year	Deck Year	Single Lane	Posted Bridge	Timber Structural Element
116	Cunninghams	3.91	5.80	1	1992		1992	Yes		Beam
117	Poigndestres	4.57	33.80	7	1920		1984	Yes	Yes	Beam
120	Scarletts	2.36	12.20	2	1920	1920	1920	Yes	Yes	Beam
130	Lundys	2.10	7.30	1	1960	1960	1960	Yes	Yes	Beam
131	Murphys	4.27	10.50	2	1929		1981	Yes		Beam
142	Waihuna	2.54	11.00	2	1920		2009	Yes	Yes	Beam
152	Ponsonbys	2.69	14.60	3	1988		1988	Yes	Yes	Beam
156	Rickmans	3.35	11.30	2	1969			Yes	Yes	Beam
170	Farm Road	2.72	24.40	5	1920		1988	Yes	Yes	Beam
172	Cleeves	4.06	3.80	1	1986		1986	Yes	Yes	Beam
191	Hakataramea Downs	3.70	42.10	5	1920	1994	1994	Yes	Yes	Piles
Total	**21**		**332.4**					**19**	**14**	

9.12.1.2 Current Condition

All bridges have a condition rating. Condition inspections are undertaken by both the maintenance contractor and the bridge maintenance professional services contractor. A third of the bridge stock is inspected each year (additionally after flood, earthquakes and overload events that may have had some effect on the bridges integrity) taking into account such factors as structural integrity, defects, safety and appearance. The Condition Rating Summary for all bridges is included in Figure 9.47. Generally annual expenditure is keeping the asset in a fair to good condition.

Figure 9.47 - Condition Rating Summary for Bridges



Timber is a less durable material suffering from rot and insect attack (which can be controlled by chemical treatment), natural defects such as cracking and splitting and, in the case of timber decks, surface abrasion from traffic.

9.12.1.3 Current Capacity and Performance

Table 9.25 - Bridge Load Capacity

Bridge No.	Bridge Name	Road Name	Length (m)	Year	axle/gross/speed	Ford
29	Holme Station Corner	Pareora River	22.40	1924	2000/3500/30	Yes
52	Ryans	Esk Bank	11.90	1986	-/3000/30	Yes
58	Taylors	Woolshed Valley	8.00	1993	80% / 30	Yes
64	Spring Bank	Springbank Rd	11.00	1923	---/6500/10	Yes
66	Old Horseshoe Bend	Old Horseshoe Bend	7.90	1920	5000/5000/30	No
81	Bournedale Homestead	Bournedale Homestead	14.60	1930	60%/4500/30	Yes
82	Hunter	Pakihi	24.40	1960	80% class1	No
93	Meyers	Gunns	7.30	1999	axle3500/30	Yes
99	Adams	Deep Creek	4.80	1890	10km/hr	No
104	Frewens	Moores	6.00	1950	6000/9000/30	Yes
117	Poigndestres	Poigndestres	33.80	1920	2000/3000/10	No
120	Scarletts	Fletchers	12.20	1920	3000/5000/10	Yes
130	Lundys	Crowes rd	7.30	1960	1500/3000/30	Yes
142	Waihuna	Redcliffs Back	11.00	1920	4500/4500/30	Yes
152	Ponsonbys	Bridge	14.60	1988	gross3000/30	Yes
153	Whites	Whites	7.30	2000	60%/60%/30	Yes
156	Rickmans	Waitaki Valley	11.30	1969	3000/4000/30	Yes
157	Hursts	Hursts	14.60	1930	---/6500/10	Yes
158	McKees	Waihaorunga Back	15.20	1930	gross5000/30	Yes
170	Farm Road	Farm Road	24.40	1920	1600/3000/30	Yes
172	Cleeves	Milne	3.80	1986	6000/90%/30	Yes
174	Hakataramea Station	Homestead	14.60	1930	2000/4000/30	Yes
186	Menzies	Menzies	9.80	1930	---/6500/10	Yes
191	Hakataramea Downs	Hakataramea Downs	42.10	1920	70% / 10km/hr	No
Total	**24**		**340.3**			**19 with fords**

Design loadings have increased as vehicle sizes and carrying capacity have been increasing. Table 9.25 shows the bridges that do not meet current standard Class 1 loads and are weight and/or speed restricted.

9.12.1.3.1 Traffic Capacity

144 bridges are single lane bridges, however given the low traffic volumes on the network this is considered appropriate for capacity purposes based on existing traffic volumes.

9.12.1.3.2 Natural Hazards

Bridges are at risk from natural hazard events such as floods, earthquakes, slips, and the failure of adjacent services (e.g. water mains). It is only in recent times that earthquake standards have been incorporated into bridge design. Most bridges were designed to have sufficient waterway area capacity to handle design flood flows. Erosion and scour of piers are a concern for some bridges. Council has a number of bridges that are at risk from natural flood disasters and earthquakes.

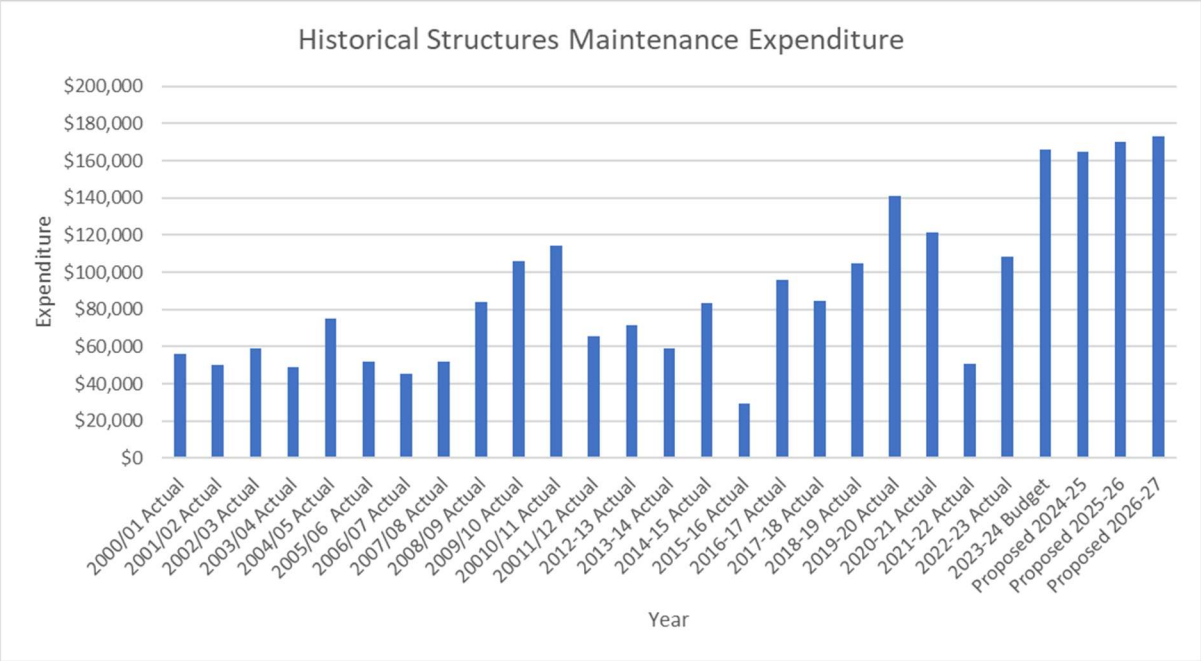
Bridges being out of services has an impact on the performance and resilience of the road network as a whole. The critical bridges have been identified through a risk management process, Appendix Section 13.2.

9.12.1.4 Historic Maintenance Costs

Over the years 2018/21, the average expenditure per year has been $123,000 for structures maintenance, and the annual expenditure for the years 2021/24 is $108,000. It is proposed that for 2024/27, the annual average expenditure for Structure Maintenance is $169,000, and is based on condition inspections and identified maintenance needs.

With the increase in frequency and intensity of storm events, Council require to increase their proactive maintenance of the bridge assets.

Figure 9.48 - Historical Structures Maintenance Expenditure



9.12.2 Maintenance Decision Making Process

Bridge inspections are completed as follows:

- On-going superficial inspections co-ordinated with other routine maintenance work
- General inspections and a full structural inspection of a third of the asset undertaken each year on a three-year cycle by a Bridge Engineer, taking into account such factors as structural integrity, defects, safety and appearance
- Special inspections after specific events such as earthquakes, severe floods or instances of overloading.

Inspection outcomes include recommendations for maintenance and prioritisation for timing of repairs. Each item of the bridge maintenance programme is the most cost effective response to the defect identified, except where a shorter term but lower cost remedy is selected when budget limitations apply and all maintenance items are assessed as equally urgent. Standard NZTA economic evaluation criteria are used to evaluate treatment options.

The Road Network Operations and Maintenance Contract includes the routine inspection, maintenance, and repair of bridges.

The type of maintenance work activity undertaken includes:

- planned maintenance inspections
- repairing structural defects (e.g. concrete spalling, corroded fastenings, rotten timber, undermining of foundations)
- repairing/replacing damaged components (e.g. handrails and guard-rails)
- restoring protective coatings (e.g. painting)
- maintaining drainage
- waterway area clearing.

The Waimate District has 105 bridges with steel beams (70% of the bridge length) There is an ongoing steel beam painting. to preserve the life of the beams.

Council uses the NZTA Bridge Maintenance Manual as Council's maintenance standards.

9.12.3 Strategy to Meet Levels of Service

The maintenance standards to be achieved are set out in the specifications contained in the Road Network Operations and Maintenance Contracts. These standards will need to be reviewed in light of the new Levels of Service outlined in Section 5.

9.12.4 How Tasks Are Prioritised

Maintenance programmes are developed 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.

9.12.5 Summary of Future Costs

Future costs have been based on estimated routine maintenance needs including inspections.

Table 9.26 - Proposed Structure Maintenance Budget for 2024-27 (as at November 2024)

114 Structures Maintenances	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Provides for the work necessary to maintain the structural condition and appearance of all bridges							
Routine Maintenance -inspection clearing deck, drainage holes .	183	$79.30	$14,512	$14,512	$14,802	$15,136	$44,450
Painting handrails 109 bridges 2150m 15 year programme 150m per year	150	$150	$22,500	$22,500	$22,950	$23,468	$68,918
Steel Beams corrosion treatment	$25,000	1	$25,000	$25,000	$25,500	$26,075	$76,575
General Repairs	$65,000	1	$65,000	$65,000	$66,300	$67,795	$199,095
Waterway Maintenance	$35,000	1	$35,000	$35,000	$35,700	$36,505	$107,205
Administration	0.03	$95,000.00	$2,850	$2,850	$2,907	$2,973	$8,730
114 Structures Maintenances Total			**$164,862**	**$164,862**	**$168,159**	**$171,951**	**$504,972**

Table 9.27 - Proposed Structure Maintenance Budget for 2027-34 (as at November 2024)

114 Structures Maintenances	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Provides for the work necessary to maintain the structural condition and appearance of all bridges							
Routine Maintenance -inspection clearing deck, drainage holes .	$15,410	$15,827	$16,239	$16,644	$17,044	$17,452	$17,837
Painting handrails 109 bridges 2150m 15 year programme 150m per year	$23,893	$24,539	$25,178	$25,805	$26,426	$27,059	$27,655
Steel Beams corrosion treatment	$26,548	$27,265	$27,975	$28,673	$29,363	$30,065	$30,728
General Repairs	$69,024	$70,889	$72,735	$74,549	$76,343	$78,169	$79,892
Waterway Maintenance	$37,167	$38,171	$39,165	$40,142	$41,108	$42,091	$43,019
Administration	$3,026	$3,108	$3,189	$3,269	$3,347	$3,427	$3,503
114 Structures Maintenances Total	**$175,067**	**$179,798**	**$184,480**	**$189,080**	**$193,630**	**$198,263**	**$202,632**

9.12.6 Deferred Maintenance and Associated Risks

Current maintenance funding levels appear adequate and there is no significant backlog of routine maintenance.

9.12.7 Structures Maintenance NLTP Approved Allocation

114 Structures Maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$164,862	$168,159	$171,951	$504,972
NZTA funding allocation	$163,678	$166,678	$169,678	$500,034
Not Funded	-$1,184	-$1,481	-$2,273	-$4,938

9.13 Bridge Renewals and Replacements

Local Road Operations Activity Class *WC215: Structures Component Replacements*

9.13.1 End of Life Projections

The bridge schedule provides details of the actual age of most structures and the estimated age of those where the construction date is not known. This information is detailed in the Bridge Operations and Maintenance Plan.

9.13.2 Renewal Decision Making Process

Asset renewal is undertaken when a structure, or significant components of a structure, has reached the end of their serviceable/economic life. Renewal provides for the following work:

- replacing a structurally inadequate bridge
- replacing a bridge for non-structural reasons such as inadequate width or waterway area
- structurally modifying an existing bridge to increase its standard capacity to a level higher than originally provided.
- renewal of components of road bridges, retaining structures, guardrails, tunnels, stock access structures, cattle stops, footpaths on road structures, and pedestrian over-bridges/underpasses.

9.13.3 Renewals Strategies to Meet Levels of Service

A Bridge Replacement and Upgrade Strategy has been developed by the Bridging professional services consultant. This strategy details the bridges that:

- require to be upgraded to Class 1,
- require beam and/or deck replacement.
- need full replacement.

9.13.4 Identification and Prioritisation of Work

The timing for replacement and upgrade works is indicated in the strategy for some bridges, but based on District's local knowledge, information provided, and forecast budgets, the priority of work is generally left to Council managed within its constraints.

Prioritisation of works and the selection of renewal options are made on the basis of an economic evaluation using NZTA criteria. The cost/benefit calculations include an assessment of risks associated with earthquakes and floods. The lowest cost option, considering all lifecycle costs over a 30-year period, is selected except where funding limitations necessitate shorter term (lower cost) options for works that cannot be deferred.

River crossing projects that cannot be economically justified in terms of NZTA criteria shall be considered by the Engineering and Works Committee on a case-by-case basis for recommendation to Council, if additional funding is deemed appropriate.

9.13.5 Replacement Standards

The NZTA Bridge Manual (SP/M/022)[51] is adopted for the design of new structures and for the evaluation of existing structures.

[51] Bridge manual | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

Figure 9.49 - Age of Existing Bridges (as at December2023)

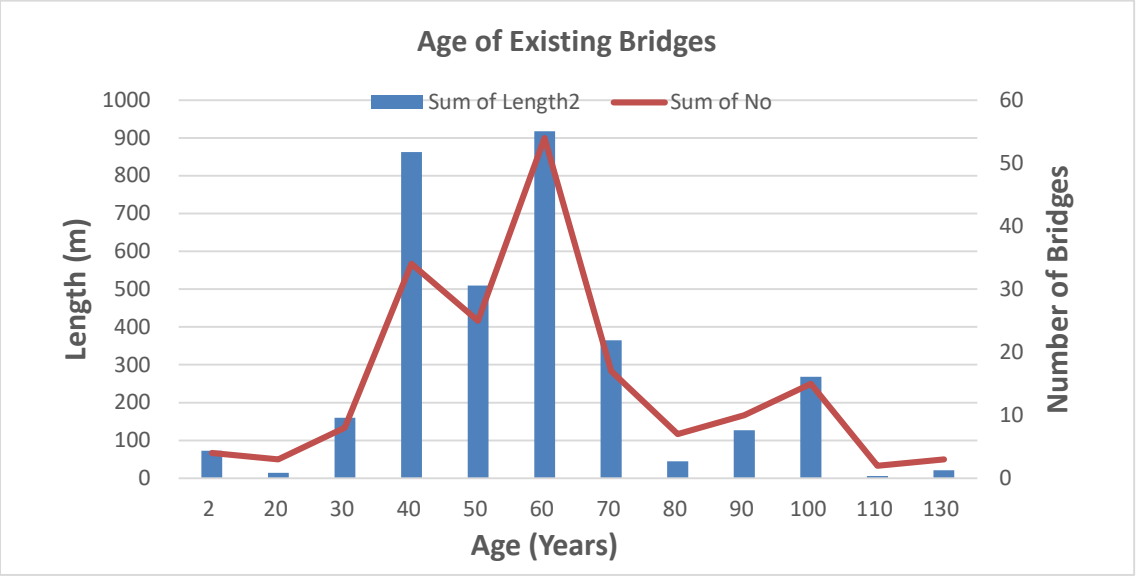


Table 9.28 - List of Bridge Structures Component Replacement / Renewals. (Updated as of February 2025)

Bridge		Existing Bridge Materials								Dimensions (m)		Component Replacement		
No	Name	Deck	Beams	Piers	Abuts	Condition	axle gross speed	Traffic Volume & Use	Notes	Width	Length	Option	ESTIMATE preferred Option	Priority
117	Poigndestres	Timber	Timber	Timber Piles	Concrete/ Timber	Poor	2000 5000 30	low, Access to Beach only	Major structure access to beach walkway one farm . Bridge is closed until repairs complete. Assessment completed	3.2	33.8	Reduce width to 3.2m,Sleave decayed piles, general repairs, Gross loading 5000 kg (completed 2/25)	**$35,000**	1
170	Farm Road	Timber Fair	Timber Truss Poor	Rail iron/ timber	Rail iron/ timber	Very Poor	1600 3000 30	45 vpd	Gravel Ford ,Side bridge	3.0	24.0	Replace superstructure ex SH 82 Waitaki Br 2x 12m span Replace Piles	**$160,000**	1
172	Cleeves	Timber	Timber	Nil	Nil	Very Poor	6000 90% 30	1 House access	Gravel Ford ,Side bridge	4.2	3.8	Replace superstructure with steel beams timber deck	**$35,000**	1
81	Bournedale Homestead.	Timber	Timber	Rail iron/ timber	Rail iron/ timber	Poor	60% 4500 30	1 farm access	No alternative access, gravel Ford	2.5	14.6	Replace superstructure with steel beams timber deck	**$85,000**	1
99	Adams	Timber 1990	Timber	Nil	Concrete	Fair	10km	35 vpd	no ford, Beams cracked, deck receives heavy traffic damage	5.0	4.8	Replace superstructure with RC concrete	**$55,000**	2
130	Lundys	Timber	Timber	Nil	Concrete, Good condition	poor	1500 3000 30	1 farm access Flood Bridge	Concrete Ford, Side bridge flood channel	2.1	7.3	Remove Bridge low use no houses or Replace superstructure with steel beams timber deck $30,000	**$55,000**	2
52	Ryans	Timber	Timber	Rail iron/ timber	Rail iron/ timber	Fair	gross 3000 30	1 farm access	Gravel Ford Side Bridge Abutments Rebuilt 1988	2.0	11.9	Replace deck and beams.	**$45,000**	2
191	Hakataramea Downs	Timber Laminated 1994 Good Condition	Steel	Timber Piles poor	Timber Piles	average	70% 10	30 vpd	Steel beams & new deck 1994. Timber piles poor 4 piers	3.8	42.1	Replace or repair piles Piles	**$115,000**	2
106	Golf Course.	Timber	Timber	Nil	Concrete	Fair	C1	510 vpd	Review capacity and condition prior to committing to replacement Priority	7.0	2.0	Replace superstructure with RC concrete	**$45,000**	2
120	Scarletts	Timber 1920	Timber	Rail iron/ timber	Concrete	Poor	3000 5000 10	60 vpd	Concrete Ford, Side bridge	2.4	12.2	Widen Concrete Ford and increase number of pipes. Remove side bridge or Replace superstructure. and poor abutment $80,000	**$60,000**	3

Bridge		Existing Bridge Materials								Dimensions (m)		Component Replacement		
No	Name	Deck	Beams	Piers	Abuts	Condition	axle gross speed	Traffic Volume & Use	Notes	Width	Length	Option	ESTIMATE preferred Option	Priority
142	Waihuna	Timber 2010	Timber	Rail iron/ timber	Concrete	Poor	4500 4500 30	110 vpd	Concrete Ford, Side bridge	2.5	11.0	Replace beams, pier & deck. Retain Abutments	**$45,000**	3
156	Rickmans	Timber	Timber	Rail iron/ timber	Rail iron/ timber	Fair	3000 4000 30	1 large farm access	Rebuilt 1986. Ford bypass.	3.4	11.3	Replace timber beams in steel	**$55,000**	3
65	Otaio Cemetery.	Timber	Steel	Nil	Concrete	Fair	C1	farm & Cemetery access	No alternative access, no Ford	4.3	4.0	Replace deck and beams	**$40,000**	4
82	Hunter	Precast	Steel	Nil	Concrete	Good	80% 30	95 vpd	Existing 22"beams Not class 1	4.0	24.4	strengthen beams and deck to remove posting.	**$125,000**	4
66	Old Horseshoe Bend	Timber	Timber	Nil	Concrete	Fair	5000 5000 30	25 vpd	Ex SH 1 bridge	4.6	7.9	Replace superstructure. or Close Bridge due to close alternative	**$45,000**	4
154	Armstongs	Concrete	Steel	N A	Stone	Fair	C1	25 vpd	Wingwall detaching from Abutment	4.5	6.1	Install Gabion buttresses	**$50,000**	4
41	Drinnans	Timber 1989	Steel 1989	Timber Piles	Timber Piles	Fair	C1	100 vpd	This bridge is an important link Piles in poor condition	4.2	75.0	Replace or Repair piles	**$150,000**	4
158	McKees	Timber	Steel	Steel Piles	Steel Piles	Fair	gross 5000 30	25 vpd	Concrete Ford, Side bridge Centre Pire is leaning	2.5	15.2	Replace pier	**$45,000**	4
116	Cunninghams	Timber 1992	Timber	Nil	Steel Piles	Fair	C1	one house	No alternative access, No Ford	3.9	5.8	Replace timber beams in steel	**$40,000**	4
131	Murphys	Timber Baulk 1981	Timber	Concrete	Concrete	Fair	C1	250 vpd	No Ford	4.3	10.5	Replace timber beams in steel Reuse deck	**$60,000**	5
29	Holme Station Corner	Timber Laminated 1994 Good Condition	Timber	Rail iron/ timber	Concrete	fair	2000 3500 30	35 vpd	Side bridge, Arterial Road, site requires 2 lane, Existing concrete ford for normal use	3.2	23.0	Replace Timber beams with steel	**$130,000**	5
103	Molloys	Concrete	Concrete	Nil	Concrete	Good	C1	260 vpd	Uncertain Design	7.3	4.0	Strengthen deck	**$30,000**	5

Bridge		Existing Bridge Materials								Dimensions (m)		Component Replacement		
No	Name	Deck	Beams	Piers	Abuts	Condition	axle gross speed	Traffic Volume & Use	Notes	Width	Length	Option	ESTIMATE preferred Option	Priority
25	Craigmore	Precast Units	Steel	Concrete	Concrete	good	C1	50 vpd	Exposed steel piles	4.5	32.0	Extend pier piles exposed	**$50,000**	5
31	Colliers	Precast Units	Steel	Concrete	Concrete	good	C1	Access to DOC camp	Exposed steel piles	4.5	22.0	Extend pier piles exposed	**$35,000**	5
22	Millars	Precast Units	Steel	Concrete	Concrete	good	C1	30 vpd	Exposed steel piles	4.5	24.8	Extend abutment pile section exposed	**$40,000**	6
78	Hamiltons	Precast Units	Steel	Concrete	Concrete	good	C1	70 vpd	Exposed steel piles	4.5	42.7	Extend pier piles exposed	**$40,000**	6
153	Whites	Timber	Timber	Nil	Stacked stone	Poor	60% 60% 30	6 vpd	No alternative access, gravel Ford	3.1	7.3	replace deck	**$20,000**	6
123	Champions No 2	Timber	Steel	Nil	Concrete	Fair	C1	30 vpd	no ford	4.0	2.6	Replace deck.	**$15,000**	6
152	Ponsonbys	Timber 1988	Timber/ Steel	Steel Piles 1988	Steel Piles	Fair	gross 3000 30	1 farm access	Gravel Ford Side Bridge Rebuilt 1988	2.7	14.6	Replace deck and beams	**$40,000**	6
186	Menzies	Timber 2010	Steel 2010	Rail iron/ timber	Rail iron/ timber	Poor	gross 6500 10	30 vpd	Concrete Ford, Side bridge New steel beam & deck 2010	2.7	9.8	Replace piles	**$35,000**	6
157	Hursts	Timber 2009	Steel 2009	Rail iron/ timber	Rail iron/ timber	Poor	gross 6500 10	30 vpd	Concrete Ford, Side bridge New steel beam & deck 2009	2.7	14.6	Replace piles	**$45,000**	6
1	Brasells	Timber 1981,1986, 1994	Steel 1986 & 1994	Steel Piles	Steel Piles	average	C1	80 vpd	Bridge rebuilt following flood damage in 1986 & 1994 some 1981 deck used	3.9	161.3	Replace plank deck spans with laminated timber deck	**$180,000**	6
93	Meyers	Timber 1999	Steel 1999	Nil	Steel 1999	Good	axle 3500 30	30 vpd	Concrete Ford, Side bridge New steel beam & deck 1999	3.1	7.3	Replace laminated timber deck	**$15,000**	6

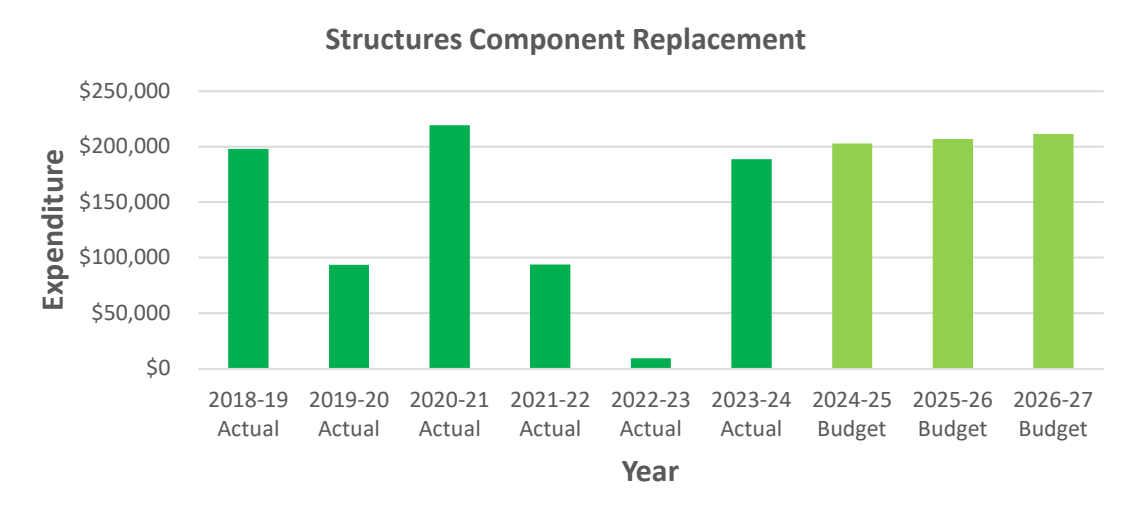
9.13.6 Proposed Disposal

Council is considering the future of the following weight-restricted side bridges

- Scarletts Bridge on Fletchers Road, and
- Lundys Bridge on Crowes Road.

9.13.7 Structure Component Replacement Historical Expenditure

Figure 9.50 - Structures Component Maintenance Expenditure



9.13.8 Summary of Future Costs

The renewals budget for structures is based on the Bridge Replacement and Upgrade Strategy. Council has not used WC 216: Bridge Structure Renewal and is not proposing to use this work category in the next NLTP 2024-27.

Table 9.29 - Proposed Structure Component Replacement Budget for 2024-27 (as at November 2024)

215 Structures component replacement	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Bridge Upgrade -Deck , beam replacement etc.	188000	1	$188,000	$188,000	$191,760	$196,084	$575,844
Professional Services	$12,000	1	$12,000	$12,000	$12,240	$12,516	$36,756
Administration	0.03	$95,000.00	$2,850	$2,850	$2,907	$2,973	$8,730
215 Structures component replacement Total			**$202,850**	**$202,850**	**$206,907**	**$211,573**	**$621,330**

Table 9.30 - Proposed Structure Component Replacement Budget for 2027-34 (November 2024)

215 Structures component replacement	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Bridge Upgrade -Deck , beam replacement etc.	$233,618	$239,932	$246,180	$252,318	$258,390	$264,572	$270,402
Professional Services	$12,743	$13,087	$13,428	$13,763	$14,094	$14,431	$14,749
Administration	$3,026	$3,108	$3,189	$3,269	$3,347	$3,427	$3,503
215 Structures component replacement Total	**$249,387**	**$256,127**	**$262,797**	**$269,349**	**$275,831**	**$282,431**	**$288,654**

9.13.9 Structure Component Replacement NLTP approved allocation.

215 Structures component replacement	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$202,850	$206,907	$211,573	$621,330
NZTA funding allocation	$196,414	$200,014	$203,614	$600,042
Not Funded	-$6,436	-$6,893	-$7,959	-$21,288

9.14 Environmental Maintenance

Local Road Operations Activity Class *WC121: Environmental Maintenance*

9.14.1 Current Trends and Issues

This work category is operations focussed, to keep other assets in service. This is done by providing routine care and attention of the road corridor to maintain safety, aesthetic, and environmental standards.

9.14.2 Scope and Nature of Activity

The scope of environmental maintenance is, but is not limited to:

- Snow clearing and ice control.
- Vegetation control
- Litter collection on rural roads and associated public footpaths, share paths and cycle paths.
- Removal of, and protection against, graffiti on road structures
- Maintenance and removal of effluent form stock-truck effluent disposal facilities
- Any special treatment of run-off from the road to maintain water quality.
- Sweeping loose chip and detritus from road intersections
- Removal of rocks and minor slip material from the road or catch fences.
- Maintenance of rest areas
- Maintenance of protection planting, including maintenance pruning
- non-recoverable costs arising from clearing the carriageway or associated public footpaths, shared paths or cycle paths of damaged vehicles, crash debris and spillages that are not the responsibility of emergency services.
- non-recoverable costs associated with removal of abandoned vehicles from road reserves.

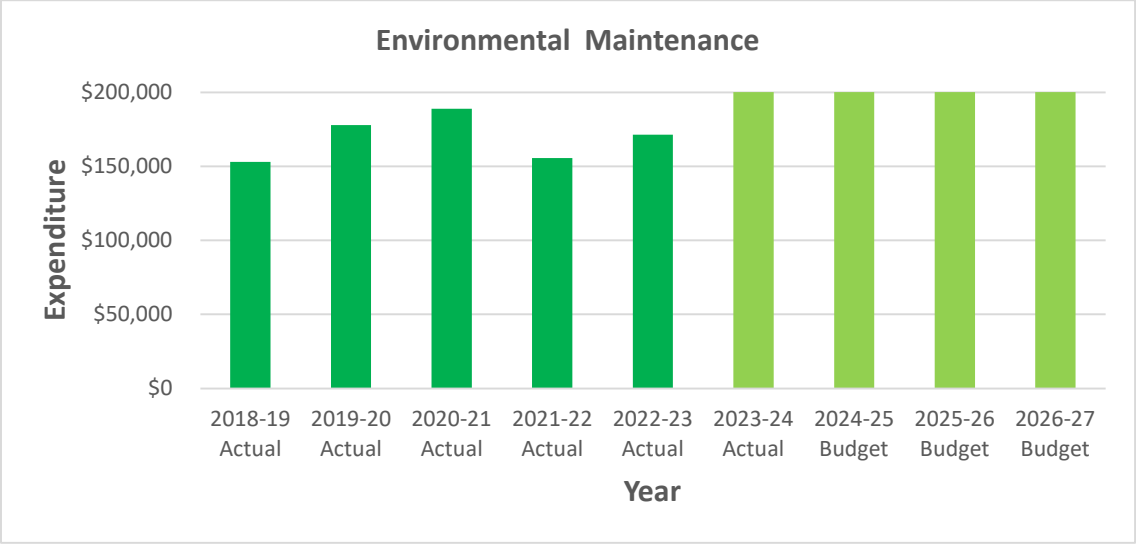
The purpose of Environmental Maintenance is to provide:

- Adequate visibility
- General safety
- Drainage
- The elimination of a fire hazard or pest refuge
- In urban and rural areas, clearing vegetation from public footpaths, shared paths, and cycle paths associated with roadways where vegetation would impede safe access and use.

9.14.2.1 Historic Maintenance Cost

Over the years 2015-18 the average expenditure has been $173,300 for environmental maintenance. In the period 2021/24 the average annual expenditure has been $172,300, which is less than the previous NLTP, and therefore reflects the potential amount of work that was done on the District's network. This in turn has caused the network to be less resilient after a storm event due to vegetation not cleared.

Figure 9.51 - Historical Environmental Maintenance Expenditure



9.14.3 Strategy to Meet Levels of Service

The sight line corridor is crucial to ensure road user safety by allowing an unobstructed view of oncoming hazards. Trees on the road reserve have been identified as a safety and resilience issue.

Costs associated with vegetation control; and managing events such as flooding have increased and larger budgets are required to main the network's resilience and safety. Vegetation control needs and responding to environmental events are difficult to predict. With climate change, there is a risk of a greater frequency and severity of storms.

There are some trees on the road network that have been identified for removal to improve the safety and resilience of the network. Some trees are quite large and require specialist arborists.

9.14.4 Summary of Future costs

Future costs have been based on estimated mowing quantities and lump sum amounts from the Road Network Operations and Maintenance Contract.

Table 9.31 - Proposed Environmental Maintenance Budget for 2024-27 (as at November 2024)

121 Environmental Maintenance	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Normal care of the road corridor to maintain the safety , aesthetic and environmental Standards							
Vegetation Control							
Vegetation Control Roadside Furniture	12	$686.25	$8,235	$8,235	$8,400	$8,589	$25,224
Vegetation Control Bridge Approaches/Railway Crossi	12	$457.50	$5,490	$5,490	$5,600	$5,726	$16,816
Vegetation Control Bridge Wilding Trees	12	$686.25	$8,235	$8,235	$8,400	$8,589	$25,224
Vegetation Control Rural Intersections	12	$686.25	$8,235	$8,235	$8,400	$8,589	$25,224
Removal of vegetation hazards includes trees	$20,000	1	$20,000	$20,000	$20,400	$20,860	$61,260
Plant pests including , control after Road Works	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
Shoulder Mowing 176 km 4 x per year, 241 km 2 x pe	1800	$32.79	$59,028	$59,028	$60,209	$61,567	$180,804
Vegetation Control Sub Total			$119,223	**$119,223**	**$121,608**	**$124,350**	**$365,182**
Rural Detritus/litter removal	12	$1,525.00	$18,300	$18,300	$18,666	$19,087	$56,053
Remove mud etc.	$5,000	1	$5,000	$5,000	$5,100	$5,215	$15,315
Stock Effluent Disposal Scheme	$7,000	1	$7,000	$7,000	$7,140	$7,301	$21,441
Rock Fall slips	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
Sub Total Debris Litter			$40,300	**$40,300**	**$41,106**	**$42,033**	**$123,439**
Snow and Ice Control ,Signs (Subject to weather)	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
Sub Total Winter			$10,000	**$10,000**	**$10,200**	**$10,430**	**$30,630**
Flood patrol Signs See minor events							
Share of Monthly Costs inspection Programming Etc.	0.10	$328,148.72	$32,815	$32,815	$33,471	$34,226	$100,512
Administration	0.04	$95,000.00	$3,800	$3,800	$3,876	$3,963	$11,639
Sub Total Enviromental Other			$36,615	**$36,615**	**$37,347**	**$38,189**	**$112,151**
121 Environmental Maintenance Total			**$206,138**	**$206,138**	**$210,261**	**$215,002**	**$631,402**

Table 9.32 - Proposed Environmental Maintenance Budget for 2027-34 (as at November 2024)

121 Environmental Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Normal care of the road corridor to maintain the safety , aesthetic and environmental Standards							
Vegetation Control							
Vegetation Control Roadside Furniture	$8,745	$8,981	$9,215	$9,445	$9,672	$9,903	$10,122
Vegetation Control Bridge Approaches/Railway Crossi	$5,830	$5,987	$6,143	$6,296	$6,448	$6,602	$6,748
Vegetation Control Bridge Wilding Trees	$8,745	$8,981	$9,215	$9,445	$9,672	$9,903	$10,122
Vegetation Control Rural Intersections	$8,745	$8,981	$9,215	$9,445	$9,672	$9,903	$10,122
Removal of vegetation hazards includes trees	$21,238	$21,812	$22,380	$22,938	$23,490	$24,052	$24,582
Plant pests including , control after Road Works	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Shoulder Mowing 176 km 4 x per year, 241 km 2 x pe	$62,682	$64,376	$66,053	$67,700	$69,329	$70,988	$72,552
Vegetation Control Sub Total	**$126,603**	**$130,025**	**$133,411**	**$136,737**	**$140,028**	**$143,378**	**$146,538**
Rural Detritus/litter removal	$19,433	$19,958	$20,478	$20,988	$21,493	$22,008	$22,493
Remove mud etc.	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Stock Effluent Disposal Scheme	$7,433	$7,634	$7,833	$8,028	$8,222	$8,418	$8,604
Rock Fall slips	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Sub Total Debris Litter	**$42,795**	**$43,951**	**$45,096**	**$46,220**	**$47,332**	**$48,465**	**$49,533**
Snow and Ice Control ,Signs (Subject to weather)	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Sub Total Winter	**$10,619**	**$10,906**	**$11,190**	**$11,469**	**$11,745**	**$12,026**	**$12,291**
Flood patrol Signs See minor events							
Share of Monthly Costs inspection Programming Etc.	$34,846	$35,788	$36,720	$37,635	$38,541	$39,463	$40,333
Administration	$4,035	$4,144	$4,252	$4,358	$4,463	$4,570	$4,671
Sub Total Enviromental Other	**$38,881**	**$39,932**	**$40,972**	**$41,994**	**$43,004**	**$44,033**	**$45,003**
121 Environmental Maintenance Total	$218,898	$224,814	$230,669	$236,420	$242,109	$247,902	$253,365

9.14.5 Environmental Maintenance NLTP Approved Allocation

121 Environmental maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$206,138	$210,261	$215,002	$631,402
NZTA funding allocation	$188,230	$191,680	$195,130	$575,040
Not Funded	-$17,908	-$18,581	-$19,872	-$56,362

9.15 Network Services Maintenance

Local Road Operations Activity Class *WC 122: Network Services Maintenance*

9.15.1 Current Trends and Issues

Traffic services are devices used to support the safety performance and functional use of the network, including:

- Road furniture
  - Including road delineation marker posts, signs, sight rails, etc.
- Pavement markings
  - Including bus priority lanes and cycleway markings on all non-separated road surfaces
- Carriageway and pedestrian crossing lighting
  - Including carriageway lighting and their control systems, belisha beacons and lighting at pedestrian crossings.

9.15.1.1 Scope and Nature of Asset

9.15.1.1.1 Signs and Marking

Signs and Marking assets are devices used for the orderly control of vehicles and people on public roads. Their function is to: Regulate, Warn, Guide and Inform. Signs and marking assets consist of road signs, road markings, edge marker posts (EMPs), and railings.

The key issues relating to traffic services are:

- deteriorated signs
- sign damage due to vandalism and traffic accidents.

Within RAMM there is an inventory for these traffic services asset components: signs, traffic, features, markings and railings.

Table 9.33 - Signs and Markings Asset Information (as at December 2023)

Type of Signage	Quantity
Bridge Warning	286
Bridge Weight Limit	52
Chevron Board	151
Intersection Control	293
Parking	41
Permanent Warning	959
Speed limit	116
Street/Road Name	1,451
Width marker /Hazard marker	715
Total	**4,064**

9.15.1.1.2 Streetlight

The purpose of street lighting is to provide sufficient lighting levels in streets to allow the safe and efficient movement of vehicles, cyclists, and pedestrians.

The asset has been developed over a number of years and has recently been upgraded to LEDs on the Local roads, which has a high output for a relatively low wattage, making them efficient and cost effective to use. This have been standardised to match makes in use in the surrounding Districts to reduce maintenance expenditure.

Council manages the maintenance and renewal of streetlights throughout the District excluding those on the State Highways owned by NZTA. Council's streetlights are attached to poles either owned by the Council or by Alpine Energy Limited, and Alpine Energy Limited maintains their poles. The demarcation point is the pole fuse, which is the supply point to the Alpine Energy Limited power network.

Maintenance of streetlights covers the replacement of failed lamps, and repair of any damage. Maintenance works are undertaken to:

- ensure safety to the public
- protect the investment in assets by extending the life of the assets
- minimise repair costs.

As NetCon Limited also maintains streetlights for the neighbouring Districts (Timaru and Mackenzie), it is cost effective to standardise on lanterns and fittings common to all three Districts. This has largely been achieved with all of lanterns being LEDs.

9.15.1.2 Current Condition, Capacity, and Performance

9.15.1.2.1 Signs and Marking

The condition of signs and road markings is assessed in routine inspections undertaken by the maintenance contractor, with the results reported to Council's Roading Engineer. There is no formal condition rating system for traffic services, with condition assessed visually against the relevant NZTA standards.

The extent of deterioration of road markings depends on age, traffic volume, the materials used, and the condition of the road, as oil and grit reduce adhesion.

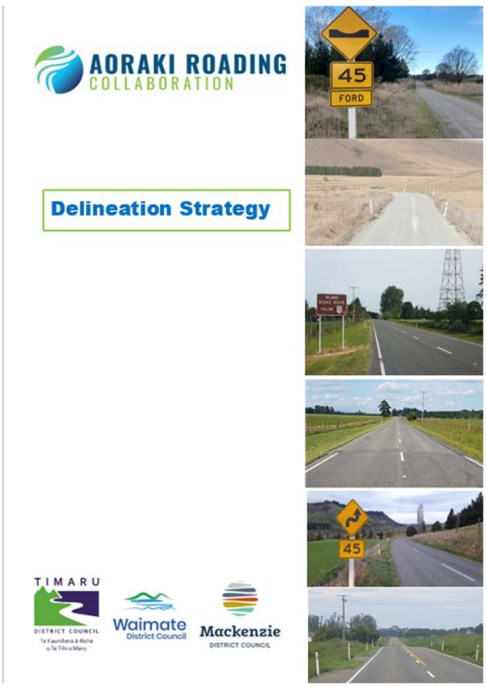
Most signs are replaced as a result of damage, resulting from vandalism and vehicle crashes. Loss of reflectivity through weathering is the most significant cause of signage deterioration. Performance issues for signs and road marking relate to coverage, accuracy of placement, visibility, and conformity with the required standards. The traffic services assets in the District is considered to overall be in good condition.

9.15.1.2.2 Aoraki Roading Collaboration (ARC) Delineation Strategy

The Aoraki Roading Collaboration (ARC) Delineation Strategy provides guidance on industry good practice to ensure consistency of delineation and signage across the roads of Mid and South Canterbury.

This document is intended to complement the Traffic Control Devices manual (TCD manual) rather than supersede the TCD manual.

The aim of this strategy is to provide road users with a consistent series of messages about the severity of approaching bends and other hazards and allow them to negotiate them in a safer manner, thereby reducing crashes the risk of death or serious injury on the roading network.



9.15.1.2.3 Streetlights

In 2020/21, street lightings were upgraded to LEDs to all 70W high-pressure sodium vapour street light luminaries on the road network. This has achieved cost efficiencies through energy efficiencies and reduction in maintenance costs.

For streetlight capacity and performance, issues relate to:

- light intensity
- reliability
- safety.

The current level of complaints, and current level of maintenance and renewal has greatly reduced due to the upgrades over the past recent years.

The Waimate District street lighting other than on the state highways has evolved from perceived need rather than being based on standard performance design requirements. Older fluorescent and mercury vapour lanterns have been upgraded (1999) to high pressure sodium, and now upgraded to LEDs (2020/21).

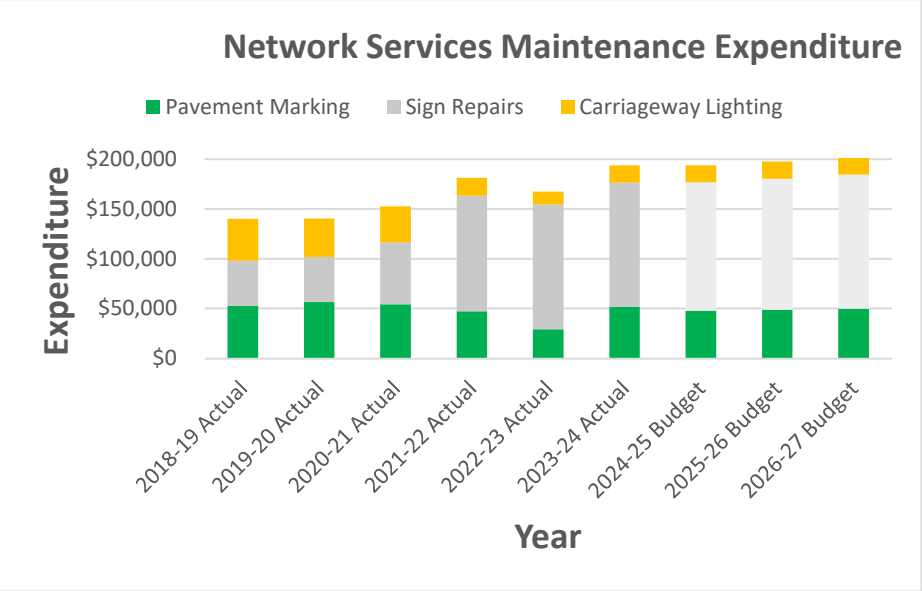
Asset data is held by the Council and the position of all light has been recorded with GPS on RAMM.

9.15.1.3 Historic Maintenance Costs

Over the years 2018-21 the annual expenditure has been $144,300, and $176,200 for 2021-24, for traffic services maintenance (WC122), includes pavement marking and signage. The Street light maintenance cost since the LED upgrade is almost nil ,with energy cost significantlyreduced.

The slight increase to $198,900 for proposed 2024-27 is to cover the cost increases due to inflation, Figure 9.52.

Figure 9.52 - Historical Network Services Maintenance Expenditure



9.15.2 Maintenance Decision Making Process

9.15.2.1 Signs and Marking

The maintenance strategy includes:

Planned inspections: The maintenance contractor is required to routinely inspect all assets and repair any defects within the following timeframes:

- Regulatory Traffic Signs: 2 days,
- Warnings Signs: 6 days,
- Information Signs: 10 days to one month.
- Road marking: Re-marked every 2 years.

Unplanned Maintenance: The maintenance contractor is required to maintain an effective communication system, level of preparedness and stocks to ensure emergency works are undertaken within the specified response timeframes.

9.15.2.2 Streetlights

All replacement lamps shall be compatible with the lantern and control gear, and shall have characteristics compatible with the original lamp.

All maintenance work must comply with the current Electricity Act and Regulations.

The current maintenance strategy is:

- Identify failed assets through inspections by contractors, staff observations, and customer complaints.
- Repair on-demand and within the specified response timeframes faulty, accident damaged, or vandalised lanterns, lamps, control gear columns and associated equipment, providing an immediate response to hazards.
- Council seeks to recover the cost of vehicle crash damage or vandalism, from those responsible
- Develop maintenance programmes from the schedules of defects identified during routine inspections.

9.15.3 Strategy to Meet Levels of Service

All traffic services maintenance is competitively tendered. NZTA specifications and standards have been adopted for maintenance work.

- Traffic Signs
    - RSMA "Standard for the Manufacture and Maintenance of Traffic Signs, Posts and Fittings".
    - NZTA "Manual of Traffic Signs and Markings" Part 1.
    - NZTA Specification M/14: Marker Posts
    - NZS 5414: 1977 “Specification for Construction of Traffic Signs”
    - NZTA Specification P/12: Paint Application - Signs.
- Road Markings
    - NZTA "Manual of Traffic Signs and Markings" Part 2.
    - NZTA Specification P/22: Road Markings

9.15.4 How Tasks Are Prioritised

The mechanism for prioritisation used by Council’s contractors as outlined in the Road Network Operations and Maintenance Contract specification. Obsolete, damaged, sub-standard and non-conforming assets identified during routine inspections are programmed for replacement according to the following additional priority:

- public safety

- traffic volumes
- convenience of road users

9.15.5 Summary of Future Costs

The maintenance budget is primarily based on historical levels of expenditure.

Table 9.34 - Proposed Network Services Maintenance Budget for 2024-27 (as at November 2024)

122 Network Service Maintenance	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Pavement Marking	$48,000	1	$48,000	$48,000	$48,960	$50,064	$147,024
Sign Repairs							
Sign Inspection & Routine maintenance cleaning etc.	12	$7,751.27	$93,015	$93,015	$94,876	$97,015	$284,906
Repairs signs, markers etc.	$5,000	1	$5,000	$5,000	$5,100	$5,215	$15,315
Post and Sight Rail Painting m	300	$34.72	$10,416	$10,416	$10,625	$10,864	$31,905
Share of Monthly Costs inspection Programming Etc.	0.05	$328,148.72	$16,407	$16,407	$16,736	$17,113	$50,256
Administration	0.04	$95,000.00	$3,800	$3,800	$3,876	$3,963	$11,639
			$128,639	$128,639	$131,212	$134,171	$394,021
Carriageway Lighting							
Maintenance	$2,000	1	$2,000	$2,000	$2,040	$2,086	$6,126
Traffic services power supply	$15,000	1	$15,000	$15,000	$15,300	$15,645	$45,945
			$17,000	$17,000	$17,340	$17,731	$52,071
122 Network Service Maintenance Total			$193,639	$193,639	$197,512	$201,966	$593,116

Table 9.35 - Proposed Network Services Maintenance Budget for 2027-34 (as at November 2024)

122 Network Service Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Pavement Marking	$72,209.20	$74,160.80	$76,092.00	$77,989.20	$79,866.00	$81,776.80	$83,578.80
Sign Repairs							
Sign Inspection & Routine maintenance cleaning etc.	$98,773	$101,442	$104,084	$106,679	$109,246	$111,860	$114,325
Repairs signs, markers etc.	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Post and Sight Rail Painting m	$11,061	$11,360	$11,656	$11,947	$12,234	$12,527	$12,803
Share of Monthly Costs inspection Programming Etc.	$17,423	$17,894	$18,360	$18,818	$19,271	$19,732	$20,166
Administration	$4,035	$4,144	$4,252	$4,358	$4,463	$4,570	$4,671
	$136,602	$140,294	$143,947	$147,536	$151,087	$154,701	$158,110
Carriageway Lighting							
Maintenance	$2,124	$2,181	$2,238	$2,294	$2,349	$2,405	$2,458
Traffic services power supply	$17,521	$17,995	$18,464	$18,924	$19,379	$19,843	$20,280
	$19,645	$20,176	$20,702	$21,218	$21,728	$22,248	$22,738
122 Network Service Maintenance Total	$228,456	$234,631	$240,741	$246,743	$252,681	$258,726	$264,427

9.15.6 Deferred Maintenance and Associated Risks

Current maintenance funding levels appear adequate and there is no significant backlog of routine maintenance.

9.15.7 Network Service Maintenance NLTP approved allocation.

122	Network Service Maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$193,639	$197,512	$201,966	$593,116
NZTA funding allocation		$130,942	$133,343	$135,743	$400,028
Not Funded		-$62,697	-$64,169	-$66,223	-$193,088

9.16 Traffic Services Renewals

Local Road Operations Activity Class *WC 222: Traffic Services Renewals*

9.16.1 End of Life Projections

9.16.1.1 Signs and Marking

Signs have an assumed useful life of 15 years. There are over 5,000 individual signs in the District, and if based on a 15-year lifecycle, that would mean that Council require 300 replacements signs each year due to overall sign deterioration. However, much of the sign replacement in the District is due to damage rather than deterioration. Vandalism of signs often results in their replacement ahead of their usual renewal requirements.

9.16.1.2 Streetlights

Council has converted all 70w high-pressure sodium vapour street light luminaires on the local road network to LED luminaires in 2021.

Asset renewal is normally undertaken when a streetlight, or significant component of a light, has reached the end of its economic life. Renewal works involve the replacement of either the complete pole and lantern or individual components (e.g. lantern, controller, bracket or pole).

The assumed average economic life for streetlights, as per 2022 valuation report is:

- all lanterns 25 years
- light bracket 30 years
- streetlight pole 50 years.

9.16.2 Renewal Decision Making Process

Signs will be renewed where they are found to be missing or ineffective (due to damage or deterioration).

The installation of additional streetlights will be assessed on the basis of road safety benefits, together with an amenity value related to security in townships. New subdivisions are to install lighting to AS/NZS 1158:2005 Road Lighting.

9.16.3 Renewals Strategies to Meet Levels of Service

Council also has a current strategy for making sure that all intersections have appropriate destination signs. A list of intersections has been included in RAMM, which is used to review and check if signs are present. Replacement or installation of new signs will form part of ongoing programme.

The strategy relating to the renewal of streetlight assets, or components of those assets, is to:

- Replace faulty or damaged assets when replacement is more economic than repair.
- Replace faulty or damaged lanterns that cannot be repaired because of obsolescence or replacement parts are unobtainable.
- Replace existing asset that does not meet current design/safety standards.

The required level of renewal will depend on:

- the age profile of streetlights

- the condition profile of streetlights
- the level of ongoing maintenance
- the economical lives of the materials and components used.

In order to save energy and maintenance costs, Council has switched mostly to LED lights. Any other changes to existing non-LED lanterns will be made when they next need to be replaced, but any significant savings are not likely to be realised within the next 10 years.

9.16.4 Identification and Prioritisation of Work

Identification and prioritisation are specified in the Road Network Operations and Maintenance Contract and as outlined in the Operations and Maintenance Plan.

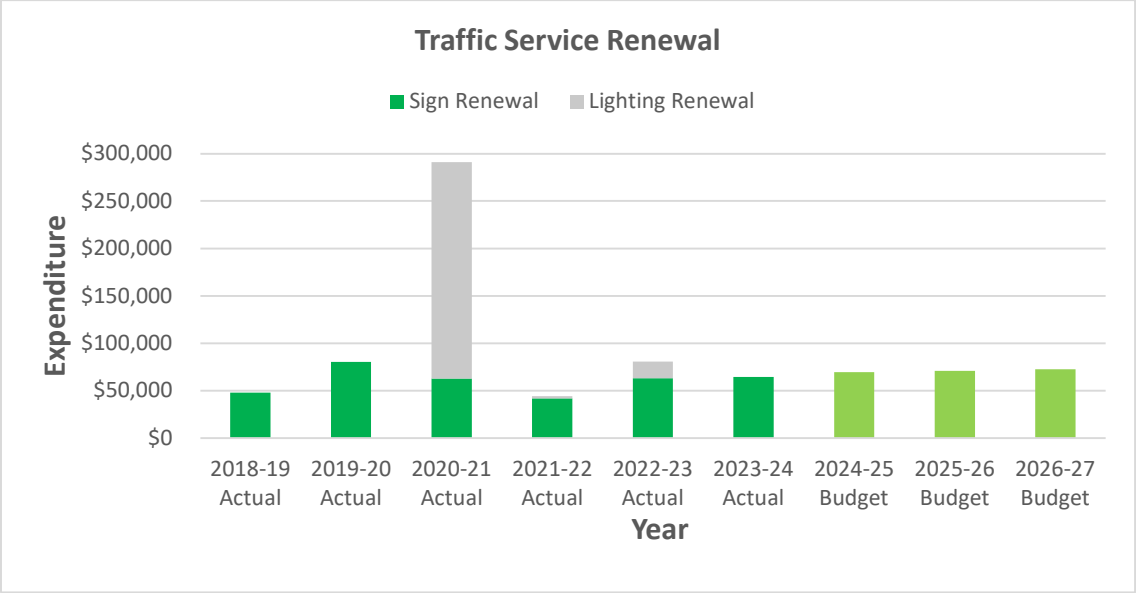
9.16.5 Replacement Standards

Sign Replacement standards are specified in the Road Network Operations and Maintenance Contract.

Streetlight replacement standard use NZTA M30 Specifications and Guideline for Road Lighting Design[52] and appropriate AS/NZ standards 1158[53].

9.16.6 Traffic Services Renewal historical expenditure

Figure 9.53 - Traffic Services Renewal Expenditure



9.16.7 Summary of Future Costs

The traffic services renewals budget is based on historical levels of expenditure.

[52] https://www.nzta.govt.nz/resources/specification-and-guidelines-for-road-lighting-design/
[53] https://www.standards.govt.nz/search/doSearch?Search=as%2Fnzs+1158

Table 9.36 - Proposed Traffic Services Renewal Budget for 2024-27 (as at November 2024

222 Traffic Services Renewal	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Sign Renewal							
Edge & Culvert Marker post replacement	800	$11.53	$9,223	$9,223	$9,408	$9,620	$28,251
Sign posts & Poles	100	$75.58	$7,558	$7,558	$7,709	$7,883	$23,150
Signs new & replacement	$50,000	1	$50,000	$50,000	$51,000	$52,150	$153,150
Professional Services	$2,000	1	$2,000	$2,000	$2,040	$2,086	$6,126
Administration	0.01	$95,000.00	$950	$950	$969	$991	$2,910
			$69,731	**$69,731**	**$71,126**	**$72,730**	**$213,586**
Lighting Renewal				**$0**	**$0**	**$0**	**$0**
222 Traffic Services Renewal Total			**$69,731**	**$69,731**	**$71,126**	**$72,730**	**$213,586**

Table 9.37 - Proposed Traffic Services Renewal Budget for 2027-34. (as at November 2024)

222 Traffic Services Renewal	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Sign Renewal							
Edge & Culvert Marker post replacement	$9,794	$10,059	$10,321	$10,578	$10,833	$11,092	$11,336
Sign posts & Poles	$8,026	$8,243	$8,457	$8,668	$8,877	$9,089	$9,289
Signs new & replacement	$53,095	$54,530	$55,950	$57,345	$58,725	$60,130	$61,455
Professional Services	$2,124	$2,181	$2,238	$2,294	$2,349	$2,405	$2,458
Administration	$1,009	$1,036	$1,063	$1,090	$1,116	$1,142	$1,168
	$74,047	**$76,049**	**$78,029**	**$79,975**	**$81,899**	**$83,859**	**$85,706**
Lighting Renewal	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
222 Traffic Services Renewal Total	**$74,047**	**$76,049**	**$78,029**	**$79,975**	**$81,899**	**$83,859**	**$85,706**

9.16.8 Traffic Services Renewal NLTP approved allocation.

222 Traffic Service Renewal	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$69,731	$71,126	$72,730	$213,586
NZTA funding allocation	$65,471	$66,671	$67,871	$200,013
Not Funded	-$4,260	-$4,455	-$4,859	-$13,573

9.17 Level Crossing Warning Devices

Local Road Operations Activity Class *WC 131: Level Crossing Warning Devices*

9.17.1 Current Trends and Issues

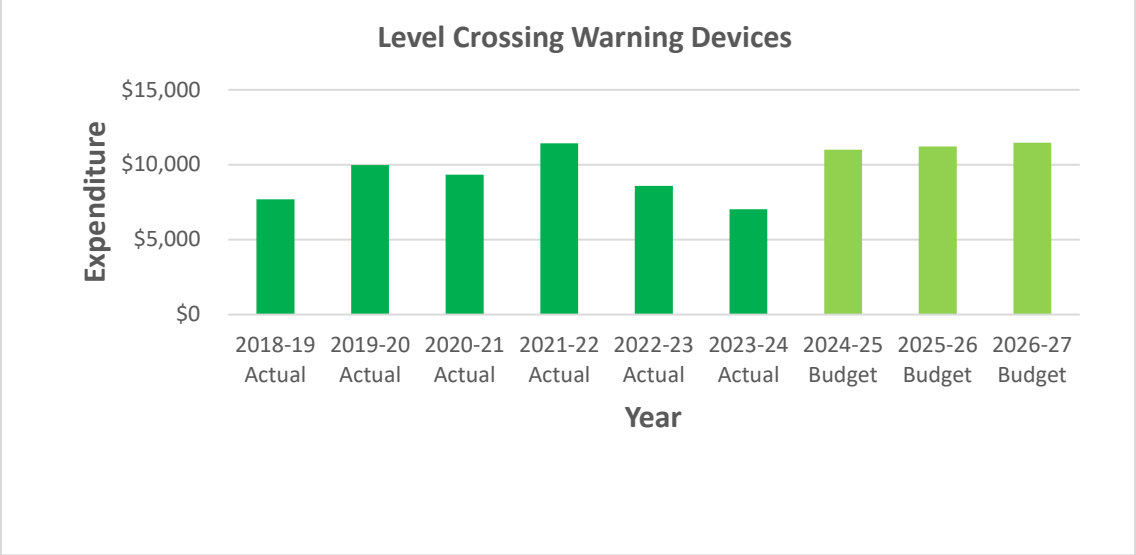
Level Crossing Warning Devices are put in place to keep road users safe. The costs associate with this work category are for the maintenance and inspection of rail level crossing warning devices (including barrier arms) carried out by the Kiwi Rail the rail track authority, where the crossing is part of the Council's Road, cycle or footpath network. The cost is shared between Kiwi Rail and Council.

Communication with KiwiRail is a key requirement and care to community and road user safety.

9.17.1.1 Historic Maintenance Costs

Over the years 2018-21, the annual expenditure has been $9,000, and $10,300 for the last three years. For the next three years, it is proposed to increase slightly to $11,200. This budget is Council share.

Figure 9.54 - Historic Level Crossing Device Expenditure



9.17.2 Summary of Future Costs

The budget for level crossing warning devices is primarily based on historical levels of expenditure charged by Kiwi Rail. Minor maintenance of these level crossing is planned for the years ahead, with no major maintenance or renewal work expected. Council is responsible for its share of increase

Table 9.38 - Proposed Level Crossing Warning Devices Budget for 2024-27 (as at November 2024)

131 Level Crossing Total	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Kiwi rail Maintenance & Inspection	$11,000	1	**$11,000**	**$11,000**	**$11,220**	**$11,473**	**$33,693**

Table 9.39 - Proposed Level Crossing Warning Devices Budget for 2027-34 (as at November 2024)

131 Level Crossing Total	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Kiwi rail Maintenance & Inspection	$11,681	$11,997	$12,309	$12,616	$12,920	$13,229	$13,520

9.17.3 Level Crossing Warning Devices NTLP Approved Allocation

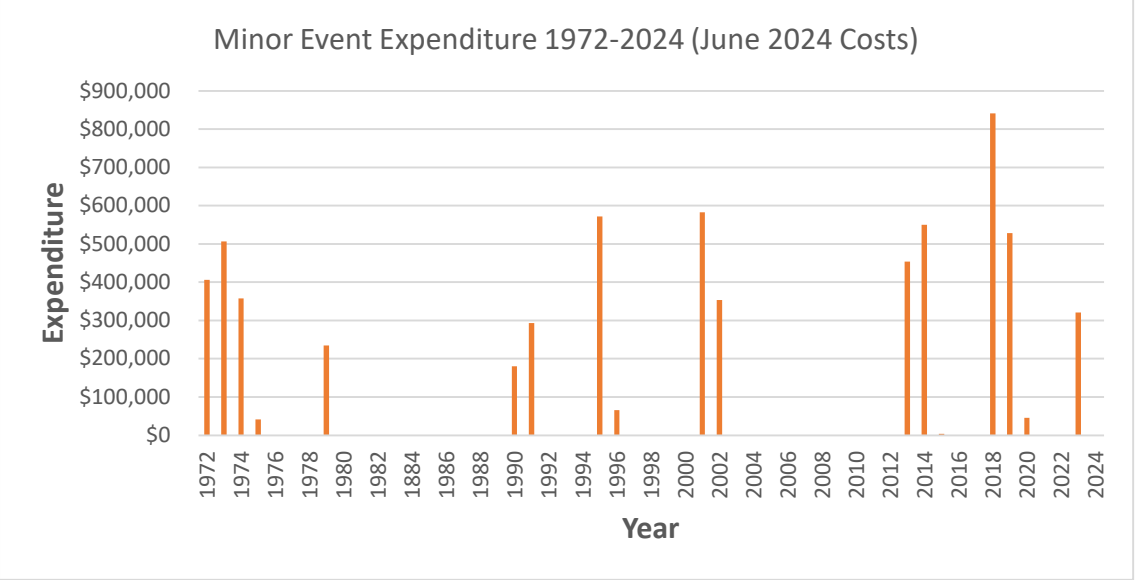
131	Rail level crossing warning devices maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$11,000	$11,220	$11,473	$33,693
NZTA funding allocation		$11,030	$11,232	$11,434	$33,696
Not Funded		$30	$12	-$39	$3

9.18 Minor Events

Local Road Operations Activity Class *WC1140: Minor Events*

9.18.1 Historic Expenditure

Figure 9.55 - Minor Event Expenditure 1972 to 2024



In the Period 1972 to 2024, Council has a least 18 events which received emergency funding. With the new NZTA Policy these events would now not qualify.

Total Expenditure $6.4Mil. Average per event $400,000, and average per year is $123,000.

9.18.2 Summary of Future Costs

Table 9.40 - Proposed Minor Event Budget for 2024-27 (as at November 2024)

140 Minor Events	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
A limited budget amount has been included s to allow for minor events. If this is exceeded Council will apply to NZTA for additional funds.							
Flood patrol Signs (subject to Storms 8 days)	$25,000	1	$25,000	$25,000	$25,500	$26,075	$76,575
Repair of scours Unsealed Roads	$35,000	1	$35,000	$35,000	$35,700	$36,505	$107,205
Additional Grading	$30,000	1	$30,000	$30,000	$30,600	$31,290	$91,890
Clearing Large Slips and Rock fall	$25,000	1	$25,000	$25,000	$25,500	$26,075	$76,575
Seal Repairs	$15,000	1	$15,000	$15,000	$15,300	$15,645	$45,945
140 Minor Events			**$130,000**	**$130,000**	**$132,600**	**$135,590**	**$398,190**

Table 9.41 - Proposed Minor Event Budget for 2027-34 (as at November 2024)

140 Minor Events	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
A limited budget amount has been included s to allow for minor events. If this is exceeded Council will apply to NZTA for additional funds.							
Flood patrol Signs (subject to Storms 8 days)	$26,548	$27,265	$27,975	$28,673	$29,363	$30,065	$30,728
Repair of scours Unsealed Roads	$37,167	$38,171	$39,165	$40,142	$41,108	$42,091	$43,019
Additional Grading	$31,857	$32,718	$33,570	$34,407	$35,235	$36,078	$36,873
Clearing Large Slips and Rock fall	$26,548	$27,265	$27,975	$28,673	$29,363	$30,065	$30,728
Seal Repairs	$15,929	$16,359	$16,785	$17,204	$17,618	$18,039	$18,437
140 Minor Events	**$138,047**	**$141,778**	**$145,470**	**$149,097**	**$152,685**	**$156,338**	**$159,783**

9.18.3 Minor Events NTLP Approved Allocation

140	Minor events	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$130,000	$132,600	$135,590	$398,190
NZTA funding allocation		$65,471	$66,671	$67,871	$200,013
Not Funded		-$64,529	-$65,929	-$67,719	-$198,177

9.19 Network and Asset Management

Local Road Operations Activity Class *WC151: Network and Asset Management*

9.19.1 Current Trends and Issues

Currently, work is undertaken using a combination of in-house and out-sourced resources.

- Professional Services In-House:
  - Strategy
  - Asset Management Part
  - Network Management
  - Network Maintenance Contract
  - Traffic Management
  - Traffic Counting
  - Design & Contract management.
- Professional Services Outsourced:
  - Bridge inspections
  - Pavement condition rating(see also Section 9.6.1.2)
  - Pavement roughness rating(see also Section 9.6.1.2)
  - Pavement strength (MSD) surveying
  - Asset Management
  - Capital works design.

Work category 003: Activity Management Planning Improvement is to provide for the preparation or upgrading of land transport activity management plans (AMPs) and their component plans such as the road safety action plans, speed management plans, demand management plans and procurement strategies. This fund has not been provided for 2021-24, and therefore Council had to use the Network and Asset Management (WC151) funds to get this work done. This has not been ideal, and funds has therefore been spread very thin to be able to provide for the expected level of work/output sought by NZTA.

9.19.2 Consistent Condition Data Collection (CCDC)

Elements of the outsourced Professional Services programme are being included as part of NZTA's Consistent Condition Data Collection (CCDC) Contract beginning in July 2024. The aims of the CCDC project are to improve both local and national asset management planning and decision-making efficiency by specifying the minimum requirements for automated pavement condition inspection for roughness, rutting, texture, cracking, and geometry on sealed roads. This data collection and quality assurance will be delivered as part of geographic contract areas. It is proposed that Te Ringa Maimoa leads these contracts via the Centre of Excellence delivery model.

Waimate District Council will now receive HSD data for roughness, rutting, texture, cracking, and geometry on sealed roads through the CCDC Contract. The CCDC programme will replace the need for Council to complete the manual condition rating surveys of sealed roads and is 100% funded by NZTA. Replacing HSD, sealed road roughness and condition rating with CCDC will result in a cost saving for Council and this has been incorporated into our estimates for Work Category 151.

Pavement strength testing using MSD will still be undertaken by the Council in the 2024-2027 AMP period as required. This may be included in future iterations of the CCDC contract.

9.19.3 Asset Management Data Standard (AMDS)

AMDS is collaborative initiative led by Waka Kotahi NZ Transport Agency. It aims to improve the management of land transport infrastructure asset information to ensure consistent and high-quality data management for transport infrastructure. This will require considerably staff and consultants resource to implement in October 2025.

Key requirements:

- Data Consistency: Council must adopt the common language and structure provided by AMDS to describe the service, impact, and lifecycle of transport assets1.
- Data Collection: Council is required to collect and maintain accurate and up-to-date data on their transport assets, including roads, highways, bridges, and cycleways1.
- Collaboration: Council will to work closely with NZ Transport Agency, and consultants to ensure the successful implementation of AMDS1.
- Training and Support: Council must ensure staff are trained in the use of AMDS and have access to necessary support and resources1.
- Data Migration: Councils are responsible for migrating existing data to the new standard, ensuring it meets the quality and consistency requirements.

9.19.4 Additional requirement secure funding allocations

The National Land Transport Programme (NLTP) approval outlines several additional requirements for council to secure funding allocations.

Additional Requirements for Council:

- **Alignment with Government Policy Statement (GPS):** Council must ensure their projects align with the priorities set out in the GPS on land transport, which includes safety, climate change, improving freight connections, and better travel options..
- **Detailed Planning and Reporting:** Councils are required to provide detailed plans and regular reports on the progress and outcomes of funded projects. This includes demonstrating how the projects contribute to the GPS priorities1.
- **Investment Quality Assurance (IQA**): Council must undergo an IQA process to ensure that their funding requests are complete, fit for purpose, and meet all necessary requirements.
- **Collaboration and Stakeholder Engagement**: Councils need to work closely with Waka Kotahi NZ Transport Agency and other stakeholders to ensure effective implementation and management of transport projects.

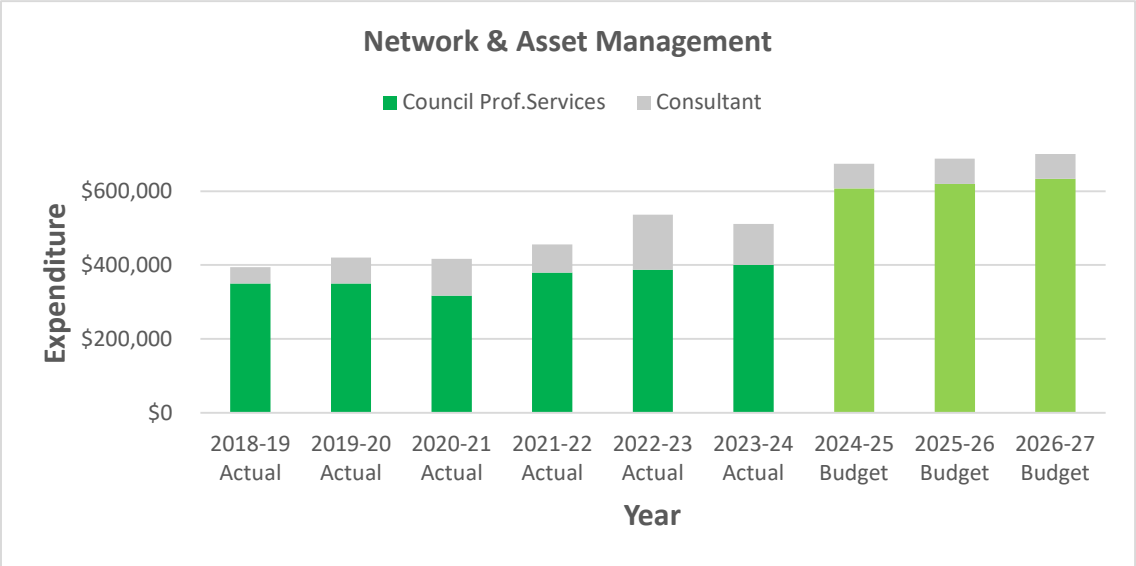
- **Data Management:** Councils must maintain accurate and up-to-date data on their transport assets and projects, which is crucial for planning, forecasting, and decision-making.

These requirements are designed to ensure that the funding is used effectively and that the projects deliver the intended benefits to the community.

9.19.5 Historic Expenditure Historic Network and Asset Management

For Network and Asset Management, over the years 2018-21 the average expenditure has been $410,600, and for 2021-24, the average expenditure is $490,300.

Figure 9.56 - Historic Network and Asset Management Expenditure



9.19.6 Summary of Future Costs

Council is benefitting from the Aoraki Roading Collaboration (ARC) where knowledge and resources are shared. The reliance on evidence is now becoming an increased requirement and this means that greater investment for better asset data knowledge is required. The programme proposed allows an increase in resources to maintain what is currently in place but focusses on asset data (and evidence) improvements. A continued commitment to better data collection and RAMM management is proposed as part of the programme.

For the 2024-27 programme, the proposed budget includes Activity Management Planning Improvement initiatives, and initiatives that were not funded in the last NLTP (WC 003) and additional requirements to meet NZTA's requirement for Network and Asset Management. Also for this programme, adequate contract supervision has been accounted for.

Table 9.42 - Proposed Network and Asset Management Budget for 2024-27 (as at November 2024)

151 Network & Asset Management	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
General management & control of the road network & management of road assets							
In-house Roading Technical Unit.							
Network Management & inspections	$380,000	1	$380,000	$380,000	$387,600	$396,340	$1,163,940
Temporary Traffic Management Audit	$10,000	1	$10,000	$10,000	$10,200	$10,430	$30,630
Roading activity management plan	$25,000	1	$25,000	$25,000	$25,500	$26,075	$76,575
Maintenance Bridge Inspections	$20,000	1	$20,000	$20,000	$20,400	$20,860	$61,260
Management of asset inventory systems	$165,000	1	$165,000	$165,000	$168,300	$172,095	$505,395
Traffic Counts	$8,000	1	$8,000	$8,000	$8,160	$8,344	$24,504
			$608,000	**$608,000**	**$620,160**	**$634,144**	**$1,862,304**
Consultant							
CC Data Collection (Waka Kotahi) 100 %		1	$0	$0	$0	$0	$0
Bridge Engineer Inspection	$30,000	1	$30,000	$30,000	$30,600	$31,290	$91,890
Road Collaboration	$8,000	1	$8,000	$8,000	$8,160	$8,344	$24,504
Preparation and improvement of activity management plans, and procurement strategies. Annual cost	$28,667	1	$28,667	$28,667	$29,240	$29,899	$87,806
Three year Cost							
Roading activity management plan	*$35,000*						
Seal road assessment	*$15,000*						
Procurement Strategy	*$6,000*						
Asset Valuation	*$30,000*						
	$86,000						
			$66,667	**$66,667**	**$68,000**	**$69,533**	**$204,200**
151 Network & Asset Management Total			**$674,667**	**$674,667**	**$688,160**	**$703,677**	**$2,066,504**

Table 9.43 - Proposed Network and Asset Management Budget for 2027-34 (as at November 2024)

151 Network & Asset Management	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
General management & control of the road network & management of road assets							
In-house Roading Technical Unit.							
Network Management & inspections	$403,522	$414,428	$425,220	$435,822	$446,310	$456,988	$467,058
Temporary Traffic Management Audit	$10,619	$10,906	$11,190	$11,469	$11,745	$12,026	$12,291
Roading activity management plan	$26,548	$27,265	$27,975	$28,673	$29,363	$30,065	$30,728
Maintenance Bridge Inspections	$21,238	$21,812	$22,380	$22,938	$23,490	$24,052	$24,582
Management of asset inventory systems	$175,214	$179,949	$184,635	$189,239	$193,793	$198,429	$202,802
Traffic Counts	$8,495	$8,725	$8,952	$9,175	$9,396	$9,621	$9,833
	$645,635	**$663,085**	**$680,352**	**$697,315**	**$714,096**	**$731,181**	**$747,293**
Consultant							
CC Data Collection (Waka Kotahi) 100 %	$0	$0	$0	$0	$0	$0	$0
Bridge Engineer Inspection	$31,857	$32,718	$33,570	$34,407	$35,235	$36,078	$36,873
Road Collaboration	$8,495	$8,725	$8,952	$9,175	$9,396	$9,621	$9,833
Preparation and improvement of activity management plans, and procurement strategies. Annual cost	$30,441	$31,264	$32,078	$32,878	$33,669	$34,475	$35,234
	$70,793	**$72,707**	**$74,600**	**$76,460**	**$78,300**	**$80,173**	**$81,940**
151 Network & Asset Management Total	**$716,429**	**$735,791**	**$754,952**	**$773,775**	**$792,396**	**$811,354**	**$829,233**

9.19.7 Network and Asset Management NLTP Approved Allocation

151 Network & Asset Management	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$674,667	$688,160	$703,677	$2,066,504
NZTA funding allocation	$631,797	$643,378	$654,959	$1,930,134
Not Funded	-$42,870	-$44,782	-$48,718	-$136,370

9.20 Footpath Maintenance

Walking and Cycling Activity Class *WC 125: Footpath Maintenance*

9.20.1 Current Trends and Issues

9.20.1.1 Scope and Nature of Asset

The purpose of footpaths is to provide a safe and efficient network of accessways catering for the movement of pedestrians. The need to provide footpaths is based on a combination of the traffic volume, road/seal width and pedestrian demand. They also fulfil a social function providing areas with a sense of community.

Footpaths on State Highways are included in this asset as they are the maintenance responsibility of the Council.

The key issues relating to footpath management are:

- Accuracy of footpath age profile
- Condition of existing asset
- Adequacy of pedestrian facilities near schools, shopping centres, residential and recreational areas
- Adequate provision of safety footpaths.

There is around 63km of footpaths, predominantly in Waimate town, with small quantities in St. Andrews, Makikihi, and Glenavy townships.

Table 9.44 - Footpath Assets

Asset	Length (km)	Area (m^2)
Asphaltic Concrete	23.4	54,255
Concrete	0.3	610
Interlocking Paving Blocks	0.4	965
Unsealed Metal	5.8	14,368
Open Grade Emulsion Mix (OGEM)	2.9	6,851
Chipseal	29.5	62,487
Total	**62.3**	**139,536**

9.20.1.2 Current Condition

The footpath network has been inspected to determine condition. It is Council's intention to undertake inspections every year, to ensure they are safe, and to inform the renewal programme. Figure 9.57 and Figure 9.58 illustrates the distribution of materials and condition of the District's footpaths, as at 2023, both condition and material, as well as the combined percentage of footpath length that is at or worse than that condition level (e.g. 15.1% of the network is poor or very poor).

Condition rating is carried out for all footpaths with a condition scale of 1 to 5, where 1 is being excellent and 5 being very poor. The level of service relates to the condition of the footpath assets.

Figure 9.57 - Footpath Material and Condition

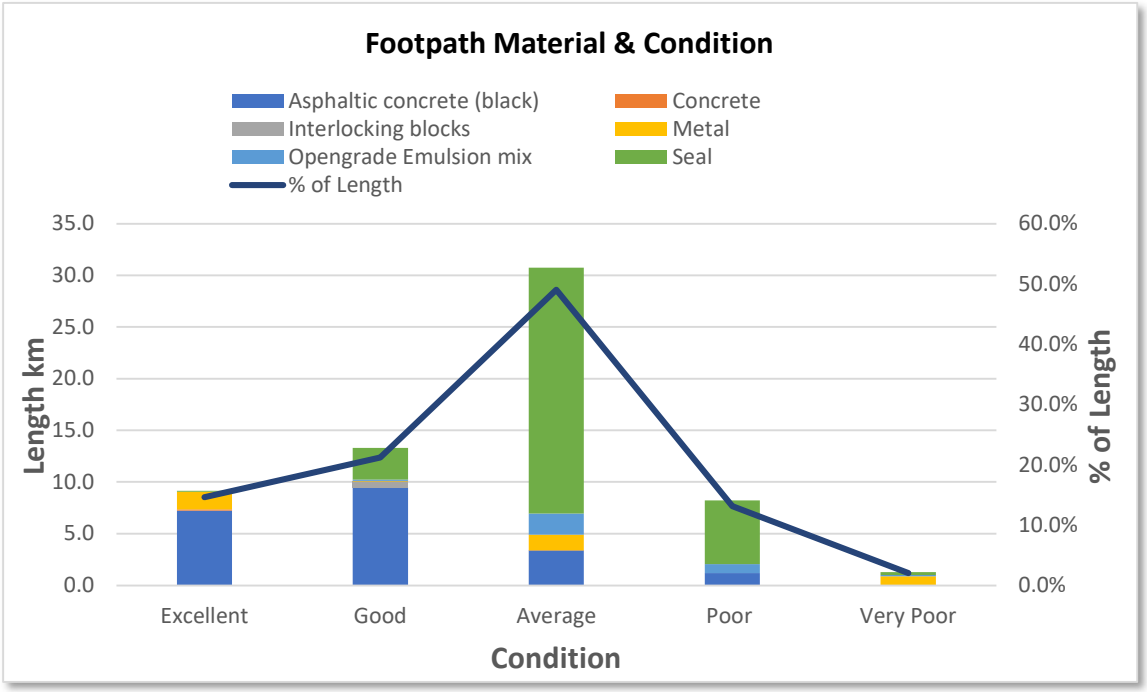
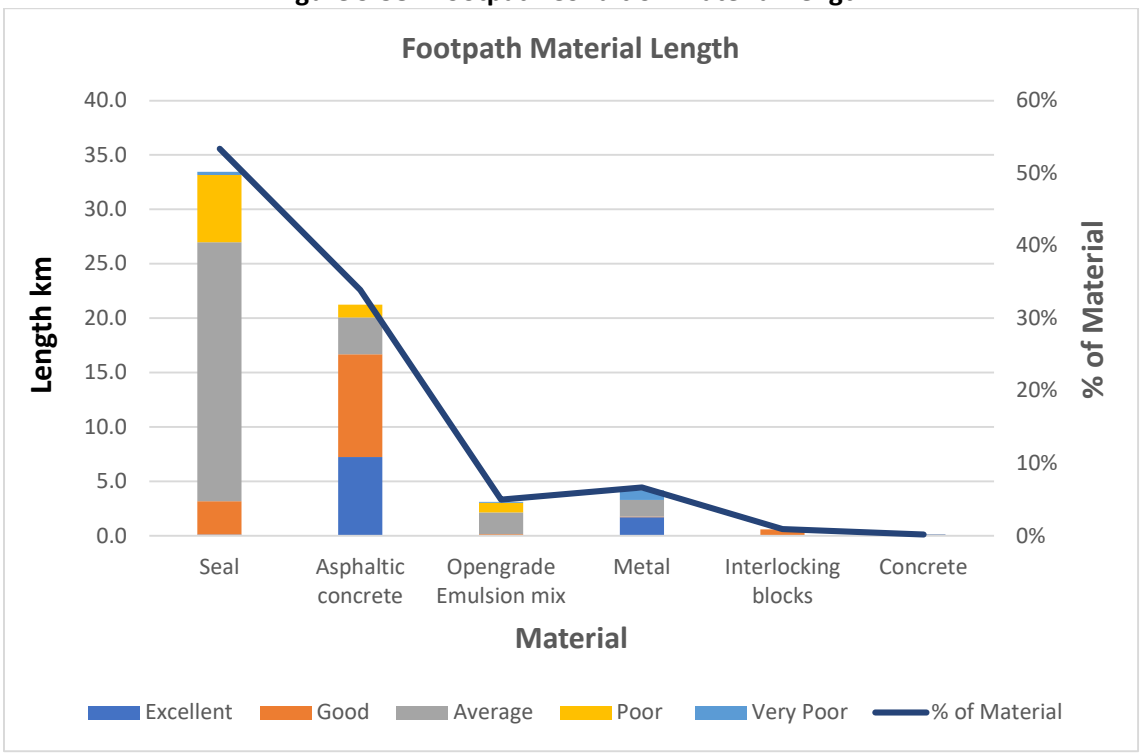


Figure 9.58 - Footpath Condition Material Length



9.20.1.3 Current Capacity and Performance

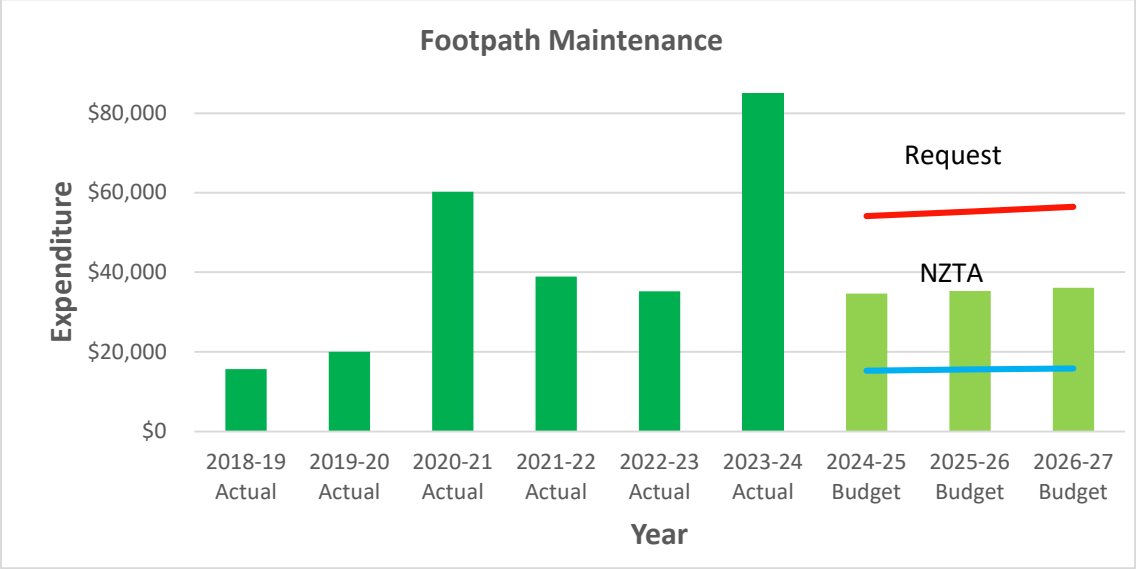
New and replacement footpaths construction in urban residential areas is 1.5- 1.8m wide and surfaced in Asphaltic Concrete (AC). However, due to poor performance of AC overlays because of the subbase quality (not achieving required life) there is now full AC reconstruction for footpath renewal.

Footpaths in the urban/rural fringe will be 1.5m wide with chipseal or gravel surface.

9.20.1.4 Historic Maintenance Work and Costs

Over the years 2018-21 the average annual expenditure was $32,000 for footpath maintenance. For the period 2021-24 the average annual expenditure is $38,000. The proposed average annual expenditure for 2024-27 is $60,700 and reflects the current commitment for an improved level of maintenance performance.

Figure 9.59 – Footpath Maintenance Historic Expenditure



9.20.2 Maintenance Decision Making Process

Repairs are undertaken on an as required basis by the Road Network Operations and Maintenance Contract contractor.

Footpath maintenance includes:

- Repairing damaged sections of footpath, usually broken by heavy vehicles
- Pothole repair on sealed paths
- Relaying uneven pavers
- Repairs around utility services
- Old trench repairs
- Removing weed or grass growth from the footpaths.

The maintenance standards to be achieved are set out in Council's specifications, contained in the Road Network Operations and Maintenance Contract. The consequences of lowering these standards are:

- Reduced safety
- Accelerated footpath deterioration and additional consequential costs.
- Lower level of service (ease of use, appearance)
- Reduction in accessibility and resilience.

9.20.3 Strategy to Meet Levels of Service

A 24-hour customer complaints service is provided. The Road Network Operations and Maintenance Contract requires the contractor to maintain a suitable level of preparedness for prompt and effective response to asset failures and emergencies and specifies maximum response times.

Asset failures are responded to with the initial objective of making the asset safe as quickly as possible by the most economic method available and/or making temporary repairs if major repairs or renewals are required. Temporary repairs are made when an asset renewal is programme or is more cost effective.

Level of service achievement is a combination of overall footpath provisions and the management of the asset on the ground.

9.20.4 How Tasks Are Prioritised

The mechanism for prioritisation used by Contractors as outlined in the Road Network Operations and Maintenance Contract specification.

The priorities are:

- Priority 1: Urgent Maintenance
- Priority 2: Essential Maintenance
- Priority 3: Less Essential Maintenance
- Priority 4: Desirable Maintenance Works

Works are also prioritised using the following additional criteria:

- The safety of pedestrians may be compromised (Priority 1 or 2)
- If it is likely that the area of distress may expand or the methods of repair change such that the cost of any repair will increase (Priority 3)
- Subsequent maintenance or renewal work depends on the completion of the maintenance repair.
- Aesthetics (e.g. minor water ponding/untidy appearance)

9.20.5 Summary of Future Costs

The maintenance budget is primarily based on assessment of required repairs required. This amount has also been escalated to produce the annual budgets for the next 10-year period.

Table 9.45 - Proposed Footpath Maintenance Budget for2024-27 (as at November 2024)

125 Footpath Maintenance	Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Footpaths Maintenance							
Footpaths Pavement repairs	$45,000	1	$45,000	$45,000	$25,111	$26,146	$96,257
Vegetation control footpaths	12	$343.13	$4,118	$4,118	$2,298	$2,392	$8,807
Other Vegetation Contral	$5,000	1	$5,000	$5,000	$2,790	$2,905	$10,695
125 Footpath Maintenance Total			**$54,118**	**$54,118**	**$30,199**	**$31,443**	**$115,760**

Table 9.46 - Proposed Footpath Maintenance Budget for2027---3427 (as at November 2024)

125 Footpath Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Footpaths Maintenance							
Footpaths Pavement repairs	$47,786	$49,077	$50,355	$51,611	$52,853	$54,117	$55,310
Vegetation control footpaths	$4,372	$4,491	$4,607	$4,722	$4,836	$4,952	$5,061
Other Vegetation Contral	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
125 Footpath Maintenance Total	**$57,467**	**$59,021**	**$60,557**	**$62,067**	**$63,561**	**$65,082**	**$66,516**

9.20.5.1 Deferred Maintenance and Associated Risks

Current maintenance expenditure appears inadequate and there is a backlog of routine maintenance.

9.20.6 Footpath Maintenance NLTP Approved Allocation

125	Footpath Maintenance	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$54,118	$55,200	$56,445	$165,762
NZTA funding allocation		$15,298	$15,579	$15,859	$46,736
Not Funded		-$38,820	-$39,621	-$40,586	-$119,026

9.21 Footpath Renewals

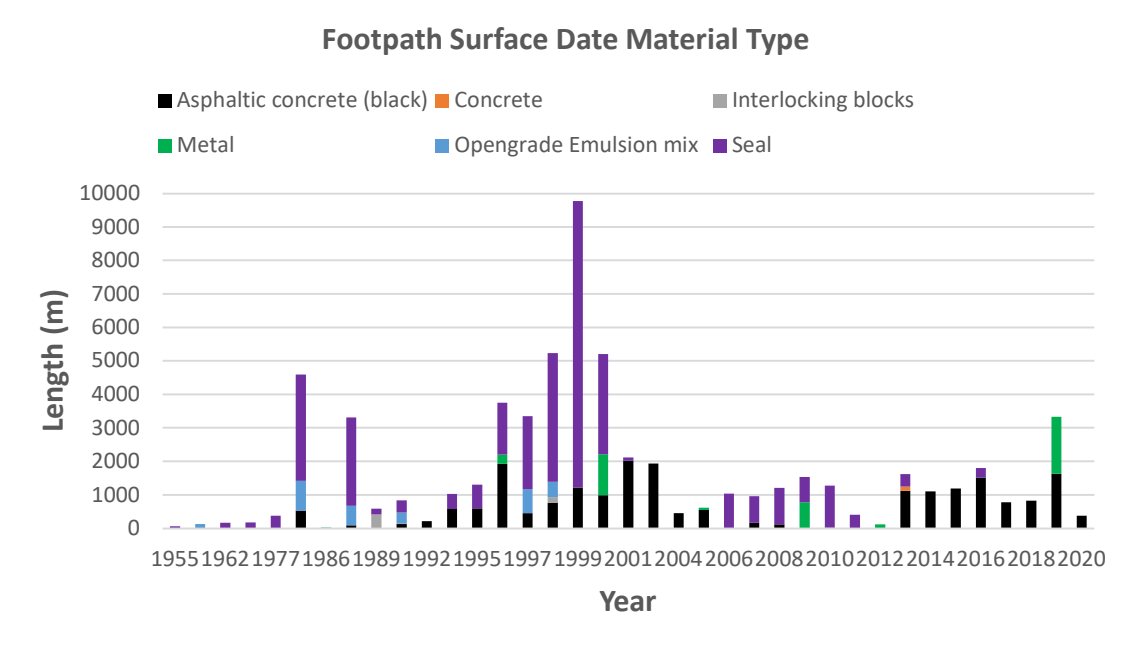
Walking and Cycling Activity Class *WC225: Footpath Renewal*

9.21.1 End of Life Projections

The types of renewal work undertaken to restore footpaths to the required condition are:

- **Resurfacing:** To provide a smooth waterproof surface by overlaying with a thin layer of asphaltic concrete, chip or sand seal coat, or to remove the existing surfacing and layer a new surface (where the footpath profile is such that the surface level cannot be built up with an overlay).
- **Reconstruction**: Reconstruct new basecourse and surfacing.

Figure 9.60 - Footpath Surface Date



Reviewing the asset lives for different materials as well as the condition, enables Council to develop a logical renewal programme.

Chipseal is the most common surfacing (approx. 50%), and while relatively inexpensive to construct the asset's life is shorter, meaning more regular renewal actions. Council now requires the smoother AC surface, especially with increased use of mobility scooters by the elderly.

From the age of footpaths and expected life of the different materials, the remaining useful life of footpaths can be modelled. This is a theoretical approach that does not include the actual condition of the assets in the network.

Actual footpath construction dates are recorded in RAMM.

There is currently a spike in the remaining useful life of footpath assets in a few years' time. Strategies for replacement of this area of footpath should be considered, especially if 3m wide footpath on some streets are still required.

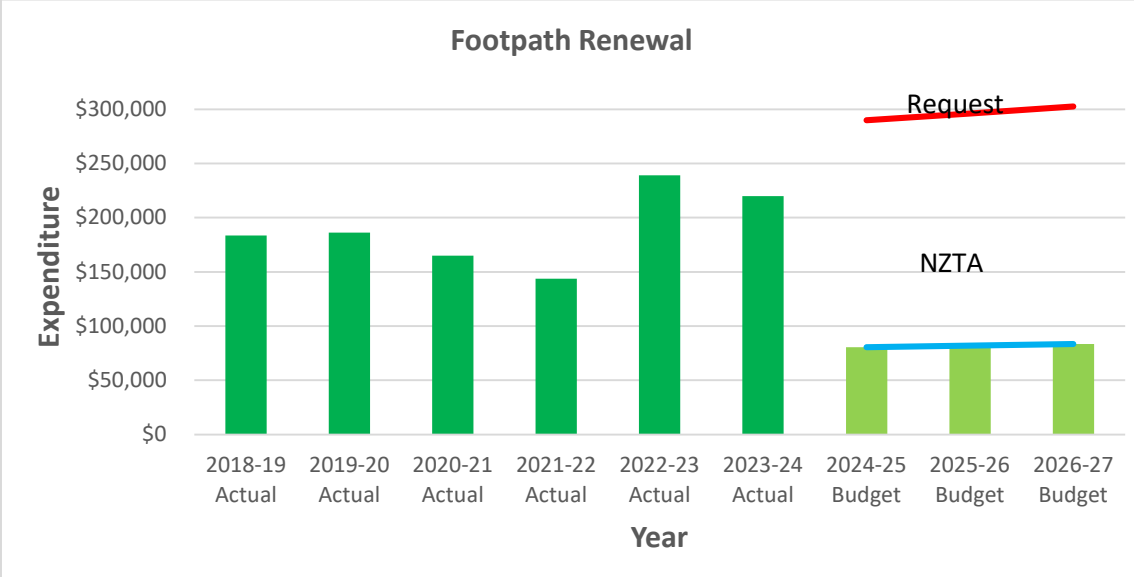
The theoretical renewal model can be tested against the depreciation calculation. This ensures that investment in the asset through renewals is appropriate, and that it is not being consumed at a rate greater than that of renewals.

9.21.1.1 Historic Renewal Costs

Footpath resurfacing and reconstruction is undertaken through direct appointment. Where possible this is integrated with other work such as kerb and channel replacement, to optimise the expenditure.

Over the years 2018-21, the average annual expenditure was $178,000 for footpath renewal. For 2021-24, the average annual expenditure is $179,500. It is proposed for the average annual expenditure to increase over the year 2024-27 to $292,800.

Figure 9.61 - Footpath Renewal Historic Expenditure



9.21.2 Renewal Decision Making Process

Reconstruction is completed when the footpath structure has deteriorated to an extent where resurfacing is not practical. Justification for work is based on the condition of the kerb and channel or the condition of the carriageway rather than the footpath condition (particularly where the footpath is to be reconstructed on a new alignment).

9.21.3 Renewals Strategies to Meet Levels of Service

As mentioned in Section 9.20.3, levels of service achievement is a combination of overall footpath provisions and the management of the asset on the ground. While the existing assets need to be renewed in a timely manner this can cause some tension when compared to areas with no footpath. Accordingly, Council has programmes for new footpaths as well and maintenance of and renewal of existing footpaths.

The levels of service requirements are for all footpaths to be a minimum width of 1.5m. Footpaths are optional in rural roads. Footpaths are required on both sides along "collector" roads, where the vacant sites are 25% or less and one side on other streets if the vacant sites between 25 to 50%, if the street is a school walking route, Figure 9.62. These requirements are applied to renewals as well as new footpaths.

Asphaltic concrete is the preferred surface material used for new construction due to its longer life and superior surface. Therefore providing the road users a safer and more reliable option for active transport.

9.21.4 Identification and Prioritisation of Work

Footpath work needs are identified through inspections by Council staff and contractors, with improvements programmed. Priorities are based on condition, pedestrian volume, and location to schools and public areas. In residential areas each street is to have a good condition footpath on at least one side.

Kerb and channel replacement requirements are used to drive footpath replacement, the priority being set by consideration of existing standards and pedestrian volumes.

Council notifies residents in the street before any works are undertaken to confirm requirements.

9.21.5 Replacement Standards

Asphaltic concrete is the preferred surface material used for new construction because of its longer life and superior surface, especially with increased use of mobility scooters by the elderly.

9.21.6 Summary of Future Costs

Council aims to replace 3,500m^2 of footpath a year, which is a modest amount, and with that amount, it will still take at least 25 years to bring the condition of the current footpaths to the desired levels of service. Council and the government are working towards transport lower emissions, providing the right level of service for road users will be required, therefore providing the assets to support the different transport options that road user use.

Table 9.47 - Proposed Footpath Renewal Budget for 2024-27 (as at November 2024)

225 Footpath Renewal		Estimate Annual Quantity	Contract Rate Estimate	Annual Estimate	2024-25	2025-26	2026-27	3 year Programme Totals
Footpath Renewal	m²	3500	$80.63	$282,204	$282,204	$64,529	$66,457	$413,191
Professional Services		$5,000	1	$5,000	$5,000	$1,143	$1,177	$7,321
Administration		0.03	$95,000.00	$2,850	$2,850	$652	$671	$4,173
225 Footpath Renewal Total				**$290,054**	**$290,054**	**$66,324**	**$68,306**	**$424,684**

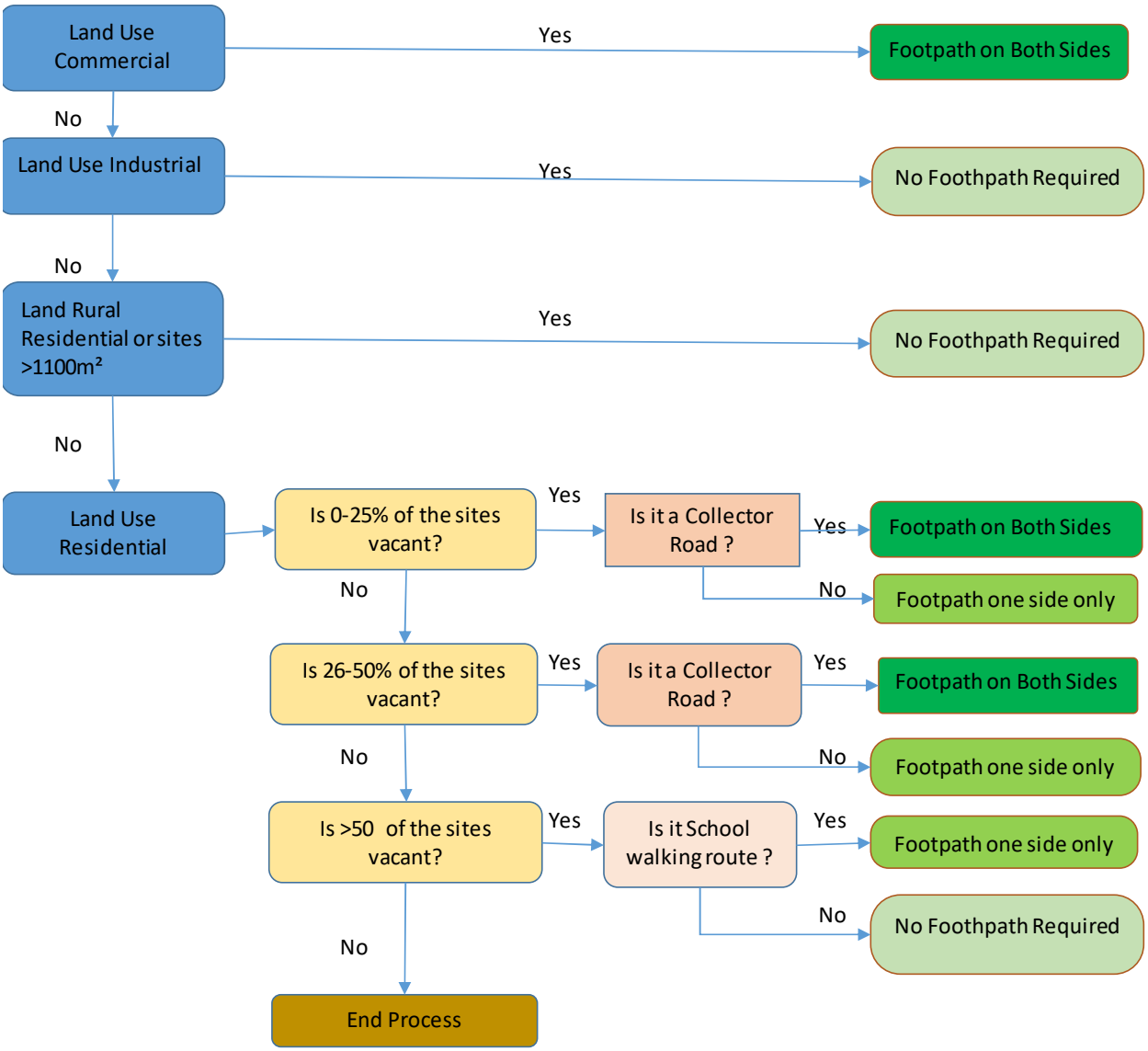
Table 9.48 - Proposed Footpath Renewal Budget for 2027-34 (as at November 2024)

225 Footpath Renewal		2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Footpath Renewal	m²	$299,673	$307,772	$315,787	$323,660	$331,449	$339,379	$346,857
Professional Services		$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Administration		$3,026	$3,108	$3,189	$3,269	$3,347	$3,427	$3,503
225 Footpath Renewal Total		**$308,009**	**$316,333**	**$324,571**	**$332,663**	**$340,669**	**$348,819**	**$356,506**

9.21.7 Footpath Renewal NLTP Approved Allocation

225	Footpath Renewal	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation		$290,054	$295,855	$302,527	$888,436
NZTA funding allocation		$80,610	$82,088	$83,566	$246,264
Not Funded		-$209,444	-$213,767	-$218,961	-$642,172

Figure 9.62 - Footpath Prioritisation Flowchart



9.22 Cycle Paths and Shared Paths

Walking and Cycling Activity Class	*WC 124: Cycle Path Maintenance* *WC 224: Cycle Path Renewal*

Council has 2.2km of shared path within the District. This route is between Waimate to Studholme Bush along Mt John Road, Hodges Road, and Gorge Road SH 82.

Council currently is not requesting any budget to maintain or renew this shared path, but may require in the future.

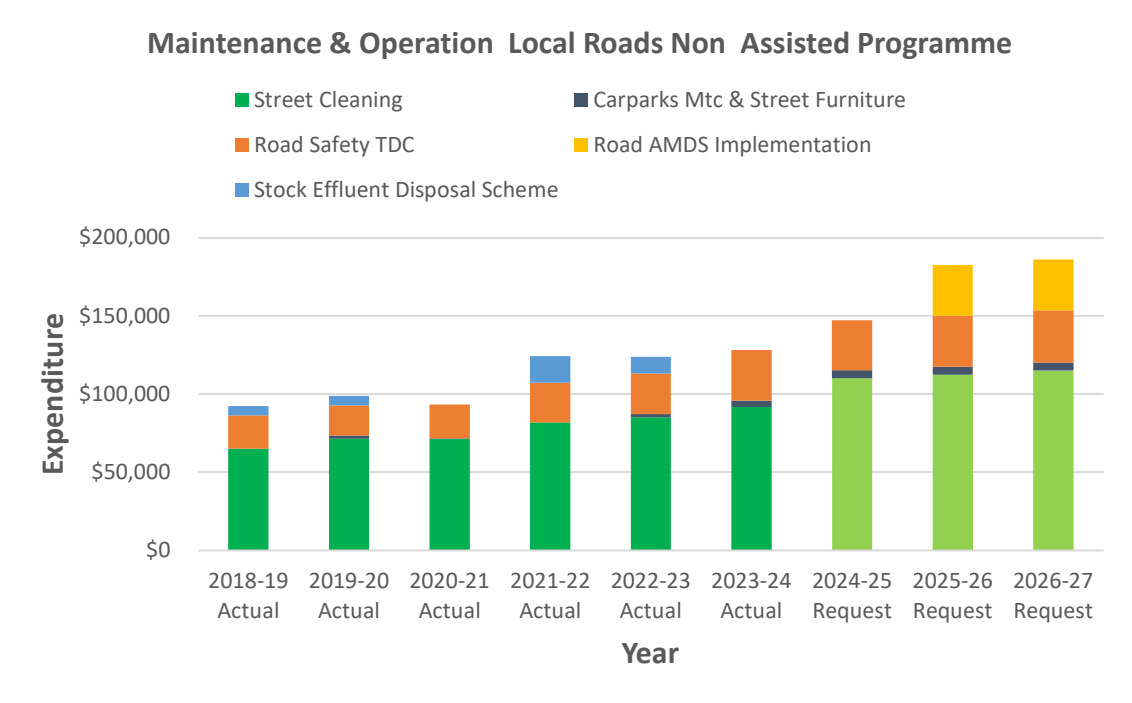
9.23 Maintenance & Operation of Local Roads Non Assisted Programme

Council completes the following Non Assisted activities.

- Street cleaning included the 70% of the cost of Kerb and Channel cleaning which is unsubsidised.
- Car Parks and Street Furniture Maintenance
- Local share of Road Safety Promotion to Timaru District Council
- Road Asset Management Data Standard Implementation. Local Share One off project completed 2027. NZTA funds at normal subsidy rate, not included in NLTP.
- Stock Effluent Disposal Scheme is now fund in assisted programme.

9.23.1 Historic Expenditure

Figure 9.63 - Maintenance & Operation Non Assisted Programme Expenditure



9.23.2 Summary of Future Costs

Table 9.49 - Proposed Maintenance & Operation Non Assisted Budget for 2024-27 (as at November 2024)

Non Assisted Maintenance	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Street Cleaning							
CBD Footpath washing							
Street Cleaning Total	$117,021	$120,184	$123,314	$126,388	$129,430	$132,527	$135,447
Carparks Mtc & Street Furniture	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
Road Safety Cluster Timaru DC	$33,981	$34,899	$35,808	$36,701	$37,584	$38,483	$39,331
Sub total Maintenance	$156,312	$160,536	$164,717	$168,824	$172,886	$177,023	$180,924

Table 9.50 - Proposed Maintenance & Operation Non Assisted Budget for 2027-34 (as at November 2024)

9.24 Renewal, New & Improved infrastructure for Local Roads Non assisted Programme

Council completes the following Non Assisted New & Improved infrastructure activities.

- Development & New Footpath (Council share of new asset required for development.)
- Seal Extension (dust sealing policy)
- Minor Improvements

Figure 9.64 - New & Improved infrastructure for Local Roads Non assisted Programme Expenditure

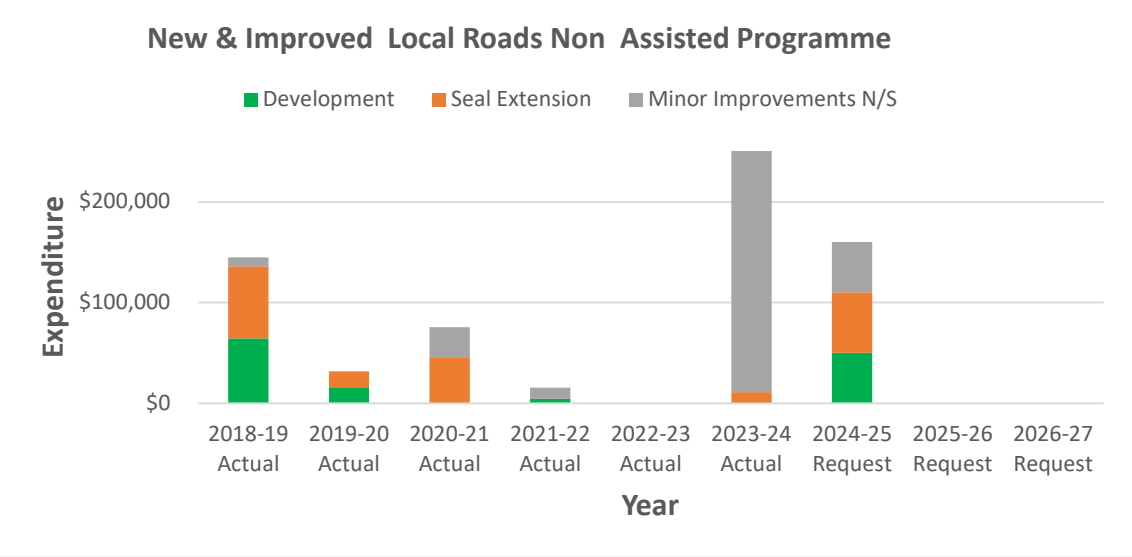


Table 9.51 - New & Improved infrastructure for Local Roads Non assisted budget for 2024-27 (as at November 2024)

Renewal, New & Improved infrastructure for Local Roads Non assisted Programme	2024-25	2025-26	2026-27	3 year Programme Totals
Development & New Footpath (Council share of new asset required for development.)	$50,000			$50,000
Seal Extension (dust sealing)	$60,000			$60,000
Minor Improvements N/S	$50,000	$40,000	$41,240	$131,240
Sub Total Renewal, New & Improved infrastructure for Non assisted Programme	$160,000	$40,000	$41,240	$241,240

Table 9.52 - New & Improved infrastructure for Local Roads Non assisted budget for 2027-34 (as at November 2024)

Renewal, New & Improved infrastructure for Local Roads Non assisted Programme	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Development & New Footpath (Council share of new as	$53,095	$54,530	$55,950	$57,345	$58,725	$60,130	$61,455
Seal Extension (dust sealing)	$63,714	$65,436	$67,140	$68,814	$70,470	$72,156	$73,746
Minor Improvements N/S	$53,095	$54,530	$55,950	$57,345	$58,725	$60,130	$61,455
Sub Total Renewal, New & Improved infrastructure for Non assisted Programme	$169,904	$174,496	$179,040	$183,504	$187,920	$192,416	$196,656

Due to financial constraints, there will not be any projects completed in 2025/26 and 2026/27.

9.25 Low-Cost Low-Risk Improvements

NZTA Work Category WC 341: Low-Cost Low-Risk Improvements

Low-Cost Low-Risk Improvements provides for the construction/implementation of low-cost, low-risk improvements to a maximum total approved cost per project of $2 million. The activities classes available under this are:

- Road to Zero (where qualifying activities form part of the NZTA NZ Transport Agency board-endorsed Road to Zero Speed and Infrastructure Programme Business Case)
- Walking and cycling improvements.
- Local road improvements.

These include, but is not limited to:

- Small, isolated geometric road and intersection improvements
- traffic calming measures.
- traffic management systems
- surface treatment (safety), including sealing for bridge approaches.
- lighting improvements for safety
- installation of new traffic signs and markings (including rumble strips) or upgrading these to the current standard
- provision of guard-railing
- sight benching to improve visibility.
- walking facilities that comply with the definition for work category 451: Walking facilities.
- cycling facilities that comply with the definition for work category 452: Cycling facilities.

- structures, culverts or stock access (including stock underpasses)
- resilience improvements within the definition for work category 357: Resilience improvements
- Stock effluent facilities.
- minor engineering works associated with community programmes, such as raised platforms at roundabouts, traffic signals and other pedestrian facilities.
- property and professional services costs associated with the improvement.

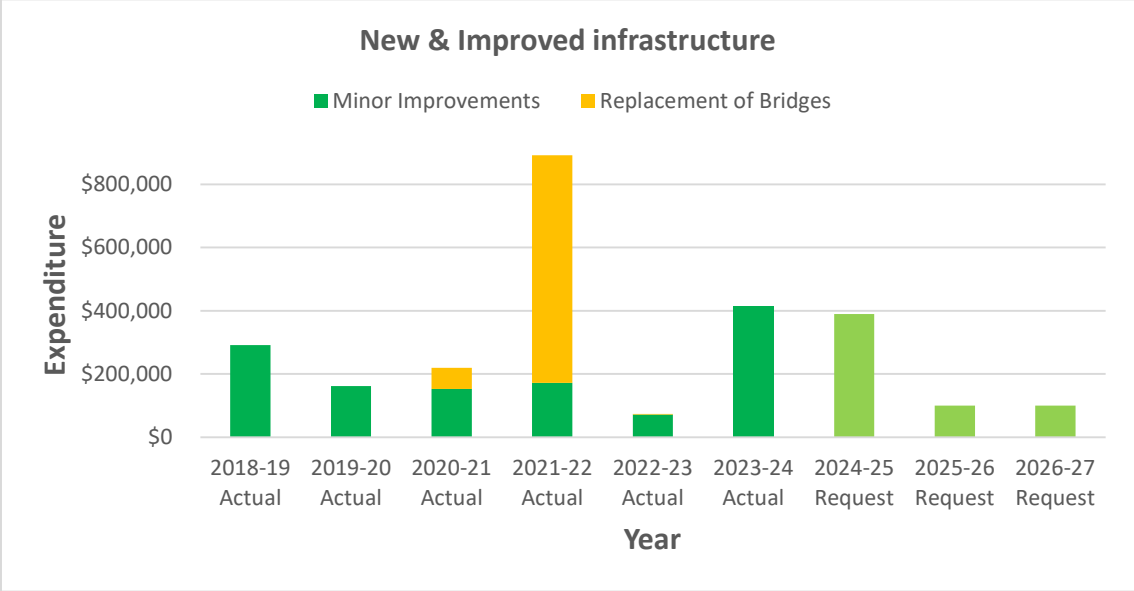
With increase in project size, there is now greater scope to complete project such and intersection improvements and bridge works that were previously of too higher in value.

A regional approach is taken in combination with the Road Safety Action Plan[54].

9.25.1 Historic Expenditure

Historically, the expenditure for Low-Cost Low-Risk Improvements varied. The proposed budget is based on the average spent in the past.

Figure 9.65 - Historical Low-Cost Low-Risk Improvement Expenditure



9.25.2 Future Programme

Council will continue to carry out targeted seal widening where there is a high risk of head-on crashes due to the narrow carriageway and the increased volume of heavy vehicle and over width vehicle traffic on low volume rural roads. The investment will reduce the reactive maintenance costs associated with edge breaks on these carriageways.

Figure 9.66 - Seal Widening Completed on Talbots Road, Blind Brow

Local road improvements and Road to Zero are completed to eliminate safety deficiencies. Safety deficiencies are identified by the roading team, and or the contractor and prioritised in terms of likelihood and consequences to the road user. Types of projects include:

- Clear zone improvements
- Guardrail improvements
- Intersection improvements
- Lighting improvements
- Minor geometric improvements
- Seal widening.
- Sight benching.
- Signage / delineation / pavement marking.
- Sealing Railway Crossings and intersections
- Safety Footpaths

Figure 9.67 - Proposed Safety Footpath on Point Bush Road Bridge

Figure 9.68 - Proposed Holme Station Intersection Realignment

9.25.3 Summary of Future Costs

The budget for Low-Cost Low Risk Improvements are based on what is required in the Waimate District and the changes that are currently being experienced. There are projects that are part of the NZTA Road to Zero Speed Infrastructure Programme (formerly the Safety Network Programme, SNP) that has been identified by NZTA as "*programme targeting roads and roadsides that offer the greatest potential to reduce deaths and serious injuries*."[55]

9.25.4 Low-Cost Low-Risk Improvement NLTP Approved Allocation

341 Low Risk- Low Cost Improvements	2024-25	2025-26	2026-27	3 year Programme Totals
Requested Allocation	$390,000	$400,000	$410,000	$1,200,000
NZTA funding allocation	$0	$0	$50,000	$50,000
Not Funded	-$390,000	-$400,000	-$360,000	-$1,150,000

In the 2024-27 Crown Resilience Programme, your council has received the following funding:

Council	Risk Name	Hazard Type	Total Cost Estimate	CRP cost share
Waimate District Council	Parkers Bush Road Stream realignment	River training	$50,000	$42,000

[55] https://www.nzta.govt.nz/safety/partners/speed-and-infrastructure/speed-and-infrastructure-improvements/

Table 9.53 - NLTP Funding Request for Low-Cost Low Risk Improvements (as at September 2023)

WC341: Low-Cost Low-Risk Improvements		2024/25	2025/26	2026/27	3 Year Programme Totals
Project Name	Project Details				
Enhanced Delineation and signage	Address corners and safety issues, including road marking. Identified in Road Safety Strategic planning document that the majority of accidents are on curves. Programme to ensure signage and delineation on curves are fit for purpose. Using 'out of context' curves tool.	20,000	20,000	20,000	60,000
Geometric improvements	Eliminate safety deficiencies. Including sight benching, clear zone, minor widening, intersection improvement and intersection sealing.	40,000	40,000	40,000	120,000
Tawai (Glenavy) area Resilience Study	To scope out and identify the current and future issues and required proposed solution options to the flooding that occurs in the area. Therefore reducing road closures and allow area to be more resilience, and residence access. A study to look into the historic and current water movement, irrigation, drainage, change in land-use, etc.		50,000		50,000
Parkers Bush Road Stream realignment	Realignment of stream and remove rock buff to eliminate culvert replacement. Providing resilience to the assets and prevent further culvert damage			50,000	50,000
7/10/24Pareora Gorge Road Safety Barriers SNP	Two known sites. Will review whole corridor to see if any other locations require a barrier			80,000	80,000

Projects not funded due to budget constraints.

Project funded from Crown Resilience Programme 7/10/24.

WC341: Low-Cost Low-Risk Improvements		2024/25	2025/26	2026/27	3 Year Programme Totals
Project Name	Project Details				
Parkers Bush Road Safety Barrier SNP	Side barrier alongside narrow single lane section next to a large drop off into a creek. Install about 80m of guardrail to protect road users from dropping into stream on narrow section of road.			40,000	40,000
~~Certified Speed Management Plan - Waimate SNP~~	~~Planning, consultation and sign installation according to Speed Management Plan.~~	~~20,000~~	~~30,000~~	~~50,000~~	~~100,000~~
John Street Traffic Calming SNP	Midblock RSPs to support the proposed 30km/h speed limit on John St. These RSPs will also provide an alternative crossing point given the proposed removal of the existing zebra crossings at the Goldsmith and Victoria intersections. Project to align with the other two intersections.	30,000	50,000	50,000	130,000
Point Bush Bridge Footpath add-on	Install 24m Footway on the side of Point Bush Bridge. The aim of the project is to improve pedestrian safety on a single lane bridge with limited sight distance.			80,000	80,000
Talbots Road Widening	Targeted seal widening of 1.9 km section of Talbots Road where there is a high risk of head-on crashes due to narrow seal and blind brows, Also reduction in edge repairs.	80,000	70,000		150,000

WC341: Low-Cost Low-Risk Improvements		2024/25	2025/26	2026/27	3 Year Programme Totals
Project Name	Project Details				
Pareora River Road & Holme Station Road IS SNP	Realignment of intersection to square up the T-intersection. One of the higher volume intersections in the area. Intersection upgrade "Convert "Y" intersection to "T" intersection	200,000			200,000
John Street & Goldsmith Street IS SNP	Intersection and pedestrian crossing reconfiguration and speed reduction.		70,000		70,000
John Street & Victoria Terrace IS SNP	Intersection and pedestrian crossing reconfiguration and speed reduction. Important project for the district and was identified as a priority in a recent NZTA audit.		70,000		70,000
Total		**390,000**	**400,000**	**410,000**	**1,200,000**

9.26 Asset Development Plan

This section covers the creation of new assets (including those created through subdivision and other development) and the works that upgrade or improve an existing asset beyond its existing capacity or performance in response to changes in usage or customer expectations (e.g. forestry harvesting routes).

9.26.1 Selection Criteria

Asset development projects are generally justified and prioritised using Waka Investment Prioritisation Method (IPM)[56] and Monetised Benefits and Costs Manual[57] procedures that accounts for:

- The benefit to the road user for reducing delays in the time to travel along a given route.
- Vehicle operating savings
- Safety benefits
- Maintenance cost savings
- Intangible benefits including community dislocation, environmental issues (including noise and vibrations) and other possible local, regional and national issues.

Roads that may meet the benefit conditions usually have high heavy traffic volumes such as the major routes to production forests or roads, which have high maintenance costs (e.g. due to steep grades).

[56] https://www.nzta.govt.nz/planning-and-investment/national-land-transport-programme/202427-nltp-development/draft-investment-prioritisation-method-2024-27/
[57] https://www.nzta.govt.nz/resources/monetised-benefits-and-costs-manual/

Generally, only the projects that meet NZTA criteria and attracting subsidy are carried out. Occasionally, there is some input from Council where roads are considered to have a community benefit above that identified through the BCR analysis and this may result in non-subsidised works being progressed by Council without NZTA's subsidy.

9.26.2 Capital Investment Strategies

NZTA documented project management procedures are used as a guide but no specific procedures are formally documented for Council. However, there is confidence that suitable procedures are used during project evaluation and design phase. Project design is standardised by use of the Pavement Design Manual and Road Geometric Design Manual recognised nationally and internationally and backed by long term research.

9.26.2.1 Developer Created Assets

Waimate District Council uses the Land Subdivision Standard NZS4404: 2010.

The construction of roads within new subdivisions are generally funded by the developers and must be constructed in accordance with the Council's Engineering Standards. On completion, provided the roads and associated assets comply with the Engineering Standards, they are vested in the Council (i.e. Council takes over ownership). There are few capital expenditure implications with this type of asset creation; the more significant implications are maintenance and renewal related.

The supervision of assets constructed within sub-divisional development and subsequently taken over by Council should be reviewed and processes formally documented. This is included in the improvement programme.

9.26.2.2 Capital Investment Strategies by Asset Types

Council's investment strategies for capital investment are detailed in Table 9.54.

Table 9.54 - Capital Investment Strategies

Asset Description	Type of Project	Summary and Investment Strategy
Sealed roads	Low Cost Low Risk Improvements	Provides for the construction / implementation of Low-Cost Low-Risk Improvements to the transport system to a maximum total cost for approval per project of $2,000,000. Typically, they include: small, isolated geometric road and intersection improvements traffic calming measures lighting improvements for safety installation of new traffic signs and pavement markings, provision of guard-railing sight benching to improve visibility. walking and cycling facilities seal widening
	Seal Widening	Widening of existing seals where this is the least cost maintenance treatment necessary to overcome edge break or to reduce shoulder maintenance. Seal widening may also be promoted as a safety improvement project where crashes can be attributed to the narrow width of a road.
	Road reconstruction	The road reconstruction category provides for the reconstruction of existing pavements within the existing or

Asset Description	Type of Project	Summary and Investment Strategy
		widened road reserve or deviations onto a new road reserve where the original road is closed. Examples of qualifying work include: Realignment Regrading Widening Intersection improvements Approaches to bridge renewals costing in excess of $50,000. This category includes retaining structures, tunnels, all signs, pavement markings, traffic signals, lighting etc., necessary to bring the improved facility into service.
	New or upgraded roads for development (excluding private subdivision developments)	This can be an issue in the Waimate District especially with development involving clusters of lifestyle units. It is recognised that development within the District adds to the demands on the infrastructure of the District. The provision of major capital works ahead of developments, presents difficulties in who should provide the funding. Council, in communication with the community, needs to formulate a Policy to provide a guiding framework for road improvement decisions and funding within the Waimate District.
Unsealed roads	Seal extensions	The District has a large number of unsealed roads and there is continual pressure to seal them, predominantly by the rural community. The policy to invest in seal extensions changes over time depending on the community and land use. Council should consider adopting a ranking system to determine the relative priority for seal extension options. The advantages of a ranking system are: it can take into account many factors with a weighting solely applicable to the Waimate District provides relativity to assist in deciding the seal extension priorities. <u>Subsidised Seal Extensions</u> are subject to NZTA Benefit/Cost (BCR) procedures that must show benefit to the road user. Benefits include safety, travel time cost savings, reduced roughness, reduced vehicle operating costs and maintenance cost savings. Roads that may meet the benefit conditions usually have high heavy traffic volumes, such as the major routes to production forests or roads that have high maintenance costs (e.g. due to steep grades). <u>Dust Suppression Seal:</u> Council will consider written applications for seal extending a maximum of 200 metres to suppress dust in front of dwellings. To gain approval the work must: applicant to fund 50% of the remaining cost. Council must have funds available. Applicants will be prioritised by the severity of the nuisance and preference will be given to cases where the use of the road has markedly changed. Council will undertake seal extensions when NZTA funding can be secured and the local share of the funding is available.

Asset Description	Type of Project	Summary and Investment Strategy
		Non-Subsidised Seal Extensions do not qualify for NZTA financial assistance will require 100% rate funding. Sealing can provide tangible (for which a monetary value can be assessed) and intangible (cannot usually be easily quantified in monetary terms e.g. improvements to air and water quality etc.) benefits. Tangible benefits generally fit into four main categories: productivity gains for properties alongside the road to be sealed. improvements to ride for driver and passengers. vehicle operating cost savings travel time savings.
Bridges	Bridge Replacement	Bridge development funding when and if required is included Bridge Renewal budget.
Drainage	General	The cost of drainage renewal and development works is included in the Council structural renewal programme.
	Kerb and Channel	The construction of new kerb and channels is driven by the urban services stormwater upgrading programme and, to a lesser extent, in response to customer/resident requests.
Traffic Services	New Signs	All renewals and minor improvements are funded under 'Traffic Services Renewal'.
Footpaths	Footpath construction	The addition to the network of footpaths and pedestrian accessways occurs in one of the following ways: Extensions constructed by Council where no footpath previously existed. ○ Taking over new footpaths constructed within sub divisional development (constructed at the developer's expense) ○ Upgrading work to improve the level of service (particularly in relation to special treatments in high profile commercial areas) Requests form Councillors, Public, and Staff Safety improvements Pedestrian demand Council has developed a prioritisation model for determining where footpaths should be added. This will also affect if footpaths will be renewed once they have reached the end of their survivable life, Figure 9.62.
Street Lighting		Streetlights are acquired or upgraded as part of: power under-grounding work minor safety works upgrading work to improve the level of service (e.g. spacing) extensions constructed by Council where no streetlights previously existed. taking over new streetlights installed with sub-divisional development (constructed at the developer's expense) in association with the street upgrading programme. Development Strategy Candidates for minor street lighting and footpath lighting are ranked according to the criteria of:

Asset Description	Type of Project	Summary and Investment Strategy
		Night-time foot traffic Night-time vehicular traffic Existing lantern spacing Geometry of the road and intersection Special features (trees, parks, bridges, lack of footpaths, social conditions) Development Programme Currently development works are included under maintenance and renewals.

9.27 Disposal Plan

For Council to dispose of an asset it must comply with the legal obligations outlined in the Local Government Act, which covers:

- Public notification procedures required prior to sale
- Restrictions on the minimum value to be recovered
- Use of revenue received from asset disposal.

In general, Council has no specific plans for disposal of components of the roading asset. Details for specific assets are included in Table 9.55.

Table 9.55 - Disposal of Assets Summary

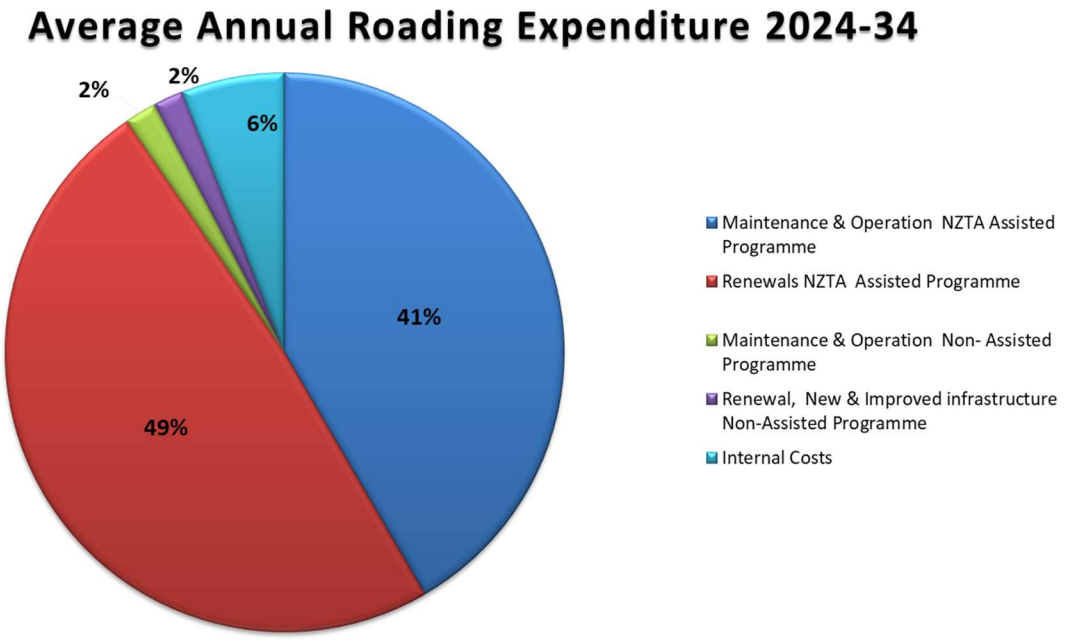
Asset Description	Disposal Plan	Comments
Land	None	Areas of unformed legal road reserve, berm areas surplus to requirements or areas being informally occupied by adjoining landowners may be identified for disposal in future.
Sealed Roads	None	Council may for financial reasons convert sealed road to an unsealed road.
Unsealed Roads	None	
Bridges	None	Bridges that are on no-exit roads, providing property access only (not to residences) that have reached the end of their economic life and that NZTA share of replacement funding is in doubt will be considered for disposal. Ownership may be transferred to the main users (local property owners).
Drainage	None	
Traffic Services	None	
Footpaths	None	
Street Lighting	None	Disposal activity for streetlights relates to lanterns, controls and poles which have been replaced with new components. Components which can be used as spare parts are retained in storage. Other surplus assets have no commercial value, and are disposed of.

10 FINANCIAL SUMMARY

10.1 Financial Strategy

Council's top priority is to maintain and operate the existing network in its current condition, follow on by allowing for renewal expenditure that revitalises components of the network that has worn out and cannot be maintained to its current levels of service.

Figure 10.1 - Proposed Average Annual Proportion for Roading Expenditure for 2024-34 (November 2024)



Funding for the operations, maintenance and management of the roading network is provided from the Council Roading rate and funding received from NZTA. Funding for improvements are provided from NZTA, financial contributions paid by developers, and the Council Roading rate.

In determining the projects to be undertaken, the benefit/cost ratio (BCR) is the governing criteria used with preference being given to projects that can show to be economically justified, attract subsidy, have Council funding available, and community support.

10.2 Valuation

10.2.1 Valuation 2022

The most recent valuation of the roading network and associated assets was undertaken in September 2022 for all assets owned by Council as at 30 June 2022. The valuation details are summarised in Table 10.1. The valuation is generally updated on a 3 yearly cycle to take into account capital improvement works and additions (such as from development, or Council newly created assets) to the roading network.

The valuation consists of an assessment of the Optimised Replacement Cost, Optimised Depreciated Replacement Cost, and the Annual Depreciation (or decline in service potential of the network). The annual depreciation is the amount the asset declines in value over a year as a result of the remaining

useful life of the asset reducing. Provision is required to be made to fund this depreciation so as to make suitable allowance for the future replacement or renewal of the asset.

Depreciation is provided on a straight-line basis on all physical assets at rates that write-off the cost of the asset to the estimated residual value at the end of its assumed effective useful life.

Expenditure on renewing or improving the capacity of the asset is capitalised annually as are assets that are vested in Council by developers. Capital works that are in progress are not depreciated. The total cost of this work is capitalised at the end of the financial year in, which it is completed and depreciated from then onwards.

Table 10.1 - Roading Infrastructure Valuation 2022 (as at 30 June 2022)

Asset	Optimised Replacement Cost	Optimised Depreciated Replacement Cost	Annual Depreciation
Land	$80,672,118	$80,672,118	$0
Formation	$190,302,784	$190,302,784	$0
Unsealed Pavement Structure	$39,908,447	$39,908,447	$0
Seal Pavement Structure	$132,544,528	$73,255,555	$1,039,236
Sealed Pavement Surface	$23,740,366	$12,991,324	$1,367,712
Bridges	$54,571,726	$25,913,519	$568,476
Drainage	$24,947,687	$11,565,610	$251,706
Drain Fords	$2,942,405	$730,119	$65,028
Footpaths	$9,329,617	$3,368,775	$305,570
Signs	$765,300	$535,710	$33,755
Street Lighting	$591,401	$355,057	$19,422
Surface Water Channels	$15,111,622	$6,719,503	$151,461
Traffic Facilities	$114,373	$55,825	$3,900
Total Road Assets	**$575,542,374**	**$446,374,346**	**$3,806,266**

Table 10.2 - Roading Infrastructure Valuation Comparison 2017-2020

Valuation	2017	2020	Difference between 2017 and 2020	2022	Difference between 2020 and 2022
Optimised Replacement Cost	$455,890,163	$495,890,500	$40,000,337	$575,542,373	$79,651,873
Optimised Depreciated Replacement Cost	$368,854,914	$396,399,285	$27,544,371	$446,374,344	$49,975,059
Annual Depreciation	$2,680,758	$2,944,360	$263,602	$3,806,266	$861,906

10.2.2 Valuation Methodology

Every recorded component has been valued in terms of its replacement and depreciated replacement value. The valuation process has been performed in accordance with generally accepted accounting standards (PBE IPSAS 17 Property, Plant and Equipment), valuation standards and NZ local authority asset management practice (NZ Infrastructure Asset – Valuation and Depreciation Guidelines Edition 2.0). The RAMM valuation module has been used to complete the valuation.

Continued enhancement has occurred in the RAMM module that now allows a more flexible approach to methods of depreciation reporting and the recording of assumptions during the valuation process.

10.2.3 Valuation Improvement Recommendations

As a result of the 2022 valuation, the following has been recommended:

1) *Continue to maintain, develop and improve the asset component register including:*
    a) *Ensuring construction dates are applied to all components, as the construction date input is one of the most sensitive inputs to the valuation system. Where default dates are being used, these need to be of a realistic nature.*
    b) *Where assets are replaced or upgraded, these changes must also be accurately recorded in the relevant asset tables in a timely manner to ensure everything is captured within the valuation.*
2) *Care should be taken to ensure every asset has the asset owner field populated. To ensure these assets are accurately included in the valuation, this data could be extrapolated from a GIS analysis where no other source is available. Ensuring the asset owner field is populated for each new asset will ensure assets belonging to WDC are valued and assets that do not belong to WDC are not valued.*
3) *Field Data validation should be undertaken on a regular basis to confirm the accuracy and completeness of the data. A prioritised currency programme should be developed to ensure data currency.*
4) *The depreciation method of 'No Depreciation' for unsealed pavement structure assets should be reviewed to accurately capture the depreciation of these assets. Council may wish to monitor the renewal programme of unsealed pavements to determine this.*
5) *Review the types of minor structures included in the valuation in order to accurately capture the depreciation of these assets.*
6) *Ensure that retaining walls are recorded in the retaining walls table and included in the valuation in order to accurately capture the depreciation of these assets.*
7) *Ensure that railings are recorded in the railings table and included in the valuation in order to accurately capture the depreciation of these assets.*
8) *Where assets are recorded as side 'Both', separate into two records – one for each side so that assets are valued as two assets instead of one. This is preferred over the other option of updating the selection criteria in the valuation module as it will make future data analysis clearer.*
9) *It was noted that the average age if signs on the network is 19 years despite the total useful life (TUL) assumption being 15. Since they have a minimal remaining useful life (RUL) of 2 this means that the AD for these assets which have lived past their TUL will decrease yearly as their TUL is adjusted to be equivalent to age + minimum RUL. It is suggested that these signs either have their install date updated or a new total useful life is assigned to signs.*

10) It is noted that despite 586 signs having been added to the network since 2020 only 34 signposts have been added. It is suggested that this table be investigated to ensure all posts have been collected.

11) Large culverts quantities are currently derived based on their cross sectional area instead of length, this should be changed along with having a linear rate applied to the assets.

10.3 Estimated Required Asset Expenditure

When assessing the expected annual renewal expenditure an indication of the appropriate level of expenditure required can be gauged by comparing the estimated renewal requirement against the Annual Depreciation for each asset component in light of the average age of that asset component. If the asset is "young", then an amount less than the Annual Depreciation (AD) would be a likely requirement and as the asset ages a larger amount, probably greater than the AD would be likely required. The 30 June 2022 Waimate District Council Valuation is summarised in Table 10.1.

The AD is an amount of money that represents the estimated annual renewal requirements of the asset. It does not include the amount required to cover routine or unplanned reactive maintenance or operational costs such as electricity for streetlights. On this basis, the AD will always be less than the theoretical total maintenance and renewal cost.

In considering the above information, it is possible to identify whether the current renewal expenditure is:

- approximately matching the theoretical renewal requirement
- less than the theoretical renewal requirement
- greater than the theoretical renewal requirement

Each Roading Asset component has been looked at to determine the outcome in relation to its budgeted expenditure. A comparison between forecast expenditure for 2024-27 and the Annual Depreciation for each asset type is shown in Table 10.3.

Table 10.3 - Comparison between Forecast Expenditure and Annual Depreciation (October 2024)

Asset	Annual Depreciation Consumption of the Asset	2021-24 Renewals	Annual Renewal	% renewals vs. Annual Depreciation
Seal Pavement Structure	$1,039,236	$2,505,228	$835,076	80%
Sealed Pavement Surface	$1,367,712	$3,972,471	$1,324,157	97%
Bridges	$568,476	$621,330	$207,110	36%
Drainage	$251,706	$518,736	$172,912	69%
Drain Fords	$65,028	$137,835	$45,945	71%
Footpaths	$305,570	$424,684	$141,561	46%
Signs	$33,755	$213,586	$71,195	211%
Street Lighting	$19,422	$0	$0	0%
Surface Water Channels (K&C)	$151,461	$897,000	$299,000	197%
Traffic Facilities	$3,900		$0	0%
Total Road Assets	**$3,806,266**	**$9,290,869**	**$3,096,956**	**81%**

From the comparison shown in Table 10.3, it shows that the proposed forecast renewal expenditure varies from asset to asset. Council and roading staff will also need to assess the budgeted expenditure level and ascertain whether this is an appropriate level given the current age and condition of the network components.

10.4 How Council Fund the Roading Activity

NZTA NZ Transport Agency (NZTA) have set the Funding Assistance Rates (FAR) for the 2024-27 National Land Transport Programme (NLTP), and for the Waimate District Council, the Normal FAR rate is 68%. This is a 4% increase from the 2021-24 National Land Transport Programme.

NZTA has provided certainty about funding arrangements so Council is able to complete their planning and budgeting required by the Regional Land Transport Plans (RLTPs), and Long Term Plan (LTP). The other 32% of the expenditure is funded through Council Roading rates.

NZTA, as investor, used the following inputs for each approved organisation to calculate the appropriate FAR rates for the Council[58]. These are:

1) centreline kilometres, which provide a measure of the length of the road network to be maintained and services to be available to all transport users.
2) capital value, which is used by most local authorities to set rates, and provides a measure of the asset base from which local authorities raise their local share.
3) inverse of rating units, which identifies local authorities that have the smallest number of ratepayers from which to source their local share.
4) index of deprivation, a demographic index published by the University of Otago and used by the Ministry of Health, which provides a measure of the relative wealth of communities.
5) total cost of all activities for a recent period, which is the actual total costs incurred by approved organisations for the last 3 to 5 years.

[58] Funding Assistance Rates (FAR) Policy | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

10.5 Roading Forecast Expenditure

Table 10.4 - Roading Subsidised Activity Forecast Expenditure for 2024-34 (based on NZTA Split, as at November 2024)

WC	Activities	Expenditure Category	GL Code	2024-25	2025-26	2026-27	3 year Programme Totals	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Maintenance, Operation & Renewal of Local Roads NZTA assisted Programme														
114	Structures Maintenance	Structures Maintenance	4110473	$164,862	$168,159	$171,951	$504,972	$175,067	$179,798	$184,480	$189,080	$193,630	$198,263	$202,632
121	Environmental maintenance	Environmental maintenance	4110474	$206,138	$210,261	$215,002	$631,402	$218,898	$224,814	$230,669	$236,420	$242,109	$247,902	$253,365
122	Network Service Maintenance	Pavement Marking	411047501	$48,000	$48,960	$50,064	$147,024	$72,209	$74,161	$76,092	$77,989	$79,866	$81,777	$83,579
		Sign Repairs	411047502	$128,639	$131,212	$134,171	$394,021	$136,602	$140,294	$143,947	$147,536	$151,087	$154,701	$158,110
		Carriageway Lighting	411047503	$17,000	$17,340	$17,731	$52,071	$19,645	$20,176	$20,702	$21,218	$21,728	$22,248	$22,738
131	Level Crossing Warning Devices	Level Crossing Warning Devices	4110476	$11,000	$11,220	$11,473	$33,693	$11,681	$11,997	$12,309	$12,616	$12,920	$13,229	$13,520
140	Minor Events	Minor Events	4110477	$130,000	$132,600	$135,590	$398,190	$138,047	$141,778	$145,470	$149,097	$152,685	$156,338	$159,783
151	Network & Asset Management	Council Prof.Services	411047801	$608,000	$620,160	$634,144	$1,862,304	$645,635	$663,085	$680,352	$697,315	$714,096	$731,181	$747,293
		Consultant	411047802	$66,667	$68,000	$69,533	$204,200	$70,793	$72,707	$74,600	$76,460	$78,300	$80,173	$81,940
215	Structures component replacement	Structures component replacement	4110484	$202,850	$206,907	$211,573	$621,330	$249,387	$256,127	$262,797	$269,349	$275,831	$282,431	$288,654
222	Traffic Service Renewal	Sign Renewal	411048501	$69,731	$71,126	$72,730	$213,586	$74,047	$76,049	$78,029	$79,975	$81,899	$83,859	$85,706
		Lighting Renewal	411048502	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sub Total Local Road Operations				**$1,652,887**	**$1,685,945**	**$1,723,961**	**$5,062,793**	$1,812,012	$1,860,986	$1,909,447	$1,957,055	$2,004,152	$2,052,101	$2,097,320
111	Seal Pavement Maintenance	Seal Pavement Maintenance	411047001	$814,125	$830,408	$849,133	$2,493,666	$864,520	$887,885	$911,006	$933,720	$956,190	$979,067	$1,000,642
112	Unsealed pavement maintenance	Grading	411047101	$275,305	$280,811	$287,143	$843,260	$341,071	$350,289	$359,411	$368,372	$377,237	$386,262	$394,774
		Unsealed Pavement Repairs	411047102	$107,280	$109,425	$111,893	$328,598	$113,920	$116,999	$120,046	$123,039	$126,000	$129,015	$131,858
113	Routine Drainage Maintenance	Culvert Maintenance	411047201	$72,790	$74,246	$75,920	$222,956	$77,296	$79,385	$81,452	$83,483	$85,492	$87,537	$89,466
		Drainage Maintenance	411047202	$442,424	$451,272	$461,448	$1,355,144	$469,810	$482,507	$495,072	$507,416	$519,627	$532,059	$543,783
		K&C Cleaning	411047203	$18,000	$18,360	$18,774	$55,134	$19,114	$19,631	$20,142	$20,644	$21,141	$21,647	$22,124
211	Unsealed Road Metalling	Unsealed Rd Metalling	4110480	$363,112	$370,375	$378,726	$1,112,213	$455,061	$467,360	$479,530	$491,487	$503,314	$515,356	$526,712
212	Sealed Road Resurfacing	Sealed Rd Resurfacing	4110481	$1,296,922	$1,322,860	$1,352,689	$3,972,471	$1,377,201	$1,414,423	$1,451,255	$1,487,439	$1,523,234	$1,559,678	$1,594,046
213	Drainage Renewals	Drainage Construction	411048201	$172,395	$175,843	$179,808	$528,046	$328,214	$337,085	$345,863	$354,486	$363,017	$371,702	$379,893
		Culvert Renewal	411048202	$193,132	$160,987	$164,617	$518,736	$297,678	$305,723	$313,685	$321,506	$329,243	$337,120	$344,548
		K&C Renewal	411048203	$292,850	$298,707	$305,443	$897,000	$348,144	$357,553	$366,864	$376,011	$385,060	$394,272	$402,960
		Concrete Ford Renewal	411048204	$45,000	$45,900	$46,935	$137,835	$47,786	$49,077	$50,355	$51,611	$52,853	$54,117	$55,310
214	Sealed Rd Pavement Rehabilitation	Sealed Road Pavement Rehabilitation	4110483	$817,900	$834,258	$853,070	$2,505,228	$1,110,110	$1,140,113	$1,169,803	$1,198,969	$1,227,822	$1,257,198	$1,284,901
Sub Total Pothole Prevention				**$4,911,235**	**$4,973,452**	**$5,085,599**	**$14,970,286**	$5,849,925	$6,008,031	$6,164,484	$6,318,183	$6,470,229	$6,625,030	$6,771,017
125	Footpath Maintenance	Footpath Maintenance	411049002	$54,118	$30,199	$31,443	$115,760	$57,467	$59,021	$60,557	$62,067	$63,561	$65,082	$66,516
225	Footpath Renewal	Footpath Renewal	4110491	$290,054	$66,324	$68,306	$424,684	$308,009	$316,333	$324,571	$332,663	$340,669	$348,819	$356,506
Sub Total Local Roads Footpaths And Cycleways				$344,172	$96,523	$99,749	$540,444	$365,476	$375,354	$385,128	$394,731	$404,230	$413,901	$423,022
Total Maintenance, Operation & Renewal				**$6,908,294**	**$6,755,920**	**$6,909,309**	**$20,573,523**	$8,027,413	$8,244,370	$8,459,060	$8,669,969	$8,878,611	$9,091,032	$9,291,358
New & Improved infrastructure for Local Roads NZTA Assisted Programme														
341		Minor Improvements	411048701	$0	$0	$50,000	$50,000	$530,950	$545,300	$559,500	$573,450	$587,250	$601,300	$614,550
		Replacement of Bridges	411048702	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sub Total New & Improved infrastructure				$0	$0	$50,000	**$50,000**	$530,950	$545,300	$559,500	$573,450	$587,250	$601,300	$614,550
Total Local Roads NZTA assisted Programme				**$6,908,294**	**$6,755,920**	**$6,959,309**	**$20,623,523**	**$8,558,363**	**$8,789,670**	**$9,018,560**	**$9,243,419**	**$9,465,861**	**$9,692,332**	**$9,905,908**
								68%	68%	68%	68%	68%	68%	68%
		NZTA Subsidy APPROVED		$4,385,612	$4,457,854	$4,538,094	**$13,381,561**	$5,819,687	$5,976,976	$6,132,620	$6,285,525	$6,436,785	$6,590,786	$6,736,018

Table 10.5 - Roading Subsidised Maintenance Operations and Renewal Activity Forecast Expenditure for 2024-34 (as at November 2024

WC	Activities	Expenditure Category	GL Code	2024-25	2025-26	2026-27	3 year Programme Totals	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Maintenance, Operation & Renewal of Local Roads NZTA assisted Programme														
111	Seal Pavement Maintenance	Seal Pavement Maintenance	411047001	$814,125	$830,408	$849,133	$2,493,666	$864,520	$887,885	$911,006	$933,720	$956,190	$979,067	$1,000,642
112	Unsealed pavement maintenance	Grading	411047101	$275,305	$280,811	$287,143	$843,260	$341,071	$350,289	$359,411	$368,372	$377,237	$386,262	$394,774
		Unsealed Pavement Repairs	411047102	$107,280	$109,425	$111,893	$328,598	$113,920	$116,999	$120,046	$123,039	$126,000	$129,015	$131,858
113	Routine Drainage Maintenance	Culvert Maintenance	411047201	$72,790	$74,246	$75,920	$222,956	$77,296	$79,385	$81,452	$83,483	$85,492	$87,537	$89,466
		Drainage Maintenance	411047202	$442,424	$451,272	$461,448	$1,355,144	$469,810	$482,507	$495,072	$507,416	$519,627	$532,059	$543,783
		K&C Cleaning	411047203	$18,000	$18,360	$18,774	$55,134	$19,114	$19,631	$20,142	$20,644	$21,141	$21,647	$22,124
114	Structures Maintenance	Structures Maintenance	4110473	$164,862	$168,159	$171,951	$504,972	$175,067	$179,798	$184,480	$189,080	$193,630	$198,263	$202,632
121	Environmental maintenance	Environmental maintenance	4110474	$206,138	$210,261	$215,002	$631,402	$218,898	$224,814	$230,669	$236,420	$242,109	$247,902	$253,365
122	Network Service Maintenance	Pavement Marking	411047501	$48,000	$48,960	$50,064	$147,024	$72,209	$74,161	$76,092	$77,989	$79,866	$81,777	$83,579
		Sign Repairs	411047502	$128,639	$131,212	$134,171	$394,021	$136,602	$140,294	$143,947	$147,536	$151,087	$154,701	$158,110
		Carriageway Lighting	411047503	$17,000	$17,340	$17,731	$52,071	$19,645	$20,176	$20,702	$21,218	$21,728	$22,248	$22,738
125	Footpath Maintenance	Footpath Maintenance	411049002	$54,118	$30,199	$31,443	$115,760	$57,467	$59,021	$60,557	$62,067	$63,561	$65,082	$66,516
131	Level Crossing Warning Devices	Level Crossing Warning Devices	4110476	$11,000	$11,220	$11,473	$33,693	$11,681	$11,997	$12,309	$12,616	$12,920	$13,229	$13,520
140	Minor Events	Minor Events	4110477	$130,000	$132,600	$135,590	$398,190	$138,047	$141,778	$145,470	$149,097	$152,685	$156,338	$159,783
151	Network & Asset Management	Council Prof.Services	411047801	$608,000	$620,160	$634,144	$1,862,304	$645,635	$663,085	$680,352	$697,315	$714,096	$731,181	$747,293
		Consultant	411047802	$66,667	$68,000	$69,533	$204,200	$70,793	$72,707	$74,600	$76,460	$78,300	$80,173	$81,940
Sub Total Maintenance, Operation				$3,164,347	$3,202,634	$3,275,413	$9,642,394	$3,431,776	$3,524,527	$3,616,308	$3,706,473	$3,795,669	$3,886,481	$3,972,121
211	Unsealed Road Metalling	Unsealed Rd Metalling	4110480	$363,112	$370,375	$378,726	$1,112,213	$455,061	$467,360	$479,530	$491,487	$503,314	$515,356	$526,712
212	Sealed Road Resurfacing	Sealed Rd Resurfacing	4110481	$1,296,922	$1,322,860	$1,352,689	$3,972,471	$1,377,201	$1,414,423	$1,451,255	$1,487,439	$1,523,234	$1,559,678	$1,594,046
213	Drainage Renewals	Drainage Construction	411048201	$172,395	$175,843	$179,808	$528,046	$328,214	$337,085	$345,863	$354,486	$363,017	$371,702	$379,893
		Culvert Renewal	411048202	$193,132	$160,987	$164,617	$518,736	$297,678	$305,723	$313,685	$321,506	$329,243	$337,120	$344,548
		K&C Renewal	411048203	$292,850	$298,707	$305,443	$897,000	$348,144	$357,553	$366,864	$376,011	$385,060	$394,272	$402,960
		Concrete Ford Renewal	411048204	$45,000	$45,900	$46,935	$137,835	$47,786	$49,077	$50,355	$51,611	$52,853	$54,117	$55,310
214	Sealed Rd Pavement Rehabilitation	Sealed Road Pavement Rehabilitation	4110483	$817,900	$834,258	$853,070	$2,505,228	$1,110,110	$1,140,113	$1,169,803	$1,198,969	$1,227,822	$1,257,198	$1,284,901
215	Structures component replacement	Structures component replacement	4110484	$202,850	$206,907	$211,573	$621,330	$249,387	$256,127	$262,797	$269,349	$275,831	$282,431	$288,654
222	Traffic Service Renewal	Sign Renewal	411048501	$69,731	$71,126	$72,730	$213,586	$74,047	$76,049	$78,029	$79,975	$81,899	$83,859	$85,706
		Lighting Renewal	411048502	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
225	Footpath Renewal	Footpath Renewal	4110491	$290,054	$66,324	$68,306	$424,684	$308,009	$316,333	$324,571	$332,663	$340,669	$348,819	$356,506
Sub Total Renewal of Local Roads NZTA assisted				$3,743,946	$3,553,286	$3,633,896	**$10,931,129**	$4,595,637	$4,719,844	$4,842,752	$4,963,496	$5,082,942	$5,204,552	$5,319,237
Total Maintenance, Operation & Renewal				$6,908,294	$6,755,920	$6,909,309	**$20,573,523**	$8,027,413	$8,244,370	$8,459,060	$8,669,969	$8,878,611	$9,091,032	$9,291,358
New & Improved infrastructure for Local Roads NZTA Assisted Programme														
341		Minor Improvements	411048701	$0	$0	$50,000	$50,000	$530,950	$545,300	$559,500	$573,450	$587,250	$601,300	$614,550
		Replacement of Bridges	411048702	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sub Total New & Improved infrastructure				$0	$0	$50,000	**$50,000**	$530,950	$545,300	$559,500	$573,450	$587,250	$601,300	$614,550
Total Local Roads NZTA assisted Programme				**$6,908,294**	**$6,755,920**	**$6,959,309**	**$20,623,523**	**$8,558,363**	**$8,789,670**	**$9,018,560**	**$9,243,419**	**$9,465,861**	**$9,692,332**	**$9,905,908**
		NZTA Subsidy		**68%**	**68%**	**68%**		**68%**	**68%**	**68%**	**68%**	**68%**	**68%**	**68%**
		NZTA Subsidy APPROVED		$4,385,612	$4,457,854	$4,538,094	**$13,381,561**	$5,819,687	$5,976,976	$6,132,620	$6,285,525	$6,436,785	$6,590,786	$6,736,018

Table 10.6 - Roading Unsubsidised Activity Forecast Expenditure for 2024-34 (as at November 2024)

WC Activities	Expenditure Category	GL Code	2024-25	2025-26	2026-27	3 year Programme Totals	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Maintenance & Operation of Local Roads Non Assisted Programme													
	Street Cleaning	411049001	$110,200	$112,404	$114,939	$337,543	$117,021	$120,184	$123,314	$126,388	$129,430	$132,527	$135,447
	Car parks ,Street furniture	new	$5,000	$5,100	$5,215	$15,315	$5,310	$5,453	$5,595	$5,735	$5,873	$6,013	$6,146
	Road Safety TDC	411019003	$32,000	$32,640	$33,376	$98,016	$33,981	$34,899	$35,808	$36,701	$37,584	$38,483	$39,331
			$147,200	$150,144	$153,530	$450,874	$156,312	$160,536	$164,717	$168,824	$172,886	$177,023	$180,924
Renewal, New & Improved infrastructure for Local Roads Non Assisted Programme													
	Development	411090202	$50,000	$0	$0	$50,000	$53,095	$54,530	$55,950	$57,345	$58,725	$60,130	$61,455
	Seal Extension	411090203	$60,000	$0	$0	$60,000	$63,714	$65,436	$67,140	$68,814	$70,470	$72,156	$73,746
	Minor Improvements N/S	411090204	$50,000	$40,000	$41,240	$131,240	$53,095	$54,530	$55,950	$57,345	$58,725	$60,130	$61,455
			$160,000	$40,000	$41,240	**$241,240**	$169,904	$174,496	$179,040	$183,504	$187,920	$192,416	$196,656
Administration & Internal Costs			$504,413	$637,666	$620,501	**$1,762,579**	$649,320	$653,955	$669,801	$681,478	$698,741	$711,996	$725,842
Rechargeable Works			$64,400	$65,688	$67,169	**$197,257**	$68,386	$70,235	$72,064	$73,860	$75,638	$77,447	$79,154
Total Local Roads Non Assisted Programme			$876,013	$893,498	$882,439	**$2,651,950**	$1,043,922	$1,059,222	$1,085,622	$1,107,667	$1,135,186	$1,158,882	$1,182,576
Total Roading Programme			**$7,784,306**	**$7,649,418**	**$7,841,748**	**$23,275,473**	**$9,602,286**	**$9,848,892**	**$10,104,181**	**$10,351,086**	**$10,601,046**	**$10,851,214**	**$11,088,484**

Figure 10.2 - Historic Roading Expenditure from 2000/01 Compared to Proposed 10 years (as at November 2024)

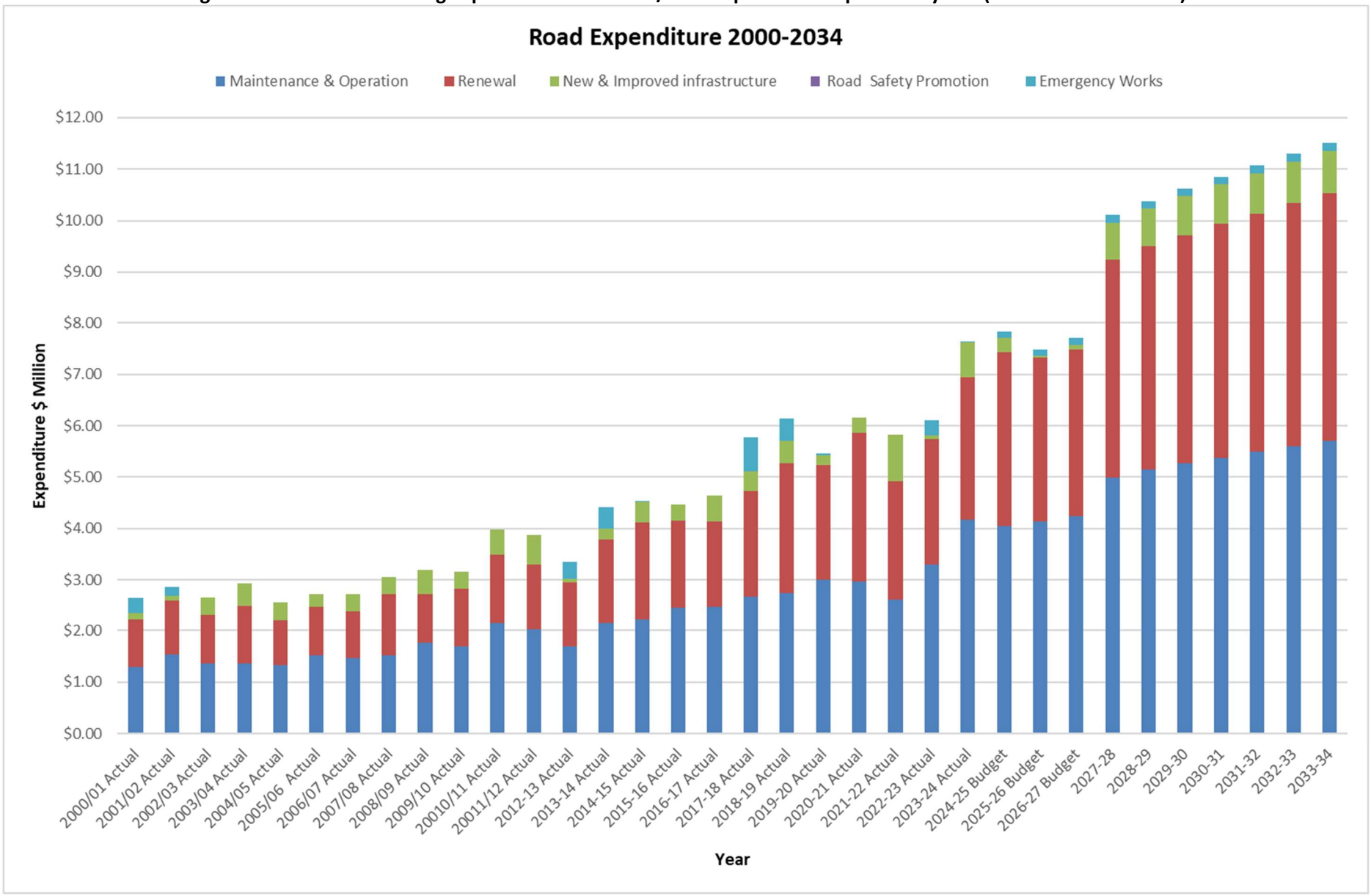
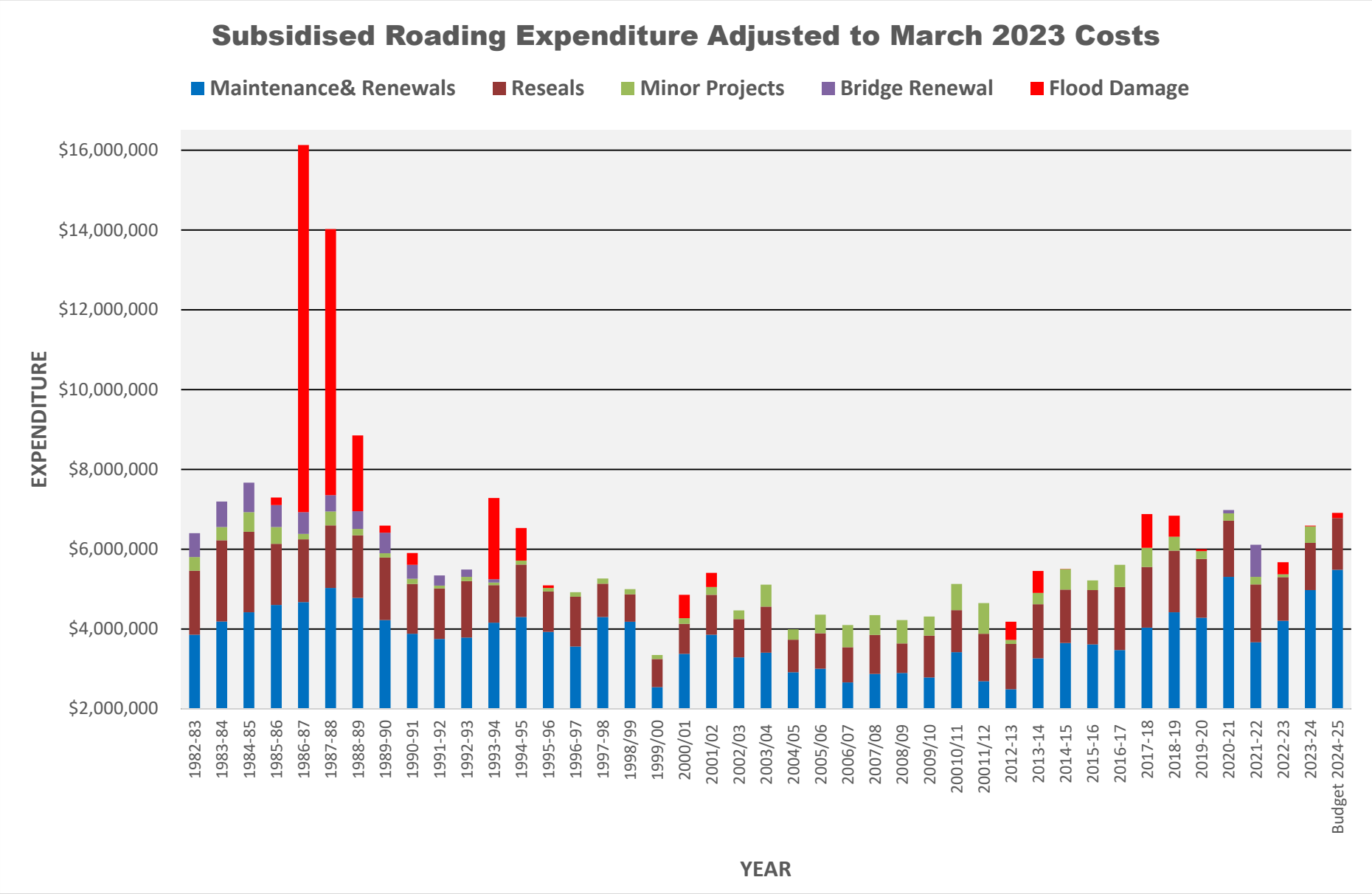


Figure 10.3 - Historic Subsidised Roading Expenditure Adjusted to June 2023 Costs



10.6 Significant Forecasting Assumptions Key Financial Forecast Assumptions

Table 10.7 - 2025-2034 LTP Significant Forecasting Assumptions (3 March 2025)

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
Population Change						
The Waimate District population will observe a gradual increase by 4.7% between 2023-2033. It is assumed that this increase will generate a relative impact on population-related metrics, such as the quantity of rateable properties.	Rationale Ltd.	Population growth either significantly exceeds that of the projected percentage or is significantly below the projected percentage.	Low	If population accelerates significantly above the given assumption, existing infrastructure may not be suitable to cope with the extra demand.	Council will monitor population measures provided for the district, and will respond to significant variations to assumptions, where possible.	All activity groups
Demographic Changes						
Between 2020-2030, the district's population retains its comparatively high mean age, while observing a gradual and mild reduction in the mean age level, with the age group of 45-49 years likely to be the most frequent by 2030.	Rationale Ltd.	The demographic make-up of the Waimate District changes significantly.	Low	If the district's demographic changes significantly from the predicted range, the existing infrastructure and services may not meet the needs of the relevant demographic classes.	Council will monitor demographic measures provided for the district and respond to significant variations to assumptions, where possible.	All activity groups
Oil Price						
Oil prices are increasingly volatile and more likely to be influenced by global political and economic events. Prices are unlikely to reliably stabilise for any extended length of time.	WDC	There is a risk that fuel demand will be different to that assumed, and that significant changes in market price	Moderate	Increased fuel costs would have a particular impact on the costs of road maintenance, renewal, and improvement. This may affect Council's ability to carry out planned work without additional	Council will monitor the impact of fuel price on spending and aim to optimise spending.	All activity groups

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
		occur with greater frequency and/or greater severity.		funding. It may also increase demand for alternative methods of transport.		
Climate Change						
Changes in our climate are projected to continue into the future. Projections indicate that Canterbury should expect warmer temperatures, an increasing number of hot days, and wider temperature ranges. The frequency of extreme weather events is projected to increase along with associated costs to economic, community wellbeing and environmental sustainability as a result.	WDC Ministry for the Environment National Institute of Water and Atmospheric Research Environment Canterbury	Environmental changes may accelerate at a rate higher than predicted, and/or the socio-economic consequences of adaptation measures may exceed the anticipated range.	Moderate	If environmental changes were to accelerate, Council's infrastructure assets would be significantly impacted. This would result in further modifications or more regular repairs to relevant assets.	Council is currently undertaking the development of a climate resilience strategy aimed at consistent monitoring, active mitigation, and pre-emptive adaptation efforts. This strategy is being built on the foundation of extensive engagement, education, and feedback to address the unique challenges faced by Waimate. This engagement includes seven community workshops based on key economic, social, environmental, and cultural activities relevant to Waimate's future.	All activity groups

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
Emissions Trading Scheme (ETS)						
The Emissions Trading Scheme (ETS) and the price of New Zealand Units (NZU) will remain relatively stable in response to changes in legislation that affect price certainty and unit limits.	Ministry for the Environment	There is a risk of legislative change, which could result in costs being higher or lower than assumed.	low	Should the impact of the scheme exceed significantly from the given assumption, budget for additional cost may need to be considered.	Council will monitor the development of relevant legislation and review the impact of any significant changes in the Annual Plan.	Investments and Finance
New Zealand Transport Agency Waka Kotahi (NZTA) Revenue						
Roading expenditure comprises a significant portion of Waimate District Council's total expenditure, therefore using a significant portion of Council's overall rate take. The majority of Council's expenditure on the district's roads is eligible to attract an assistance rate from the Waka Kotahi New Zealand Transport Agency (NZTA). The funding assistance rate received by Council for qualifying roading expenditure for maintenance and improvement projects is set at 68% for 2024-27.* It is further assumed that this funding assistance rate will remain unchanged over the life of the Long Term Plan as there is no indication that NZTA will modify the criteria used to establish these rates. Council also assumes that funding priorities indicated in Government Policy Statements on Land Transport will remain consistent through future bids during the life of the plan.	NZTA	The subsidy rate may be subject to change, along with any variation in criteria for inclusion in subsidized works programmes.	Moderate	Changes to the funding priorities of NZTA remain outside Council control. Minor variations would impact significantly on forecasted financials.	Any impact of changes to the NZTA funding assistance rate will be applied to the relevant Annual Plan.	Roading and Footpaths
*Normal funding assistance rates | Waka Kotahi NZ Transport Agency (nzta.govt.nz)						
Emergency Event						
Disruptive or destructive emergency events such as earthquakes, extreme weather events, and pandemics may occur to damage, disable,	WDC	Inability to recover or continue	Moderate	If a major emergency event did occur, Council has some insurance for	Council undertakes business continuity plans for its own	All activity groups

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
or destroy community infrastructure (for example, district roads, bridges, water supplies, among others), or community activities. It is further assumed that the cost of correcting such damage is met either by Council or its insurance providers, or by possible special government grants.	NEMA National Emergency Management Advisor Ministry for Environment	business following a major event. Inability to provide intended level of service to affected areas.		its infrastructure, and assistance would be offered from Central Government. To pay for additional emergency work not covered by the above, Council would increase internal/external borrowings.	operation and coordinates Civil Defence planning for the district. In doing so, Council attempts to prepare itself and the district for such events.	
Legislation Changes						
Council's operations are guided by central government legislation and policy directives that set the framework for decision making and service delivery. Council operates under the assumption that while minor legislative changes and evolving policy guidance are expected, major changes that could significantly alter Council operations are infrequent. When such changes do occur, they are typically communicated well in advance, allowing time for necessary adjustments.	Central Government Taituarā	That major legislative changes are introduced on short notice or due to an unforeseen event that would require Council to alter its existing business operations.	**low**	Council would need to implement changes at a pace faster than anticipated. Accelerated timeframes would likely result in increased costs of implementation.	Council maintains consistent communication with central government, regulatory bodies, and local government support organisations to ensure that proposed changes that may impact Council operations are identified and anticipated at the earliest stage.	All activity groups
New Zealand Water Service Delivery						
Delivery of 3 Waters assets and infrastructure (water, sewer, and stormwater) remain under Council ownership for the life of the plan.	WDC Central Government	Legislation changes under urgency in Parliament that must be implemented immediately.	High	Changes are required to be implemented more quickly than anticipated.	Council closely monitors any and all developments and responds accordingly.	Rural Water Supply, Urban Water Supply, Sewer, Stormwater

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
Resource Consents						
The conditions of resource consents held by Council may be changed, and that Council will obtain the necessary resource consents for planned projects.	WDC	There is a risk that resource consent conditions are altered significantly.	Moderate	Advanced warning of likely changes is expected. The financial effect of any change to resource consent requirements would depend on the change.	Council will monitor the development of relevant standards and review the impact of any significant changes.	Roading and Footpaths, Sewerage, Stormwater, Waste Management, Urban Water Supply, Rural Water Supply
Water Schemes Viability						
Elevated pricing for rural water schemes, and particularly the stock water element, may result in the relinquishment of water allocations. Sourcing of stock water from existing irrigation schemes may mean that pricing within individual supplies increases as a result.	WDC	Increased cost associated with water allocations under existing and proposed service delivery models	Moderate	No new irrigation schemes are currently planned within the district and the existing command areas only cover a small proportion of the overall footprint of the Waimate District Council Rural Water Supplies.	Council will monitor sold volumes (allocations) and review charging structures if necessary to mitigate the overall risk for the district. Council is actively engaging with central government to mitigate the impact of this risk.	Rural Water Supply
Useful Lives of Significant Assets and Depreciation						
The useful lives of significant assets are based on the useful lives as identified in the Statement of Accounting Policies. It is assumed that these useful lives are retained for the nine-year period covered by this Long Term Plan. In practice useful lives are re-assessed at a minimum of every three years in line with asset revaluations.	New Zealand Asset Management Support WDC asset revaluations	There is a risk that assets will wear out more quickly than forecasted and require replacement earlier than planned	Moderate	If assets require replacement earlier than first considered, capital expenditure projects may need to be brought forward.	Regular review of the useful life of each asset category reduces the risk of significant inaccuracies.	Roading and Footpaths, Rural Water Supply, Urban Water Supply

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
Revaluation of Non-Current Assets						
Council conducts asset revaluations every three years. The Long Term Plan assumes the following percentage increases to book value, for each of the following class of assets: Land: +10% Buildings: +15% Utilities (Water Schemes, wastewater, stormwater, Sanitation): +8% Roading: +6%	WDC	Revaluations will somewhat differ from those projected carrying values of the assets and depreciation expense.	Moderate	Variation in values is expected to be low unless the valuation methodology changes.	Regular revaluation of non-current assets reduces the risk of significant valuation shifts.	Roading and Footpaths, Rural Water Supply, Urban Water Supply, Sewerage, Property
Funds for Future Replacement of Significant Assets						
In general, councils have some flexibility in the policies they may set with regard to sources of funds for the future replacement of significant assets. Council's flexibility centres on whether we should collect depreciation monies from ratepayers during the lifetime of the asset to build up a reserve that can fund the replacement of the asset when it comes to the end of its useful life, or when the asset comes to the end of its useful life which would compel Council to rely on borrowed money to replace it. Council considers that the most sensible approach is to collect depreciation during the life of an asset, therefore having reserve funds on hand at the time replacement is needed. See Council's 'Revenue and Financing Policy' and the 'Financial Strategy'.	WDC	Sufficient funds may not be available to pay for planned asset replacement.	Low	Funds may need to be borrowed or rated for, which may be a burden to either the Council or ratepayers in the future.	Council develops Asset Management Plans that determine the timing of asset replacements. Council uses these to forecast and prepare for future funding requirements.	Property, Roading and Footpaths, Rural Water Supply, Urban Water Supply, Sewerage
Return on Investment – Alpine Energy						
Alpine Energy's FY2025-2027 Statement of Corporate Intent includes a Dividend Policy whereby the Directors are not indicating any	WDC	There is a risk that returns on investments	Low	Should dividends be received, Council finances will be more	No management of this risk is required as	Investments and Finance

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
dividends to shareholders for the 3 years of the SCI. It is therefore assumed that the company will not provide a return to shareholders for the duration of the 2025-34 Long-Term Plan.	Alpine Energy	will be higher than forecasted.		favourable than anticipated to the extent of that dividend. This unanticipated income would contribute to the activity reserve balance and may result in positive cash-flow enabling consideration of higher levels of service.	any variation will be favourable to Council.	
Forestry Assets Values						
It is assumed that the forestry asset values will increase annually over a rotation cycle of 30 years.	Laurie Forestry Limited WDC	The value of forestry assets may sharply increase or decrease.	Moderate	A change in the value of the forestry asset will change Council's financial performance in the year of change occurring. However, it will not have a direct impact on the level of rates or expenditure.	Annual revaluation of forestry reduces the risk of significant valuation shifts.	Investments and Finance
Capital Delivery						
Council plan to deliver 100% of all capital projects over the life of the Long-Term Plan. The financial model was developed based on this assumption.	WDC	There is a risk that improved levels of service in the Water Supply area will be delayed. There is a risk that the capital projects will not be	Moderate	Variation to planned improved levels of service for the Water Supply area, where any delay in projects relating to Drinking Water Standards New Zealand compliance will result in maintaining current levels of service.	Council is aware of material sourcing and has addressed this issue by sourcing materials early and maintaining stock levels. Procurement is now completed through the Government Electronic Tenders System (GETS), notifying the wider	Water Supply and all other activities

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
		completed in any given year and carried over to subsequent years.		If projects are not completed on time, or are deferred, there may be reduced operational costs and depreciation expense impacts. There could also be an increase in required budget to complete the project if delayed.	contracting / consulting market of upcoming projects. In anticipation of a large capital programme in Year 1 (2026), a portion of these projects are likely to be tendered by 30 June 2025, or very early in the 2025/26 financial year. Due to the nature of the rates smoothing profile for the Water Supply activity, any delay in project completion will have no effect on the funding and rates required as planned.	
Return on Investment – Other						
It is assumed that Council's cash investments will generate returns from 2.38% - 3.77% based on the current economic climate. It is further assumed that the returns from Council's forestry investments for the duration of the Long Term Plan will be reflective of market conditions present at the time of preparation of this document.	Bancorp Laurie Forestry Limited WDC	Returns on investments will be higher or lower than forecasted.	Moderate	Higher interest rates received on cash investments or increased investment income could result in positive cash-flow enabling consideration of higher levels of service or reduced expenditure. Council does not heavily rely on interest revenue for running its operations, therefore the impact of	Council will manage its external investments to optimise returns (as described in the Council's Investment Policy). Council will monitor the forestry market's conditions and review the impact of any significant change in forecasted returns through each	Investments and Finance

<table>
<tr><th>Assumption</th><th>Source</th><th>Risk</th><th>Level of Uncertainty</th><th>Impact of Variation</th><th>Management of Risk</th><th>Activity</th></tr>
<tr><td></td><td></td><td></td><td></td><td>lower investment returns on delivery of Council services would be minimal. Similarly, Council does not use its forestry investment returns to fund other Council operations or activities.</td><td>subsequent Annual Plan process.</td><td></td></tr>
<tr><td colspan="7">Inflation</td></tr>
<tr><td>Council, along with many other New Zealand Councils, calculates and applies inflation factors to its Long-Term Plan budget forecast, using predictions of future inflation levels from New Zealand [economic research company] Business and Economic Research Ltd (BERL).
<table>
<tr><th>Year</th><th>Roading
%</th><th>3 Waters
%</th><th>Other Operational Expenditure
%</th><th>Capital Expenditure
%</th></tr>
<tr><td>June 2026</td><td>3.0</td><td>2.5</td><td>3.2</td><td>3.4</td></tr>
<tr><td>June 2027</td><td>3.1</td><td>2.8</td><td>3.2</td><td>3.3</td></tr>
<tr><td>June 2028</td><td>3.0</td><td>2.5</td><td>3.0</td><td>3.2</td></tr>
<tr><td>June 2029</td><td>2.7</td><td>2.1</td><td>2.7</td><td>2.9</td></tr>
<tr><td>June 2030</td><td>2.6</td><td>2.0</td><td>2.6</td><td>2.8</td></tr>
<tr><td>June 2031</td><td>2.5</td><td>2.0</td><td>2.4</td><td>2.5</td></tr>
<tr><td>June 2032</td><td>2.4</td><td>2.0</td><td>2.3</td><td>2.4</td></tr>
<tr><td>June 2033</td><td>2.4</td><td>2.0</td><td>2.2</td><td>2.2</td></tr>
<tr><td>June 2034</td><td>2.2</td><td>2.0</td><td>2.1</td><td>2.1</td></tr>
</table></td><td>Business and Economic Research Ltd.</td><td>Inflation will be higher or lower than anticipated.</td><td>Moderate</td><td>A difference between the inflation rates experienced and those assumed will change the cost base of Council, and therefore impact funding requirements.</td><td>Council has endorsed the rates produced by BERL as the most appropriate basis for accounting for the impact of inflation and preparing the Long Term Plan.

In the event of significant changes to the underlying costs supporting work in the activity areas, mitigation planning will feature in the Annual Plan. Activity areas, mitigation planning will feature in the Annual Plan.</td><td>All activity groups</td></tr>
<tr><td colspan="7">Borrowing Costs</td></tr>
<tr><td>Interest costs are estimated to range between 3.09% - 5.24% This refers to the expected external cost of debt facilities where costs are not known and are required to be projected. Loan repayments are forecast to be repaid on</td><td>WDC

Bancorp</td><td>Interest rates will differ significantly from those estimated.</td><td>Moderate</td><td>If borrowing costs are greater than those assumed, Council may need to increase its rates or reduce its</td><td>Council will monitor its applicable interest rates and adjust through the Annual Plan process to reflect</td><td>Investment and Finance</td></tr>
</table>

Assumption	Source	Risk	Level of Uncertainty	Impact of Variation	Management of Risk	Activity
the last day of the financial year, therefore interest is incurred for the full year.	Local Government Funding Agency			expenditure. Conversely, lower costs may mean rates required to fund Council operations are lower than they would otherwise have been.	a level best aligned to its actual anticipated external borrowing rate, utilizing the advice of its Treasury Advisors.	
Unidentified Liabilities						
It is assumed that Council does not have any unidentified liabilities.	WDC	There is a risk of an unexpected liability occurring. For example, a claim against Council.	Low	If an unidentified liability arises it may increase Council's expenditure. This risk is mitigated by the Council's Risk Management and Insurance Policies.	Regular review of liabilities reduces against the risk of items being unidentified.	All activity groups

10.7 Confidence Levels

The 10-year funding forecast has been based on current contract rates tendered in June 2021.

The confidence level of the first two years of the programme is high as this is based on actual assessed need on the network, which is unlikely to change significantly over this period.

The forecast for 2026/27 could be affected by wither the option to extend the maintenance contract is beyond the 5 year period is adopted.

The forecast for the remainder of the 10-year period is based on general annual quantity projections and not a robust forward works programme, so the confidence level is lower.

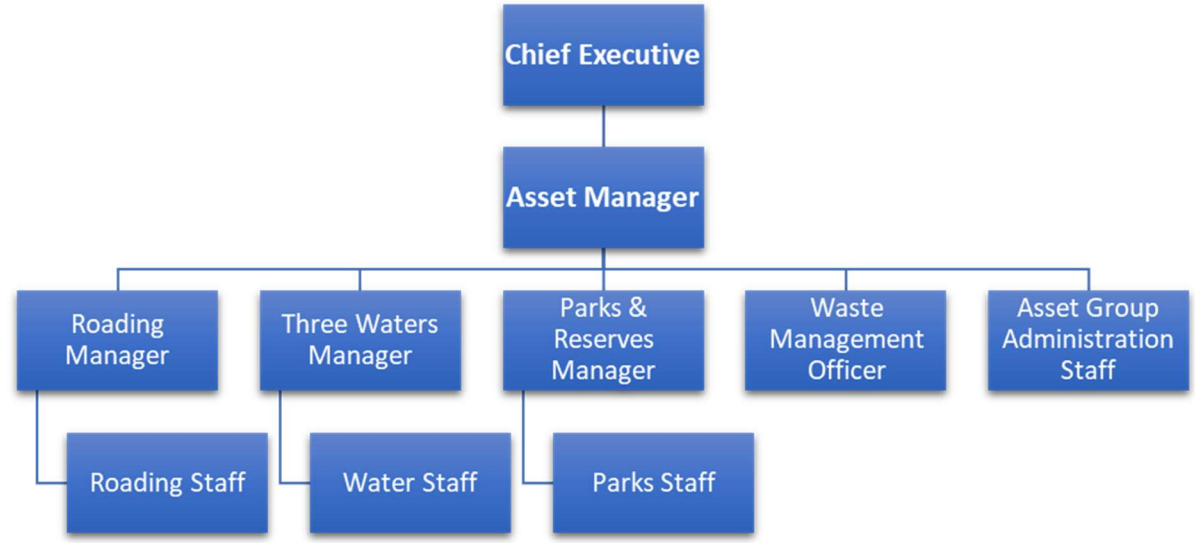
11 PROCESSES AND ASSET MANAGEMENT PRACTICES

This section outlines the information available on the assets, information systems used and process used to make decisions on how the asset will be managed. It also provides details on planning for monitoring the performance of the Activity Management Plan (AMP).

11.1 Organisation Structure

Figure 11.1 shows the organisation structure for the Asset Group only, with the Roading Group structure defined.

Figure 11.1 - Waimate District Council Asset Group Orgainsation Structure



Council Roading programme is delivered through a combination of in-house staff, external professional service consultants and physical works contractors.

Council staff undertake the strategic management of the asset and respond to stakeholder queries. They also undertake routine inspections of the network and manage both the professional services and physical works contracts.

We utilise professional services consultants to provide technical skills and capacity that cannot be provided by staff within Council.

11.2 Activity Management Plan Review and Monitoring

11.2.1 Monitoring Approach

Council has developed this Activity Management Plan (AMP) based on its current knowledge of customer requirements, NZTA's requirements, the configuration of the existing and future network to meet customer requirements, current asset information, and the strategies to achieve customer requirements.

To further develop a meaningful AMP, including supporting processes, systems and data, Council recognise the need for a more structured approach. This approach includes:

- Council's firm commitment to implement and develop the AMP.
- Incorporate this AMP as a tactical plan within Council's planning framework.
- Review of the plans by internal staff and suitably qualified external consultants
- Aiming to produce an AMP that meets the requirements of the community.
- Benchmarking key performance indicators against similar external TLAs
- A corporate commitment to implementing and maintaining suitable AM information systems.
- Adopting a team approach to the preparation of future AMPs in order to maximise the buy-in of internal staff and sharing of specialised knowledge.
- On-going dialogue with NZTA to ensure the plan reflects NZTA priorities and expectations.

11.2.2 Timetable for Audit and Review

The programme for future AM reviews of this plan is in Table 11.1:

Table 11.1 - Timetable for Audit and Review

Activity	Target Date
Improvement Plan reviewed annually by all staff directly involved and focusing on key business issues	30 June each year
Report on Improvement Plan	30 June each year
AMP updates involving members of staff involved in preparing specific aspects of the AMP	30 July each year
Internal AMP peer review by staff not directly involved in preparation of AMP	30 August each year
Adoption of AMP by Council	Determined by LTP programme, typically December the year preceding LTP consultation
External benchmarking by internal staff	Annually
Audit NZ external audit	As required by Audit NZ

11.2.3 Utilisation of AMP

Historically Activity Management Plans (AMP) have been carried out for regulatory requirements and not used on an on-going basis. Table 11.2 details the methodologies for the on-going implementation and updating of the AMP within WDC to ensure the Roading Activity Management Plan is used to its full potential.

Table 11.2 - Methodologies for the On-going Implementation and Updating of AMP's

Methodologies	Output
Continuation of the organisational culture of asset management	The asset management culture needs be supported by the Chief Executive and senior managers in conjunction with the elected Council. Effective stewardship and management of WDC major investment (assets) will not occur in the long term without a culture of asset management.
Resourcing of Asset Management Programmes	Activity management programmes must be adequately resourced
Roles and Responsibilities of Council Staff	The roles and responsibilities of Council staff as they relate to the AMP's implementation need to be defined in respect to the ongoing use of the plans as this will assist the Plan to remain relevant and current. To enable this to occur the following is required. • The Activity Management Plans adopted/accepted by staff down to a defined level. • Council Staff to know what's in the plans and how it could affect their day to day work. • Council Staff to understand the reasons for the plan and the implications for the long term use of them. • Understand all the reporting requirements for Levels of Service and Internal Benchmarking • Training required in the use of the Plan (what's in it, how work is done, on-going requirements for monitoring, review and updating) • Instigation of processes to encourage Council Staff to use the Plan

11.2.4 NZ Transport Agency Investment Audits

NZTA has a legal obligation to audit organisations that are funded through the National Land Transport Programme (NLTP). There are two types of investment audits that NZTA performs:

- Technical Investment Audit
- Procedural Investment Audit.

11.2.4.1 Technical Audit

Technical audits normally take place every six years. *The technical aspects considered include:*

- *assessing whether the value for money objectives are being achieved*
- *activity management planning processes and documents*
- *data quality*
- *network activity management*
- *safety systems.*

As part of the review, a network inspection is also carried out.

In April 2021, Council had their technical audit completed.

Table 11.3 - NZTA Technical Audit Rating Assessment (As at November 2021)

Subject Areas		Rating Assessment*
1	Previous Audit Issues	N/A
2	Network Condition and Management	Some Improvement Needed
3	Activity Management Planning	Some Improvement Needed
4	Data quality	Effective
5	Road Safety	Some Improvement Needed
Overall Rating		**Some Improvement Needed**

Table 11.4 - NZTA Technical Audit Recommendations (As at November 2021)

We recommend that Waimate District Council:		Implementation Date
R2.1	Ensures net present value (NPV) analysis is completed to support selection of pavement rehabilitation as the preferred option, required as a condition of funding by the Planning & Investment Knowledge Base.	Immediate (2021-22 programme) and ongoing
R2.2	Implements a drainage maintenance work programme for unlined water channels to optimise pavement and surfacing lifecycles.	This is an ongoing programme
R2.3	Refines and implements a pavement renewal programme development process, including documenting investigation, design, optioneering and NPV analysis in advance of the pavement construction season.	June 2022
R3.1	Ensures completion of safety deficiency inspections/data collection and develops a risk-based prioritisation methodology to enhance effectiveness of the road safety work programme.	June 2024
R3.2	Ensures audit recommendations and suggestions are included in the AMP improvement plan and a project plan is developed for each AMP improvement task, enabling progress to be monitored against programme.	June 2024
R4.1	Completes implementation of the IDS data improvement plan to enhance dTIMS modelling analysis and Council's investment decision making.	June 2024, subject to model investigation
R4.2	Evaluates the REG data quality and RAMM database reports for data improvements, prioritises and then ensures improvements are added as new items in the AMP improvement plan.	June 2022
R5.1	Ensures a Road Safety Audit or exemption declaration (where a RSA is not justified) is completed and approved at each improvement and renewal project stage.	June 2022
R5.2	Implements an audit of signs, markings and delineation to identify inconsistent practice (including the use of speed advisory signs on unsealed roads) and advances work required to ensure compliance with the national guideline (Traffic Control Devices Manual – Part 5).	June 2022
R5.3	Increases compliance monitoring and enforcement of Roading Bylaw 1127 regarding the use of waratah standards on road berms to ensure temporary fences do not constitute a traffic hazard.	Implemented

11.2.4.2 Procedural Audit

Procedural audits normally take place every three years. *The list of procedures or list of areas of focus includes:*

- *reviewing documentation/ledgers supporting final claims submitted to us*
- *reviewing and validating a sample of transactions included in the general ledger*
- *checking a sample of contracts to ensure they have been let in accordance with approved procurement procedures*
- *NZTA Procurement manual alignment*
- *looking at the management of the contracts subsequent to them being let, including both financial and non-financial, and validating annual achievement reports submitted to NZTA*
- *assessing whether the value for money objectives are being achieved*
- *compliance with this Knowledge Base*
- *road safety promotion*
- *the operation of the SuperGold scheme*
- *the management of the Total Mobility scheme*
- *public transport infrastructure maintenance and development*
- *validating patronage funding claims.*

In May 2023, Council had their procedural audit completed for 1st July 2019 to 30th June 2022 period, of which an overall rating of "*Effective*" was received.

Table 11.5 - NZTA Procedural Audit Rating Assessment (As at June 2023)

Subject Areas		Rating Assessment*
1	Previous Audit Issues	N/A
2	Financial Processes	Effective
3	Procurement Procedures	Some Improvement Needed
4	Contract Management	Effective
5	Professional Services	Effective
Overall Rating		**Effective**

Recommendations and suggestions were provided from the audit for Council to implement into the organisation.

Table 11.6 - NZTA Procedural Audit Recommendations (As at June 2023)

We recommend that Waimate District Council:		Implementation Date
R 2.1	Investigates the status of the retention for Greg Donaldson Contracting (Contract 20/2 Kerb Channel and Footpath Renewal), and credits any surplus portion to a financially assisted account.	December 2023
R 3.1	Records on file a thorough tender evaluation report that include explanations of any cost adjustments made to tenderers.	September 2023
R 3.2	Ensures that all contract documents are complete and accurate.	September 2023
R 3.3	Discloses only the minimum requirements specified in the Waka Kotahi Procurement Manual (section 5.5, p.72), rather than revealing competitors' costs and non-price attribute scores.	September 2023
R 3.4	Commits to advertising all Waka Kotahi financially assisted and competitively tendered contract proposals on GETS.	September 2023
R 4.1	Ensures that all sections of road safety audit reports are completed by the relevant parties.	September 2023

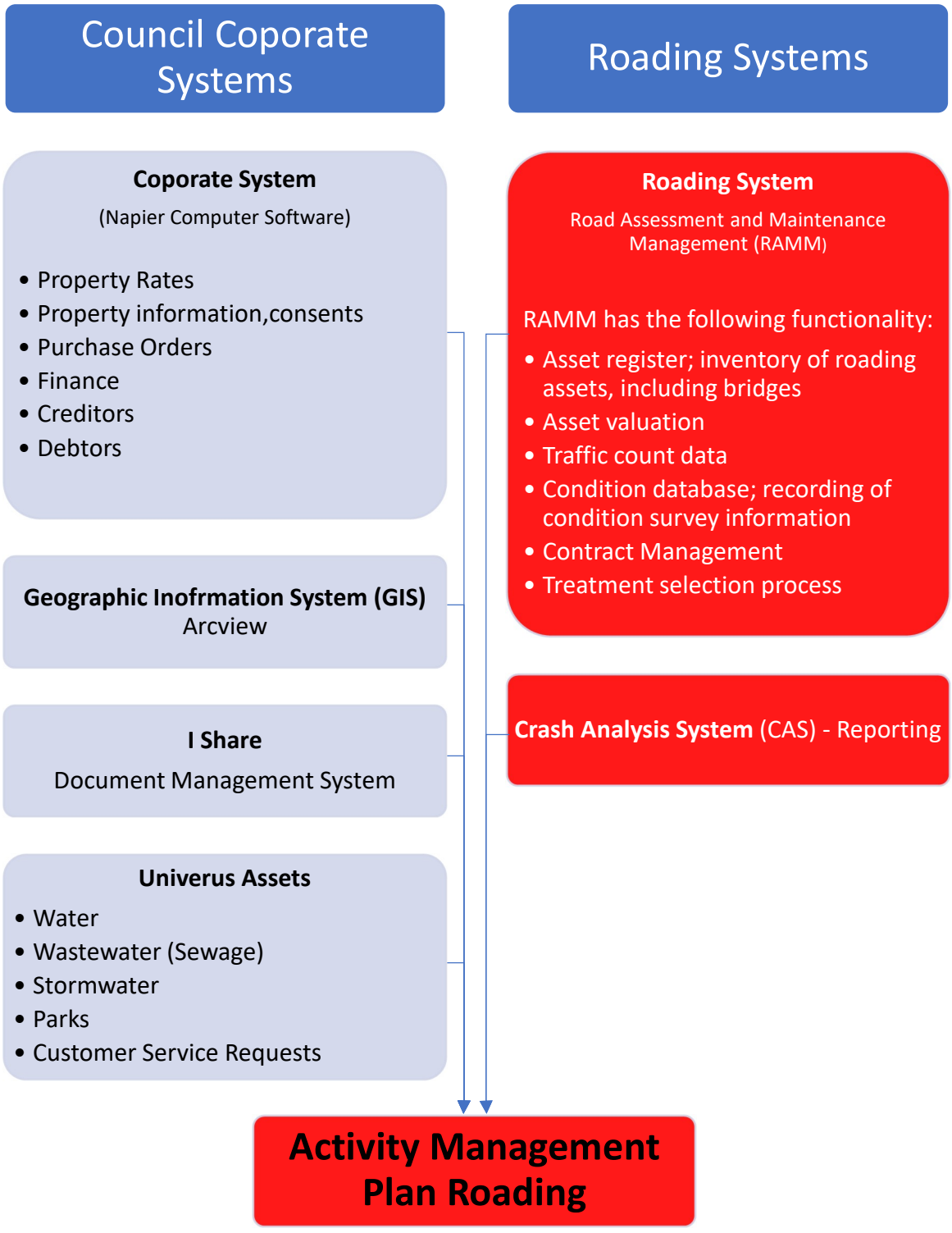
Table 11.7 - NZTA Procedural Audit Suggestions (As at June 2023)

We suggest that Waimate District Council:	
S2.1	Considers utilising accruals where appropriate or manual adjustments to carry over late expenditure to the following year to ensure that all eligible expenditure is claimed.
S5.1	Considers reviewing its in-house professional services and administration costs charged to financially assisted accounts.

11.3 Business Processes

Figure 11.2 details the data systems that are presently used within Council and their relationship with other systems. Data management systems used to assist in the decision making process for Roading network issues are detailed sections that follow.

Figure 11.2 - Waimate District Council Data Systems



11.3.1 Road Assessment and Maintenance Management System (RAMM)

The Road Assessment and Maintenance Management System (RAMM) is a digital asset and work management system. It is a geospatial, real-time system that supports data accuracy and validation, therefore making it possible for Council and contractors to manage and maintain any assets in any location and at any time. The RAMM system is the main information system used in the management

of the Council's roading network. RAMM provides an asset register for storage of primary asset attributes including all roads in the network, hierarchy, carriageway widths, surfacing types and ages, pavement composition, traffic volumes and loadings and road condition data. Basic information on structures such as drainage facilities, footpaths, bridges, streetlights, and signs are also stored on the RAMM system.

The information held on RAMM is continually being updated and improved following the completion of roading maintenance and renewal treatments, capital improvements, traffic counts, and road rating condition assessments.

The use of RAMM or an equivalent asset management system is mandatory to obtain financial assistance from NZTA.

General maintenance and renewal work is continuously completed throughout the year and responds to the needs of the network is worked through the RAMM system. The data from the maintenance carried out is entered into RAMM on a regular basis. Traffic count data is entered into the RAMM database as it become available.

Confidence levels used to assess the accuracy of the Waimate District Council RAMM data tables are described in the 2022 Roading Asset Valuation report and shown in Table 11.8 and Table 11.9. These confidence ratings are assigned to the source data and unit cost rates and to other items as appropriate. Data from the RAMM database was assessed to have an average confidence grading (rating) of **B**.

Table 11.8 - Data Confidence Grade Definition (Valuation 2022)

Grade	Label	Description	Accuracy
A	Highly Reliable	Data based on sound records, procedures, investigation, and analysis which is properly documented and recognised as the best method of assessment.	± 5-10%
B	Reliable	Data based on sound records, procedures, investigation and analysis which is properly documented but has minor shortcomings, for example, the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.	± 10-15%
C	Uncertain	Data based on sound records, procedures, investigation, and analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B data is available.	± 15-25%
D	Very Uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.	± 25-40%
E	Unknown	Based on a best guess from an experienced person.	± 50-60%

Table 11.9 - Data Confidence Grading for Roading Assets (Valuation 2022)

Confidence Grading					
Asset	ORC		ODRC		Overall Value
	Quantity	Unit Cost	Life	Remaining Life	
Land	B	A	-	-	A-B
Formation	B	B	-	-	B
Unsealed Pavement Structure	B	B	-	-	B
Sealed Pavement Structure	B	B	B	B	B
Sealed Pavement Surface	A	A	B	B	B
Bridges	A	B	A	B	A-B
Drainage	A	B	B	B	B
Drain Fords	A	A	B	B	B
Footpath	A	B	B	B	B
Signs	B	A	B	B	B
Street Lights	A	B	B	B	B
Surface Water Channel	B	A	B	B	B
Traffic Facilities	B	B	B	B	B
Overall					B

Data on road condition is collected through the carrying out of road roughness and condition rating surveys.

Roughness surveys that measure the quality of ride experienced by motorists when travelling on the road are undertaken bi-annually. The measurements are obtained using a vehicle mounted response meter which records the vertical displacement or roughness of each 100 metres of traffic lane. These measurements are then converted to NAASRA and IRI counts which are the standard measure of road roughness and stored on the RAMM database.

Condition rating surveys involve a visual assessment of pavement surface condition and are undertaken bi-annually over the sealed network. They involve a detailed walkover and identification of defects on the carriageway over 100% of the roads. Drainage assets are not rated. The defects recorded include the number of potholes and the area or length of other defects such as rutting, shoving, flushing, scabbing, cracking, edge break.

11.3.2 Te Ringa Maimoa Transport Excellence Partnership – Transport Insights Data Quality Report

Te Ringa Maimoa Transport Excellence Partnership (Te Ringa Maimoa, formerly known as Road Efficiency Group (REG)) Transport Insights Data Quality Report provides a useful insight into the standard of the asset data[59].

Waimate District Council's overall Data Quality sits at a score of 85% (2023/24). compared to a score 83 and 80 for previous years. Waimate is keeping the quality of their asset data good, with steady improvements, Figure 11.3. There are a few new measures in the report for Council to review data for and some improvement required including culvert condition data.

[59] Transport Insights - Te Ringa Maimoa

Figure 11.3 - Data Quality 2023/24 (Extracted from Transport Insights August 2024)

11.3.3 RAMM -Treatment Selection Algorithm (TSA)

The RAMM system contains a treatment selection algorithm that 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 also at an individual treatment section level.

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 also makes recommendations as to the length of the network requiring major treatments such as smoothing or strengthening. The treatment selection algorithm undertakes an economic analysis of the maintenance options for each treatment length to identify the most cost-effective treatment option. This is based on the ongoing cost of maintenance and the unit costs of the various maintenance and renewal treatments.

The treatment selection 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 output identifies sections of road with various faults and makes recommendations as to which specific road sections should undergo resealing or rehabilitation. These outputs are used in the preparation of the annual resealing and rehabilitation programmes.

The treatment selection algorithm is run after updating of the RAMM database to reflect completed physical work.

11.3.4 GIS

GIS is used as a tool to present roading asset management data as required. For example, bridges, signs, and culvert locations can be mapped. The systems also allow for mapping of other information such as State Highway detours etc.

RAMM also includes a GIS mapping function.

11.3.5 CAS Database

CAS is an online NZTA live database of official crash data and includes sophisticated spatial, analysis and reporting capability. Access to this data is available by direct enquiry to NZTA.

11.3.6 Bridge Data

Sufficient bridge data is currently held in the RAMM database such that the bridge valuation using RAMM Valuation module can be undertaken. Waimate District Council has more bridge information in a separate spreadsheet database and 70 years files including of engineering drawing design, repair and flood damage records.

Processes for regularly monitoring the performance of bridges are well documented and the information is used for identifying and prioritising upgrading and development of projects.

11.3.7 Complaints and Service Requests Database

The Council operates a Complaints and Service Requests database (a module within Noreply). This records all complaints and service requests associated with the Roading activity and provides useful information for trending and analysis of system performance and highlights issues.

11.3.8 Accounting Processes

Waimate District Council accounts for revenue and expenditure on an accrual basis. All work under the Works Programme is identified through a General Ledger code. The costs are summarised into where operational/maintenance costs are identified separately to capital/renewal items. Valuations are currently based on straight line depreciation and assumed effective life.

There are a range of reports prepared in order to comply with the requirements of Council, NZTA and the Auditors. All reports are prepared in compliance with Generally Accepted Accounting Principles (GAAP)

11.3.9 Contracts

All contract works are claimed monthly against each of the contract item numbers by the physical works and professional services contractors. Waimate District Council and/or consultants confirm the payment value for all physical works and the Waimate District Council confirms the payment of any professional services. The accounts codes are included on the payment certificate. These certificates are forwarded to Waimate District Council for payment.

11.3.10 As-Built Data

The process of capturing as-built records for the on-going enhancement of asset registers is included as a requirement of the maintenance contract. The information is supplied to Council staff for them to upgrade the relevant registers. Projects undertaken outside the maintenance contract have a requirement within the contract for the relevant information to be collected and forwarded to Council for them to upgrade the registers.

Asset data is collected for new subdivisions and recorded in the appropriate location (e.g. RAMM) and available for

11.3.11 Value for Money Procurement.

Council's NZTA endorsed Procurement Strategy (2023) is designed to help Council maximize value and efficiency in their road maintenance activities.

The following principles have informed the development of The Strategy.

- Value for money: selecting the best possible outcome for the total cost of ownership.
- Transparency: being open in the administration of funds.
- Accountability: ability to provide complete and accurate records of the use of public funds.
- Fairness: acting reasonably and impartially to all parties involved in the procurement process.

These objectives align closely with Council's funding partner for Transportation, NZTA objectives:

- Value for money
- Competitive and efficient markets
- Fair competition among suppliers.

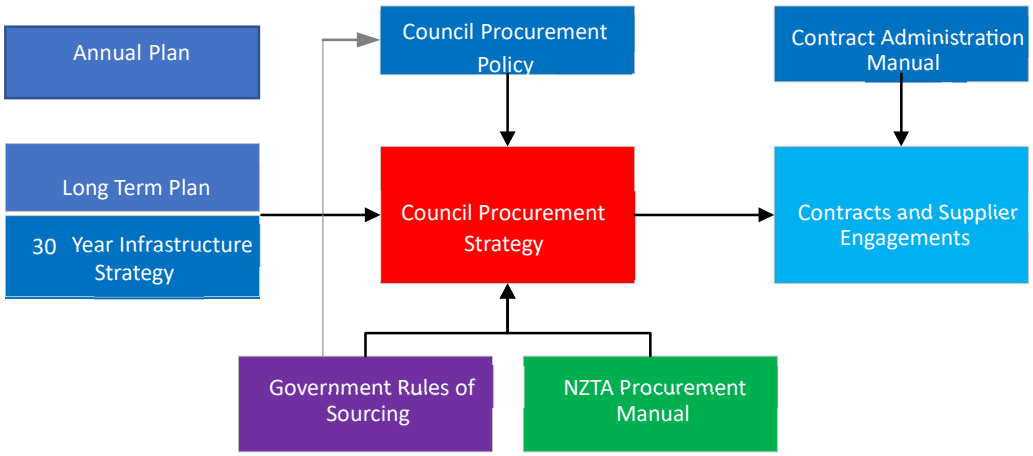
Furthermore, the principles align closely with the principles of Government Procurement (Government Procurement Rules and NZTA Procurement Manual):

- Plan and manage for great results.
- Be fair to all suppliers.
- Get the right supplier.
- Get the best deal for everyone.

- Play by the rules.

Council follows the NZTA Smart Buyer Principles , where Council works towards minimising rate increases by maximising the value created for our community from being a smart buyer. Right time, right asset, right value.

Figure 11.4 - Procurement Strategy Linages (Extracted from Procurement Strategy 2023)



11.3.12 Future Improvements

11.3.12.1 RAMM Database

The current status of the Council RAMM database should also be reviewed and reported accordingly in the "Confidence Ratings for Roading Asset Data".

Improve Data Quality in RAMM to Grade 1 level.

11.3.12.2 Traffic Counting

Implement Traffic Counting Strategy.

11.3.12.3 Systems

Develop and implement information storage system.

Improve service requests.

Provide roading information for the public on Council website.

11.4 Service Delivery S17A Reviews

Service Delivery Reviews are a legislative requirement for local authorities under Section 17A of the Local Government Act (2002) (the Act). This states:

"A local authority must review the cost-effectiveness of current arrangements for meeting the needs of communities within its district or region for good-quality local infrastructure, local public services and performance of regulatory functions."

The LGA goes on to specify that a review must be undertaken in the following circumstances:

- When a significant change to the level of service is proposed

- Within two years of a contract or binding agreement expiring
- At any other time, but no less than six years following the last review.

A review was completed in July 2020 prior to the Road Network Operations and Maintenance Contract renewal in 2021.

11.4.1 Roading Service Delivery

Council manages roading activity through a mixture of in-house and contracted professional services providers. All physical works are completed by a long-term maintenance contract, and some projects by specific project contracts for capital works.

11.4.2 Service Delivery Review Recommendation

The service delivery options were assessed as part of the 2020 service delivery review. An issue highlighted in the review was the opportunity for more collaboration and optimisation in the professional services. This should be explored to ascertain where there is mutual benefit.

There have been minimal changes in the internal or external environment since 2020 that would have a material impact on the most effective and efficient service delivery option. In the physical works space, delivery by another agency (private sector) remains the only option for physical works delivery under the Land Transport Management Act (LTMA).

12 IMPROVEMENT PLAN

12.1 Asset Management Improvement Process

This section provides details of how Council plans to improve this version of the Roading Activity Management Plan (AMP).

This AMP has previously been reviewed and updates incorporated including improvements to manage within the "Core" level Asset Management. Council is committed to a continual improvement as outlined in this section of the AMP. A key objective is to dovetail the asset management planning process with the other key planning processes particularly the Community Plan (Long Term Plan - LTP).

Council has undertaken a structured assessment of the appropriate level of asset management practice for the Roading assets. This assessment follows the guidance provided in Section 2.2: Levels of Service of the international Infrastructure Management Manual (IIMM). The results of this assessment are shown in Table 2.1. Analysis of factors suggests that asset management practice should be 'Core'. This has been adopted by Council through Council's Asset Management Policy Statement for Roading states that the following principles will be used by Council to guide asset management planning and decision making:

- Effective consultation to determine appropriate Levels of Service
- Ensuring service delivery needs form the basis of asset management
- Integration of asset management with corporate, financial, business and budgetary planning using Asset management plans and Council's LTP to demonstrate this
- Integration with neighbouring authorities and other agencies including NZ Transport Strategy, National Land Transport Programme, and the Regional Land Transport Strategy
- Integration of asset management within Council's strategic, tactical and operational planning frameworks
- Informed decision making taking a lifecycle management and inter-generational approach to asset planning
- Transparent and accountable asset management decision making
- Sustainable management providing for present needs whilst sustaining resources for future generations.

12.2 Monitoring and Review Procedures

12.2.1 Three Year Review

This AMP is to be reviewed on a three (3)-yearly basis, with the next full review taking place as part of the development of the 2024 Long Term Plan (LTP). During the three-year period leading up to this review, the items in the Improvement Programme should be addressed within the timeframes provided. These improvements can then be incorporated into the next review of the AMP.

This AMP is also audited externally with the review including process, data integrity and Levels of Service.

12.2.2 Annual Review

At the completion of each annual budgeting period the financial forecasts are to be updated to include the new Year 10 figures and any changes made to the intervening budgets by the Council.

By the end of July each year asset inventory data to be updated in RAMM to reflect the previous financial year's maintenance and renewal activities. Data accuracy is to be verified by completing a random 10% audit.

12.3 AMP Improvement Programme

The review and improvement of this AMP requires resource and budget in order to complete the selected improvement tasks. Table 12.1 outlines the items for improvement, relative urgency, resource, priority, budget and the authority sought to give approval to complete each item.

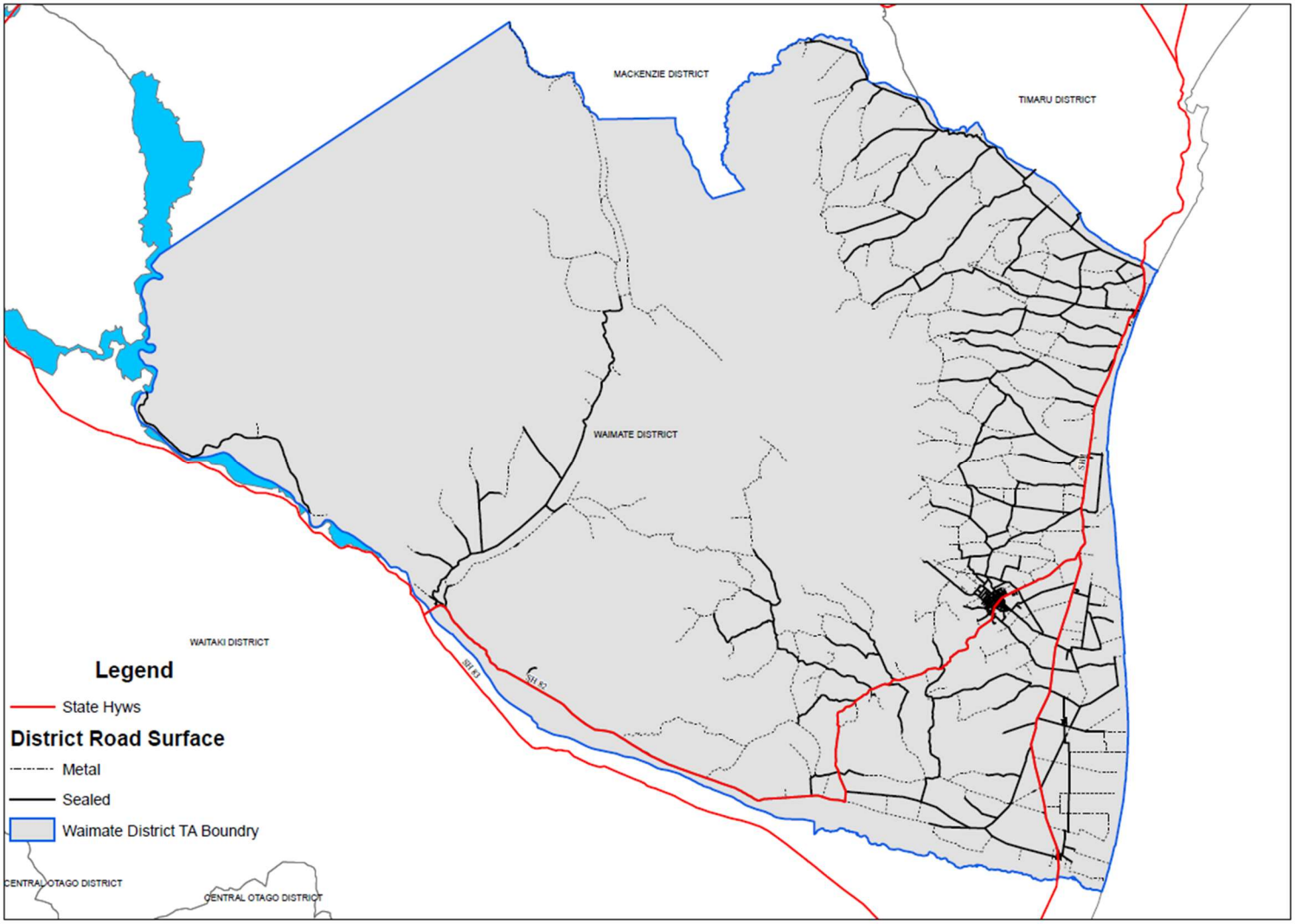
Table 12.1 - Improvement Programme (As at November 2024)

TRM IP Category	Task Description	Action	Resource	Priority	Timing
Systems	Bridge Valuations	Value bridges on a component level	Roading team / External	High	30/6/2025
Communicating	Communication	Review communication protocols and procedures with respect to keeping the public and emergency services informed of road closures and the management of emergency events	Roading team / Council	High	30/6/2025
Systems	Data Quality	Review of the traffic and loading estimates	Roading team	High	30/06/2025
Systems	Data Quality	Improve Data Quality by implementation of Asset Management Data Standard	Roading team/External	Medium	30/6/26
Decision Making	Forward Works Programme	A full 10 year forward Works Programme needs to be developed for renewals especially sealed road surfacing, drainage assets, sealed pavement and footpaths.	Roading team	Medium	30/6/27
Systems	Maintenance Contract	One Network Framework implemented in contract		Medium	30/6/27
Decision Making	Maintenance Contract	develop maintenance intervention strategy		Medium	30/6/27
Decision Making	Maintenance Contract	Develop Strategy for renewal of Maintenance Contracts. Including engagement with contractors		Medium	30/6/27
Decision Making	Risk Assessment	Complete risk assessment of culvert assets	Roading team	Medium	30/6/27

TRM IP Category	Task Description	Action	Resource	Priority	Timing
Decision Making	Sealed Pavement Management	Model drainage issues and pavement performance	Roading Team	Medium	Ongoing
Systems	Systems	Network survey and plan to implement Aoraki Roading Collaboration Delineation Strategy	Roading Team / Contractor	Medium	30/3/27
Decision Making	Climate Change	Update plan to include Council Climate Resilience Strategy.	Roading Manager / External	Medium	30/6/27
Systems	Routine	Treatment length maintenance must be kept up to date to reflect work completed on the network. This should be monitored and reported.		Medium	On going
Systems	Routine	Ensure all annual surfacing data is field validated and entered into RAMM.		High	On going
Systems	Routine	Ensure all rehabilitation data is field validated and entered into RAMM.		High	On going
Decision Making	Network Condition and Management	Ensures net present value (NPV) analysis is completed to support selection of pavement rehabilitation as the preferred option, required as a condition of funding by the Planning & Investment Knowledge Base.			ongoing

13 APPENDICES

13.1 Waimate District Road Map



13.2 Risk Registers

13.2.1 Planning Risks

Table 13.1 - Waimate District Council Roading Activity Planning Risks

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
Compliance	Non-compliance with legislation and legal requirements	5	4	2	3	2	4	4	16	Training and awareness		4	2	8	No	M			
	Inability to comply with council's own standards	4	2	2	2	2	4	4	16	Training and awareness		4	2	8	No	M			
Planning Status	Inadequate asset management / infrastructure strategy planning	4	3	2	1	4	4	2	8	Ensure adequate resources are available ARC collaboration	80k	2	2	4	No				
	Insufficient business continuity planning for disruptive events	3	3	1	1	2	3	5	15	Ensure adequate resources are available Link risk to resilience planning		2	4	8	yes				
	Ineffective input into regional strategic planning	2	2	3	1	2	4	4	16	Ensure adequate resources are available		4	2	8	No				
Climate	Underestimating / understanding the effects of climate change	1	3	3	1	3	2	4	8	Ensure appropriate advice is sought available		2	2	4	No	L			
	Overestimating the effects of climate change	1	4	3	1	1	2	4	8	Ensure appropriate advice is sought available		2	2	4	No	L			

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
Assumptions and Projections	Poorly defined levels of service	2	1	2	1	1	3	4	12	Included in AMP processes		4	2	8	No	M			
	Level of Service	2	1	2	1	1	3	4	12	Included in AMP processes		2	3	6	No	M			
	Population Projection	2	1	2	1	1	3	4	12	Included in AMP processes		2	3	6	No	M			
	Demand Change	2	1	3	1	2	3	4	12	Included in AMP processes		3	3	9	No	M			

13.2.2 Delivery Risks

Table 13.2 - Waimate District Council Roading Activity Delivery Risks

	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
Risk Type	Inadequate portfolio management	3	4	2	4	3	4	3	12	• Structure (management) • Appropriately trained personnel • Have technical audits • Have independent review network • Work in-line with contract documents • Ensure quality control • Monitor contractor	≤ $150k	2	2	4	N	M			

	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Inadequate capital works contract management	4	4	2	4	3-4	4	3	12	• Appropriate supervision • Contract documents in place • Appropriate/qualified civil works contractor • Documentation • Technical knowledge • Design / drawing / spec • Photos • Site inspection at critical times	≥ $100k	2	2	4	N	M			
	Inadequate maintenance contract management	3	3	2	4	4	3	3	9	• Appropriate staffing levels • Holding contractor accountable for their contractual obligations • Auditing • Contract document • Site inspections • Technical knowledge • Data collection	≥ $50k	2	2	4	N	M			
Relationship	Service level agreements between transport/roading and other parties	3	3	2	2	3	3	3	9	• Have a written agreement • Communicate issues • Monitor agreed levels • Spot check • Monitor vehicles • Have defined measures • Adjust/be aware of seasons • Prescribe maintenance regime • Discuss/communicate variances	$3k	2	2	4	N	M			

	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Unsatisfactory working relationships with utilities	3	4	3	2	3	3	5	15	• Provide training • Provide maintenance intervention strategy • Communicate • Reason/work in together • Agree on an integrated FWP • Address conflicts • Have standards • Try to time works effectively • Discuss issues civilly with facts up front	$10k	2	2	4	N	M			
	Unsatisfactory public relationship management and communication	4	4	1	2	3	4	3	12	• Involved in process early • Follow up complaints / enquiries • Put customer first • Communicate plans and changes • Reasons for decision / provide facts where possible	≥ $5k	2	2	4	N	M			
Resources	Inadequate procurement practices	4	4	2	2	4	4	3	12	• Mixture of age and experience in workforce • Succession plan • Maintain asset/training/ recommendation • Support resources • Performance reviews • Sharing of knowledge • Record processes / methodology	$20k	2	1	2	N	M			

	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Shortage of local contractors and consultants	4	4	3	3	4	4	3	12	Address through procurement strategy including: • Approach larger players to establish forward workload • Keep in competitive marks • Keep works local where possible • Discuss with key stakeholders • Early involvement • Design builds • Collaboration • Share work around • Have a good spread of short/long term contracts • Don't package to larger portions of work over great terms.	$5-10k	2	3	6	N	M			
	Ineffective enforcement measures	3	3	–	2	3	3	3	9	Address through procurement strategy including: • Work to policies/plans and introduce new • Limit/no exceptions • Random audit • Rectify exceptions/hazards • Discuss why with public • Have approved standards	≥ $5k	2	3	6	N	M			

13.2.3 Physical Risks

Table 13.3 - Waimate District Council Roading Activity Physical Risks

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
Performance	Sub-optimal condition level Unsealed Roads	2	2	3	3	2	3	3	9	Ensure adequate resources are available to adequately monitor	$60k	2	2	4		M			
	Failure Risk Bridges	4	4	4	5	3	5	2	10	Bridge Management Strategy Engage qualified structural bridge engineer to undertake regular inspections	$6k	5	1	5		H			
	Over Loading Pavements (significant issue)	1	3	2	2	2	3	5	15	Encourage law enforcement Work with transport providers		3	3	9	Y	M			
	Inadequate Functional Performance	2	2	2	1	2	2	4	8	Maintenance and Operational Management		2	2	4		M			
	Poor Amenity Performance	3	1	1	1	2	2	4	8	Address through LCC planning		2	2	4		M			
	External Damage E.g. Bridge	3	3	3	2	3	3	5	15	Maintenance and Operational Management		1	5	5		H			
Natural Hazards	Geo-hazards	5	5	4	4	4	5	3	15	Life lines strategy Resilience/adaptation strategy		2	5	10	Y	H			
	Floods	2	4	3	2	3	4	3	12	Life lines strategy Resilience/adaptation strategy Drainage investment		2	3	6	Y	M			
	Snow	2	3	1	2	3	3	2	6	Have adequate plans and resources in place to deal with it	$20k	1	3	3		L			
	Wind	1	2	1	2	2	2	4	8	Maintenance and Operational responses to clear roads (e.g. fallen trees)		1	4	4		L			
	Fire/others	3	2	2	3	2	3	5	15	Life lines strategy Resilience/adaptation strategy Work with forestry		4	2	8		M			
Safety/Security	Crashes	1	1	1	2	1	2	5	10	Safety programme		2	4	8	Y	M			

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Sabotage – Signs	1	1	1	2	1	1	3	3	Maintenance and Operational Management		1	3	3		L			
	Spills	1	2	3	3	2	3	3	9	Maintenance and Operational Management, incident response		2	3	6		L			

13.2.4 Management Risks

Table 13.4 - Waimate District Council Roading Activity Management Risks

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
Finances	Inadequate Funding	4	5		3	5	5	2	10	• Sufficient AMP process • Strong funding applications • Adequacy in rates charged • Not over invest • CPI adjustment		5	1	5		M			
	Financial Response to Disasters	3	5	4	4	5	5	3	15	• Resilient network • Property resilience	$500k	4	3	12		H			
	External economic influences		4		4	4	4	2	8	• AMP • Cash reserves	$100k	4	2	8		M			
	Consumer Costs	3	4	–	–	3	4	3	12	• Maintaining network effectively • Sound asset management • Holding levels of service with finances		2	2	4		M			
People Resources	Staff Skills / Knowledge Base	4	4			4	4	3	12	• Succession plan • Training on job • Policies / records • Processes written up	$10k	4	2	4		M			

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Critical Council Size	3	4	–	–	4	4	4	16	• Multi party funding agreement • Collaboration contract (ARC) • Consultants (external) help • Section 17a reviews		4	2	8		M			
	Loss of System / Institutional Knowledge	4	4	–	–	4	4	3	12	• Standard operating procedures • Off-site storage/Cloud base system • Electronic that than paper based	$300k	1	2	3		L			
	Technology	2	3	2	–	3	3	3	9	• Resources reviewed remotely • Paper copies/report • Generator • Internal (closed base) system	$10k	1	3	3		M			
	Shortage of local contractors and consultants	3	4	–	–	4	2	4	8	• Open tenders • Collaboration • Larger contracts • Multi party funding agreement	$70k	2	3	6		M			
Politics	Lack of political alignment	4	3	–	2	4	4	3	12	• PR with council • Provide answers rather than options • Present issues and associated costs indicating ‘do nothing’	$5k - $20k	3	2	6	N	M			
	Inadequate Governance /Policy	4	4	4	4	3	4	2	8	• Have policies in place and operate under • Operate under governing legislation	$10k	4	1	4	N	M			
	Public Satisfaction	3	2	–	–	3	3	3	9	• Carry out public surveys • Answer/follow-up/action public complaints	$20k	2	2	4	N	M			
	Loss of public trust	5	3	2	5	5	5	1	5	• Risk management process • Governance/management		5	1	5		H			

Risk Type	Specific Risk Description	Consequences					Consequence Rating	Likelihood Rating	Gross Risk	Mitigation Strategy (Existing Controls)		Residual Risk			Further Action Required?	Priority (Extreme / High / Medium / Low)	Funded?	Data Items	Reference
		Corporate image	Financial / economic	Environmental	Health & Safety	Service level / Effectiveness				Action	Costs	Consequence Rating	Likelihood Rating	Net Risk					
	Loss of political trust / dysfunctional organisation	5	4	3	4	4	5	1	5	• Risk management process • Governance/management		5	1	5		H			
	Rating	4	4	–	–	3	4	3	12	• Plan in advance • Communicate with public • Advertise make people	$30k	3	3	9	N	M			
	Background / Influence –Bias / Elective Members	3	4	–	–	3	3	4	12	• Educate elected members • Provide supporting information • Discuss pros and cons individually	$5k	2	3	6	N	M			
	Lack of Supporting Economic Growth (Tourism)	4	4	3-4	2	4	4	3	12	• Adjust infrastructure where possible • Recognise needs • Apply for additional funding with supporting info • Get community/elected members on board • Form forward plan		4	2	6	N	M			
	In-adequate Communications Plan	3	2	1	1	3	3	3	9	• Commit sufficient resources at this risk		2	3	6	N	M			

13.3 2024-27 National Land Transport Plan Final decisions

NZ TRANSPORT AGENCY WAKA KOTAHI

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03 September 2024

Stuart Duncan
Chief Executive Officer
Waimate District Council
Email: Stuart.duncan@waimatedc.govt.nz
Cc: mayorcraigrowley@waimatedc.govt.nz; James.Caygill@nzta.govt.nz

Dear Stuart,

2024-27 National Land Transport Programme – Final decisions

The NZ Transport Agency Waka Kotahi (NZTA) Board has now adopted the 2024-27 National Land Transport Programme (NLTP). The NLTP is our commitment to the Government's priorities for the land transport system set out in the Government Policy Statement on land transport 2024 (GPS 2024). These are boosting economic growth and productivity, increasing resilience and maintenance, improving safety and focusing on value for money.

Thank you for the huge amount of time and effort you've put into developing your submissions and supporting documentation. It's only through working closely together that we've been able to develop this NLTP.

Canterbury Investment for 2024-27

- A total of $1.8 billion is forecast to be invested in Canterbury in the 2024-27 National Land Transport Programme (NLTP) period.
- Investment in Canterbury during the 2024-27 NLTP will support the region's critical role as the economic powerhouse of the South Island. This will be targeted at strengthening critical freight routes to boost economic growth and improving travel times.
- The $1.8 billion forecast investment includes:
    - $364m forecast maintenance operations investment
    - $541m forecast for pothole prevention
    - $538m forecast improvements investment
    - $351m forecast public transport investment
    - $4m forecast safety investment
    - $13.4m forecast walking and cycling investmen

Canterbury investment highlights for 2024-27

- Work will progress on the SH1 Belfast to Pegasus Motorway and Woodend Bypass Road of National Significance
- Work will progress on 3 Roads of Regional Significance
    - SH1 Rolleston access improvements – design completion and property purchase, with construction to begin towards the end of the period.
    - SH75 Halswell Road improvements, including new bus lanes

- A second Ashburton Bridge
- Reseal or rebuild 575 lane kilometres of the state highway network
- Complete design and strategic property purchase for SH76 Brougham Street
- Replace two bridges on SH82 - Waihao North Branch and Elephant Hill
- Replace a key Christchurch emergency evacuation bridge on Pages Road
- Construct the northbound Commercial Vehicle Safety Centre at Rakai

More information

This factsheet includes key highlights of our investment in Canterbury. For more information on the 2024–27 NLTP, visit our website.

Attachment 1 sets out your continuous programme allocations and your low-cost, low risk programme allocation.

The complete list of activities included in the NLTP can be viewed here.

Ministerial Expectations in GPS 2024

GPS 2024 includes a Statement of Ministerial Expectations for NZTA and the sector in general. This statement recognises the need for active cooperation of all players in the sector to deliver the results for the land transport system that New Zealanders want and deserve.

NZTA is expected to ensure that road controlling authorities and public transport authorities follow the Ministerial expectations where applicable. In particular, it is expected that the NZTA will ensure Ministerial expectations are incorporated into the requirements placed on other road controlling and public transport authorities as a condition of inclusion of their projects in the National Land Transport Programme (NLTP).

We've reflected in Attachment 2 how approved organisations can actively support the delivery of the Minister's expectations in GPS 2024. I would also urge you to ensure that you and your staff are familiar with the contents of the GPS including Section 5 where the expectations are set out.

Conditions of inclusion in the NLTP and funding

Alongside adoption of the NLTP, the NZTA Board also approved terms and conditions that apply to NLTF funding approvals during this NLTP period for activities of approved organisations or NZTA (for its own activities). These terms and conditions are set out in Attachment 3 and tie in the general requirements and conditions set out on NZTA's website and any other conditions attached by NZTA to funding of any specific activity. They also reflect and support the Ministerial expectations highlighted above.

These terms and conditions provide that NZTA may develop and provide to approved organisations (and NZTA (for its own activities)) other specific requirements to achieve Ministerial expectations (including measures to assess whether an approved organisation is making appropriate progress), and self-assessment and reporting requirements to demonstrate the steps that an approved organisation has taken to meet relevant expectations and any specific requirements. We are currently in the process of considering what specific requirements, self-assessment and reporting requirements are needed to achieve the Ministerial expectations. We will provide these to you once they have been developed. Generally, this is likely to include requiring:

- periodic self-evaluation and reporting of your performance against Ministerial expectations, including identifying improvements in practices to enhance performance;

- monitoring alignment with Ministerial expectations by NZTA as part of future investment audits.

We also anticipate that the reconstituted Road Efficiency Group (REG) will support opportunities for benchmarking, sharing of best practice, use of REG tools etc. to assist in meeting these expectations. The Director of Regional Relationships for your region, James Caygill, will be in contact with you to answer any questions you may have relating to the decisions made and to discuss any questions or concerns you may have. However, please feel free to contact him at your own convenience.

We look forward to continuing to work closely with you in coming months as we work to deliver on the Government's priorities.

Yours sincerely

Nicole Rosie
Chief Executive

Attachment 1
Approved investment for 2024-27 NLTP – Waimate District Council

Continuous programme allocation

The NZTA Board has endorsed the final allocations for your continuous programmes as shown in the table below.

Activity Class	2024-27 indicative funding allocation	2024-27 funding allocation at NLTP adoption
Local Road Pothole Prevention	$14,935,000	$14,935,000
Local Road Operations	$4,439,000	$4,439,000
Walking and Cycling	$293,000	$293,000

The figures above are in total cost which is both local and NLTF share.

Low cost, low risk allocation

In this NLTP, given the available funding and existing commitments, coupled with the specific priorities of the GPS, LCLR programmes were only affordable in the state highway improvements and local road improvements activity classes for high GPS aligned activities. The activities in your LCLR programme in these activity classes did not meet this threshold.

For more project specific detail, please discuss with your investment advisor.

In addition to the LCLR allocations outlined above, NLTP 2024-27 establishes a new $100m fund for low cost (<$2m) improvements that are targeted at delivering on the GPS strategic priorities of economic growth and productivity, increased resilience, and value for money.
The new fund will be available to low cost low risk projects that deliver on these strategic priorities and are assessed by NZTA as having a high GPS alignment or high net present value. Please contact your NZTA maintenance investment advisor for further detail regarding access to this fund.

Attachment 2

Supporting delivery on the Minister of Transport's expectations outlined in GPS 2024

A focus on delivery

Approved organisations are expected to:

- demonstrate contribution of their proposed activities to the GPS strategic priorities and GPS expectations.
- actively seek to progress and deliver their funded activities in line with the GPS expectations.
- ensure their business cases are focussed on the primary transport objective(s) of their projects, are completed in a timely fashion to control costs and deliver on the strategic priorities of the GPS.
- maintain a tight control on the scope and cost of their projects and adopt a "no frills" approach. (GPS 2024 gives examples of "no frills" and NZTA is considering providing further guidance around this approach).

A focus on core business

Road controlling authorities are expected to:

- act primarily as delivery agencies (alongside NZTA), recognising that the Ministry of Transport is to lead the oversight and development of policy for New Zealand's transport system.

A focus on value for money

Approved organisations are expected to:

- choose the most advantageous combination of whole of life cost and infrastructure quality to meet a "no frills" specification that delivers the primary transport objective of the project in the most cost-effective manner. This requires identifying the project's primary objectives and will affect option selection. (NZTA is currently revising its guidance in this regard).
- monitor its operational expenditure to ensure that it is achieving value for money and that it can deliver within approved NLTF funding approvals. Reporting on operational expenditure continues to be via Transport Investment Online. Forecasting future expenditure continues to be via the Programme Monitor on a quarterly basis.
- focus on providing services that meet the needs and expectations of users.
- in the case it has approved funding for a road safety promotion programme, will identify the most cost effective and beneficial method for carrying out that programme. This may be supporting national advertising, rather than engaging in regional or local advertising and only engaging in advertising where necessary.

Road controlling authorities are expected to:

- obtain value for money by keeping costs under control and identifying savings that can be reinvested back into maintaining or improving the land transport network.
- actively seek to reduce expenditure on temporary traffic management through a risk-based approach while maintaining safety of workers and road users.
- report expenditure on temporary traffic management in a way that these costs can be reported by NZTA to the Minister each month. This requires requesting contractors to itemise TTM costs in their contract claims.
- consider the use of standardising design or delivery of building and maintaining roading infrastructure where appropriate to do so to obtain value for money.
- be open to new models of delivery that are likely to result in better and smarter services and/or lower costs.
- for proposed investments in walking and cycling, undergo robust consultation with community members and business owners that could be affected by the investment, prior to any investment decisions being made.

Consider other revenue sources and other funding and delivery models

Approved organisations are expected to:

- consider relevant funding and financing options in relation to each of their projects.
- consider relevant sources of third party funding in relation to their projects and actively pursue those deemed suitable and include in each project's funding mix.
- consider relevant delivery models that represents value for money and balance appropriate levels of risk and timely delivery.

Increased focus on performance and efficiency

Road controlling authorities are expected to:

- comply with requirements in the NZTA Performance and Efficiency Plan that are relevant to an RCA. These relate to management of programmes, asset management practices, price/quality trade-offs for maintenance and operations expenditure, business case and cost estimation, managing overheads and back-office costs, and other GPS requirements and Ministerial expectations.
- monitor and provide information to NZTA to enable monthly reporting to the Minister on delivery of the Performance and Efficiency Plan.
- review their activity management plans in order to improve long-term maintenance outcomes by increasing the percentage of rehabilitation of the local road network towards 2% per annum. RCAs will deliver in accordance with approved funding for 2024-27 and will identify what funding is required to lift to 2% in future years.
- review their activity management plans in order to achieve long-term maintenance outcomes by increasing resurfacing the local road network towards 9% per annum. RCAs will deliver in accordance with approved funding for 2024-27 and will identify what funding is required to lift to 9% in future years.
- demonstrate progress towards fixing potholes on local roads within 24 hours of inspection. This requires best endeavours where it is value for money to repair potholes within that timeframe. RCAs will report on a monthly basis the response times for repairing potholes on its local road network.

Specific expectations relating to public transport

Public transport authorities are expected to:

- actively work towards increasing farebox recovery by 30 June 2027. This includes operating within approved funding of public transport continuous programmes, reviewing services that are delivering very low farebox recovery and considering appropriate fares.
- support and actively work towards transition to, delivery of and operation of the National Ticketing Solution in partnership with NZTA. This includes aligning concessionary fare structures with national policy to make the National Ticketing Solution cost effective and value for money for customers.

Supporting NZTA to report on the expectations

Approved organisations are expected to:

- use best endeavours to support NZTA in reporting on progress towards meeting the Minister's expectations in relation to GPS 2024 by providing information relating to their respective local transport networks.

Attachment 3
Terms and Conditions of NLTF funding for activities during NLTP 2024-2027 period

1 The following terms and conditions apply to the approval by NZTA of funding from the National Land Transport Fund (**NLTF**) during the 2024-2027 NLTP period for approved activities carried out by an approved organisation or NZTA (for its own activities).

2 The approved organisation or NZTA (for its own activities):

2.1 must comply with all the general requirements and conditions set out on NZTA's website (as amended from time to time)(2024-27 NLTP investment requirements | NZ Transport Agency Waka Kotahi (nzta.govt.nz)) applying to organisations who receive NLTF funding for approved activities, and any other conditions that NZTA attaches to funding of any activity (including those conditions communicated to approved organisations when advising indicative funding allocations for continuous programmes);

2.2 must take all reasonable and practicable steps available to it to support it:

(1) meeting the Minister of Transport's expectations for the land transport sector set out in Section 5 of the Government Policy Statement on land transport 2024/25–2033/34(including as those expectations are communicated in writing by NZTA for particular types of funding or activity); and

(2) satisfying any other requirements and conditions specified by NZTA in relation to an approved activity and a particular Ministerial expectation; and

2.3 must comply with any self-assessment and reporting requirements linked to Ministerial expectations (referred to below).

3 NZTA may develop (and update) and provide to approved organisations and NZTA (for its own activities):

3.1 other specific requirements to achieve Ministerial expectations (including measures to assess whether an approved organisation is making appropriate progress); and

3.2 self-assessment and reporting requirements to demonstrate the steps that an approved organisation has taken to meet relevant expectations and any specific requirements.

4 If NZTA determines that:

4.1 the steps taken (or the progress being made) by an approved organisation, or NZTA for its own activities, to meet relevant expectations or any specific requirement is not satisfactory; or

4.2 an approved organisation, or NZTA for its own activities, has failed to comply with the self-assessment and reporting requirements,

NZTA may, at its discretion:

4.3 require the approved organisation, or NZTA, to provide further information to NZTA and/or propose how it will address or remedy the matter;

4.4 amend the funding approval for the relevant approved activities to lower the amount of funding approved; and/or

4.5 withhold (or make subject to additional supplemental conditions) funding for that approved activity.

7

13.4 Schedule of poor performing Road Pavements

RoadNo	Road	Start RP	End RP	Length	Seal Width	Sea Area	Pavement Date
201	CANNINGTON ROAD	4000	5000	1000	4.2	4200	01/01/1967
201	CANNINGTON ROAD	5000	5946	946	4.2	3973	01/01/1967
232	ELDERS ROAD	3274	4300	1026	4.2	4514	01/01/1968
232	ELDERS ROAD	4300	5413	1113	4.2	4897	01/01/1968
233	MIDDLE YARDS ROAD	5300	6300	1000	4.2	4500	01/01/1963
233	MIDDLE YARDS ROAD	6300	7050	750	4.2	3375	01/01/1963
234	CRAIGMORE VALLEY ROAD	5292	6800	1508	6	9048	10/03/2024
234	CRAIGMORE VALLEY ROAD	7720	7880	160	6	960	22/10/2014
239	GORDONS VALLEY ROAD	3900	7254	3354	6	16723	01/01/1962
239	GORDONS VALLEY ROAD	7254	9665	2411	6	13019	01/01/1963
272	PAREORA RIVER ROAD	0	2300	2300	6	13800	01/01/1950
272	PAREORA RIVER ROAD	7340	8605	1265	7	10754	01/01/1950
272	PAREORA RIVER ROAD	9103	10465	1362	7	8172	01/01/1956
272	PAREORA RIVER ROAD	11055	12288	1233	7	7819	01/01/1956
292	GRAYS CROSSING ROAD	0	1491	1491	6	8648	01/01/1966
295	BLUE CLIFFS ROAD	5040	5160	120	6	5322	01/01/1957
295	BLUE CLIFFS ROAD	5600	6100	500	6	5322	01/01/1957
295	BLUE CLIFFS ROAD	6785	7350	565	6	6936	01/12/1988
356	PAKIHI ROAD	150	414	264	6	1932	01/01/1967
380	LOWER HOOK ROAD	0	660	660	6	4092	01/01/1952
380	LOWER HOOK ROAD	1010	1645	635	6	3810	01/01/1952
406	HAYMANS ROAD	870	1737	867	4.2	3902	01/01/1964
407	LINDSAYS ROAD	980	1220	240	4.2	4301	01/01/1971
432	MCNAMARAS ROAD	1544	2155	611	7	4033	01/01/1940
552	MAORI ROAD	2000	3424	1424	4.2	6266	01/01/1967
556	BARNETTS ROAD	1035	2069	1034	6	6204	01/01/1950
558	MORVEN BEACH ROAD	2086	3067	981	5	4807	01/01/1970
563	MORVEN ROAD	1300	1599	299	6	6132	01/01/1958
574	OLD FERRY ROAD	5755	6020	265	7	1617	01/01/1959
574	OLD FERRY ROAD	6260	7558	1298	7	7918	01/01/1959
577	TAWAI-IKAWAI ROAD	10400	10750	350	7	3861	01/01/1970
577	TAWAI-IKAWAI ROAD	10950	11350	400	7	7271	01/01/1959
585	GLENAVY-TAWAI ROAD	450	650	200	6	10746	01/11/1955
585	GLENAVY-TAWAI ROAD	4000	4500	500	6	19439	01/11/1955
589	GUM TREE FLAT ROAD	5870	7200	1330	4.8	6251	01/01/1969
589	GUM TREE FLAT ROAD	8000	8514	514	4	6176	01/01/1969
589	GUM TREE FLAT ROAD	8514	9000	486	8	4240	01/01/1969
590	DOG KENNEL ROAD	2150	2400	250	4.2	3722	01/01/1969
604	SERPENTINE VALLEY ROAD	2560	2920	360	6	7174	01/01/1954

604	SERPENTINE VALLEY ROAD	4408	5145	737	6	4275	01/01/1954
626	WAIHAORUNGA BACK ROAD	1700	2000	300	4.8	3616	01/01/1969
631	PENTLAND HILLS ROAD	1944	2944	1000	4.8	4800	01/01/1965
660	HAKATARAMEA VALLEY ROAD	7800	8800	1000	6	6000	01/01/1959
660	HAKATARAMEA VALLEY ROAD	10689	11800	1111	6	6666	01/01/1960
660	HAKATARAMEA VALLEY ROAD	11800	12800	1000	6	6000	01/01/1960
660	HAKATARAMEA VALLEY ROAD	12800	13232	432	6	2592	01/01/1960
660	HAKATARAMEA VALLEY ROAD	13232	14600	1368	6	8208	01/01/1961
667	HOMESTEAD ROAD	3200	3550	350	4.8	15975	01/01/1965
710	MILL ROAD	1557	1943	386	7	1930	01/01/1950
				43	**km**		

13.5 3 Year Reseal Programme

Year	Road No.	Road Name	Start	End	Proposed Reseal Chip	Width m	Length m	Seal Area m²
1	453	BAKERS ROAD	4	1078	3/5	4.8	1074	6200
1	295	BLUE CLIFFS ROAD	15	917	3/5	12.4	902	6800
1	746	BUTCHERS LANE	5	358	4/6	9	353	3300
1	243	COLLIERS ROAD	2360	6380	3/5	5	4020	19600
1	733	DASH STREET	10	150	4/6	13	140	1850
1	590	DOG KENNEL ROAD	0	2846	3/5	4.5	2846	13300
1	780	EDWARD STREET	8	255	4/6	12.6	247	3100
1	209	GALWAYS ROAD	4215	5853	3/5	4.3	1638	7100
1	354	MAKIKIHI STATION ROAD	0	327	4/6	6	327	1750
1	710	MILL ROAD	15	975	4/6	12.8	960	12300
1	420	MOLLOYS ROAD	6	4753	3/5	6.2	4747	30300
1	571	MORVEN GLENAVY ROAD	751	4733	3/5	6	4146	26000
1	574	OLD FERRY ROAD	10	4765	3/5	6.2	4755	21000
1	272	PAREORA RIVER ROAD	15045	17032	2/5	6.5	1987	12200
1	604	SERPENTINE VALLEY ROAD	419	1744	3/5	6	1325	7900
1	604	SERPENTINE VALLEY ROAD	8860	11270	3/5	6	2410	14500
1	712	SHEARMAN ST (STH)	233	693	4/6	12.9	460	5950
1	338	SHEAS ROAD	136	286	3/5	3.5	150	700
2	754	AUGUSTINE STREET	6	506	4/6	12.3	500	6150
2	764	CAMERON STREET	6	342	4/6	12.8	336	4450
2	208	CLIFFS ROAD	37	4085	3/5	4.3	4048	17500
2	572	COONEYS ROAD	8	1220	3/5	6.7	1047	7100
2	232	ELDERS ROAD	660	864	3/5	4.4	204	950
2	232	ELDERS ROAD	1021	2195	3/5	4.4	1174	5400
2	239	GORDONS VALLEY ROAD	3900	7254	3/5	4.9	3354	19000
2	589	GUM TREE FLAT ROAD	6502	7450	3/5	4.7	948	3800
2	401	HANNATON ROAD	3	3631	3/5	5.1	3628	22300
2	708	HILLARY STREET	303	540	4/6	12.7	237	3000
2	727	INNES STREET	6	411	4/6	12.8	380	4850
2	745	LEONARD STREET	7	347	4/6	10.6	340	3700
2	286	LYALLDALE MIDDLE ROAD	24	1658	3/5	4	1634	7500
2	710	MILL ROAD	975	1943	4/6	6	968	5900
2	272	PAREORA RIVER ROAD	2300	3375	5	6.5	1075	5900
2	281	PLEASANT VALLEY ROAD	24	3928	3/5	5.7	3904	22500
2	772	VICTORIA TERRACE	8	247	4/6	13	239	4200
2	626	WAIHAORUNGA BACK ROAD	14	2486	3/5	4.6	2472	11500
2	390	WAIMATE HUNTER ROAD	2109	7687	3/5	6	5578	35000
2	765	WALL STREET	6	222	4/6	12.6	216	3600

Year	Road No.	Road Name	Start	End	Proposed Reseal Chip	Width m	Length m	Seal Area m²
2	773	WILKIN STREET	0	666	4/6	12.3	666	8250
3	272	PAREORA RIVER ROAD	8605	9082	5	7	477	3350
3	272	PAREORA RIVER ROAD	10465	11055	5	7.5	590	4450
3	272	PAREORA RIVER ROAD	12288	15045	5	7	2757	19300
3	285	LYALLDALE ROAD	1850	2050	3/5	3	200	600
3	315	SPRINGBANK ROAD	10	917	3/5	10	907	8700
3	352	MEEHAN PLACE	5	358	3/5	6.2	353	3000
3	364	RODGERS ROAD	790	990	3/5	3	200	600
3	380	LOWER HOOK ROAD	8	1655	3/5	6.2	1647	10200
3	415	BRADSHAWS ROAD	3	2625	3/5	3.9	2622	10600
3	449	WHITNEYS ROAD	5	700	3/5	6.1	695	4050
3	463	PARKERS BUSH ROAD	6	2105	3/5	5.2	2099	11700
3	473	KAPUA SCHOOL ROAD	0	80	3/5	4.5	80	350
3	505	PEMBROKE STREET	11	303	3/5	4.2	292	1200
3	574	OLD FERRY ROAD	5620	5755	3/5	6.5	135	900
3	574	OLD FERRY ROAD	6020	6260	3/5	6.5	240	1560
3	575	MCNAUGHTONS ROAD	520	660	3/5	4.3	140	600
3	579	IKAWAI MIDDLE ROAD	7550	7895	3/5	6.5	345	2250
3	589	GUM TREE FLAT ROAD	2531	5870	3/5	4.7	3339	13400
3	596	BRIGGS ROAD	787	1053	3/5	3.8	266	4050
3	619	CLARKESFIELD ROAD	800	984	3/5	3	184	2050
3	632	MCHENRYS/MEYERS PASS INTERSECTION	14075	18866	3/5	6	4791	1250
3	660	HAKATARAMEA VALLEY ROAD	10	3440	3/5	6	3430	21750
3	660	HAKATARAMEA VALLEY ROAD	13232	17160	3/5	6	3928	23600
3	675	MENZIES / SCOTTS BRIDGE ROAD	0	40	3/5	4.7	166	800
3	676	MOORLAND FARM SETTLEMENT ROAD	2928	3024	3/5	5.7	96	250
3	678	SCOTTS BRIDGE ROAD	343	518	3/5	5.1	175	360
3	680	GORMANS ROAD	320	485	3/5	3	165	500
3	681	HAKATARAMEA PASS ROAD	249	329	3/5	6	80	480
3	681	HAKATARAMEA PASS ROAD	3145	3260	3/5	6	115	700
3	681	HAKATARAMEA PASS ROAD	6500	6652	3/5	3	152	460
3	690	TE AKATARAWA ROAD	10943	16115	3/5	6.2	5172	31700
3	690	TE AKATARAWA ROAD	17030	20060	3/5	6	3030	18180
3	752	CARLISLE STREET	0	158	4/6	12.8	158	2050
3	758	REGENT STREET	7	215	4/6	11.4	208	2450
3	759	JOHNSON LANE	0	144	4/6	5	144	720
3	766	EATON STREET	6	136	4/6	9.6	130	1250
3	774	JOHN STREET	230	610	4/6	12.8	380	4800
3	792	SAUL SHRIVES PLACE	0	119	4/6	9.2	119	1450
3	793	PITMAN PLACE	6	150	4/6	8.3	144	1700