



# Transportation Activity Management Plan

Enabling Delivery of Community Priorities

2024-27

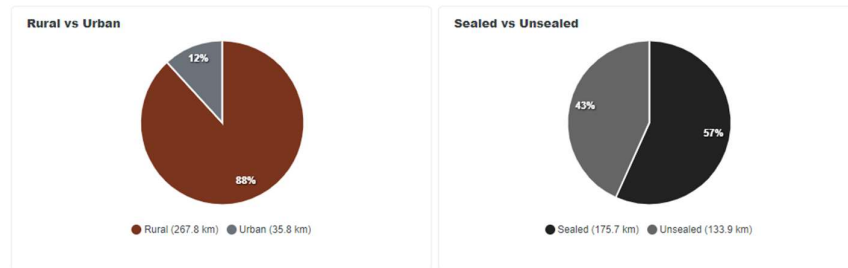


## Executive Summary

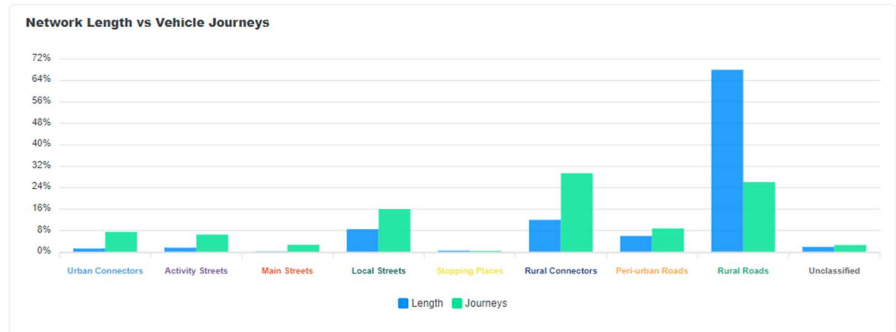
The Ōpōtiki District Council Transportation Asset Management Plan (AMP) for 2024 to 2027 describes the current state of the transportation assets, the levels of service, the demand and risk factors, the lifecycle management strategies, and the financial projections for the next 10 years. The purpose of the AMP is to provide a framework for managing the transportation assets in a sustainable and efficient way, while meeting the needs and expectations of the stakeholders and the community. The AMP also identifies the key issues and challenges facing the transportation network, and the opportunities and actions to address them.

## The Transport Activity

The Ōpōtiki road network has over 300km of formed roads, of which 57% is sealed.



12% of the network is classified as urban where “local” streets carry 16% of all journeys in the district. The most heavily trafficked roads are the rural connectors, such as Otara Road and Motu Road, which carry around 30% of all traffic on the network.



In addition, the transport network includes:

- ⇒ 68km of footpaths and cycleways
- ⇒ 17.5km of drainage culverts
- ⇒ 55km of water channels
- ⇒ 69 bridges and large culverts
- ⇒ 742 street lights
- ⇒ 6km of safety Railings

The Total replacement value for the transport assets is **\$257 Million**.

## Network Performance

The network, and transportation activity, is performing in line with the performance of other provincial centres. The summary of performance is:

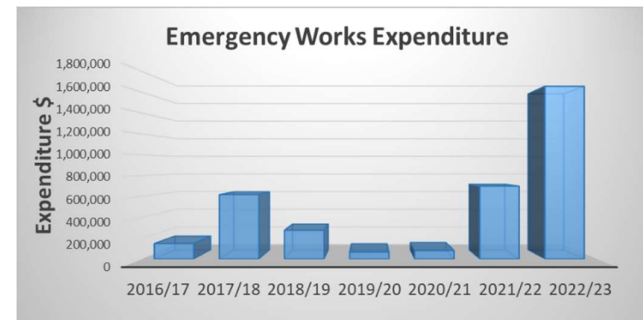
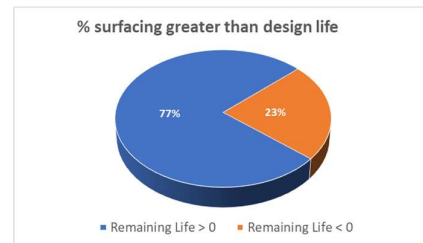
- ⇒ Overall Road Safety has a decreasing trend of serious injuries and fatalities, although the personal risk for lower trafficked roads is still high and the district still ranks poorly on the Communities at risk register.

- ⇒ Roads are getting rougher due to deferred renewals, the average is still above that for other provincial centres though.
- ⇒ Maintenance costs are trending up due to deferred renewal of surfacing and pavements, but costs/km are at the lower end of the provincial peer group.

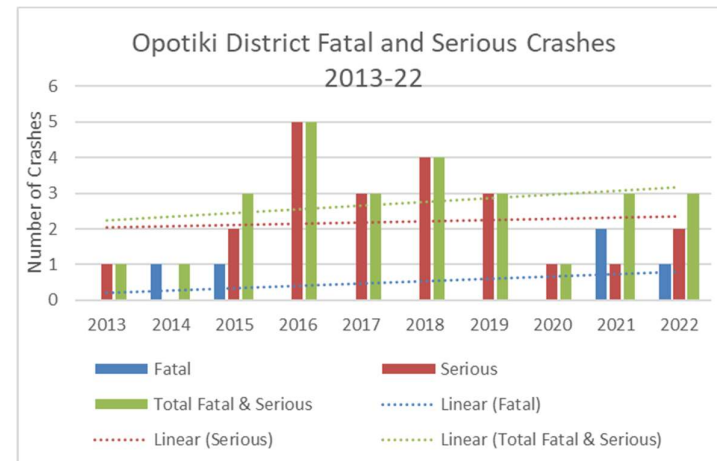
### The Issues

The key issues facing the transportation activity in the context of investment that aligns with the Government Policy Statement on transport (GPS) and the Ministry of Transport's outcomes framework (TOF), the Regional Land Transport Plan (RLTP), and the Ōpōtiki District Long Term Plan (LTP) community priorities, have been identified as:

1. Maintaining the network – Increasing maintenance costs as a result of increased loading, climate change, and deferred surfacing and pavement renewals.
2. Supporting Economic Growth – providing a safe and efficient transport network that supports the growth and economic development in the district.
3. Network Resilience – The increasing costs and impacts from more frequent and higher intensity rain events and the need to build in resilience for the network.



4. Connecting the community – providing safe travel options for all travel modes with walking and cycling and speed management within urban centres.
5. Road Safety – develop and deliver speed management initiatives to address the specific safety issues of speed, intersection crashes, and impacts on pedestrians and vulnerable road users.



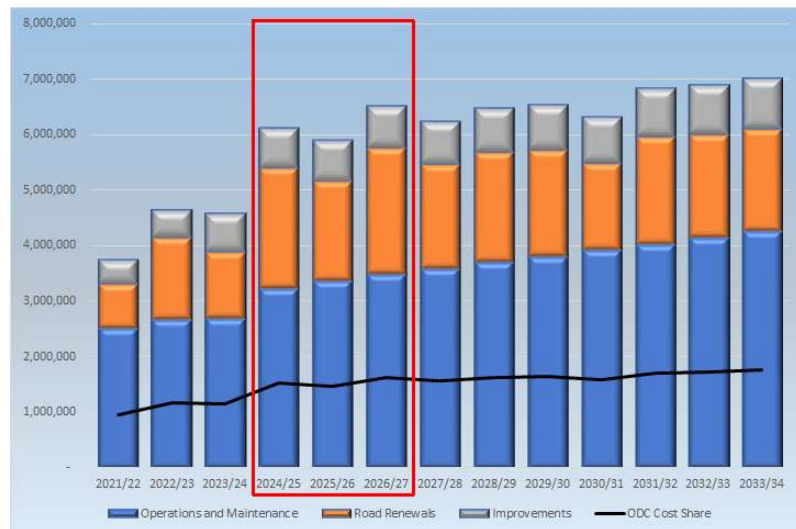
## The Response

Three Scenarios for investment were considered.

- ⇒ Base case - Maintain current levels of service (MOR).
- ⇒ Balanced case – MOR and community mandated improvements
- ⇒ Growth case – MOR, Improvements and investment for growth

The preferred programme is based on Scenario 2 for balanced investment.

The programme of investment for the 2024 to 2027 period is \$16.49M, which is a 44% increase on the approved 2021-24 programme of \$11.38M. The increase is the result of higher than expected inflation that resulted in cuts to renewals. The proposed programme has a large increase in the renewals programme to address this.



The programme qualifies for subsidy from the National Land Transport Programme (NLTP) at 75% of the programme cost under current Financial Assistance Rates (FAR).

## The Benefits

The focus of the planned investment in the district is to address the key issues and deliver on three key benefits for the community.

- ⇒ Benefit 1: Healthy and Safe people: a reduction in personal risk on our network roads; and improvement in the perception of safety and ease of walking and cycling in the district
- ⇒ Benefit 2: Resilience and Security: network risks are managed to maintain access for the community.
- ⇒ Benefit 3: Economic Prosperity: improved High Productivity Motor Vehicle (HPMV) access; and improved walking and cycling access to social and economic opportunities.

## Investment Risks

The current overall network condition is considered fair to good, as measured against other provincial centres. We have been able to achieve this by delivering more, for less cost, due to favourable local pricing of contract works. The supply of local aggregates and increased costs for contractors are a risk to the affordability of the programme going forward. Possible changes to investment priorities by the new Government or changes to the FAR may result in deferred maintenance and reduced renewals programme. This increases risks of asset deterioration and a reduced ability to deliver the desired community priorities.

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# Part 1:

## Strategic Case for Investment



# 1 Introduction

The transport network is a significant and essential physical resource in the District contributing to the social and economic well-being of residents, visitors and businesses. The transport network is essential to the continued growth and economic success of the Ōpōtiki District and must be managed, safely, efficiently and effectively, now and in the future.

Transport planning, policy and networks are all provided through the transportation activity. This includes transport infrastructure including roads, footpaths, cycleways, parking facilities and bridges; and traffic control mechanisms (such as signage, lighting and road markings). This activity ensures a safe, efficient and affordable transport network that helps with the movement of people, goods and services.

## 1.1 Purpose

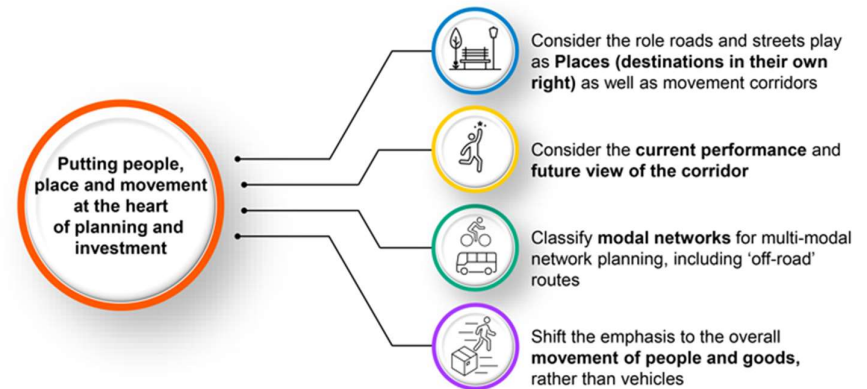
The purpose of this plan is to assess the community transport requirements and propose an evidenced based case for investment. The Transport Activity Management Plan (AMP) provides a ten year focus that prioritises and addresses key transportation issues. It illustrates how assets are intended to be managed to provide agreed service levels for the community. This plan seeks to build on the investment case from the 2021 to 2024 AMP, reviewing the problems, the key challenges and progress to date.

# 2 Background

## 2.1.1 The Ōpōtiki District Road Network

The Ōpōtiki transport network is classified in accordance with the One Network Framework (ONF). The ONF is an advancement on the One Network Road Classification (ONRC) used with the 2021-24 AMP, which considered roads and streets as movement corridors only to get us from A to B.

The One Network Framework (ONF) recognises that streets not only keep people and goods moving, but they're also places for people to live, work and enjoy. The ONF is designed to contribute to improving road safety and build more vibrant and liveable communities.



The current classification of the Ōpōtiki District road network is provided in the following tables and Figures below.

	ONF Category	Total Length (km)	Total Length (%)	Sealed (km)	Unsealed (km)	Lane (km)	Vehicle Journeys (M vkt)
URBAN	Urban Connectors	3.9	1.3%	3.9	0	7.9	2.2
	Activity Streets	5.1	1.6%	5.1	0	10.2	1.9
	Main Streets	0.5	0.2%	0.5	0	1.1	0.8
	Local Streets	26.2	8.5%	25.9	0.3	52.2	4.6
	<b>Total Urban Network</b>	<b>35.8</b>	<b>11.6%</b>	<b>35.4</b>	<b>0.3</b>	<b>71.4</b>	<b>9.4</b>
RURAL	Stopping Places	1.7	0.5%	1.7	0	3.3	0.1
	Rural Connectors	37.2	12%	37.2	0	74.2	8.4
	Peri-urban Roads	18.5	6%	16.7	1.8	37	2.5
	Rural Roads	210.5	68%	81.6	128.9	420.5	7.5
	<b>Total Rural Network</b>	<b>267.8</b>	<b>86.5%</b>	<b>137.1</b>	<b>130.7</b>	<b>535</b>	<b>18.5</b>
	Unclassified	6	1.9%	3.2	2.8	11.6	0.7
<b>Total Network</b>		<b>309.6</b>	<b>100%</b>	<b>175.7</b>	<b>133.9</b>	<b>618</b>	<b>28.6</b>

Table 2-1 : One Network Framework (ONF) Network Characteristics

# Network Characteristics

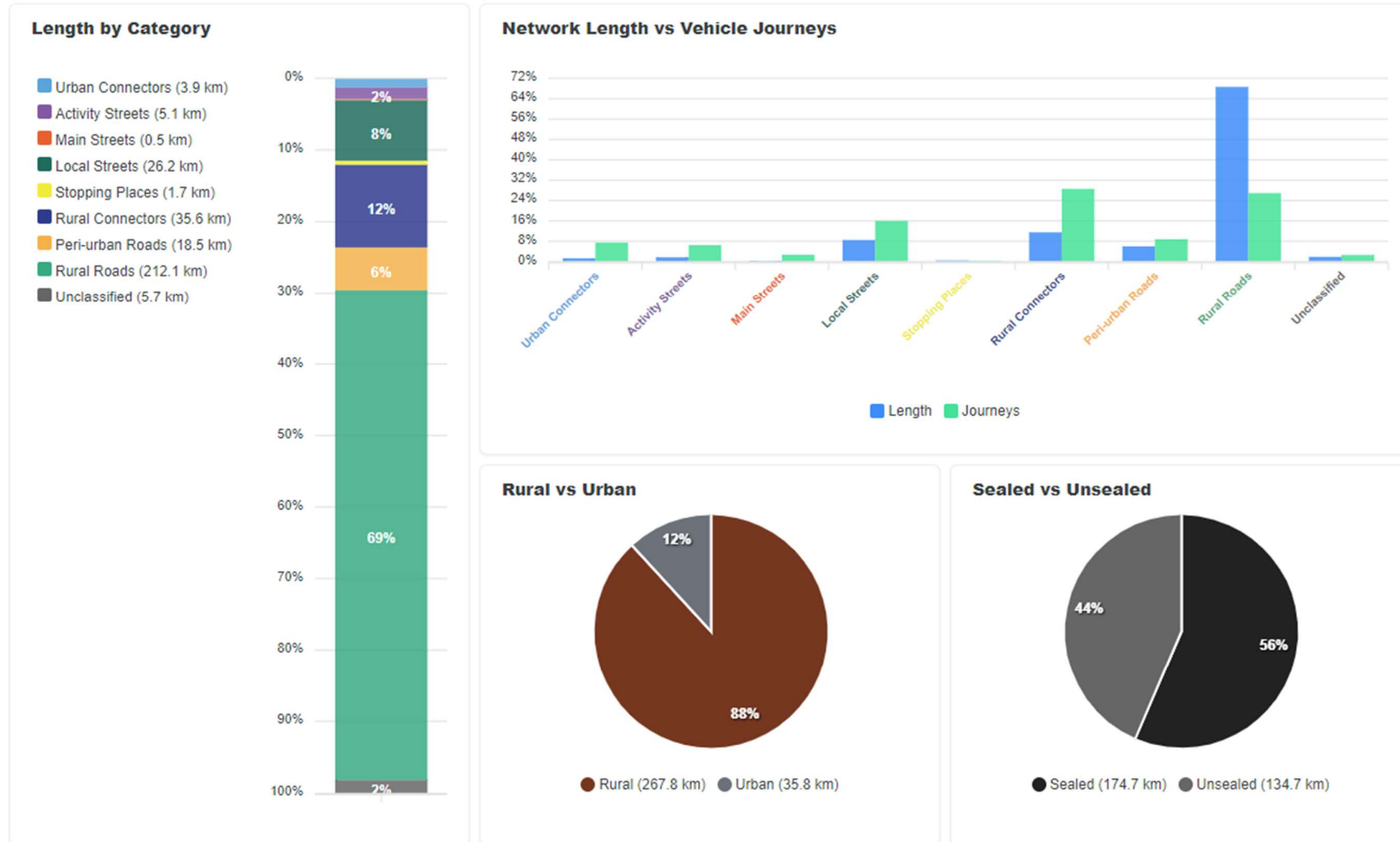
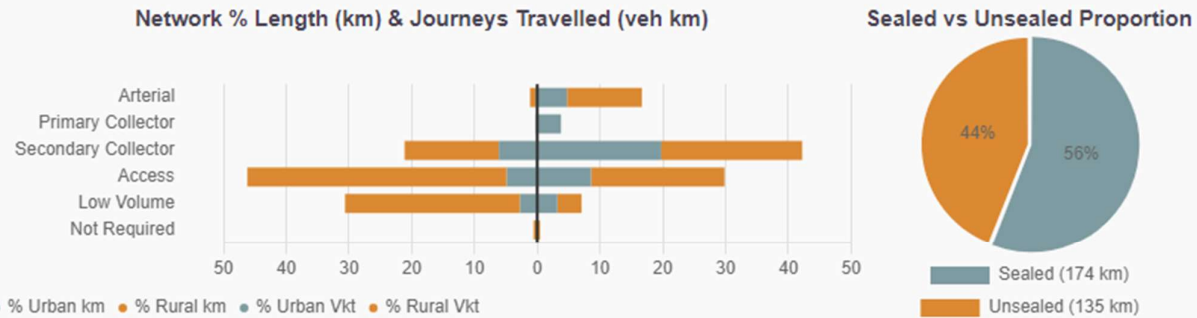


Figure 2-1 : One Network Framework (ONF) Classification Details

# Network Characteristics



ONRC	Total Length(Km)	Urban (Km)	Rural (Km)	Sealed (Km)	Unsealed (Km)	Lane (Km)	Urban Journeys (M VKT)	Rural Journeys (M VKT)	Annual Total Journeys Travelled (M VKT)	Percentage of length
Arterial	3.5	0.9	2.6	3.5		7.1	1.4	3.4	4.8	1%
Primary Collector	1.0	1.0		1.0		1.9	1.1		1.1	0%
Secondary Collector	65.3	19.0	46.4	65.3		130.6	5.6	6.4	12.1	21%
Access	142.8	15.0	127.8	92.2	50.6	285.2	2.5	6.1	8.5	46%
Low Volume	94.7	8.4	86.2	12.3	82.4	188.8	0.9	1.1	2.0	31%
Not Required	1.8	0.0	1.8	0.1	1.7	3.6	0.0	0.1	0.1	1%
Unclassified	0.2									0%
<b>TOTAL NETWORK</b>	<b>309.3</b>	<b>44.2</b>	<b>264.9</b>	<b>174.5</b>	<b>134.7</b>	<b>617.1</b>	<b>11.4</b>	<b>17.2</b>	<b>28.6</b>	

Figure 2-2 : Network Characteristics in terms of the One Network Road Classification (ONRC)

As a small provincial district rural roads make up the greatest proportion of the Ōpōtiki network at 69% of the length. However, Just over a third of total network journeys are on Rural Connectors such as Gow road and Paerata Ridge Road.

## 2.2 Looking back at 2021 to 2024 AMP

Council is required to produce an AMP every three years. When considering the future, it is helpful to look back and see where we have come from. Reviewing past plans and understanding what has actually occurred provides continuity for understanding Council’s intentions for the future, both in a financial and non-financial sense. The 2021 to 2024 AMP outlined a number of key issues and problems that faced the district. Many of these issues remain and will do for the foreseeable future.

- Ageing assets from a maturing network resulting in higher maintenance requirements and programmed renewals.
- Economic development requiring investment and planning for support of horticulture growth and industry associated with harbour development.
- Global warming (Resilience issues, storm damage from intensity and frequency of storms, coastal erosion, sea level rise, and storm water management)
- Changing demographic - ageing population requiring different infrastructure needs for modal travel choices.
- Population and rateable dwelling growth resulting from economic development in the district will start to put pressure on transport links.
- Road safety, Ōpōtiki District ranks highly against other provincial centres and in the communities at risk register.

The following table outlines the key activities proposed by the 2021-24 AMP that were aligned to the issues identified and provides an understanding of progress made.

2021 to 24 Activities	Description	Achievement/Progress
<b>Road Surface Renewals</b>	The length of reseals (% of network resurfaced) was proposed to be 13.5km average per year.	Achieved 10.5 km average over last two years due to cut in funding and escalation. Building backlog of expired surface lives on network
<b>Pavement Renewals</b>	Continue urban street renewals and rural rehabs programme.	2 of the 3 years programme achieved. Increase in costs resulted in reduced achievement in 2021 with deferral and scaling of programme
<b>Bridge Component Replacement</b>	Replacement of degraded bridge components to maintain Access	Major renewals undertaken and backlog addressed
<b>Road Network Asset Management</b>	Improve data capture and accuracy of Asset inventory	Work completed in improving data quality for future implementation of Modelling
<b>Motu Trails cycleway Extension</b>	Extension of Motu trails west to Ōhiwa harbour	Path constructed from Opotiki township to Waiohahi River

2021 to 24 Activities	Description	Achievement/Progress
Harbour Access Roads	Design for permanent public access to Harbour including public facilities	Designs progressed and implementation underway
Walking and Cycling improvements	Improvements to walking infrastructure through urban street renewals programme	Minor works completed. Additional assets developed through government stimulus packages
Town Lighting upgrade	Upgrading the street lighting in the Ōpōtiki township to appropriate standards	Works completed with new assets installed to improve safety.

**Table 2-2 : 2021 to 2024 Programme Achievements**

The major achievement from the 2021 to 24 period was progress on the building of the Ōpōtiki Harbour. This will unlock a huge potential for the district, providing employment opportunities and further growth.




Other transport programmes were affected by storm events and affordability issues from inflation. This resulted in the reduction of output quantities for renewals, which in turn increase the risk profile for the network.

### 3 Partners and Key Stakeholders

Delivering transportation outcomes have far reaching results in terms of social, economic and environmental factors. To effectively deliver this the transportation activity overlaps with other Council activities, for example, district planning, economic development and community services.

Engagement with external partners is achieved through joint planning and programmes at the national, regional, sub-regional and local level. Key groups include the Bay of Plenty Regional Council (BoPRC), Waka Kotahi New Zealand Transport Agency (Waka Kotahi), the Road Efficiency Group (REG), Bay of Plenty Regional Road Advisory Group (RAG), Road Controlling Authority Forum (RCAF), and Eastern Bay Road Safety Committee. Engagement with these groups will be important during the process of engaging on the Transportation AMP.

In terms of setting the strategic context and direction for the AMP our key partners and stakeholders are those that we work with on a regional and sub-regional level and are outlined in the following table.

Stakeholders	Knowledge/involvement
 <p><b>Ōpōtiki District Council</b> STRONG COMMUNITY STRONG FUTURE</p>	Controlling Authority for Ōpōtiki District Transport network and activities. Manages and provides the services that develop and maintain the network for the community.
 <p><b>WAKA KOTAHI</b> NZ TRANSPORT AGENCY</p>	Sets out the activities that can receive funding from the National Land Transport Fund. Also provides national and regional guidance for the land transport system
 <p><b>BAY OF PLENTY REGIONAL COUNCIL</b> TOI MOANA</p>	Sets the direction for the region’s land transport system for the next 30 years through the Regional Land Transport Strategy.



Neighbouring RCA with whom we have a strong strategic alignment.

**Table 3-1 : Key stakeholders involved in the development of the strategic case**

## 4 Strategic context

This section provides the strategic context for transportation. It outlines the relevant legislative and strategic objectives for the transportation activity and how it contributes towards the Treasury’s Living Standards Framework.

The strategic context starts with the relevant legislative framework for transport, how the Local Government Act 2002 and Land Transport Act 2003 align with the relevant strategic documents at the following levels:

1. National – The Government Policy Statement on transport (GPS)
2. Regional – Regional Land transport Plan (RLTP)
3. Local – Council Community Long term Plan (LTP).

Each of these documents influence the development of the AMP, levels of service (LOS) and the delivery of the transport activity. These key driving documents are described in the following subsections.

### 4.1 National Context

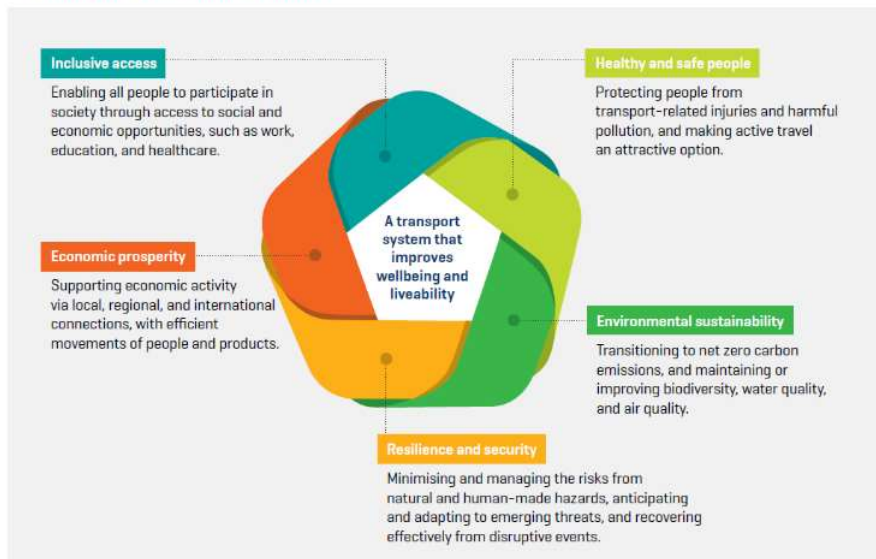
Within the national policy context, the strategic direction in the Government Policy Statement on Land Transport (GPS), and Arataki (Waka Kotahi 30 year transport plan) play a key role in the development of AMPs.

#### 4.1.1 Government Policy Statement on Land Transport (GPS)

**The Land Transport Management Act 2003** requires the Minister of Transport to issue a Government Policy Statement. The GPS sets out how central and local government will invest in the land transport system to provide resilience, give effect to reducing transport emissions, and to help our towns and cities to function safely and smoothly. It does this by

contributing to five key outcomes, identified in the Ministry of Transport’s Transport Outcomes Framework (TOF).

**Transport Outcomes Framework**



**Figure 4-1 : Ministry of Transport - Transport Outcomes Framework**

The six strategic priorities for GPS 2024 are outlined below. These strategic priorities reflect the need to rebuild after recent weather events and strengthen the resilience of the entire transport system. These priorities must be supported by firm foundations, which is why GPS 2024 includes as a priority maintaining and operating our existing transport system, including our roads and public transport services.

The strategic priorities are national land transport objectives under section 68(3) of the Land Transport Management Act 2003 (the LTMA). Together, these priorities support environmental sustainability, resilience and security,

economic prosperity, access, and healthy and safe people. These strategic priorities underpin the work of all government transport agencies. The priorities guide investment decisions by Waka Kotahi NZ Transport Agency (Waka Kotahi) and the Council as co-investment partners.

**Maintaining and operating the system**

*The condition of the existing transport system is efficiently maintained at a level that meets the current and future needs of users.*

**Increasing resilience**

*The transport system is better able to cope with natural and anthropogenic hazards.*

**Reducing emissions**

*Transitioning to a lower carbon transport system.*

**Safety**

*The primary focus of this priority is to make transport substantially safer for all.*

**Integrated freight system**

*Well-designed and operated transport corridors and hubs that provide efficient, reliable, resilient, multi-modal, and low-carbon connections to support productive economic activity.*

**Sustainable urban and regional development**

*People can readily and reliably access social, cultural, and economic opportunities through a variety of transport options. Sustainable urban and regional development is focused on developing resilient and productive towns and cities that have a range of low-emission transport options and low congestion.*

Investment in the transport system is through the National Land Transport programme.

#### 4.1.2 National Land Transport Programme

The National Land Transport Programme, developed by Waka Kotahi, sets out the activities that can receive funding from the National Land Transport Fund under the Land Transport Management Act. The National Land Transport Programme must give effect to the GPS and regional land transport programmes must be aligned with the GPS.

### 4.2 Regional Context

The Bay of Plenty road network forms part of the wider Upper North Island and national land transport network. Important inter-regional connections are to the Waikato and Auckland (SH29 and SH2), Gisborne (SH2) and Taupo (SH5). State Highways also provide intra-regional connections between the main urban centres and to the Port of Tauranga.

#### 4.2.1 Bay of Plenty Regional Land Transport Plan 2024

The **Bay of Plenty Regional Land Transport Plan 2024** (Regional Strategy) sets out the priorities and activities the region will work towards in the next six years with a long term view of what might happen in the next 30 years. The region's vision for transport is the "best transport systems for a growing economy and a safe, healthy and vibrant Bay lifestyle for all".

The RLTP sets out 6 main objectives for the region. Each of these influences and shapes the strategic transport issues for the region:

- Deaths and serious injuries are minimised on the region's transport system
- The environmental effects, including emissions, arising from the use of the transport system are minimised
- Communities have access to an inclusive, equitable and reliable transport system that provides them with a range of travel choices to meet their social, economic, health and cultural needs
- The transport system enables people and goods to move efficiently and reliably to, from and throughout the region
- Resilience issues in the transport system have been proactively identified and actioned so that the region can respond to, adapt, and rapidly recover from unplanned events and hazards
- The transport system enables connectivity between places where people live, work, learn and play

From the assessment of these strategic drivers the region has identified the following priority land transport problems and benefits:

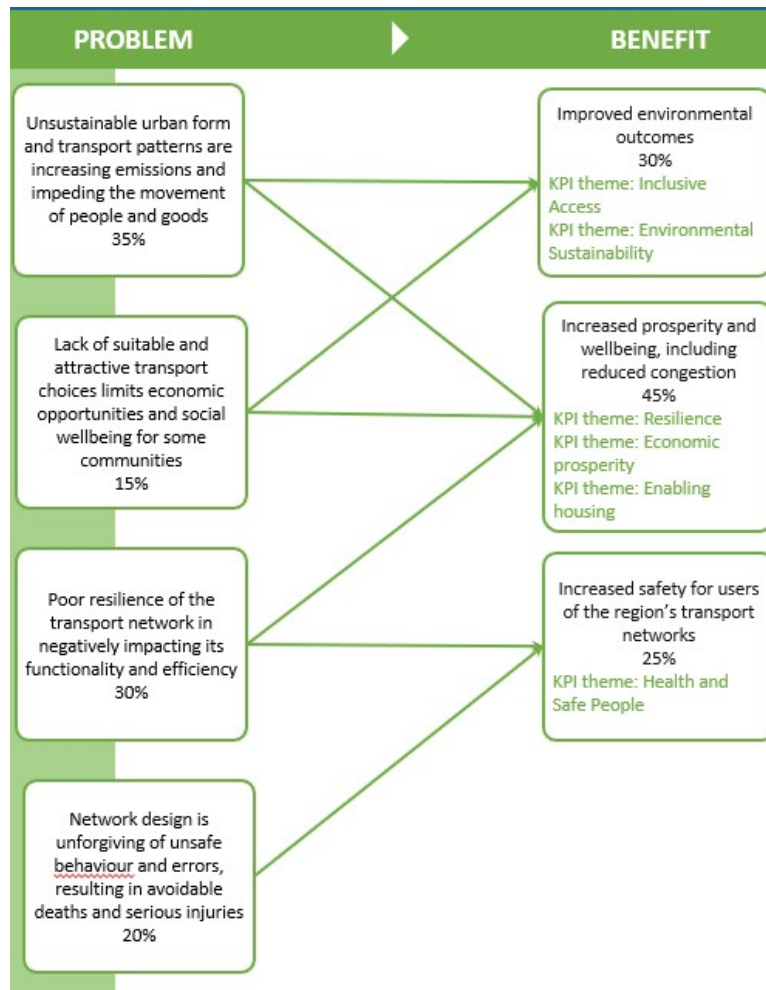


Figure 4-2 : RLTP Problems and Benefits ILM

### 4.2.2 Other Regional Strategies

Other sub-regional and regional strategies and plans that also have an influence on this AMP include:

- Eastern Bay Beyond Today (2016)
- Eastern Bay Road Safety action plan (2018)
- Eastern Bay of Plenty Regional development Project (2018)
- Bay of Plenty Regional Economic Development Strategy.
- Eastern Bay of Plenty Spatial Plan

### 4.2.3 State Highway Investment

The State Highway Investment Proposal (SHIP) 2024-34 outlines the proposed programme of works for the Bay of Plenty Region. The specific projects outlined in the SHIP that impact on the Ōpōtiki district are:

- SH2 Awakeri to Ōpōtiki Resilience – development of a business case in the 2024-27 NLTP with potential implementation phases in 2027-30 and 2030-34.
- Low Cost Low Risk (LCLR) resilience, walking and cycling, and safety improvements.
- Development of a Commercial Vehicle Regional Safety Centre in Ōpōtiki
- Continuation of the SH2 Wainui to Ōpōtiki safety works for the Speed and Infrastructure Programme.

The draft GPS also points to greater investment in the State highway Maintenance, Operations, and renewals programme.

### 4.3 Local Context – Community Priorities

The Land Transport Network in the Ōpōtiki District enables the safe and efficient movement of people and goods and services. It provides access to economic development and jobs, the “first mile” of freight connections, and contributes to the social and environmental outcomes of the District.

An efficient, safe and reliable Land Transport Network is essential for the economic wellbeing of our District. Roads provide access to properties, unlock opportunities for development, provide social connections, the passage of traffic, and the transportation of goods and services.

#### 4.3.1 Long term plan (LTP)

The LTP 2024-2034 sets out the Council’s vision and strategy for the district and is a high-level key driver for all its activities. Council has developed 5 strategic priorities for the community. They help guide and inform planning and the setting of priorities. Land transport is directly linked with the following community priorities and associated goals as outlined in the Council’s LTP:

**Strong relationships and Partners:** the council recognise the importance of relationships and the value in working with Partners toward shared outcomes. this involves having meaningful relationship with mana whenua through engagement and the delivery of services to support shared outcomes.

**Investment in our district:** creating relationships and connections to drive investment opportunities through council plans that are fit for purpose and support increased commercial and business activity.

**Well-being is valued:** to ensure the services, facilities and projects that council delivers support and enhance the well-being of the community.

**Our communities are resilient:** communities are aware of the reality of climate change and want to better understand the risks in order to be prepared, respond, and recover. Council takes a proactive approach to understanding the implications and financial responsibilities, and ensure our communities are not burdened with the impact. This involves ensuring strategic infrastructure is identified, planned for and prioritised.

**Growth is sustained over time:** Council wants to enable development to occur within the district, this includes careful planning and development of supporting infrastructure. This involves polices and strategies for planning and infrastructure that prioritise growth and development in identified areas.

The district strategy defined by the Ōpōtiki District Council aligns very closely with the social, cultural, economic and environmental well-being of the community. It identifies the most important projects and those projects that will take the district forward and give the best return for the ratepayer.

In addition, there are a number of District Council strategies, policies and plans that also have an influence on this AMP.

ODC strategy, policy, plan	Linkages to transportation
Infrastructure Strategy 2024-2054	Upgrading Council’s infrastructure to cater for growth and demographic changes in particular areas. Ensuring the health and safety of the community by developing and maintaining safe walking and cycling

ODC strategy, policy, plan	Linkages to transportation
	<p>infrastructure to support safe alternative transport solutions.</p> <p>Addressing the effects of Climate change and the impact on coastal infrastructure.</p> <p>To address the Council’s issue of ageing infrastructure. With expenditure required for renewals to the roading network.</p>
<p><b>Walking and Cycling Strategy</b></p>	<p>Aims to develop a District where walking and cycling are convenient, attractive and popular forms of everyday transportation and recreation. A District that promotes sustainable transportation and provides for the growing cycle tourism market.</p>
<p><b>Opotiki District Plan</b></p>	<p>The relationship between land-use and the transport network is a significant one that relates to the importance of access to individual properties and businesses at the local level and to the safe and efficient movement of goods and people along main roads. The key areas within the transport section are safety, efficiency, connectivity and a well-designed transport network that is resilient and responds to its environment.</p>
<p><b>Eastern Bay of Plenty Road Safety Strategy</b></p>	<p>Working together to ensure a safe Eastern Bay of Plenty road system that is increasingly free of death and serious injury. Risk areas include speed, rural roads, alcohol &amp; drug impairment, young drivers, restraints, older road users and distraction.</p>
<p><b>Seal Extension Policy</b></p>	<p>Resurrecting the Seal extension policy of the Council for support of Coast communities that are prepared to meet local share commitments for seal extensions on the network.</p>

**Table 4-1 : Transportation Link to Council’s Strategies, policy’s and plans**

## 5 Assessment of current performance

The assessment of current performance of the transportation activity is shown using the One Network Road Classification outcome measures. This is because the One Network Framework does not provide enough detail to assess performance trends. The following comparative measures provide a snapshot of the district as compared with the provincial centres peer group

Customer Outcome		Arterial	Primary Collector	Secondary Collector	Access	Low Volume	Comment
Safety – Customer outcome measures	1: Number of serious injuries and fatalities (DSI)						<ul style="list-style-type: none"> <li>The DSI crash trend on the network is increasing for secondary collector and access roads.</li> <li>Overall DSI trend is improving for the network though.</li> </ul>
	2: Collective risk						<ul style="list-style-type: none"> <li>Collective risk (reported crashes per km) ratings for access and Low Volume roads is in line with the peer group average.</li> <li>Arterials have collective risk ratings that are higher than the provincial centres average but below the Bay of Plenty.</li> </ul>
	3: Personal risk						<ul style="list-style-type: none"> <li>The highest risk roads are Access Low Volume and Arterial Roads which have high personal risks when compared across the provincial, Bay of Plenty, and National averages.</li> </ul>
Safety – Technical output measures	4: Loss of Control on Wet Roads						<ul style="list-style-type: none"> <li>Wet road performance of the network over the last 5 years is good</li> </ul>
	5: Loss of Driver Control at Night						<ul style="list-style-type: none"> <li>Night performance of the network over the last 5 years is good following targeted delineation and lighting upgrades</li> </ul>
	6: Intersection crashes						<ul style="list-style-type: none"> <li>Intersection crashes are still an issue for Ōpōtiki, but the trend has been down.</li> </ul>

Customer Outcome		Arterial	Primary Collector	Secondary Collector	Access	Low Volume	Comment
	9: Vulnerable Users						<ul style="list-style-type: none"> <li>The district performs poorly against provincial centres and the Bay of Plenty for Secondary Collector and Access Roads with motorcycle crashes a feature.</li> </ul>
Amenity	1 - Smooth Travel Exposure (STE)						<ul style="list-style-type: none"> <li>The Ōpōtiki network is smoother than other provincial centres but is trending rougher with the effects of deferred renewals starting to show</li> </ul>
	2 - Peak Roughness (85 <sup>th</sup> percentile)						<ul style="list-style-type: none"> <li>Peak roughness deterioration is being driven mostly by the deterioration on low volume roads with reprioritisation of renewals to higher classifications</li> </ul>
Cost Efficiency	Percentage of network renewed annually	<b>Surface</b>		<b>Pavement</b>			<ul style="list-style-type: none"> <li>Rates of surface renewal over the last 3 years Have been below an optimum long-term level for a mature network. The rate of renewal is proposed to grow to around 8%, or 14km per year over the next three years.</li> <li>Historic rates of pavement renewal are low and further deferrals over the last three years has resulted in higher risks for pavement condition. The proposal is that this will need to increase to an average 1km (0.5%) per year as the network matures.</li> </ul>
	Sealed road maintenance: 4-year annual costs	<b>Maintenance</b>	<b>Resurfacing</b>	<b>Rehabilitation</b>			<ul style="list-style-type: none"> <li>Routine Pavement and Drainage maintenance costs have increased in line with traffic growth and climatic effects. Shoulder maintenance costs are increasing with higher traffic volumes related to horticultural development across the district.</li> <li>Resurfacing costs are low compared to peer networks but the impacts of bitumen costs have resulted in reduced renewal quantities.</li> <li>Pavement renewal costs per km are at the low end for the peer group.</li> </ul>
	Unsealed road maintenance: 3-year average annual costs per kilometre	<b>Maintenance</b>		<b>Metalling</b>			<ul style="list-style-type: none"> <li>The unsealed roads pavement maintenance costs per km are at the higher end for the peer group.</li> <li>The Total metalling costs for unsealed pavements remains steady.</li> </ul>
	Overall Network Cost (Excluding Emergency Works)						

## 6 Key Challenges

### 6.1 Economic Development and Network impact

There are a number of developments within the Eastern bay of Plenty district that are in development. These developments will have a positive effect on growing wealth and jobs for the district. The Eastern Bay of Plenty Regional development report summary from 2018 provides a summary of the new developments, shown in the following figure, many of which have received funding and are either in development or have been completed.



**Figure 6-1 : Economic developments in the Eastern Bay of Plenty Region**

With the Ōpōtiki Harbour Development Project underway and the Entrance works near completion there will continue to be additional pressure on the

ODC transport network from the growth that is resulting from this transformation project.



PGF funding has also been obtained for development of the Harbour industrial zone on the western approach to town which is currently working through Resource Consent. Further funding has enabled the construction of the mussel processing factory on the southern side of town, now in operation. Crown funding has also been obtained for an upgrade of the town centre and the town wharf refurbishment.

Te Whanau Apanui are currently developing a mussel hatchery and research hub in the Te Kaha area. They have also applied for a 10,000 hectare seawater consent off the coast of Te Kaha for aquaculture activities. These developments are all part of the development of an aquaculture industry associated with the Ōpōtiki Harbour development. This development is expected to deliver:

- Employment of 936 people
- Provision of \$27.3 million in household income
- Contribution of \$34.6M to Ōpōtiki's GDP
- An increase in \$44.9 million in output

The exotic forests South of Ōpōtiki and on the coast continue to be harvested with harvesting having a slight decline over the coming years but expected to pick up again. HPMV access to these parts of the network is still restricted either due to Bridge restrictions or the geometry of the road. The main areas restricted to HPMVs are shown on Figure 6-2.

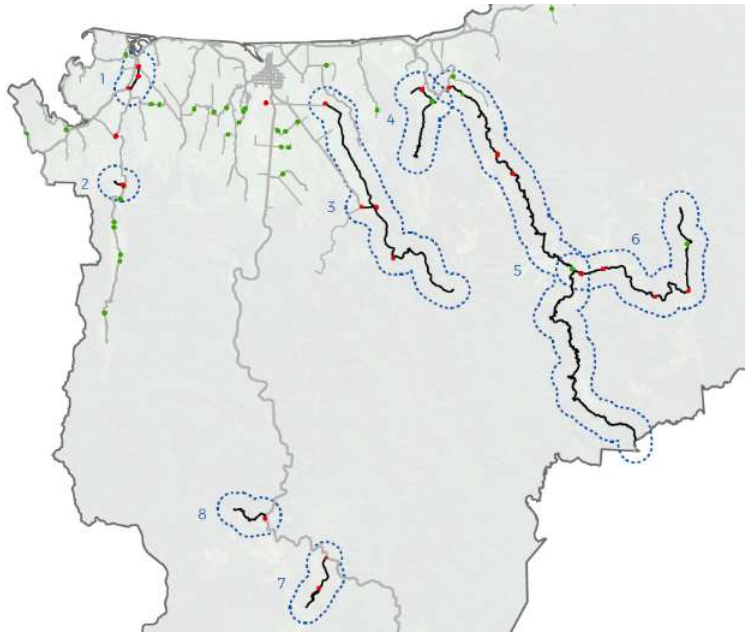


Figure 6-2 : HPMV access restrictions

Continued growth in the Horticulture sector, mainly kiwi fruit development, is still occurring throughout the district. Kiwi fruit developments are underway in Waihou bay, Raukokorere, Te Kaha, Omaio, and the surrounding area of the Ōpōtiki Township. This is expected to add an additional 8000 tonne per annum being processed through the Ōpōtiki Cool stores. In addition to Ōpōtiki Developments is a forecast increase of 12,000 additional tonnes from Gisborne also to be processed in Ōpōtiki. Recent investment and expansion has occurred at both Kiwi fruit packing houses in Ōpōtiki, and further development is in the planning to cope with the forecast increases from orchard development.

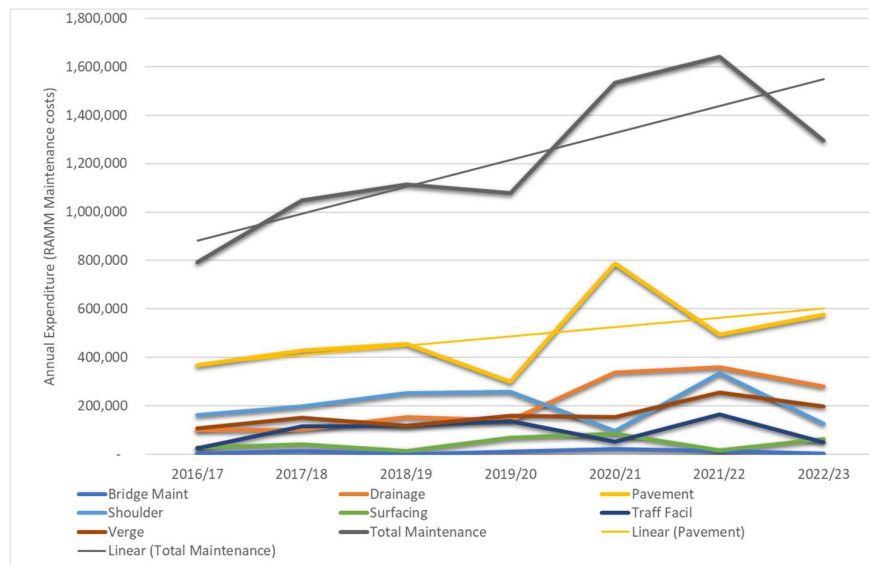
The planning and development of new transportation assets to fill the current infrastructure gaps will be required to meet the requirements of the community. Investment to bring existing infrastructure up to standard to provide safe access will also be required. This includes improved drainage and installation of footpaths to provide safe access for pedestrians and mobility vehicles within the Ōpōtiki township. Anticipated growth from town developments is also expected to result in new internal subdivision provided by private fund sources and Kāinga Ora. This will include the new transportation assets that will have to be created within these developments including facilities for public transport.

Tourism in the Ōpōtiki district is steadily increasing again following the Covid Pandemic, where the Motu Trails cycle ride has been a major contributor. The extension of the cycle trail through to the Waiotaha River was completed in 2022. Funding for the extension through to Ohiwa Harbour is still being sought. The full development of the cycle trail and harbour development projects are forecast to further increase tourism opportunities within the Ōpōtiki district.

These developments happening in the district are forecast to unlock an additional 1,100 jobs over the next ten years. This increase in activity flows through to the

growth of industry support and the service sectors within Ōpōtiki. Such developments and growth in industry and support services will result in greater vehicle movements within the town, and place pressure on existing transport infrastructure.

On top of these growing pressures and increased demand the Council is faced with the issue of ageing infrastructure. Although the average age profile for high value network assets does not indicate an asset renewal deficit, the maintenance requirements from increased demand on the network is increasing.

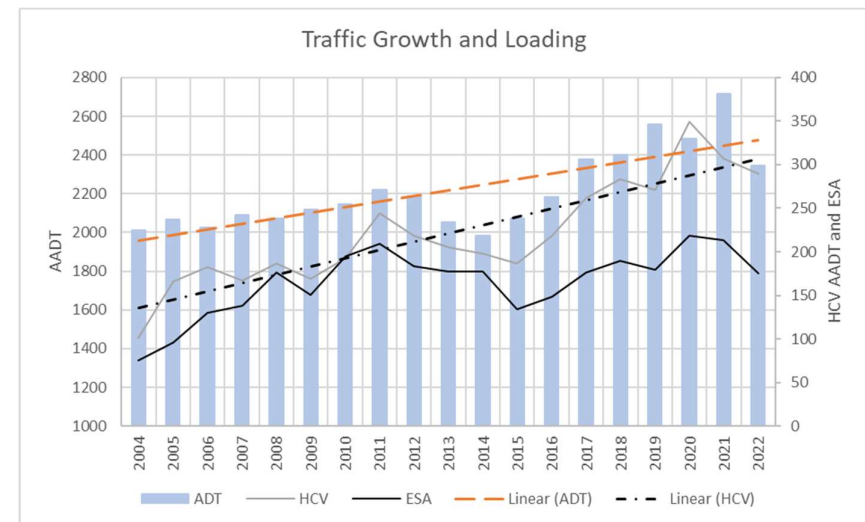


**Figure 6-3 : Annual Maintenance Costs as recorded in RAMM**

*Note: reduction in pavement maintenance for 2019/20 due to COVID 19 shut down in April with a corresponding peak the year after.*

This increase in maintenance is due to a number of factors but predominantly related to increasing loading on the network and climatic effects. The growth in traffic for the network can be demonstrated by the increase in traffic on SH35 on the entrance to Ōpōtiki. Total traffic volumes at this location over the longer-term have steadily increased, reflecting the growth in coast ward.

The growth in HCV traffic between 2015 and 2018 was nearly twice the growth rate of total traffic but growth in loading, measured by equivalent standard axles (ESA), follows the rate of total volume. This is a result of the drop off in Forestry volumes and increase in Horticultural traffic associated with Kiwifruit developments.



**Figure 6-4 : Traffic counts and loading on SH35 at Ōpōtiki threshold**

As the network ages this increased loading will continue to have an incremental effect on the pavement maintenance and renewal requirements for the network.

Resurfacing quantities for the network over the last ten years have been averaging around 10km per year. This represents 5.8% of the network annually resurfaced. 57% of the network is sealed with a single coat grade 3 or grade 4 seal with an average age of 10.4 years. A further 20% of the network is surfaced with a grade 5 void fill seal with an average age of 9.6 years. 23% of the network has expired seal lives. This represents a large proportion of the network with an increasing surface age and increased risk of rising maintenance requirements.

Some high value assets (bridges) are approaching the end of their economic life. The Tirohanga Rd Culvert has been found to have a corroded base and will require replacement. Other structures that were a concern have undergone component replacements to extend their useful lives. Although replacement of these assets will no longer be required within the next ten-year period, based on current condition assessments, there will still be a need to maintain structural component renewals within the next three years to manage risk and maintain access levels of service.

***Problem Statement 1: The form and condition of the network will not meet the required levels of service from increased demand, resulting in restricted access, loss of productivity, and increased reactive maintenance***

## 6.2 Network Resilience and Climate Change

The Ōpōtiki District is located in an area where the threat of natural hazard events is reasonably high, particularly from severe weather events that frequently and severely compromises access and cause unplanned disruptions to the transport system. A resilient transport network is an important economic, social, and safety component, particularly as there are areas within the District where roading network routes are few or there are no alternative access.

Flooding of road network as a result of high rainfall events; and potential flooding as a result of sea-level rise due to the effects of climate change. Prime examples include sections around both sides of the Ohiwa Harbour, Waiotahi River estuary, Gabriels Gully, Waiotahi Valley and Browns Roads, Otara East and Pakihi Roads, lower Motu Road. Sections of the state highway network are also affected such as coastal sections of SH2 and at Matekerepu. Lower lying parts of SH 35 such as Raukokere and Hawai are also affected.

Ongoing assessment will be necessary to plan interventions with climate change effects exacerbating circumstances. This will require working with Waka Kotahi to prioritise maintenance and Emergency response operations for SH35 as a lifeline route. Specific works will require undertaking specific drainage assessments and maintenance, with resulting renewals and upgrades of infrastructure to ensure the drainage system performs as required. Ongoing assessment of infrastructure resilience will be necessary to plan interventions in line with predicted climate change effects.

Waka Kotahi has undertaken route security assessments on the state highway and have developed options which include raising sections and

detour routes onto local roads. This includes the detour for Waiotahi beach onto Old Creamery Road, which remains unsuitable for Heavy traffic.

Currently the local road flooding issues are of relatively short duration and of low economic impact. However, over the past decade the Ōpōtiki District has been subjected to heavy rain events resulting in widespread surface and river flooding, together with major slips and river scour adjacent to roads, that disrupt transportation connectivity within the district and regionally. These events have resulted in the additional costs to the Council in the form of emergency works, as shown in the figure below.

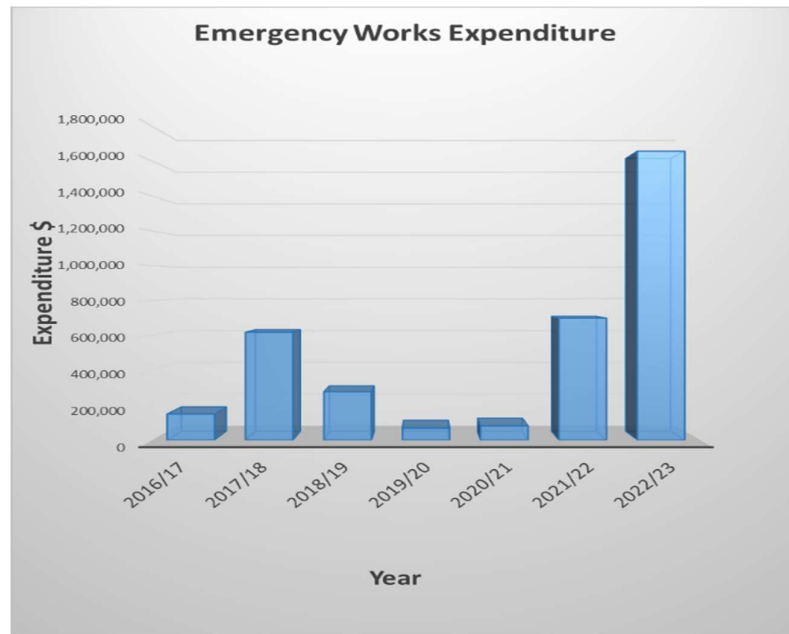


Figure 6-5 : Emergency works expenditure 2016 to 2023

In the period from 2016 to 2020 the district experienced some minor events. The wet weather events of 2022/23 resulted in \$1.6M in storm damage works on the network. There remains a number of sites in the network that are likely to deteriorate and trigger further reinstatement expenditure requirements.

### 6.2.1 Climate Change

A changing climate is expected to create both opportunities and risks for the Bay of Plenty. These predicted changes may be beneficial to some sectors of the agricultural and horticultural industries with less frost and increased mean temperatures leading to longer growing seasons and continued growth in horticultural development.

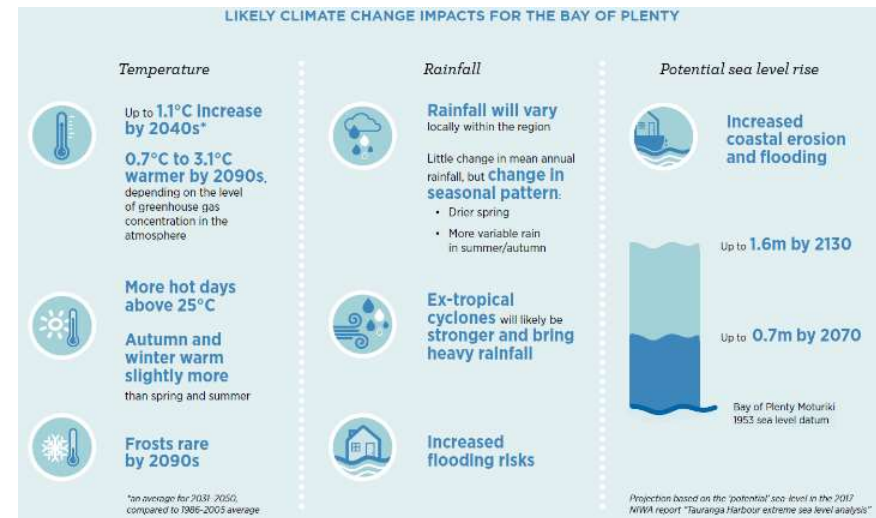


Figure 6-6 : Climate Change Impacts for the Bay of Plenty

Rainfall readings from January 2012 from the regional council site at Browns Bridge on the Otara river are shown in the figure below. This shows an increase in the number of high intensity events and also the increasing trend in cumulative annual rainfall per year through to the end of 2022, which has been the wettest in recent time.

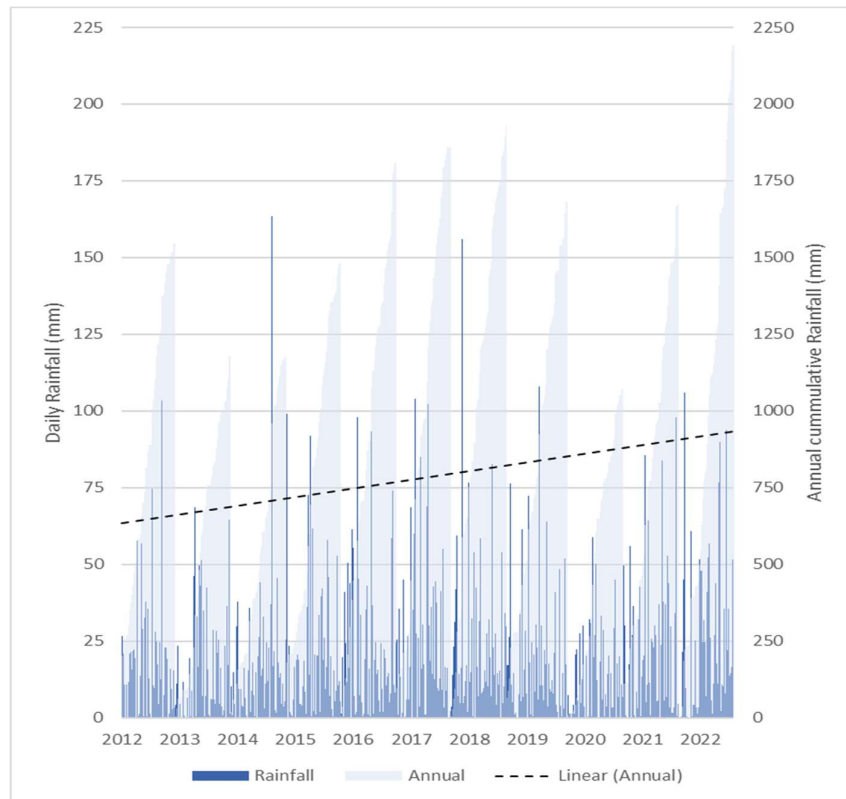


Figure 6-7 : Ōpōtiki Rainfall 2012 to 2022

This shows the predicted effects of climate change on rainfall intensities and total rainfall over time. Climate Change can affect Councils transportation activity functions in a number of ways. As global sea temperatures rise with resulting increase in storm intensity the resilience of Ōpōtiki’s transport infrastructure will continue to be tested. The steep terrain over much of the district results in short run off concentration times that can overwhelm existing storm water assets.

In designing its assets, Council will continue to use the latest guidance for the various design parameters. Climate RCP scenario are built into the design of new assets and on replacement of existing assets. Some assets will need additional capacity as climate change effects become apparent.

Higher ground water from sea water levels not only poses a threat to coastal infrastructure in Ōhiwa harbour and Orete point, it effects the ability to manage storm water through soakage. This may have an effect on the load capacity of road pavements with saturated base layers. Ōpōtiki District is already investing heavily in storm water upgrades within the Ōpōtiki township to alleviate flooding issues. Many of the storm water management projects will require reshaping of existing roads to alleviate surface ponding and flooding issues.

Climate change predictions are for an increase in the size of extreme events over time. It is assumed that there will be a gradual increase in size of events causing increased erosion and damage. Apart from Council potentially finding itself facing increased emergency works costs from heavy rain events the related impacts to resilience must be factored in when determining route security.

**Problem Statement 2:** *The challenging topography, climate change effects and network demand will result in reduced network resilience and higher costs to maintain and restore services*

### 6.3 Providing for Community and Growth

#### 6.3.1 Population Increase

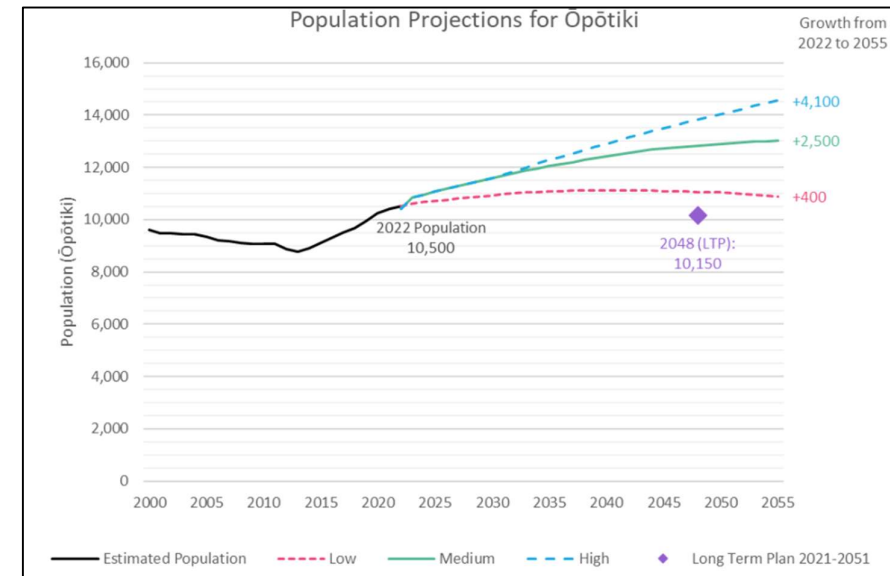
Population change is a key driver of demand for transport. Either as demographic changes demand different use of the transport system or as growth puts pressure on existing capacity or safety in the system.

As a smaller community, Statistics NZ predicted in 2013 that Ōpōtiki District would be likely to experience a static or declining population. However, the report “ŌPŌTIKI TOWN CENTRE: The role of the town centre in supporting sustainable growth” ( Martin Jenkins, September 2016) looked at what effect the current growth industries in Ōpōtiki will have on Population. The report stated:

*“Many small and rural populations in New Zealand are not declining. Several are, in fact, growing, and are likely to continue to do so for some time. Those districts that have grown share some characteristics with Ōpōtiki, including role, geography, location, climate and purpose, which suggests that Ōpōtiki has the ingredients for sustainable growth.”*

The main points in the report supporting growth in the district have been shown to be correct to date with growth primarily from internal migration. In June 2022, Ōpōtiki district had an estimated population of 10,500.

The Eastern Bay of Plenty Housing and Business Needs Research Report (2023) by MRCagney states that the forecast for the Ōpōtiki district population is an increase to 13,000 residents by 2055 under the medium growth scenario. Figure 6-8 below shows the projected population growth for the high, medium and low projections for the district.



**Figure 6-8 : Ōpōtiki District Population Projection to 2055**

Current growth in population is following the high profile trend, with the greatest increase in the 15 to 39yrs age group as more employment opportunities are provided in the district.

There are also a number of key projects underway or completed to encourage further employment growth in the Ōpōtiki district. These are in the aquaculture and horticulture sectors. The harbour development will also support and enable tourism activity once completed in 2024.

This growth in population is forecast to result in an additional 500 households over the ten years to 2034. A small proportion of this development will be with infill development within the Ōpōtiki township. The majority of the remaining areas of development are West of the Waioeka river in the Hukataia and woodlands area, and development at Waitohahi Drifts, which use SH2 to access the town and main areas of employment south of the town.

The spatial plan for the district also has growth in the Tablelands area East of the town, which uses SH35 for access to the town centre services and employment.

### 6.3.2 An Ageing Population

In 1996, when the total population was similar to what it was in 2018, 11% of the community were over 65. Between 1996 and 2013 as people under 40 left the district for work the proportion of the district aged 64 years or greater grew to 17%. This compares to 14.3 percent of the total New Zealand population over 65. The graph below tracks past changes to the Ōpōtiki Districts population age and shows that the even with younger families moving back into the district the percentage of the population over 65 has continued to grow.

The overall trends point toward a growing population across all demographic, particularly as those in the 15 to 40 year age group are finding they do not have to leave the district for employment.

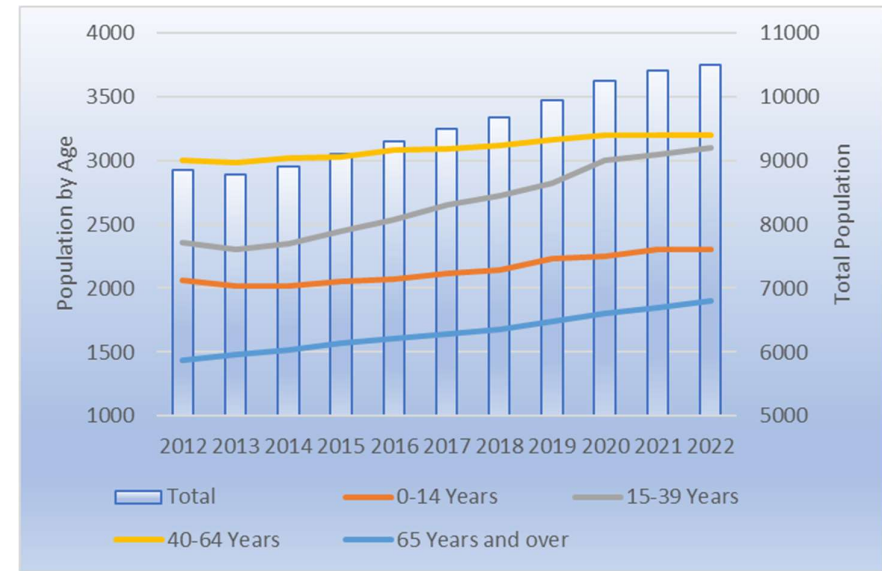


Figure 6-9 : Opotiki Population by Age (Statistics NZ subnational estimates)

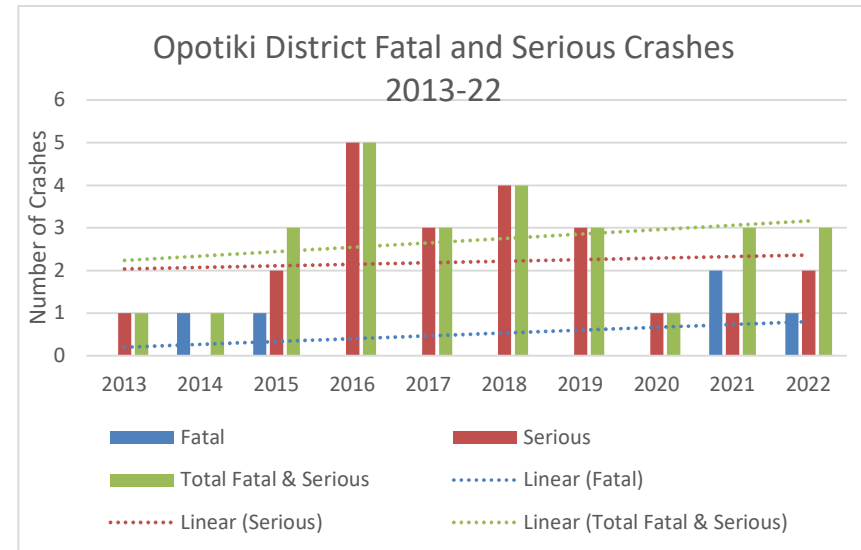
This growth means there is a need to encourage active transport services, not just for older residents, but also to provide safe active transport infrastructure for the growing population of under 15 year olds to access education and town amenities.

**Problem Statement 3:** Infrastructure is not meeting the changing needs of the community for active modes of transport which is disconnecting people from services and amenities

### 6.4 Road Safety

The Ministry of Transport’s Road to Zero: A New Road Safety Strategy for NZ 2020-2030 vision for road safety in New Zealand is “a New Zealand where no one is killed or seriously injured in road crashes”, with the ONRC Safety customer outcome aim being “the road and roadside are becoming safer for road users’.

Road crash deaths and serious injuries in the Opotiki District are a significant issue making up 13 % of crashes for the district, minor injury crashes account for 31% of crashes. This resulted in a combined death and injury social cost of \$51.54 million to the district for 2013 to 2022.



**Figure 6-10 : Fatal and serious crashes on Opotiki District Council Roads**

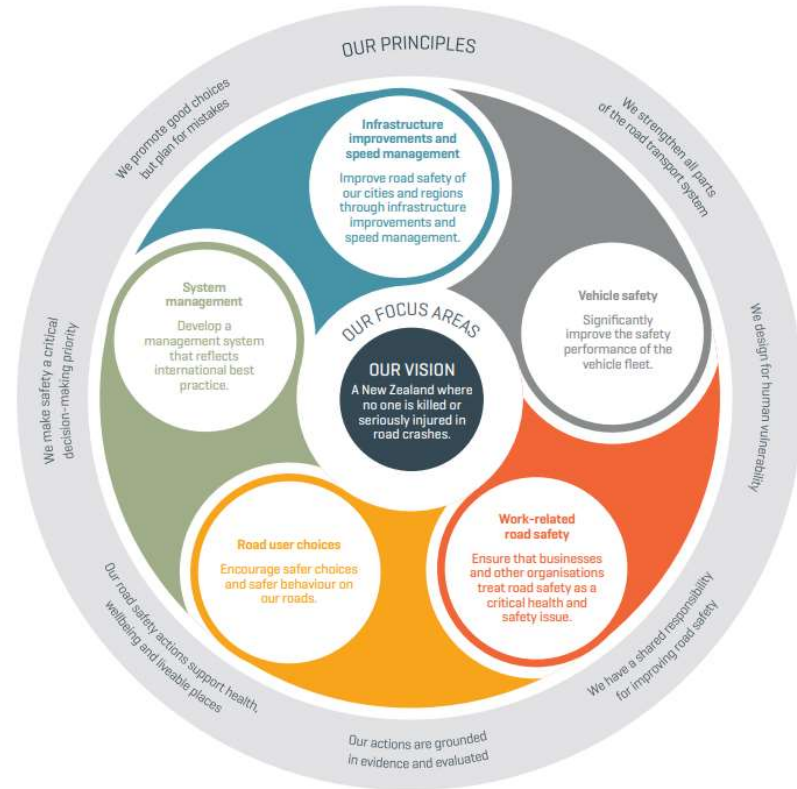
Ōpōtiki District roads have a high personal risk rating with 10 Deaths and Serious Injuries (DSI) per 100 million Vehicle Kilometres Travelled (KMT). This puts Ōpōtiki District within the 11 highest road controlling authorities in regards personal risk rating.

The Communities at Risk Register, developed by Waka Kotahi to identify communities over-represented in road safety risk, shows that Opotiki District ranks highly against the majority of the 14 Strategic Areas of Concern. Areas of Concern where Ōpōtiki District is over-represented are:

- Alcohol and/or drugs
- Speed (Too fast for conditions)
- Urban intersections

- All intersections
- Motorcyclists
- Pedestrians
- Cyclists
- Distraction
- Restraints
- Older road users (over 75yrs)

Underpinning the vision of the Road to Zero strategy are the seven guiding principles and five focus areas. These are shown in the diagram below.



**Figure 6-11 : Road to Zero Principles**

To improve safety outcomes for the district an integrated approach is needed which targets three of the five Focus Areas of the Road to Zero strategy:

- Infrastructure improvements and speed management
- System management
- Road user choices

By adopting the safe system philosophy in which we expect there to always be some crashes, but we have the infrastructure and systems in place to reduce the severity of these crashes to prevent death and serious injuries Ōpōtiki District Council can reduce the personal risk on their roads. Improving our road infrastructure, and setting and enforcing safe speed limits, are some of the most powerful ways we can create a road system that is forgiving of human mistakes. As the Ōpōtiki road network primarily hangs off the State Highways the Council will need to work with Waka Kotahi for an integrated approach to speed management and safety infrastructure.

Road safety was one of the worst performing areas for delivery of council services from the 2023 resident survey.

***Problem Statement 4: The form and function of roads is resulting in medium-high personal road safety risk for the community.***

### 6.5 Status of the Evidence Base

The status of evidence used to assess the strategic issues facing Ōpōtiki district is varied. A summary of the key data sources and status (High, medium, or low accuracy, quality, or relevance) is provided as follows:

Evidence	Data Source	Status
Asset data	RAMM	H
Community outcomes	SIL Research 2022-23 Resident Survey, DSI measures	H
Asset Condition	RAMM, Bridge and structures Annual assessment.	M
Asset Value	Beca 2022 Valuation	H
Historic Costs	Transport Investment Online	H
Safety	ONRC, RAMM, CAS	H
Population statistics	Statistics NZ, 2018 Census	M/L
Economic Statistics and forecasts	Statistics NZ, Eastpack, OPAC, BoP Aquaculture strategy.	H

**Table 6-1 : Status of the Evidence Base**

## 7 Strategic Case assessment

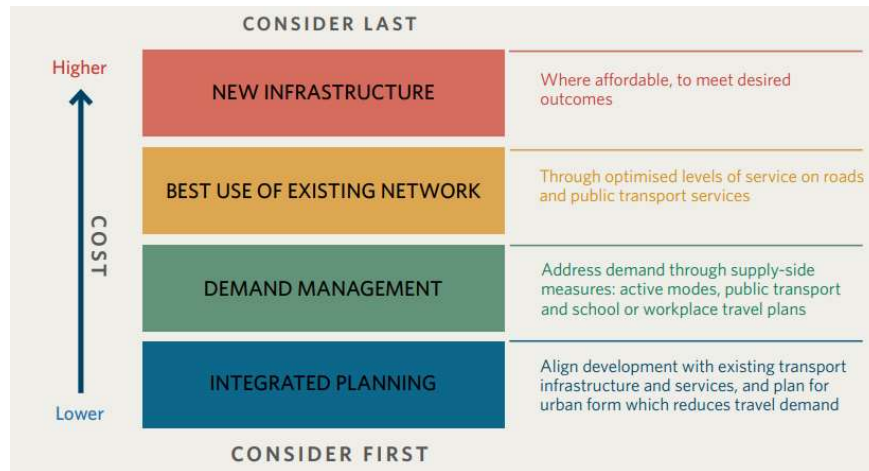
The strategic assessment of the key challenges needs to be undertaken in the context of the Government Policy Statement on Transport and the Ministry of Transport's Transport Outcomes Framework (TOF). The TOF identifies five core outcomes that the government is seeking to achieve through the transport system: inclusive access, healthy and safe people, economic prosperity, environmental sustainability, and resilience and security. The assessment of the key challenges has identified four problem areas for Opotiki in relation to these outcomes:

- Economic growth and access
- Climate impacts and Resilience
- Healthy and safe communities, and
- Road Safety

## 8 Strategic Response

### 8.1 Hierarchy of Intervention

An intervention hierarchy is applicable to all steps in the planning and investment process. Alternatives and option selection should start with lowest cost alternatives and options, including making best use of existing transport capacity, before considering higher cost alternatives and options.

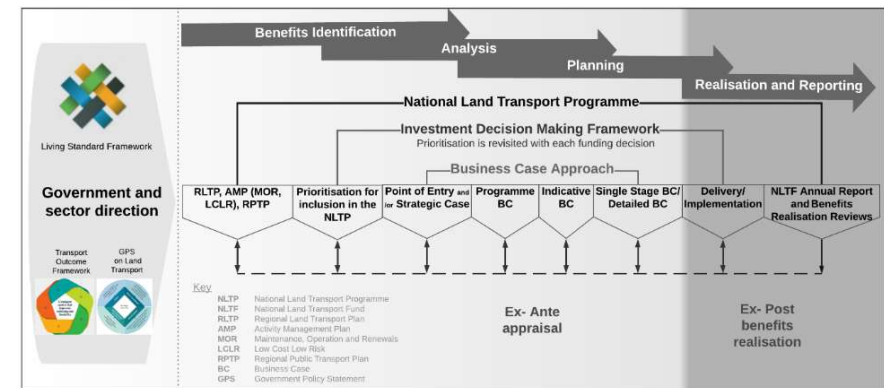


**Figure 8-1 : Intervention hierarchy for National Land Transport Fund (NLTF) investments**

To ensure best use of available resource and financial impacts Council will assess proposed programmes against the intervention hierarchy.

### 8.2 Benefits analysis

Waka Kotahi uses an Investment Decision making Framework (IDMF) for the assessment of Transportation investments. The IDMF uses a benefits framework to categorise and describe the various contributions of land transport to the wellbeing of New Zealanders. The benefits are identified from the problems, and the opportunities and benefits of addressing them. The following figure outlines the various components of benefits management and investment decision making, identifying four phases of benefits management (identification, analysis, planning and realisation/reporting).



**Figure 8-2 : Waka Kotahi Benefits management for the business case process**

The following benefits have been identified relating to the identified problems for the district and aligned to the Transport outcomes framework and proposed benefits measures.

**Benefit 1:** Healthy and Safe people:

1. Reduction in personal risk
2. Improvement in the perception of safety and ease of walking and cycling in the district

**Benefit 2:** Resilience and Security:

1. Risks are managed to maintain access.

**Benefit 3:** Economic Prosperity:

1. Improved spatial coverage for HPMV Access
2. Improved walking and cycling access to social and economic opportunities

### 8.3 Investment scenarios and strategy for delivery

The key outcomes sought from transportation investment are:

- **Safety:** A network that provides the community with healthy and safe transport choices
- **Resilience:** A network that provides a reliable level of service
- **Economic growth:** Investment supports economic development and productivity

There are three scenarios for investment that Council wishes to consider in delivery of the transport strategy. These scenario are based on a desire from the community for more spending on council roads and better maintenance to address potholes and other road hazards.

The scenario are defined as:

- **Scenario 01:** Maintain current levels of service – This scenario is the base case (do minimum) which includes the maintenance, operations, and renewals to maintain the current levels of service for the network.
- **Scenario 02:** Maintain current levels of service plus improvements to meet mandated improvements to levels of service. This includes Scenario 01 plus the LCLR road improvements for resilience and safety improvements.
- **Scenario 03:** Maintain current levels of service, improvements to meet mandated improvements to levels of service, plus other improvements to accommodate and provide for growth in the district. This investment scenario includes specific growth projects such as the town centre upgrade, transport investments in new connections as indicated in the Hukutia development proposal, and SH intersection improvements. Includes a % increase for growth as per forecasted population increase and demographic shifts. However, growth in town will mean better utilisation of existing transport assets, not necessarily LoS requirements for more assets outside of the LCLR improvements. Growth in areas east and west of town as indicated in the draft spatial plan will mostly utilise the SH and existing connections but specific development of connections may be required.

The detailed investment strategy to address issues and deliver transportation benefits to the community is provided in detail within the Programme Business case. The key focus areas and actions in terms of the intervention hierarchy are mapped against the benefits in the following table.

Response	Action	Benefits			Notes
		Healthy and safe people	Resilience and security	Economic Prosperity	
Integrated Planning	Development strategy for future development needs reflected in the Eastern Bay of Plenty Spatial Plan.	😊	😐	😐	Identifies areas of residential and industrial development and the impact on services
	Climate Change Action Plan.	😊	😊	😐	Council commitment to taking action to mitigate and adapt to climate change.
	Road to zero	😊	😐	😐	The road to zero (R2Z) outlines a strategy for 2020 to 2030 to guide improvements in road safety.
	One Network Framework (ONF)	😊	😐	😐	Design that meets form and function for movement and place.
Demand Management	Walking and cycling strategy	😊	😐	😊	Developments to encourage and support active modes
Best use of Existing Network	Speed management Plan	😊	😐	😐	Setting of speed limits based on form and function of road
	ONRC	😊	😊	😐	Risk based maintenance and renewal strategy aligned to road hierarchy
New Infrastructure	Urban street upgrades	😊	😊	😐	Walking and cycling, drainage, and safety improvements.
	Resilience improvements	😐	😊	😊	Preventive Maintenance and detour route improvements
	Motu trails extension	😊	😐	😊	Providing active transport choice connecting Waiotahi and Ōhiwa to town and development of local tourism
	Speed management	😊	😐	😊	Infrastructure improvements to manage speeds in high risk areas.
	Hukutia Development transport connections	😊	😊	😊	New Walking and cycling connections to support and provide transport choices for growth in Hukutia

**Table 8-1 : Hierarchy of intervention**

## 8.4 Delivery of the Strategy

Delivery of the strategy will be through a mixture of the following:

- continued in house management of annual renewals programmes and maintenance outputs through the traditional delivery model.
- Assistance with Asset Management and reporting will be delivered through a combination of Collaboration with neighbouring councils and Professional service commissions as required.
- New infrastructure works to be developed through Council and applications to central Government funding packages for resilience, growth, and transport choices funding.
- Other major investments in district development projects to be delivered by a Partnership of Ōpōtiki District Council, Regional Council, private development and Iwi partnerships.

## 8.5 Programme Risks

The programme risks in terms of community service, outcomes, and future costs. Are outlined in the following table:

Community Service Risk	Impact	Probability
Level of service gaps are not able to be closed resulting in continued community risks for safety and access.	M	M
Continued population spread to the fringes of Ōpōtiki township and insufficient funding for mode choice access. This would result in more vehicle journeys to key town services and increased community transport costs and safety risks.	M	H
Reducing levels of service result in community satisfaction with Council delivery declining.	M	M
Outcome Risk	Impact	Probability
Development opportunities that rely on resilient transport links are delayed or taken out of the district resulting in loss of employment opportunities and additional costs on ratepayers.	H	H
Reduced maintenance contributes to a reduction in the resilience of the network resulting in impacts on customer journeys	M	H
Future Costs/Funding Risks	Impact	Probability
Reduced investment in transportation results in loss of Contractor capability in the community and increased costs from loss of competition.	H	M
Hi inflation costs makes achieving desired outputs unachievable, resulting in higher network risks and affordability to deliver Council services.	M	H

**Table 8-2 : Assessment of Investment risks**

## Part 2:

# Programme Business Case



## 9 Framework and Alignment to Strategic Case

The structure of this Programme Business Case has been based around the core activities of:

- Pavements and surfacing management, including drainage maintenance and renewals.
- Structures Management.
- Traffic services and management of walking and cycling facilities.

Each of the core activities are broken into sub activity groupings for the provision of asset knowledge and lifecycle planning. The sub- activities for each core activity have been selected regarding their function in providing the Strategic goals for the district.

The Plan subsections and link to the Strategic case is provided in the following Table 9-1.

Core Activity	Sub Activity Groups	Link to strategic case				Transport Outcome
		Relevant Problem Statements	Key Benefit delivery			
			# 1	# 2	# 3	
Pavements	Sealed Pavements and surfacing	Problems 1 and 4	😊	😊	😊	Provide a safe, reliable network that meets the needs of the community
	Unsealed Pavements	Problems 1 and 4	😐	😊	😊	Provide a reliable network that provides access to support economic development
	Drainage	Problem 2	😐	😊	😐	Provide for a resilient network
Structures	Bridges and Structures	Problems 1 and 2	😐	😊	😊	Provide a reliable network that provides access to support economic development
Traffic Services	Walking and Cycling	Problem 3	😊	😐	😊	Provide a safe network that offers transport choices
	Street lighting	Problems 3 and 4	😊	😐	😊	Provides perception of safety and connection to services
	Traffic facilities	Problem 4	😊	😐	😐	Provide a safe network that reduces personal risk

**Table 9-1 : Link to Strategic case for transportation activities**

## 10 Asset Management

### 10.1 Network and Asset Management

Network Maintenance Management activities are undertaken in-house by Ōpōtiki District Council staff. This includes MSQA for the maintenance contract and delivery of renewals. Programming of maintenance activities is provided by the Maintenance Contractor and approved by the Council Transport Engineer under a traditional delivery model.

Renewals are delivered either through the maintenance contract or procured in accordance with the endorsed procurement strategy.

Asset Management is undertaken with a mixture of in-house services and external consultants for specialist assistance with management of RAMM Data, Condition data, bridge and structures assessments, and assistance with developing improved asset management outcomes.

The Procurement strategy for transportation demonstrates how council is obtaining value in delivery of maintenance and renewals activities. This is measured against both value for money for ratepayers and alignment with community outcomes that support local businesses and employment.

Ōpōtiki district Council has embraced the principles of smart buying. However, a review of organisational capacity shows there is some areas where improvements to the operational and asset management resources within the team may provide value. The smart buyer assessment for ODC is provided in Figure 10-1.

Assessment statement for Ōpōtiki District Council		Score				
		1	2	3	4	5
1	Fully understands the different contracting models available					✓
2	Holds meetings that update the contracting industry on the FWP and any changes in approach, and proactively engages with the industry to ensure it gains optimal value from any changes being implemented			✓		
3	Has sufficient robust data on our networks to enable optimal decision-making			✓		
4	Has access to expertise that fully enables best use of the data available				✓	
5	Is open to alternative solutions to those proposed in the contract documents				✓	
6	Understands risk and how to allocate and manage it				✓	
7	Has a Council that is prepared to pay more now to achieve a lower whole of life cost				✓	
8	Actively pursues value for money & does not always award contracts to the lowest price			✓		
9	Is able to manage supplier relationships to ensure optimal expenditure, which sustains appropriate levels of service				✓	
10	Supports ongoing skill and competency training and development for staff			✓		
11	Actively shares and gains knowledge within the sector				✓	
12	Is effective in keeping up with best practice in procurement, including best practice RFP/contract documentation				✓	
13	Regularly seeks and receives candid feedback from suppliers on its own performance as a client and consistently looks to improve its performance			✓		

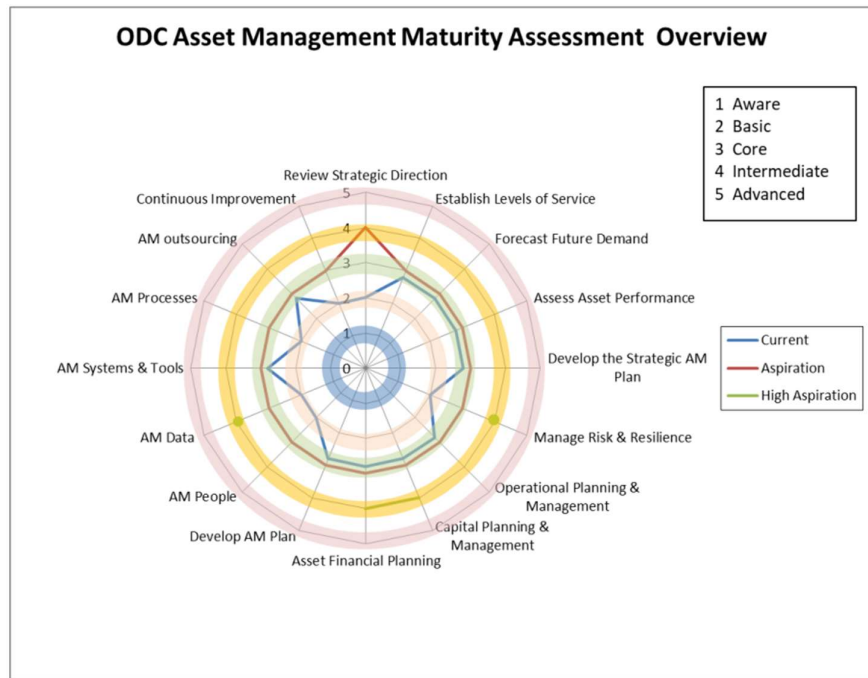
Assessment statement for Ōpōtiki District Council		Score				
		1	2	3	4	5
14	Explores opportunities for collaboration by either sharing in-house resources with neighbours, or by procuring together or tendering together.				✓	
Number of ticks in each column		0	0	5	8	1
Multiplying factor		x1	x2	x3	x4	x5
Total Score in Column		0	0	15	32	5
Total Score		52				

**Figure 10-1 : Smart Buyer Self-Assessment**

The approved procurement strategy for council states that support for advanced asset management and management of bridges and structures will be put to market. The scope of this will be dependent on the outcome of current objectives to grow and maintain resources within council.

Assistance for renewal and capital project delivery design inputs, and specialist services will be provided by external consultants as required in line with Council procurement policy.

The Council completed an Asset Management Maturity Assessment for 3-waters and roading in 2022. This identified gaps between current and desired levels of Asset Management delivery for council. The results of this are presented in the following figure.



**Figure 10-2 : AM Maturity Assessment**

With a need to manage institutional knowledge risks and a move to improve asset management practices within council an increase in work category 151 has been included within the programme. Employing and retaining staff in this area has been an issue for council. The increase in asset management funding is to cover:

- Continued improvements in asset management and opportunities to develop staff in partnership with external suppliers.
- To cover the costs of data management and systems maintenance
- For analysis of condition and asset data to better manage risks to the network and deliver optimal outcomes.

- Complete and implement speed management for the district in line with the speed management guide.

Options to deliver projects in collaboration with Waka Kotahi state highway operations and Whakatane District council will continue to be reviewed on a case by case basis.

## 10.2 Asset Data

The transportation asset inventory described in the following sections is held and maintained within the Council RAMM system. The Council is developing staff to maintain the data in-house with support from external professional service suppliers.

Asset information is captured from annual renewals projects from as-built information and entered into the required tables for annual achievement reporting requirements. A programme of monthly updates of Maintenance activities is provided with monthly claims, this also identifies where maintenance activities have resulted in minor alterations to existing assets for recording within the database.

A data validation project was completed in 2020 where the existing RAMM data was taken into the field and validated.

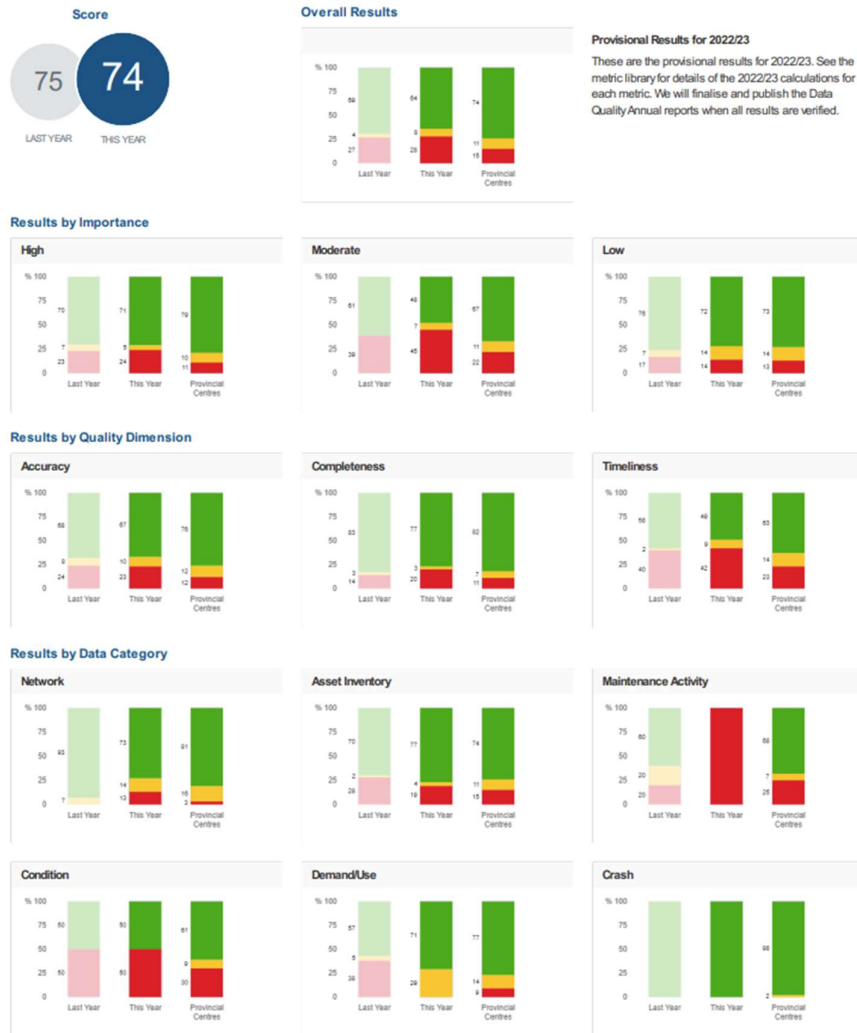
### 10.2.1 Data Quality

Current asset data confidence grades vary for each asset category. For example, carriageway surface data is highly reliable (confidence rating A) but there is currently very little information on Pavement layers (confidence rating C).

The Roding Efficiency Group (REG) provide annual Data Quality Reports for each RCA. The results of the 2022/23 data quality assessment for Ōpōtiki, compared with the Provincial Peer group results, are shown below in Figure 10-3.

Overall data quality has been steady over the last three years for Ōpōtiki with data quality scores sitting in the mid 70 range. Low scores for some items have generally related to timeliness of delivery (resource availability) or are related to missing data, such as high speed condition data, which will improve with the roll out of the CCDC. The issue with Maintenance activity is currently being addressed. This relates to delays in processing of the monthly maintenance costs data, which is now up to date.

Allowance has been included within WC 151 network and asset management for continuous improvements to data, data management processes (e.g. condition assessments), resourcing and reporting requirements.



### 10.3 Asset description

All of the transport assets included in this AM Plan are solely owned and operated by ODC. However, some of these assets are formed on land not vested in Council ownership as road. This is due to one of the following reasons:

- The carriageway was and has been historically maintained on private land. There are many examples of this throughout the district, and in such cases it is where the legal road corridor was otherwise less convenient.
- The carriageway passes over land that is recognised legally as Maori land. These are termed “Maori Roadways”. These can be either:
  - “Restricted” Maori Roadways, where they are deemed by Maori Land Court ruling to be restricted in use to descendants of original owners and descendants of authorised agents, or
  - “Unrestricted”, whereby the road is deemed to be continuously available for public use. Some of these roads are maintained by the council under Memorandum of Understanding (MOU) agreements.

The Ōpōtiki transport Assets are recorded and managed using the RAMM platform, provided by “ThinkProject”. The current state of assets listed in the database is summarised in the following table. A more detailed description of the assets is provided in the following subsections.

Figure 10-3 : Data Quality Summary

Asset	Quantity (No.)	Length / Area	Units
Carriageway Sections	471	326.3	km
Drainage	2,526	17,512	m
Footpath and cycleways	452	68.3	km
Railings	260	5,977	m
Surface Water Channel	448	55.2	km
Signage	1,503		No.
Bridges	69	1,330	m
Carparks and reserves	19	9,552	m <sup>2</sup>
Street Lighting	742		No.

**Table 10-1 : Asset Inventory as at 1 July 2023**

### 10.3.1 Sealed Pavements and Surfacing

The road pavement is the structural component of a road, the pavement is either sealed or unsealed. The purpose of the pavement is to provide the structure to support effective, efficient and the safe passage for the movement of people and freight.

Layers of construction beneath the pavement surface are:

- The subgrade formation - the preparation of the natural ground including cut and fill batters.
- The sub-base - the structure of gravel with media to support the overlying layers.

- The basecourse - the structure of high grade roading gravels laid and prepared to distribute loads and support the pavement.

The pavement surface of a road should be:

- A safe, suitable, all weather surface that is appropriate to its location and function in terms of skid resistance, noise reduction, and smoothness. In other words: “fit for purpose”.
- The surface can be either a bituminous seal coat, Asphaltic concrete, or a weathered rock wearing course for unsealed roads.

The road dimensions for a carriageway are generally relative to the traffic volumes, use, and purpose of a road. This defines the road in terms of road classification and the expected level of service the road provides. The One Network Road Classification (ONRC) has been implemented across the country to provide consistency with road classification. A summary of road classification for ODC is presented in the strategic case.

### 10.3.2 Bridges and Structures

Within the Ōpōtiki District, Council maintains 69 bridges including culverts with a nominal area greater than 3.4m<sup>2</sup>, stock underpasses, and cycle bridges. Of these assets 54 are bridge structures (2 are closed but remain in place), 7 are major culverts with 5 of these being stock underpasses, and 8 cycleway bridges have been added to the network over the last 5 years. The bridges range in length from 3m to 91m.

Bridges in the district are mainly constructed from concrete, with the remaining constructed from timber and/or steel.

### 10.3.3 Drainage

Good drainage is one of the key aspects to ensuring the integrity and serviceability of the Districts pavement assets. This includes a number of assets contained within drainage inventory. These include:

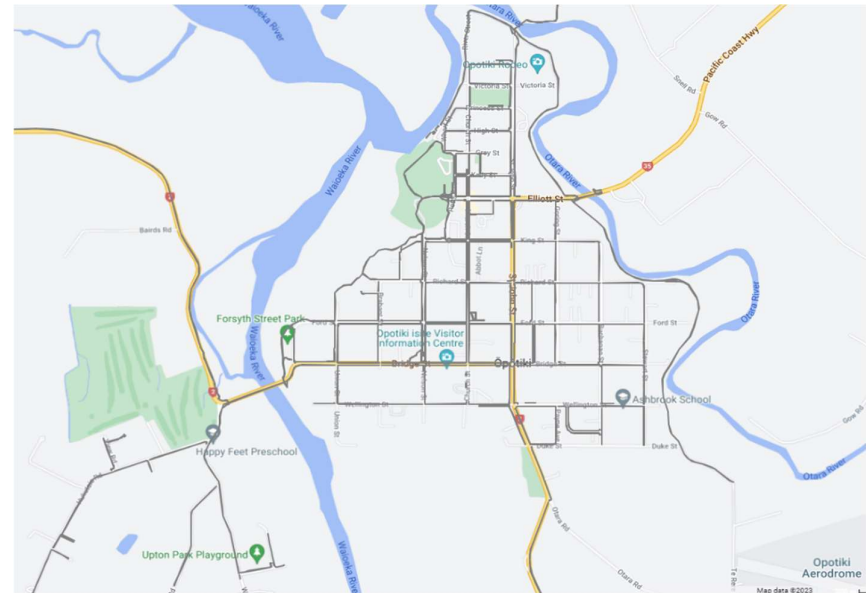
- Culverts with a cross section area of less than 3.4m<sup>2</sup>.
- Stormwater channels including kerb and channel, and dish channels.
- Catchpits and leads to the first manhole, and
- Flumes and other minor structures to control stormwater from the road surface.

The primary purpose of these assets is to take water off the roads during a rain event. The Drainage assets are not provided for the purpose of draining land adjacent to the road corridor. Culverts also provide for transfer of water from one side of the road to the other to prevent flooding of the carriageway.

### 10.3.4 Walking and Cycling Facilities

Walking and Cycling assets include, footpaths, verges, cycleways, and shared paths. This includes vegetation control for cycleways and shared use paths. The only other landscaping transportation is involved in is the mowing of the grass verges in rural areas. Other landscaping and management of street trees and gardens is done by Parks and Reserves.

Details of the ODC footpath network as at July 2023 are contained in the RAMM database and shown below.



**Figure 10-4 : Ōpōtiki Urban footpath and cycle facilities**

There is no data in RAMM regarding the verge asset. The following table shows the extent of the footpath assets owned and managed by ODC and recoded within the RAMM database.

Asset Group	Material	Length (m)	Area (m2)
Footpaths	Asphaltic concrete	904	2,937
	Concrete	41,346	64,020
	Interlocking blocks	1,156	3,976
	Metal (unsealed)	24,243	51,606
	Chip Seal	581	1,844
<b>Total</b>		<b>68,230</b>	<b>124,383</b>

**Table 10-2 : ODC Walking and Cycling Assets**

### 10.3.5 Street Lighting

Street lighting assets include Light fittings, brackets and poles. It does not include any of the under veranda lighting in the CBD of Ōpōtiki Township.

The RAMM database details all streetlights owned by Ōpōtiki District Council and the pole ownership, as some of the poles used for street lights are power poles that are owned and managed by the lines company, Horizon Energy Distribution Limited.

The following table shows the extent of the streetlight assets owned and managed by ODC and recorded within the RAMM database.

Asset Group	Asset Type	Quantity	Unit
Street Lights	Poles owned by Ōpōtiki District Council	317	Number
	Poles owned by Horizon	425	Number
	<b>Total</b>	<b>742</b>	<b>Number</b>

**Table 10-3 : ODC Street Light Assets**

The Ōpōtiki District Council has completed a process of bringing the Street Lighting network into compliance with the current requirements of AS/NZS1158 – Lighting for Roads and Public Spaces – with infill lighting within the Township of Ōpōtiki.

All new Sub-Divisions are required to be compliant with AS/NZS1158 prior to acceptance by Council.

### 10.3.6 Traffic Services

Traffic services assets include the following:

- Guard Rails, sight rails, and handrails on transport infrastructure.
- Delineation (Road Signs and Markings)
- Speed management infrastructure

Full detail of the railing assets, signs, and road marking are contained in the RAMM database.

The following table shows the extent of the rail, sign, and road marking assets owned and managed by ODC and recorded within the RAMM database.

Asset Group	Asset Type	Quantity	Unit
Railing <sup>1</sup>	W-section Armco	2,106m	Length
	Timber sight rails	1049m	Length
	Bollard and Wire rope	1,246m	Length
	<b>Total (includes other)</b>	<b>5,977m</b>	<b>Length</b>
Signs <sup>2</sup>	Hazard Markings	310	Number
	Information	344	Number
	Permanent Warning	324	Number
	Regulatory	383	Number
	Other	122	Number
	<b>Total</b>	<b>1,483</b>	<b>Number</b>
Rooding Marking <sup>3</sup>	Stop intersections	77	Number
	Give way intersections	88	Number
	Bus Stop markings	6	Number
	Fire Hydrant markings	243	Number
	Pedestrian Crossings	6	Number
	No stopping lines	2,591m	Length
	Centre line (100mm wide intervals)	116,366m	Length
	Centre line (100mm wide solid)	5,800m	Length
Edge lines (100mm wide solid)	104,825m	Length	

**Table 10-4 : ODC Traffic Services Assets**

**Note:**

1. W-section Armco guard railing is generally located on bridges or hazards that require vehicle protection. Timber sight rails are generally located at intersections or corners to advise drivers of the hazard or bend.
2. The street name finger boards are included in the information sign class.
3. The table is a summary of the main road marking asset classes.

**10.4 Asset Valuation**

The valuation information for this AMP is based on the 2020 Road Asset Valuation, carried out by Beca Ltd. The total value of the infrastructure assets by category as at 30 June 2022 are shown in the Table below.

Asset Type	Component	Unit	Base life (average)	Age	RUL	% Base consumed	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation
Formation	Formation	m2					69,285,166	69,285,166	
Sealed Pavement	Sealed Subbase	m2					28,615,026	28,615,026	
	Sealed Basecourse	m3	108	51	57	47%	49,296,874	25,725,400	454,655
	Sealed Surfaces	m2	16	10	6	63%	8,049,680	3,103,499	505,407
Unsealed Pavement	Unsealed Subbase	m2	0	0	0		6,715,198	6,715,198	
	Wearing Course	m3	5	3	2	60%	1,170,703	583,242	233,310
Footpaths and Crossings	Footpath	m2	67	16	51	24%	15,671,449	11,826,681	233,149
	Vehicle Crossings	m2	80	12	68	15%	43,114	36,647	539
	Pedestrian Give Way	each	80	11	69	14%	22,437	19,468	280
Drainage	Drainage	each/m	74	41	33	55%	14,344,395	6,309,656	193,238
Surface Water Channels	Surface Water Channels	m	80	24	56	30%	8,862,509	6,253,866	110,781
Streetlights	Light	each	26	5	21	19%	559,680	453,424	21,464
	Brackets	each	50	16	34	32%	350,350	240,194	7,007
	Poles	each	50	23	27	46%	1,047,375	570,536	20,948
Structures	Bridges	m2	99	46	53	46%	49,927,263	26,827,762	506,001
	Retaining Walls	m2	60	5	55	8%	716,386	646,326	11,846
Traffic Facilities	Traffic Signs	each	26	20	6	77%	882,775	190,511	33,943
	Edge Marker Posts	each	15	5	10	33%	31,805	20,143	2,120
	Railings	m	35	18	17	51%	1,366,956	666,154	39,554
	Bollards	each	50	1	49	2%	5,064	4,968	101
	Gates	each	25	2	23	8%	41,038	37,717	1,642
<b>Total</b>							<b>257,005,243</b>	<b>188,131,584</b>	<b>2,375,986</b>

Table 10-5 : Land Transport Asset Valuation as at 30 June 2022

An assessment of Age and remaining useful life shows that on average the traffic services and sealed surfacing are showing consumption of the useful life of these assets. This points to an increase in expenditure required for these assets to maintain a balanced risk of maintenance versus renewal to deliver lowest whole of life costs. The other Asset groups show that in general the network is reaching a mature state where rates of renewal are maintaining a balanced age profile.

The base life (average) for sealed surfaces is from the RAMM expected surface life table and is a conservative estimate of the expected life at time of sealing. This is backed up with **22.4% of the network (39.7km) showing expired surfacing** yet the condition index for the network remains low. This is still a risk that requires monitoring to ensure levels of service do not deteriorate to unsafe conditions.

The valuation Report describes the basis for valuation and the expected ranges of economic lives of the asset components. The basis for valuation uses an adjusted Remaining Useful Life for assets that have been condition assessed.

## 11 Lifecycle Management

### 11.1 Overview of Lifecycle process

The lifecycle process for assets is defined in the International Infrastructure Management Manual (IIMM 2015) as:

*“the time interval that commences with the identification of the need for an asset and terminates with the decommissioning of the asset or any liabilities thereafter”*

The objective is to determine the lowest long term cost over the lifecycle of the asset rather than looking for short term savings. It is expected that local authorities will start to record the Carbon impact of maintenance and renewals operations and take this into consideration when determining renewal options for network assets.

Figure 11-1 : Asset lifecycle activities below presents the lifecycle asset management processes, with each process outlined briefly following.



Figure 11-1 : Asset lifecycle activities

- a. **Requirements definition:** The need for the service as identified and defined by the strategic goals of council and the Government Policy Statement on Transport. This defines the Levels of service (LoS) to be provided.
- b. **Asset Planning:** Confirming the service required within the context of the investment scenarios, and assessing the solution from the ‘Hierarchy of intervention’ for meeting the service requirement as identified in the Strategic case of this AMP.
- c. **Asset Creation:** The provision or improvement of an asset where the outlay can reasonably be expected to provide benefits beyond the cost of the outlay.
- d. **Operations and Maintenance:** The day to day running and upkeep of assets to meet required service levels.
- e. **Asset Monitoring:** measurement of asset performance in meeting target levels of service and the assessment of physical condition. Monitoring provides the information to drive future programmes.
- f. **Asset Renewal:** The upgrade or replacement of an asset or component to restore the asset to the required level of performance or functional condition.
- g. **Asset Disposal:** An option for when a service is no longer required, or an asset becomes less economical than other methods of delivering a service.

The lifecycle process for steps (c) to (g) for each sub group activity is provided in the following sections.

## 11.2 Sealed Pavements and Surfacing

This section provides the details of the lifecycle activities for the management of the districts sealed roads network.

Delivery of services for sealed roads is managed in house by engineering staff who monitor the performance of contractors and make “best for asset - fit for purpose” decisions on the network.

Asset management and planning support is currently provided by internal and external consultants working collaboratively with the ODC roading manager. This delivery method allows the council to better manage and balance risk to provide best value outcomes for the district.

### 11.2.1 Asset Creation

New road assets, including improvements to existing assets, for the Ōpōtiki district will generally be procured through the Low Cost Low Risk (LCLR) programme. Any works for the Ōpōtiki LCLR for this activity will be under the Local road improvements activity class for Safety and Resilience works.

The current network generally meets the required service levels of the community. There are no new council investments in new roads planned for the 2024-27 NLTP in regard to meeting levels of service gaps on the existing network.

Growth in the district resulting in subdivision development is planned to occur during the term of this AMP. The development of related transport assets is funded by developers and are required to meet ODC engineering standards.

### 11.2.2 Operations and Maintenance Plan

The Operations and Maintenance of sealed roads entails working closely with the Maintenance contractors to ensure the Community goals and requirements are achievable.

The existing contract is a 5 + 2 traditional term contract due to be reviewed in year 4 (2025) to assess value and performance of the contract, and if the +2 extension through to the 30<sup>th</sup> June 2028 should be awarded. The contract is broken down into scheduled and unscheduled works items where the Contractor submits a programme of scheduled work items for approval prior to work commencing.

Maintenance intervention strategies (MIS), such as pavement repairs, are agreed in general terms at the beginning of the physical works contract. These take into account response times and standards relative to the various community areas spread throughout the network. The required maintenance standards and response times have been aligned to ONRC classifications within the contract.

Sub activity budgets are continually reviewed against expenditure and then forward works programmes adjusted to suit available funding and in response to network condition, climate events and targets.

The Maintenance Contract also has provision for storm patrols. The Contractor is required to carry out storm patrols whenever adverse weather is likely to affect the integrity of the road network. During these patrols the Contractor is required to carry out initial works to ensure the safety of all road users and carry out repairs and clear slips where possible from roading assets. These emergency works are recorded within RAMM Maintenance costs under environmental maintenance.

Where a storm event causes large amounts of damage to the roading network and the road can't be opened, the site is to be made safe and the scale and cost of the remedial works are documented. If the work exceeds the criteria for the minor events funding category (WC140) Council staff will prepare and submit an application to Waka Kotahi for emergency works funding. The last two years have resulted in significant expenditure related to Emergency works for initial response and permanent reinstatement.

Operations and maintenance is carried out on Maori roadways, both restricted and unrestricted, and is approved for funding by Waka Kotahi.

An increasing need for maintenance on the network related to the wet weather is to be addressed by an increase in the planned renewals programme. This should maintain the maintenance output at current levels with an allowance made for increased unit cost rates.

### 11.2.3 Asset Monitoring

The following figures provide a snapshot of the service performance of the sealed network assets for the Ōpōtiki District.

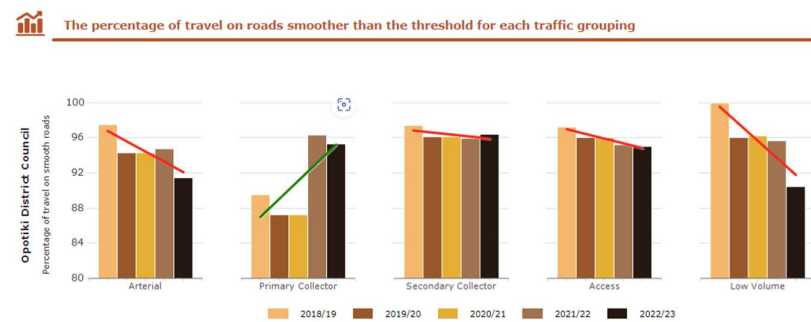


Figure 11-2 : Smooth Travel Exposure

Smooth Travel Exposure (STE) is defined as the proportion of vehicles traveling each year on roads smoother than the targeted conditions for those roads. An increase in STE means that fewer vehicles are travelling on roads rougher than the target roughness. For the purpose of the reviews, the target roughness is generally taken as 150 NAASRA. A roughness greater than 150 NAASRA usually indicates poor road condition. Figure 11-2 shows that although the Ōpōtiki district roads are smoother than those for other areas of the country there is a worsening trend as the network ages.

The average network roughness shown in Figure 11-3 shows a comparison of the roughness across the ONRC categories for the network. This shows that the median network roughness remains low although 15% of low volume roads have roughness above 150 NAASRA.

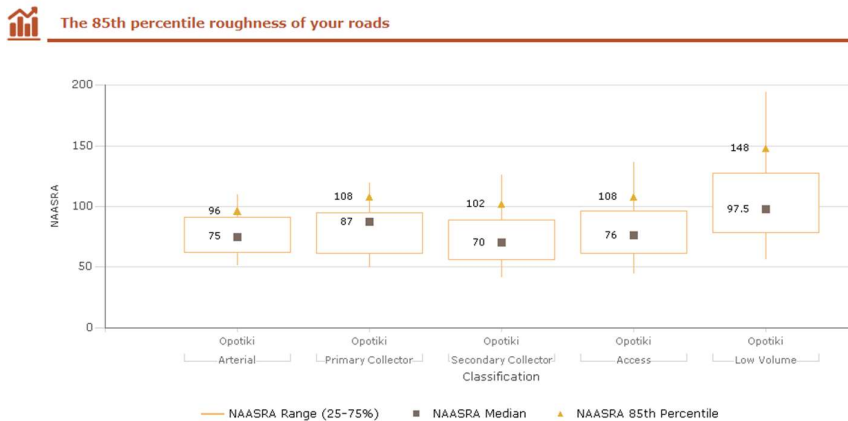


Figure 11-3 : Average Roughness by ONRC

The maintenance expenditure shown in Figure 11-4 shows higher pavement maintenance requirements for Secondary Collector roads. This involves pot hole repairs and stab repairs for localised pavement failures

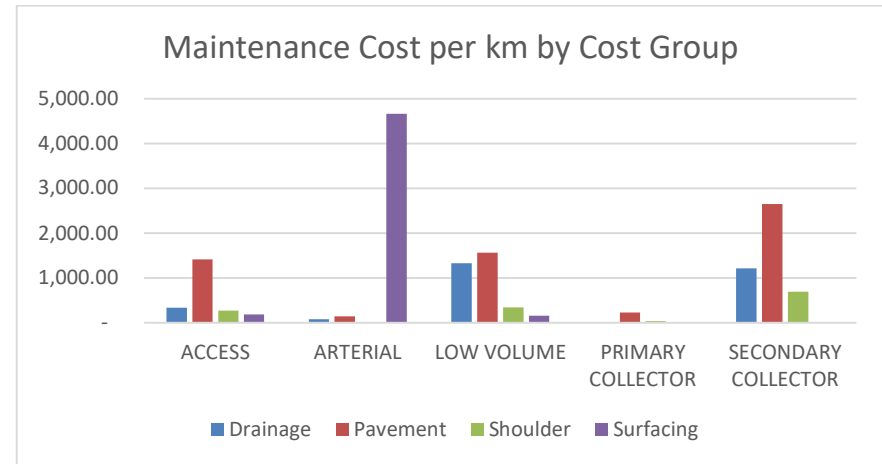


Figure 11-4 : Maintenance Expenditure per km

The low pavement costs but high surfacing costs for Arterials relates to AC work on Church street and is distorted by the low proportion of the network that is Arterial.

A high proportion of the costs on the low volume and access roads is for maintaining the high proportion of the network that is unsealed with corrugations, stormwater structures and side channels.

Chipseal resurfacing average life achieved, four year average to 2022/23

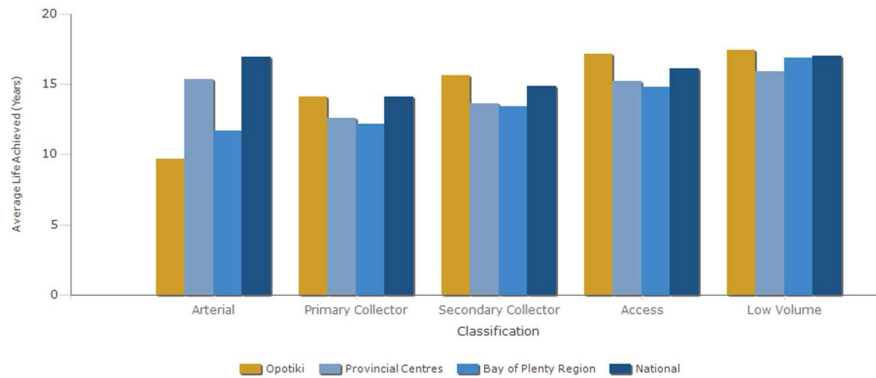


Figure 11-5 : Average sealed surface life achieved

The average life achieved for chip sealed surfacing on the network is around 15 years. Life achieved for secondary Collectors, Access, and low volume roads is greater than the national and peer group averages showing Ōpōtiki has had to extend seal lives for the majority of the network due to funding restrictions and cost increases. The lower result for Arterial Roads is due to the completion of Safety related widenings on Wainui Road with full width 2<sup>nd</sup> Coat seals.

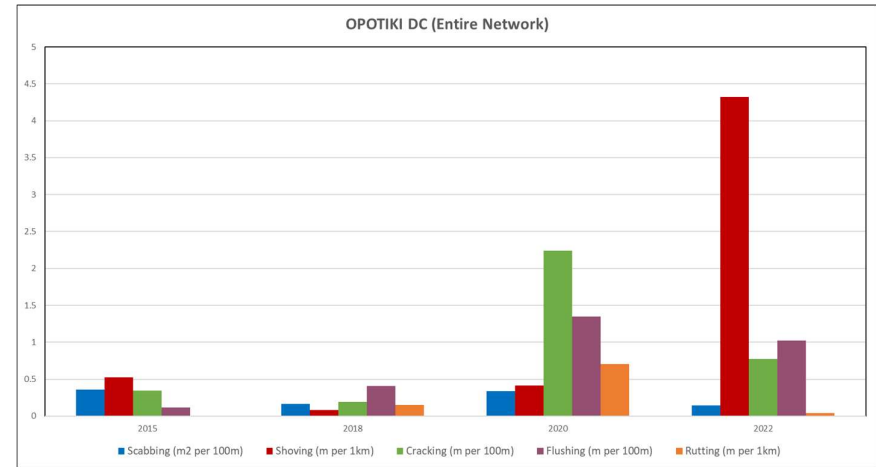


Figure 11-6: Network Condition Rating

Figure 11-6: Network Condition Rating shows the rating results from the last four condition surveys for the full network. This shows that there has been an increase in network defects, surface faults of cracking and flushing and pavement related shoving. A rating survey of the higher volume roads for 2023 showed significant increases in cracking. This increasing trend of pavement and surfacing faults correlates with the increase in maintenance costs for the network. This increase in costs and deterioration in condition is likely related to the low surfacing renewal rates between 2013 and 2018. This analysis supports planning for an increased renewals program to address surface integrity issues and the rise in network maintenance costs.

### 11.2.4 Renewals Plan

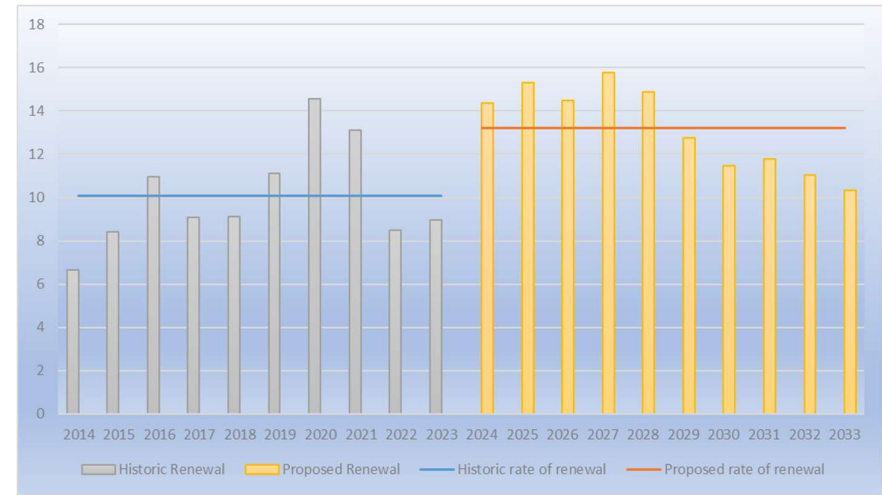
The resurfacing of pavements has historically been carried out with an annual P4 reseal contract. The council has moved to a 3-year P17 contract in 2023 due to the loss of surfacing expertise within council to design and run a P4 contract.

Historic resurfacing quantities for the network since 2014 have been averaging 10.2km per year. This represents around 6% of the sealed network annually resurfaced. The forward work programme for the network proposes to increase the surface renewal rate to 7.8% of the network (13.5km) per year over the next three years to address maintenance risks from an ageing asset. This is then forecast to drop back down to the long term average of around 12km per year.

The proposed increase in resurfacing is based on three main factors:

1. Decreasing seal lives from a maturing network.
2. To manage the maintenance risk at existing levels from increased traffic loadings due to growth in industry across the network, and
3. To address the high levels of cracked seals across the network that are contributing to the increase pavement faults.

This programme was developed based on RAMM inputs which have been verified and finalised with Council staff through a network drive-over. This identified resurfacing requirements of 13.29km in 2024/25, and 19.86km and 19.22km in the following two years. This “bow wave” of surfacing requirements has been re-assessed based on council accepting higher risks for lower volume roads to develop the proposed “balanced” programme provided below.



**Figure 11-7 : Historic and Planned rates of surface renewal**

Pavement renewals have been at between 300m and 700m per year, 0.2 to 0.4% of sealed network length. This historic level of pavement renewal points to an expected average pavement life for sealed pavements in excess of 200 years. The annual length of pavement renewal is forecast to increase over the life of this AMP as the programme shifts from targeted shape corrections, in conjunction with the urban storm water improvements, to strength improvements on rural roads. The costs for pavement renewals are forecast to increase in line with network requirements to address deteriorating rural roads.

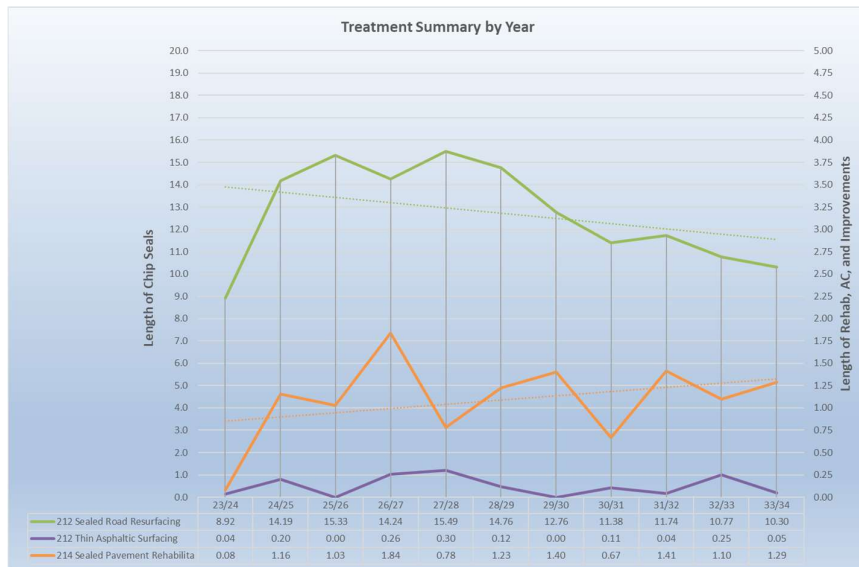


Figure 11-8 : Proposed Pavement and Surfacing FWP

The ongoing recording of maintenance costs will assist in monitoring network performance and help to fine tune the pavement renewals programme going forward. Presently the programme for renewals is balanced between a predicted increasing requirement for rural roads and a decrease in reshaping works associated with urban street drainage improvements and upgrades. The proposed cost increases for work category 214 reflects the rural rehabs requirement for strengthening versus urban renewal reshaping to address drainage issues within town.

### 11.2.5 Disposal Plan

In terms of the lifecycle planning and providing value for money solutions for service delivery some sections of the Waiotahi drifts subdivision will be reverted from asphalt surfacing to chipseal at time of renewal. There is no other disposal of assets planned for within the timeframe of this AMP.

## 11.3 Unsealed Pavements

Unsealed pavements make up 43% of the network with 51km of Access roads and the remaining 82km being low volume.

### 11.3.1 New Assets

There are currently no plans for development of new unsealed roads on the Ōpōtiki Network.

Council policy on seal extensions is for 60% of the cost being met by land owner or developer contribution. This has resulted in a number of seal extensions being undertaken in recent years. However the council is facing community pressure to review the policy and re-introduce a seal extension programme. Table 11-1 is an indicative programme of a proposed seal extension programme.

Road	Year	Approximate Length	Notes
Old Creamery Road	2024 - 2027	2.55 km	SH Detour Route
Brown Road	2026 +	1.0 km	SH Detour Route
Amokura Road	2026 +	0.3km	Maintenance cost
Parkinsons Road	2026 +	1.67 km	Developer requests
Te Waiti Road	2026 +	1.5 km	Community Requests
Motu Road	2027 +	2.2 km	Community Requests
Otara East Road	2027 +	2.0 km	Community Requests
Maungaroa Pā Road	2028 +	0.3 km	Community Requests
Dickenson Road	2028 +	1.2 km	Community Requests
Parautu Road	2028 +	0.5 km	Community Requests
Waiotahi Valley Road	2030 +	2.0 km	Maintenance cost

**Table 11-1 : Indicative Seal Extension Programme**

Continued growth in the district may result in the economic justification for seal extension under Waka Kotahi funding criteria to seal portions of the network.

The future of seal extension works therefore depends on a willingness for developers to meet the local share portion for works that meet Waka Kotahi funding criteria, or subject to council approval, the local communities contribute 60% of the cost for upgrade and sealing to ODC subdivision standard with Council meeting the remaining 40% cost.

The increasing use of Old Creamery Road as a SH detour during closures is resulting in increased maintenance requirements, particularly for the steep sections at each end. Council is investigating the application of a traction seal for the western end of the road to address maintenance and safety concerns.

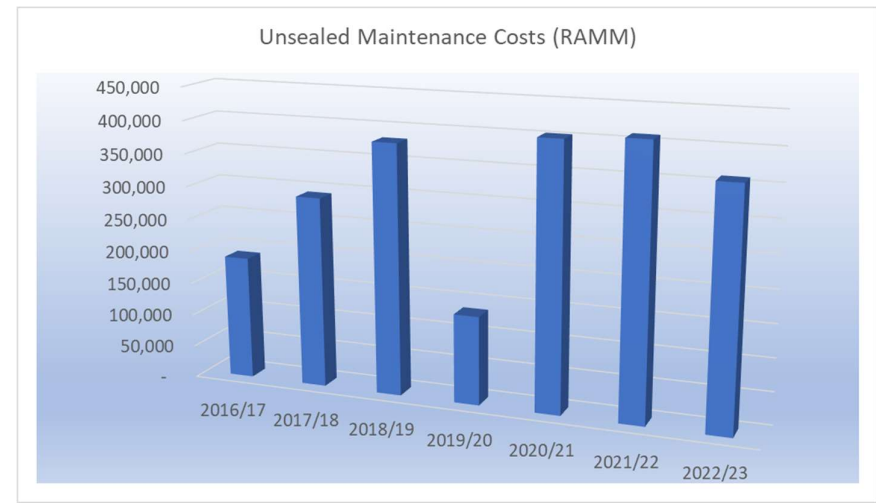
**11.3.2 Operations and Maintenance Plan**

As per the sealed roads maintenance, the Operations and Maintenance of unsealed roads entails working closely with the Maintenance contractors to ensure the Community’s goals and requirements are achievable.

Present practice is for maintenance of the network through a balance of spot metalling to maintain a level of service suitable for public access, and re-metalling to restore structure to the pavement. The growth in apiculture, manuka, and maturing of forests is resulting in greater demands on the unsealed network for the district, resulting in a greater maintenance need.

**11.3.3 Asset Monitoring**

No rating condition measures are currently recorded for the unsealed network. Therefore, performance monitoring involves the review of maintenance costs recorded in the RAMM Database, which includes spot metalling and re-metalling. The last four years costs are shown in the following figure.



**Figure 11-9 : Unsealed Roads maintenance Costs**

This shows that costs steadily rose to 2019 before dropping back in 2020 due to COVID shutdown. The costs in 2021 to 2023 returned to an annual maintenance cost of \$350,000 to \$400,000.

To be able to deliver better outcomes from unsealed maintenance and improve maintenance practices a performance monitoring framework is required. The NZTA research report 652 – “Assessment process for the condition of unsealed roads” will provide the basis for this framework,

resource constraints within council restricted the development of this during the 2021-24 NLTP.

#### 11.3.4 Renewals Plan

For unsealed roads an annual re-metaling programme is developed for unsealed roads where routine maintenance and spot metalling is no longer economically viable. The programme is developed on a condition basis with input from the Maintenance Contractor and verified by Council staff through network inspections. The works are carried out by the Maintenance Contractor.

Historically, unsealed roads will generally require re-metalling every 8 years on average. However, the re-metalling cycle can vary considerably depending on use, wear and condition. There is currently no specific treatment lengths and forward work programme for unsealed roads within RAMM and the final programme is often constrained by available funding. It is envisaged that the performance monitoring framework will provide the evidence to base a FWP for unsealed roads on.

#### 11.3.5 Disposal Plan

There are no current plans to dispose of any of the unsealed road assets within the district in the period of this AMP.

### 11.4 Drainage Assets

#### 11.4.1 New Assets

New drainage assets are planned to be created through the urban streets upgrade programme in association with the ODC Storm water management project to alleviate flooding and surface ponding issues within the township. These works are to be undertaken through a combination of drainage

renewals and LCLR low cost improvements through the local roads improvements activity class.



Figure 11-10 : Areas of surface flooding in Ōpōtiki Township for 10% AEP

#### 11.4.2 Operations and Maintenance Plan

Drainage channels are inspected under a routine maintenance regime by the maintenance contractor. This requires all side drains to be inspected and cleared on a monthly basis, and all kerb and channel in urban areas to be swept monthly. If the contractor identifies any unscheduled maintenance works during these inspections, or they are identified by members of the public or Council staff, the contractor is required to quantify the required works and seek approval from Council staff prior to works commencing.

The Maintenance contract also has provision for storm patrols. The contractor is required to carry out storm patrols whenever adverse weather is likely to affect the integrity of the road network. During these patrols the Contractor is required to carry out initial works to ensure the safety of all road users and any repairs or clearing required to open the road.

Where a storm event causes large amounts of damage to the drainage assets and the road can't be opened, the site is to be made safe and the scale and cost of the remedial works are documented. Council staff will then prepare and submit an application to Waka Kotahi for emergency works funding.

### 11.4.3 Asset Monitoring

The current Maintenance and operations system, where inspections focus on ensuring that the drainage system is clear and functioning to maintain the current service levels, provides a balance between short term asset management and reactive maintenance practice that balances risk against cost. However, as there is currently no formal condition assessment procedure for drainage assets the condition of critical assets is unknown. A condition assessment of the drainage assets will provide the required data to accurately assess the remaining useful life of assets and form the basis of a long-term renewal programme.

The valuation of transportation assets show that on average, drainage assets are around 55% through their useful life based on assumed asset ages and base lives. With impacts of climate change being felt across the district the low level of condition data for critical drainage assets is a risk to council.

### 11.4.4 Renewals Plan

Some renewal of drainage assets occurs in conjunction with the street upgrades programmes. Otherwise, renewals are undertaken to address service gaps as they are identified through routine maintenance inspections.

The current level of asset renewals is considered adequate. However, the completion of a detailed assessment of critical drainage assets may identify issues that will need addressing to ensure resiliency in network connections and access to community services.

### 11.4.5 Disposal Plan

No disposal of assets is planned for the period of this AMP. Some existing assets may be disposed of during the planned street upgrade programme for optimisation of the drainage system to address identified undercapacity issues.

## 11.5 Bridges and Structures

### 11.5.1 New Assets

With the increase of use of the Motu Road a need for a crossing of the Papamoa Stream has been identified as a high risk by a NZ Cycle Trails safety Audit. The installation of a concrete Ford for the crossing at RP26.8 on Motu Road is planned to be completed through the LCLR Programme.

### 11.5.2 Operations and Maintenance Plan

All bridges are currently inspected on an annual basis and after storm events under the current Pavement maintenance contract. As a result of these inspections, minor maintenance works are carried out, such as painting,

guardrail replacement, approach road reinstatement or erosion control to protect the road and abutments.

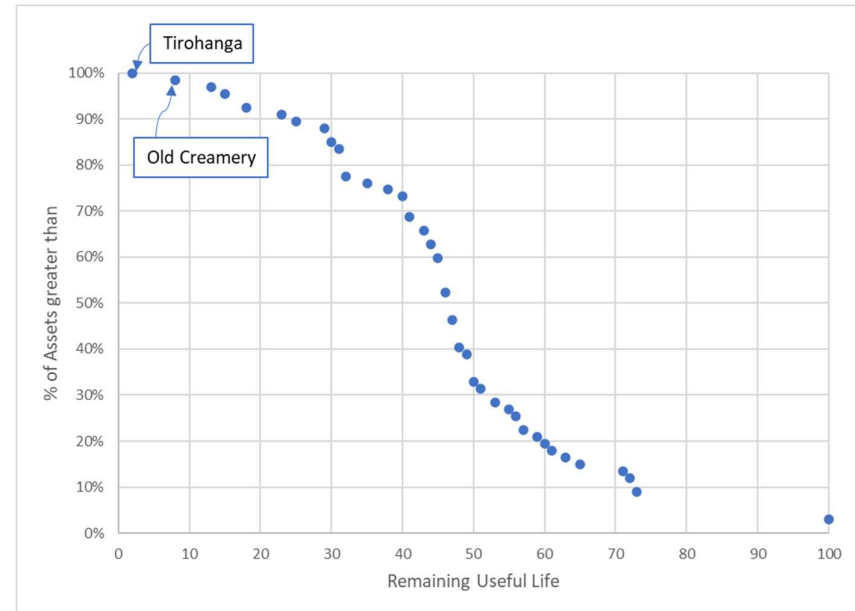
Specific maintenance requiring specialist contractor services such as beam painting or joint replacement is tendered out under a specific structures maintenance contract.

The existing Contract also has provision for storm patrols. The Contractor is required to carry out storm patrols whenever adverse weather is likely to affect the integrity of the bridge assets. The key requirement is to inspect for any damage or debris build up on bridge abutments and piers. During these patrols the Contractor is required to carry out initial works in a safe manner to protect and clear the structures. Where conditions don't allow the work to be carried out safely, the Contractor is required to monitor the bridge and return to finish the works when conditions allow.

### 11.5.3 Asset Monitoring

The Bridge inspection programme has been used to update the remaining useful life (RUL) assessment of bridge assets on for the district. The RUL is adjusted using expected life and an assessment of the condition. Over the last three years the Takaputahi bridges have had structural component replacements that have extended the lives of these bridges.

The profile of RUL for Ōpōtiki Bridges is presented in Figure 11-11. This shows that, based on the last full network assessment of structures, there are 7 structures (10% of structures inventory) will require major component renewal or replacement in the next 25 years.



**Figure 11-11 : Age profile of Ōpōtiki Bridges**

Recent inspections have identified rapid deterioration of the Tirohanga Road Culvert, which will require replacement within the term of this AMP. The next replacement, based on current condition assessments, is the Old Creamery Road Bridge in 2030.

A programme of investigations to accurately assess structural capacity and determine a more accurate remaining life assessment for structures with less than 30 years is to be undertaken to inform the long term risk profile for council.

### 11.5.4 Renewals Plan

As mentioned above, the replacement of the Tirohanga Road Culvert is planned for in the first year of the programme. This is due to bed load

abrasion of the Armco culvert resulting in corrosion that has compromised the structure. A Present Value End Of Life (PVEOL) assessment for the replacement of the culvert is appended.

There is currently no other major bridge structural component or deck renewals required within the next three years. There is however a number of structures on the network that will require works to side rail protections, guard rails and handrails, and Kerbs due to vehicle damage.

Old Creamery Road bridge is currently planned for replacement in 2030 but may have to be brought forward due to compromised structural beams from impacts to side rails. This is also a state highway detour route, which has had more frequent use over the last couple of years due to SH2 closures, which is increasing the risks on this weight restricted structure.



**Figure 11-12 : Damaged side protection on Old Creamery Road bridge**

The intensity and frequency of heavy rain events over the last couple of years has resulted in some issues requiring structural component works to bridge foundations such as extension of the pile head casing on the Tutaetoko Bridge.

### 11.5.5 Disposal Plan

There are no structures identified that are planned to be disposed of in the term of this AMP. The Waiotahi Valley Back Road Bridge and the Stoney Creek Bridge have both been closed. The Waiotahi Valley Back Road Bridge is being assessed for works to make the structure safe for use as a cycle bridge. The Stoney Creek Bridge has had the deck removed and there is on going discussions with land owners about future access provisions to land between Stoney Creek and the Waioeka River.

## 11.6 Walking and Cycling

### 11.6.1 New Assets

Footpaths are one of the transport assets that the council receives the poorest ratings for. This has historically been due to the lack of footpaths on the roading network. Recent town upgrades and central government funding has resulted in an increase in footpath and shared use path assets over the last 5 years. There remain some new footpaths planned to be created through urban street upgrades to complete the urban pedestrian facilities improvement programme. The addition of Footpaths is usually coordinated with the council storm water upgrade and drainage renewal works.

The Councils has received requests from the Coast ward for extensions to the footpaths in the main coastal townships at Te Kaha and Waihou Bay. Footpaths for these communities are limited which creates safety risks and are a barrier to mode choice as they continue to grow. Waka Kotahi has

plans to provide some widened shoulders for cyclists on SH35 and further discussions are to be held in regard to extending this for other sections. Any new facilities are to be prioritised based on connections to community facilities, schools and Maraes.

Funding under the LCLR walking and cycling activity class has also been requested to assist with further development of the extension of the Motu Trails through to Ohiwa Beach and to the Harbour Entrance. Several sections of this trail have been completed through the Government stimulus packages and funding is being requested to complete the connections to the west of Ōpōtiki township. Although primarily being developed for tourism development the cycleway will provide off road modal choice for connections between Ohiwa, Waiotahi Drifts subdivision, the harbour industrial zone, and Ōpōtiki Township.

### 11.6.2 Operations and Maintenance Plan

The maintenance of the footpaths has been undertaken on an annual basis based on service requests and asset condition inspections. This has addressed many of the footpath faults on the network but community satisfaction survey results for walking facilities in the district still have 40% of residents dissatisfied with the footpaths. A review of comments from the customer survey results showed the top reasons for dissatisfaction with footpaths were:

- Cleaning / maintenance needed - 40%
- Lack of footpaths - 27%
- Slippery / unsafe - 26%
- Repairs / upgrades needed - 20%

The faults identified through the condition inspections enables a programme of work to address the isolated faults. Faults are graded 1 to 3, where:

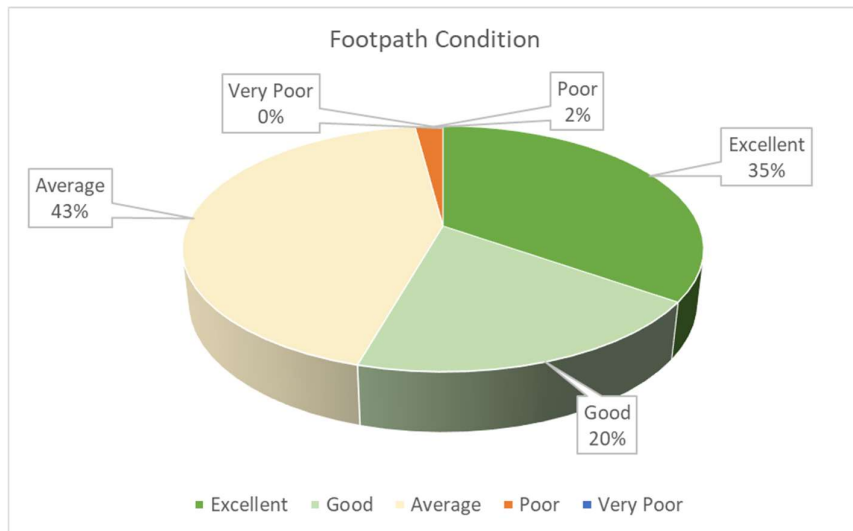
- 3 is an urgent repair, such as a trip hazard exceeding 20mm.
- 2 are faults that require repair within the next 12 months, and
- 1 are low priority repairs that are to be monitored or repaired if budgets allow, i.e. are adjacent to a level 2 or 3 fault.

Maintenance works are funded through work categories 124 and 125 and an increase in funding is being requested to catch up on deferred maintenance for the 2024 to 27 programme.

### 11.6.3 Asset Monitoring

Footpath condition surveys were undertaken in 2019, 2021, and 2022. The results of these surveys are recorded in the condition fields of the RAMM footpaths table. 98% of the network has an overall condition rating of 3, average, or better and no sections have a grade of very poor (5). The overall grade for a length of footpath is governed by the number and extent of graded faults within a rating length.

The percentage of footpath lengths in each condition category are shown in the following figure.



**Figure 11-13 : Footpath Condition Assessment**

The Level of Service for footpaths in the district is for 95% of footpaths to have a condition rating of “average” or better.

#### 11.6.4 Renewals Plan

There are currently no complete sections of footpaths that require a full renewal due to current condition, where greater than 30% of a rating section has grade 2 or 3 faults. There are a number of sections of footpath that are below recommended standard for mobility impaired pedestrian access or users. These sections are prioritised based on a risk matrix that takes into consideration pedestrian demographics and volumes and are addressed as funding allows.

Technical audits of the network have highlighted that historic kerb let downs are not in line with current Mobility standards. Renewals funding is planned

for within the renewals budget to address a programme prioritising and bringing these up to standard.

#### 11.6.5 Disposal Plan

There are no walking and cycling assets that are planned to be disposed of during the term of this AMP.

### 11.7 Traffic Services

This Activity group includes:

- Signs, markings and other delineation for the road network.
- Speed management infrastructure.
- Street lighting
- The maintenance of vegetation for roadsides in Rural areas, on shared use paths, and road side verges adjacent to shared public spaces.

#### 11.7.1 New Assets

The implementation of speed management around Kura and Marae throughout the district will require the installation of new signs and markings. An allowance for costs of this upgrade has been included within the traffic services renewals allocation for where this work has not been funded through the approved LCLR programme.

Intersection safety and speed in the Ōpōtiki township area is one of the main road safety issues for council. A programme of implementing intersection controls and speed platforms to manage speeds in line with Councils speed management plan is to be progressed through the LCLR programme for local road improvements.

Council has completed a town upgrade of street lighting assets to bring the residential lighting network up to compliance with AS/NZS 1158 – Lighting for Roads and Public Spaces. This involved the infill of gaps in the current network using existing poles and the installation of new light poles where required. No further plans for lighting upgrades are proposed.

### 11.7.2 Operations and Maintenance Plan

Rural road verge cutting is done under the maintenance contract as per the schedules. Approximately 143km is done annually with an additional 170km done three times per year. This current practice provides a minimum level of service that meets community requirements and provides delivery efficiency.

Urban road verge maintenance is the responsibility of the house owner to maintain their verge. Additional funding has been requested to control vegetation that has impacted on footpath widths throughout the urban area and address community concerns regarding maintenance of footpaths.

Funding has also been requested for the maintenance of vegetation for the newly created cycleways. This involves controlling noxious weeds and overgrowing vegetation that narrows the path and impacts on user safety.

The maintenance of rails and signs is done on a reactive basis through the maintenance contract with activity recorded in the RAMM maintenance costs tables. Rails and signs that are replaced on a one off basis i.e. damaged or vandalised, are replaced as a maintenance expense. The maintenance needs are identified by ODC staff, the contractor or via rate payer notification.

Road marking is carried out annually across all local roads in the district under the maintenance contract. For the small quantity required this approach provides the balance of safety and value to ratepayers. The

required standards for delineation and marking are defined within the maintenance contract.

The operational expense associated with lighting assets is the electricity for the street lighting and amenity lighting. The street lighting electricity is part of the Council's electricity contract for all Council electricity. The Council's electricity contract is negotiated along with Whakatane District Council (WDC), Kawerau District Council (KDC), Bay of Plenty Regional Council (BOPRC) and Waka Kotahi on an annual basis. The electricity is charged based on the number of lights, Luminaire wattage, and hours of operation. Horizon Energy currently turns the lights on and off each day. Council is installing Central Management System (CMS) with the street lighting upgrade, which will allow optimised management of lighting levels and operation times.

All maintenance on the street lighting asset is done by Horizon Energy. There is no formal contract and work is carried out as and when requested by ODC under works order. Maintenance works done by Horizon Energy is as a result of either notification of a fault through the CMS, a rate payer notification, or from night inspection.

The operations and maintenance of the streetlights is subsidised by Waka Kotahi, however the under veranda and amenity lighting in the Ōpōtiki CBD are not covered.

### 11.7.3 Asset Monitoring

As mentioned above condition assessments of the traffic services are managed on collaborative basis between community, council staff, and the maintenance contractor. The cost of a detailed asset monitoring condition survey is not considered to be cost effective for council. The Council does not

own any large traffic signs that require specialist inspections to maintain safety.

Valuation of the traffic services asset shows that much of the current signs and rails on the network are reaching end of useful life. The average remaining useful life being 23% of the base life for signs and 49% for railings.

Asset monitoring of the street lights is undertaken through the CMS and updating of data is completed within the council RAMM database.

#### 11.7.4 Renewals Plan

Generally, renewals are completed on an as required basis. However, there remains a need to upgrade some obsolescent signage across the network.

There is likely to be a need for a greater renewals requirement as assets reach the end of useful life and fail to meet required standards to provide safe customer journeys. An additional allowance has been made to cover this risk within the renewals funding request.

A programme of checking existing steel light poles for corrosion is undertaken by Horizon Energy. There is a small number of poles identified for renewal through these inspections. Funding for pole replacement is through work category 222 traffic services renewals.

#### 11.7.5 Disposal Plan

There is no plan to dispose of any existing assets in the term of this AMP.

## 12 Assessment of Investment Options

The three investment options for delivery of Council services are:

➤ **Scenario 01: Base** - Maintain current levels of service.

This scenario is the do minimum which includes the Maintenance, Operations, and Renewals (MOR) to maintain the current levels of service for the network with risk based intervention aligned to ONRC classification.

➤ **Scenario 02: Balanced** – MOR and community mandated improvements

Maintain current levels of service plus improvements to meet mandated improvements to levels of service. This includes Base MOR plus the LCLR road improvements to close service gaps for resilience, transport choices, and safety improvements.

➤ **Scenario 03: Growth** – MOR, LCLR and investment for growth

Network or service improvements to accommodate and provide for growth in the district. This investment scenario includes specific growth projects such as the town centre upgrade, transport investments in new connections as indicated in the Hukutia development proposal, and SH intersection improvements. Includes a % increase for growth on MOR budgets as per forecasted population increase and demographic shifts put different needs on the transportation activity.

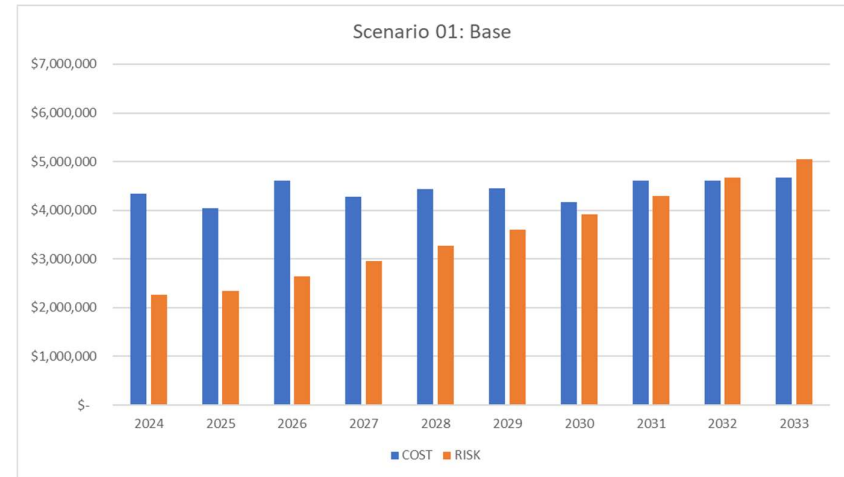
The three investment Scenarios have been reviewed using the Te Ringa Maimoa Differential Level of Service model. Three options have been tested for each of the main transport activity service areas. Each option has been entered with an overall view aligned to the investment options.

Level of Service	Service Outcome	Risk	Work Category	Performance Metric
<b>Sealed Pavements and Surfacing</b>	Safety	Vehicle damage/safety and increased maintenance costs	<u>WC 111, 121, 212, 214</u>	% Faults responded to in time
<b>Unsealed Pavements</b>	Accessibility	Access restricted and Vehicle damage/safety	<u>WC 112, 121, 211</u>	% Faults responded to in time
<b>Drainage</b>	Resilience	Road condition is adversely affected	<u>WC 113, 213</u>	# of trips impacted by results of flooding
<b>Bridges and Structures</b>	Efficiency	Access restricted	<u>WC 114, 215, 216</u>	# of vehicle trips impacted
<b>Walking and Cycling</b>	Accessibility	Safety and Access restricted	<u>WC 124, 125, 224, 225</u>	% of trips by alternate mode to private motor vehicle
<b>Traffic Facilities</b>	Safety	Community safety impacted	<u>WC 122, 222</u>	Personal risk rating for district

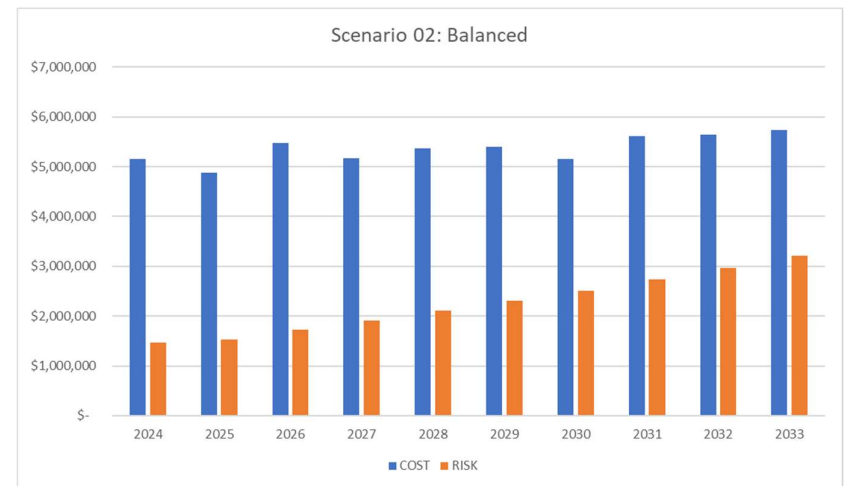
**Table 12-1 : Level of Service criteria**

The risk costs for each scenario are based on the likelihood of a risk to meet customer outcomes occurring, multiplied by the monetised value of that risk.

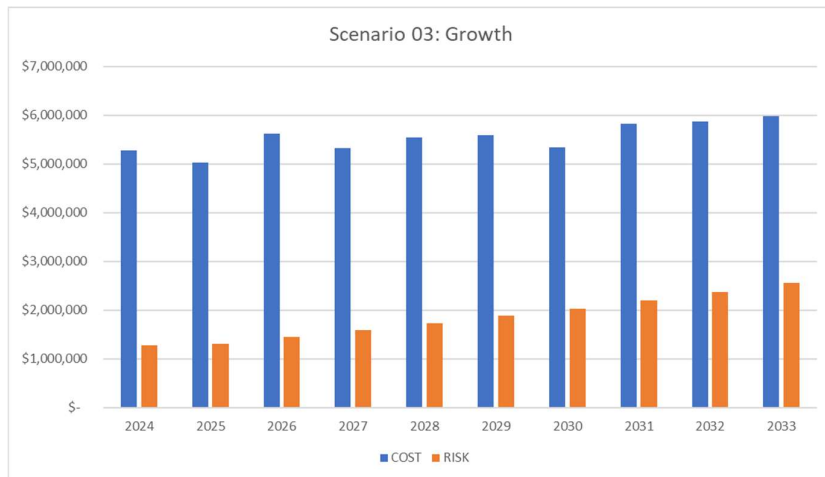
The outcomes of the analysis are presented in the following figures.



**Figure 12-1 : Investment Scenario 1 – Cost vs Risk**



**Figure 12-2 : Investment Scenario 2 – Cost vs Risk**



**Figure 12-3 : Investment Scenario 3 – Cost vs Risk**

All three scenarios have the base scenario with the MOR programme for surfacing and Pavement renewals. This maintains the current levels of service but does not have any of the investments for addressing the issues of growth, resilience, and safety outcomes for the district. The risk profile for the base scenario reflects this with an increased risk associated with network pressures from traffic and environmental factors.

The Balanced and growth scenarios investment profiles are similar, where identified risks to service outcomes are addressed through targeted investment in speed management, mode choice infrastructure, and resilience improvements.

The risk profile for the Growth scenario reflects the increased investments from the LCLR programme in speed management and mode choice infrastructure and the contribution this makes to service outcomes.

The preferred programme is based on Scenario 2 for balanced investment.

## 13 Preferred Programme

### 13.1 Programme delivery

The Ōpōtiki network is predominantly a lightly trafficked rural network with two State highways providing the main arterial/regional connections. The current and future demands on the network do not support major alternatives to the current practice for delivery and maintenance of the ODC transportation services.

The delivery of the proposed programme is outlined through the approved procurement strategy and as indicated within the previous sections of this document. Maintenance services are to be continued to be provided through the existing traditionally based maintenance contract with in-house management.

Specialist Engineering services for bridge and structures management, and delivery of asset management services, is to be tendered out prior to the start of the 2024-27 programme. Specific programmes for pavement renewals and improvement projects will either be developed through the professional services supplier or tendered out in accordance with ODC procurement policy. Where the council has the appropriate capability and capacity for the quality management and surveillance of works then these services will be delivered in-house. MSQA for specialist works will be undertaken through separate contract with a professional supplier or as a variation to the professional services Consultant agreement.

### 13.2 Proposed Programme

ODC will continue to seek support either through collaborative arrangements with neighbouring RCAs or specialist professional service suppliers.

Regarding the Problems and benefits assessment in the strategic case it is considered that maintaining and renewing the existing network under this existing delivery model provides the appropriate method of delivering strategic outcomes. A summary of the proposed programme is provided in Table 13-1 below.

	2021 to 2024	2024 to 2027	Difference
Road Operations and Maintenance	7,865,521	10,098,289	28%
Road Renewals	3,515,315	6,390,451	79%
Total MOR	11,380,836	16,488,740	44%
Improvements (LCLR)	1,625,780	2,183,424	34%

**Table 13-1 : Summary of Proposed Investment Programme**

A discussion of the main differences in programme costs is provided below.

The cost of all activities shown in the MOR request for funding (Appendix A) are inclusive of administration costs. The forecasted figures are inclusive of inflation.

### 13.3 Summary of Changes for Maintenance and Renewals

Greater than expected inflation over the past two years has contributed to an additional 6% increase over the forecasted programme for 2021 to 2024, where outputs were cut to absorb the additional costs. A summary of the major increases or decreases in the proposed funding requirements are provided for each work category as follows:

- WC 111: 26% increase to cover increased maintenance requirements from ageing assets and impacts from weather events. Also includes for increased pre-reseal requirements related to increased surfacing renewals from reduced output during 2021 to 2024.

- WC 113: Increase in drainage maintenance of 10% to ensure network resilience is maintained
- WC 124 and 125: 140% and 135% increases respectively reflecting low expenditure during 2021-24 and requirements for the increased Walking and Cycling network length.
- WC 121 and 140: increases in each category to reflect impacts of climate change on the Environmental maintenance and Minor events budgets.
- WC 211: 15% reduction from what was spent in 2021 to 2024 as a result of increased re-metalling over last three years. This is offset with an increase in WC 112 for unsealed Maintenance to keep on top of spot metalling and increased grading costs.
- WC 212 and 214: Bringing back into balance from low investment levels in resurfacing over last 6 years and increased rehabilitation requirements on rural roads.

The Maintenance, Operations, and Renewals request is appended as Appendix A

### 13.4 Road Improvements Programme

The threshold for low cost low risk (LCLR) road improvements projects remains at \$2M. The proposed projects are outlined in the specific Activity management sections above. The majority of ODC transport projects sit under the threshold for LCLR projects.

The draft GPS 2023 sets out the activity classes for the 2024-27 NLTP. LCLR programmes need to be allocated to the appropriate activity class. The two activity classes applicable for ODC are:

- Local Roads improvements activity class

- Walking and cycling improvements activity class

The local roads activity class includes the previous “road to zero” road safety improvements.

The draft LCLR Programme is appended as Appendix B.

Projects greater than \$2M require a separate business case outside of this Activity Management Plan. There is currently one project that is being proposed for the 2027 to 2030 NLTP that will require the development of a business case within 2024 to 27. This Single Stage business Case (SSBC) will be required for access to the State highway at Woodlands Road and west of Baird Road for areas identified for growth within the Spatial plan.

### 13.5 Programme Administration Costs

Administration is not integral to a project or activity that has been funded by Waka Kotahi but, nevertheless, must be provided by an approved organisation to support the delivery of activities.

The administration costs allocated to running the programme are derived from costs developed for the Long Term Plan and are based on:

- Administration buildings – allocated out by floor area used by the Engineering team.
- Information Systems – allocated out by staff working directly in the activity.
- Plant and vehicles – allocated out based on where the vehicles are used.
- Rating activities – covers the expense side of the rating activity – allocated out based on rate revenue per activity.

- Finance - covers the finance activity, accounts payable, accounts receivable – allocated out based on operating expenditure per activity.
- Engineering Services – covers the overhead costs of photocopying, training, subscriptions, and ACC for the Engineering Team. Allocated out based on the level of asset value managed.
- Corporate Services - covers Health and Safety, HR, Customer Services, Records Management, and CEO – allocated out based on operating expenditure per activity.

The above costs also include an allowance for growth in the team over the term of the long term plan.

## 14 Risk Management

Risk Management associated with the transport activity and assets include financial, operational, organisational, and public health and safety. The risks are from both a higher, corporate level, and to a more detailed asset – specific level, but do not substitute for more specific risk analysis at those levels.

The corporate risk management process at ODC utilizes risk matrices to assess risks. The risk Matrix is presented in Table 14-1.

		Probability				
		Almost certain	Likely	Possible	Unlikely	Rare
Consequence	Catastrophic	E8 - Extreme	E7 - Extreme	E5 - Extreme	D8 - High	D6 - High
	Major	E6 - Extreme	E4 - Extreme	D7 - High	D5 - High	C4 - Moderate
	Moderate	E3 - Extreme	E2 - Extreme	D4 - High	C3 - Moderate	B4 - Low
	Minor	E1 - Extreme	D3 - High	C2 - Moderate	B3 - Low	B2 - Low
	Insignificant	D2 - High	D1 - High	C1 - Moderate	B1 - Low	A - Low

**Table 14-1 : Corporate Risk Matrix – Extreme, High, Moderate and Low Risk**

The risks fall into one of the follow four categories:

Low Risk:           Manage by routine procedures.

Moderate Risk:   Management responsibility must be specified.

High Risk:         Risk & management strategy identified in AM Plan.  
Failure management plans available.

Extreme Risk:     Risk & management strategy identified in AM Plan.  
Failure management plan specifically addressing event in place.

### 14.1.1 Land Transport Risk Register

Governance, Business, Legal, Human Resource, Information System and Financial Management risks have been identified as part of the Corporate Risk Register. Risks relevant to the transport assets and the management of these are shown Table 14-2.

Added at the end of this table are three Land Transport risks which are not part of the Corporate Risk Register.

Risk	Raw Risk	Present Systems and Process to manage risk	Present Risk	Is risk acceptable?
<b>Governance</b>				
Relevant information not reported to Council and/or advice does not meet required standard.	D7	Mayor's and Chief Executive's reports to six weekly meetings of Council (and informal updates); quarterly activity reports.	C2	Yes
Needs of community are not met.	E6	Statutory consultation and decision-making requirements; three yearly Resident survey; Council communications strategy.	D3	Yes
<b>Business Risk</b>				
Customer expectations not met.	D4	Monitoring and Reporting of levels of service; Resident survey; Performance Measures Reporting Tool.	B3	Yes
Exposure to Council following poor tender process.	E6	Procurement policy aligned to Waka Kotahi guidelines and accepted by Council's auditors; tender committee reports and decisions documented.	B3	Yes
Exposure to Council following poor contract management process.	E6	Audits with contractors; monthly meetings; referral back to asset management plans; Health and Safety.	D7	Yes
Action, inaction and/or advice resulting in adverse effects on person or property.	E6	Timely information flows within the organisation and early access to legal advice where potentially necessary; on-going training; information system updated; skilled and competent staff.	D7	Yes
Inability of recover/continue business following disaster.	E6	Servers moving off-site; back up at BOPRC, multiple communication paths into organisation and sites.	D7	Yes
Relationship with Maori deteriorate.	D7	Regular invitations to WMTB, varying locations of CCB meeting, partnering in projects with WMTB such as Mōtū Trails and Harbour; meetings at various marae for annual plan, attendance at various high profile events.	D5	Yes
Resource base does not meet community needs.	E3	Advocacy to central government for a realistic level of funding outside rates (roading in particular, but also community development initiatives). Maximise use of volunteers; investment supports Economic Development and social wellbeing.	D4	Yes
<b>Built Assets</b>				
Inability to provide services to community following damage to assets.	E6	Relationship with suppliers (for availability of parts; work to uniformity) and neighbouring councils. Insurance cover. Business Continuity Plans	D5	Asset Management Plan Improvements
National disasters e.g. Storms, floods, tsunami and earthquakes.	E6	Some redundancies in infrastructure. A component of asset management planning and process for assets.	D7	Yes

Risk	Raw Risk	Present Systems and Process to manage risk	Present Risk	Is risk acceptable?
Adverse impact from failure to assess risks to assets.	D7	Improving AM Plans (and monitoring these); arrangements with neighbouring authorities to cover prolonged staff absence (and also local contractors with utilities).	D5	Implementations of Improvement Plans
Poor asset design/maintenance resulting in potential safety service delivery and/or environmental management issues for roading.	D7	Periodically updated AM Plans and their interaction with the LTP and Annual Plan processes	C2	Yes
<b>Human Resources</b>				
Appropriate staff are unable to be recruited and retained.	E3	Shared Services provides capacity without huge cost; formal interviews always associated with referee checks; recognition that there are a large number of 'unique' roles and the need to ensure performance of time-critical functions. Projects/promotion; lifestyle awareness, flexible employment conditions.	E2	Promotion of organisation as employer.
<b>Information Systems</b>				
Information system does not adequately support organisational needs.	E4	BoPRC contract to provide IT and telephone system provides good capacity and quality. RAMM with external supplier.	C3	Yes
<b>Land Transport Risks</b>				
Traffic services out or not visible from unreported traffic incidences, vegetation, or vandalism.	E5	Minimise time to repair/replace traffic service and maintain vegetation around traffic services. Regular network inspections.	C4	Yes
Road network closed due to storm damage.	E6	Minimise reaction time, identify detour routes, emergency works included in the maintenance contract.	E4	Yes
Asset failure closes or restricts access	E4	Asset monitoring and condition assessments	D7	Yes

**Table 14-2 : Land Transport Risks**

## 15 Improvement Programme

### 15.1 Review of Asset Management Processes

Current AM process for the delivery of the Transportation activity for ODC is focused on delivery of fit for purpose services for the community. This has resulted in reactive maintenance dominant practices, which due to the light loading of the network, has proven to be cost effective for the district. These current processes have delivered transport services that the community has continued to express a high level of satisfaction with.

The council has improved its asset management practices with improved condition data and planning. As the district grows and changes there are more pressures and requests being put on the transport budgets. To clearly communicate and manage community expectations and levels of service further improvements will be required.

The following Improvement plan reviews and extends on the improvements to data and outlines the next steps to help Council achieve better outcomes for the community.

### 15.2 Improvement Plan

Project	Title	Activity	Current Status	Future Status and Identified Improvements	Improvement approach	Priority	Timeframe	Responsibility (task owner)	Resources	Cost	Status Update / Notes
<b>SYSTEMS</b>											
1	AM Framework	Developing an organisational AM framework for ODC	Under development with assessment of capability completed	Develop framework for improved and aligned AM systems across Council.	Work with Finance, engineering services, and parks and facilities to develop alignment of practices and systems aligned to ISO 55000 and IIMM. Review staff against REG AM competencies.	High	2024 to 34 LTP	Engineering and Services Manager	Internal / External	TBD	

Project	Title	Activity	Current Status	Future Status and Identified Improvements	Improvement approach	Priority	Timeframe	Responsibility (task owner)	Resources	Cost	Status Update / Notes
2	ONF integration	Improve how the ONRC/ONF is linked to Operational process, town planning and systems.	ONRC incorporated in AMP development. Work to incorporate back through systems underway	Business, Operational, and contractual systems fully integrated with ONRC classification, levels of service, and use of performance measures.	Work with NZTA and BoP RCAs to develop consistent approach.	Medium	2025	Engineering and Services Manager	Internal / External	TBD	
<b>EVIDENCE</b>											
17	Treatment Lengths	Review treatment lengths	Treatment lengths reviewed with FWP development	Better alignment to work programmes and forward works planning	Review TL's based on top surface table and validate in field with FWP drive over.	High	Ongoing	Engineering and Services Manager	Internal / External		
18	Condition Assessments	Collection and analysis of asset condition and performance	Bridges, footpaths, and carriageway condition assessments up to date.	Review programmes for condition assessments of other assets and recording procedures for results. CCDC to proceed in 2024	Develop plan for assessment of critical assets aligned to ONRC and community outcomes. Assess systems for recording and reporting for AM planning.	Medium	Ongoing	Engineering and Services Manager	External		HS data collection of collectors completed. Condition surveys up to date.
19	Traffic Estimates	Develop traffic counts methodology/strategy	Draft strategy and programme produced	Accurate loading and traffic estimates are important for assisting with FWP and maintenance activities.	get council sign off on Traffic counts strategy and implement	High	2024	Engineering and Services Manager	Internal / External		Methodology developed
20	ONRC measures	Collection and reporting of ONRC customer performance and technical output measures	A number of ONRC performance measures are not being collected and/or monitored	Develop systems for Collection and recording of data to better understand network performance indicators, comparative measures and guide investment	Draft ONRC data collection plan, collect and store data, analyse and report	Low	2024	Engineering and Services Manager	Internal / External		
<b>COMMUNICATING</b>											

Project	Title	Activity	Current Status	Future Status and Identified Improvements	Improvement approach	Priority	Timeframe	Responsibility (task owner)	Resources	Cost	Status Update / Notes
31	Status Report	Council progress report	Currently standard reporting does not include reporting of benefits from TOF.	Explore potential to develop dashboard for council reporting.	develop reporting framework for sign off by Council executive	Medium	2025	Engineering and Services Manager	External		Need to workshop benefit's with executive Team. Review reporting Requirements.
<b>DECISION MAKING</b>											
46	Forward works programme	Programme development	Lack of accurate asset and condition data to develop proactive forward works programmes.	Use data to develop longer term views in renewal programmes which will provide better evidence to support future investment	Undertake review of treatment lengths and FWP, identify data gaps, deliver data improvement programme to support further development. Build data evidence for implementation of performance monitoring in line with adjacent networks	Medium	Ongoing	Engineering and Services Manager	Internal / External		HS Data survey of collector roads completed. Develop management framework for unsealed roads
<b>SERVICE DELIVERY</b>											
61	Maintenance contract	Procurement of new Road Maintenance contract	Maintenance contract review in 2025.	Integrate ONRC into existing Maintenance specification.	Review current maintenance specification to align with ONRC.	High	2022	Engineering and Services Manager	Internal		Complete
62	LoS implementation	Define LoS aligned to ONRC within contracts	Current Contract to be reviewed	Review ONRC and alignment with Contract Los	Update Contract operational requirements	High	2022	Engineering and Services Manager	Internal		Refer #61 above.
<b>PEOPLE / CULTURE</b>											
76	Regional collaboration	Regional collaboration Through RAG and information sharing is continued	Sharing of ideas and opportunities across region continues	Continue to work together to identify shared improvement opportunities for service delivery and AMP development. Identify further collaborative opportunities	Communicate and review activities across region with involvement from WK, work to develop better process for collaboration with HNO .	High	ongoing	Engineering and Services Manager	Internal		

Project	Title	Activity	Current Status	Future Status and Identified Improvements	Improvement approach	Priority	Timeframe	Responsibility (task owner)	Resources	Cost	Status Update / Notes
77	Capability and succession plan	Development of a skills matrix and succession plan	No skills matrix developed. Succession planning in place for key staff.	Review existing staff/service skills and identify any gaps.	Capability matrix of core competencies requires development. Gaps identified and action plan developed for staff development/progression and service delivery options.	Medium	Ongoing	Engineering and Services Manager	HR / Exec		Morrison Low Report on procurement and service delivery complete. Options to be developed.

**Table 15-1 : Improvement Plan**

## Appendix A – Maintenance, Operations and Renewals Request

GPS	W/C	W/C Description	Activity breakdown	2024/25	2025/26	2026/27	3-year request
Maintain	111	Sealed pavement maintenance	Routine pavement repairs	401,660	409,346	448,749	1,259,755
			Pre-seal repairs	198,660	214,321	200,862	613,843
			Work Category Total Cost	600,320	623,667	649,611	1,873,598
	112	Unsealed pavement maintenance		280,500	291,409	303,531	875,440
	113	Routine drainage maintenance	Street cleaning	68,000	70,645	73,584	212,229
			Drainage maintenance	405,035	420,786	438,291	1,264,111
			Work Category Total Cost	473,035	491,431	511,875	1,476,340
	114	Structures maintenance	Bridge maintenance	49,740	51,675	53,825	155,240
			Retaining wall maintenance	14,000	14,544	15,149	43,693
			Work Category Total Cost	63,740	66,219	68,974	198,933
	124	Cycle path maintenance		40,500	42,076	43,826	126,402
	125	Footpath maintenance		35,000	36,362	37,874	109,236
	140	Minor events		280,000	290,890	302,991	873,880
<b>Total Maintain Costs</b>				<b>1,773,095</b>	<b>1,842,054</b>	<b>1,918,682</b>	<b>5,533,829</b>

GPS	W/C	W/C Description	Activity breakdown	2021/22	2021/23	2021/24	3-year request
Operate	121	Environmental maintenance	Vegetation control	172,918	179,643	187,116	539,677
			Other environmental maintenance	194,582	202,149	210,559	607,290
			Work Category Total Cost	367,500	381,792	397,675	1,146,967
	122	Network service maintenance	Traffic services power supply	31,598	32,827	34,192	98,617
			Traffic services maintenance	265,402	275,724	287,195	828,321
			Work Category Total Cost	297,000	308,551	321,387	926,938
	151	Network and asset management	Network management (including inspections)	383,455	393,398	404,216	1,167,614
			Management of asset inventory systems	414,545	435,636	459,306	1,322,941
			Work Category Total Cost	798,000	829,034	863,522	2,490,555
	<b>Total Operation Costs</b>				<b>1,462,500</b>	<b>1,519,377</b>	<b>1,582,584</b>

GPS	W/C	W/C Description	Activity breakdown	2024/25	2025/26	2026/27	3-year request
Renew	211	Unsealed road metalling		185,000	192,119	199,929	577,048
	212	Sealed road resurfacing	Chip sealing	737,880	812,519	771,871	2,322,270
			Thin asphaltic surfacing	103,480	0	140,350	243,830
			Work Category Total Cost	841,360	812,519	912,221	2,566,100
	213	Drainage renewals	Culvert renewals	101,500	106,295	111,395	319,190
			Kerb and channel renewals	25,500	26,705	27,987	80,192
			Work Category Total Cost	127,000	133,000	139,382	399,382
	214	Sealed road pavement rehabilitation		555,360	503,111	919,883	1,978,354
	215	Structures component replacements		54,000	56,079	58,359	168,438
	216	Bridge and structures renewals		300,000	0	0	300,000
	222	Traffic services renewals		48,600	50,471	52,523	151,594
	224	Cycle path renewal		0	0	0	0
	225	Footpath renewal		80,000	83,079	86,456	249,535
<b>Total Renewal Costs</b>				<b>2,191,320</b>	<b>1,830,378</b>	<b>2,368,753</b>	<b>6,390,451</b>

## Appendix B – Low Cost Low Risk Programme

Activity name	Location description	Activity description	Programme reference	Primary benefit	Funding source	Intervention type	2024/25	2025/26	2026/27
<b>Ohiwa Beach Road Resilience</b>	Ohiwa Beach Road RP 730 to 2020	resilience improvement associated with Rehab	Associated Improvement	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Resilience improvements			518,734
<b>Papamoa Stream Crossing - Motu Road</b>	Motu Road RP 26.8	Concrete Ford of Stream crossing	Activity Management Plan	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Resilience improvements	120,000		
<b>Coast Communities walking improvements</b>	Omaio, Te Kaha, Waihou Bay	Walking facilities for Coast Communities linking places of Social interest	Activity Management Plan	10.4 Impact on community cohesion	Walking and cycling improvements	Walking improvements		270,005	
<b>Ōpōtiki Rtz Urban Speed Management</b>	Opotiki Township Urban Roads	Implement speed management - WK Ref 374992	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Traffic calming	180,000	124,618	64,842
<b>Ōpōtiki Rtz Rural Speed Management</b>	Rural Roads greater than 70km/hr	Implement speed management - WK Ref 374992	Endorsed business case	1.2 Impact on a safe system	Local road improvements	Signage / pavement marking	45,000	41,539	43,228
<b>Urban Street upgrades 2026/27</b>	Duke Street RP 12 to 561	Road widening to target width and drainage improvements	Associated Improvement	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Other, as agreed with Waka Kotahi			129,683

Activity name	Location description	Activity description	Programme reference	Primary benefit	Funding source	Intervention type	2024/25	2025/26	2026/27
<b>Urban Street upgrades 2025/26</b>	Stoney Creek Road, Union Street	Road widening to target width and drainage improvements	Associated Improvement	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Other, as agreed with Waka Kotahi		186,927	
<b>Old creamery Road Traction Seal</b>	Old Creamery Road RP 1.3 to 2.5	Traction seal Hill section of Old Creamery Road SH detour route	Activity Management Plan	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Traction seals	236,000		
<b>Sedgewick Road drainage improvements</b>	Sedgewick Road RP 0.2 to 0.4	Road widening to target width and drainage improvements	Activity Management Plan	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Kerb and channel	46,000		
<b>Waioeka Pa Road drainage improvements</b>	Waioeka Pa Road 0.0 to 0.4	Road widening to target width, drainage improvements and walking improvements to School	Activity Management Plan	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Kerb and channel	73,000		
<b>Old creamery Road Safety Improvement</b>	Old Creamery Road RP 0.05 to 0.55	sight line improvement and Traction seal Hill section of Old Creamery Road SH detour route	Activity Management Plan	4.1 Impact on system vulnerabilities and redundancies	Local road improvements	Traction seals		103,848	
<b>Total</b>							<b>700,000</b>	<b>726,937</b>	<b>756,487</b>

## Appendix C – Pavement and Surfacing Renewal Programme

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
ARAKOTIPU BLVD	17	480	463	3535	7.63	ACCESS	Asphaltic concrete	15/02/2006	20	18	2	RS		
ARAKOTIPU BLVD	487	617	130	988	7.60	ACCESS	Asphaltic concrete	15/02/2006	20	18	2	RS		
BALNEAVIS PL	3	92	89	525	5.90	LOW VOLUME	Void fill seal	15/02/2003	12	21	-9	RS		
BUCHANAN ST	224	437	213	1640	7.70	ACCESS	Single Coat Seal	25/12/2012	18	11	7			RS
CHURCH ST	660	876	216	2593	12.00	ARTERIAL	Asphaltic concrete	15/02/2005	13	19	-6			TAC
CHURCH ST	876	898	22	265	12.04	ARTERIAL	Asphaltic concrete	15/02/2005	13	19	-6	TAC		
CHURCH ST	898	1000	102	1234	12.10	ARTERIAL	Asphaltic concrete	25/12/2012	13	11	2	TAC		
CHURCH ST	1025	1100	75	908	12.10	ARTERIAL	Asphaltic concrete	25/12/2012	13	11	2	TAC		
CHURCH/ELLIOTT RAB	0	50	50	425	8.50	PRIMARY COLLECTOR	Asphaltic concrete	15/02/2005	14	19	-5	TAC		
COAST VIEW ROAD (EX WALKER RD EXT)	3	376	373	1828	4.90	LOW VOLUME	Void fill seal	12/02/2015	12	9	3			RS
CROOKED RD	15	743	728	4732	6.50	SECONDARY COLLECTOR	Two Coat Seal	15/02/2011	16	13	3	RS		
DIP RD	3	1761	1758	10525	5.98	SECONDARY COLLECTOR	Single Coat Seal	25/12/2011	16	12	4			RS
DUKE ST	12	221	209	1212	5.80	ACCESS	Void fill seal	15/02/2008	11	16	-5			PROJ

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
DUKE ST	221	414	193	1119	5.80	ACCESS	Void fill seal	15/02/2008	11	16	-5			PROJ
DUKE ST	414	561	147	980	6.66	ACCESS	Void fill seal	15/02/2001	11	23	-12			PROJ
EDNA PL	6	88	82	590	7.20	LOW VOLUME	Void fill seal	15/02/2005	11	19	-8	RS		
ELLIOTT ST CARPARK (RP131 RHS)	15	65	50	670	13.40	CARPARK	Single Coat Seal	15/02/1985	14	39	-25	RS5		
FISHER PL	3	57	54	416	7.70	LOW VOLUME	Void fill seal	15/02/2004	12	20	-8			RS
FISHER PL	57	87	30	231	7.70	LOW VOLUME	Single Coat Seal	25/12/2011	20	12	8			RS
FRASER RD	1500	1843	343	1955	5.70	ACCESS	Two Coat Seal	15/02/2011	2	13	-11		RS	
GOW RD	22	575	553	3816	6.90	SECONDARY COLLECTOR	Single Coat Seal	6/04/2016	14	8	6			RHAB
GOW RD	575	1391	816	5630	6.90	SECONDARY COLLECTOR	Single Coat Seal	6/04/2016	14	8	6		RHAB	RS
GOW RD	1511	1816	305	1586	5.20	ACCESS	Single Coat Seal	1/03/2007	16	17	-1			RS
HUKUWAI BEACH RESERVE ACCESS	23	242	219	788	3.60	PARKS/RESERVE	Two Coat Seal	15/02/2000	3	24	-21	RS		
HUKUWAI BEACH RESERVE SLIP #1	18	84	66	224	3.40	PARKS/RESERVE	Two Coat Seal	15/02/2000	3	24	-21	RS		
HUKUWAI BEACH RESERVE SLIP #2	10	215	205	636	3.10	PARKS/RESERVE	Two Coat Seal	15/02/2000	3	24	-21	RS		
KING ST	120	205	85	1063	12.50	SECONDARY COLLECTOR	Two Coat Seal	15/02/2015	14	9	5			RS
KING ST CARPARK (RP550 RHS)	10	53	43	404	9.40	CARPARK	Asphaltic concrete	15/02/2000	20	24	-4			RS

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
<b>KUTARERE WHARF RD</b>	184	1206	1022	5621	5.50	ACCESS	Single Coat Seal	29/03/1999	18	25	-7	RS		
<b>MAXWELL RD</b>	3	200	197	867	4.40	LOW VOLUME	Single Coat Seal	1/03/2007	20	17	3		RS	
<b>MCCARTHY RD</b>	2	1390	1388	8050	5.80	ACCESS	Void fill seal	15/02/2002	11	22	-11			RS
<b>MOTU RD</b>	2291	2710	419	2724	6.50	SECONDARY COLLECTOR	Single Coat Seal	15/02/2005	18	19	-1	RS		
<b>MOTU RD</b>	2710	3250	540	3375	6.24	SECONDARY COLLECTOR	Single Coat Seal	15/02/2005	18	19	-1	RS		
<b>MOTU RD</b>	3250	4480	1230	7626	6.20	SECONDARY COLLECTOR	Single Coat Seal	15/02/2005	18	19	-1	RS		
<b>MOTU RD</b>	4480	4963	483	2995	6.20	SECONDARY COLLECTOR	Single Coat Seal	15/02/2005	18	19	-1	RS		
<b>MOTU RD</b>	4963	4986	23	127	5.50	ACCESS	Single Coat Seal	15/02/2005	18	19	-1	RS		
<b>MURIWAI BLVD</b>	4	267	263	1736	6.60	ACCESS	Asphaltic concrete	15/02/2006	20	18	2		RS	
<b>OHIWA BEACH RD</b>	734	2020	1286	7297	5.67	ACCESS	Single Coat Seal	15/02/2005	16	19	-3			RHAB
<b>OHIWA HARBOUR RD</b>	1999	2060	61	354	5.80	ACCESS	Single Coat Seal	30/03/1999	16	25	-9	RS		
<b>OHIWA LOOP RD</b>	4	529	525	3413	6.50	ACCESS	Void fill seal	4/04/2016	11	8	3			RS
<b>OHIWA LOOP RD</b>	529	1550	1021	6637	6.50	ACCESS	Single Coat Seal	30/03/1999	18	25	-7	RS		
<b>OHIWA LOOP RD</b>	1550	2872	1322	8593	6.50	ACCESS	Single Coat Seal	30/03/1999	18	25	-7		RS	

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
<b>OHIWA LOOP RD BOATRAMP CARPARK</b>	0	50	50	815	16.30	CARPARK	Single Coat Seal	30/03/1999	20	25	-5		RS	
<b>OMARUMUTU RD</b>	1495	2780	1285	8208	6.38	ACCESS	Single Coat Seal	15/02/2004	18	20	-2		RS	
<b>OMARUMUTU RD</b>	2780	3878	1098	7018	6.39	ACCESS	Single Coat Seal	15/02/2004	18	20	-2		RS	
<b>OMARUMUTU RD</b>	3878	4775	897	5382	6.00	ACCESS	Single Coat Seal	15/02/2008	20	16	4			RS
<b>OTARA EAST RD</b>	0	1444	1444	8953	6.20	ACCESS	Two Coat Seal	25/02/2015	16	9	7			RS
<b>OTARA RD</b>	27	441	414	2981	7.20	SECONDARY COLLECTOR	Single Coat Seal	13/03/2017	16	7	9			RS
<b>OTARA RD</b>	441	600	159	1145	7.20	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	9	8	1			RS
<b>OTARA RD</b>	766	1175	409	2945	7.20	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	9	8	1			RS
<b>OTARA RD</b>	1175	1237	62	533	8.60	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	10	8	2			RS
<b>OTARA RD</b>	1237	1610	373	2387	6.40	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	10	8	2			RS
<b>OTARA RD</b>	1610	1990	380	2432	6.40	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	10	8	2	RHAB	RS	
<b>OTARA RD</b>	1990	2490	500	3200	6.40	SECONDARY COLLECTOR	Sandwich Seal	5/04/2016	10	8	2		RS	
<b>OTARA RD</b>	9138	9164	26	140	5.40	ACCESS	Single Coat Seal	15/02/2004	18	20	-2	RS		

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
OTARA RD	9164	9202	38	144	3.80	ACCESS	Single Coat Seal	15/02/1985	18	39	-21	RS		
OTARA RD	9202	10127	925	5818	6.28	ACCESS	Single Coat Seal	15/02/2004	18	20	-2	RS		
PETERSEN PL	3	176	173	1021	5.90	LOW VOLUME	Void fill seal	15/02/2011	12	13	-1		RS	
PILE RD	10	371	361	1986	5.50	ACCESS	Two Coat Seal	15/02/2003	2	21	-19	RS		
PILE RD	371	500	129	568	4.40	LOW VOLUME	Two Coat Seal	15/02/2003	2	21	-19	RS		
SEDGEWICK RD	13	367	354	2251	6.35	ACCESS	Void fill seal	15/02/2004	11	20	-9		RS	
SEDGEWICK RD	367	442	75	488	6.50	ACCESS	Void fill seal	15/02/2004	11	20	-9		RS	
SEDGWICK RD EXTENSION	3	71	68	517	7.60	ACCESS	Void fill seal	15/02/2004	11	20	-9	RS		
SNELL RD	0	777	777	3885	5.00	ACCESS	Single Coat Seal	1/03/2018	18	6	12	RHAB	RS	
TABLELANDS RD	4	674	670	4355	6.50	SECONDARY COLLECTOR	Single Coat Seal	6/04/2016	16	8	8			RS
TABLELANDS RD	2808	4981	2173	11993	5.51	ACCESS	Void fill seal	15/02/2011	11	13	-2		RS	
TABLELANDS RD	4981	7736	2755	14051	5.10	ACCESS	Single Coat Seal	25/12/2013	20	10	10			RS
TE KAHA HOTEL RD	108	167	59	437	7.40	ACCESS	Two Coat Seal	15/02/2008	2	16	-14	RS		
TIROHANGA RD	605	855	250	1483	5.93	ACCESS	Single Coat Seal	1/03/2007	16	17	-1		RS	
TIROHANGA RD	855	2194	1339	8034	6.00	ACCESS	Void fill seal	15/02/2011	11	13	-2	RS		

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
<b>TIROHANGA RD</b>	2194	5050	2856	1551 1	5.43	ACCESS	Single Coat Seal	1/03/2007	18	17	1		RS	
<b>TRAVIS PL</b>	11	90	79	427	5.40	LOW VOLUME	Void fill seal	19/01/1998	12	26	-14	RS		
<b>UNION ST</b>	567	730	163	962	5.90	ACCESS	Void fill seal	18/04/2017	11	7	4		RHAB	RS
<b>UNION ST</b>	730	779	49	289	5.90	ACCESS	Void fill seal	18/04/2017	11	7	4		RHAB	RS
<b>VERRALL RD</b>	1200	2490	1290	8385	6.50	ACCESS	Single Coat Seal	15/02/2001	18	23	-5	RS		
<b>VERRALL RD</b>	2490	4492	2002	1301 3	6.50	ACCESS	Single Coat Seal	15/02/2002	18	22	-4	RS		
<b>VIEW RD</b>	5	211	206	1555	7.54	ACCESS	Void fill seal	15/02/2002	11	22	-11			RS
<b>WAIOTAHU BEACH SURF CLUB ACCESS</b>	6	370	364	2002	5.50	PARKS/RESERVE S	Two Coat Seal	15/02/2000	3	24	-21		RS	
<b>WAIOTAHU DRIFTS BLVD</b>	65	502	437	3450	7.89	ACCESS	Asphaltic concrete	15/02/2006	20	18	2			RS
<b>WAIOTAHU DRIFTS BLVD</b>	509	757	248	1924	7.75	ACCESS	Asphaltic concrete	15/02/2006	20	18	2			RS
<b>WAIOTAHU RIVER ESTUARY RESERVE</b>	12	155	143	836	5.84	PARKS/RESERVE	Two Coat Seal	15/02/2005	3	19	-16			RS
<b>WAIOTAHU VALLEY RD</b>	141	770	629	4089	6.50	SECONDARY COLLECTOR	Single Coat Seal	14/03/2017	16	7	9	RS		
<b>WAIKAKAIA RD</b>	13	113	100	540	5.40	LOW VOLUME	Single Coat Seal	15/02/2006	18	18	0			RS
<b>WELLINGTON ST</b>	0	125	125	938	7.50	LOW VOLUME	Single Coat Seal	15/02/2009	18	15	3			RS
<b>WELLINGTON ST</b>	135	334	199	1930	9.70	SECONDARY COLLECTOR	Single Coat Seal	15/02/2009	16	15	1	RS		

Road Name	TL start	TL end	Length	Area	Width	Classification	Existing Surface	Surface Date	Design Life	Age	Remaining Life	24/25	25/26	26/27
<b>WELLINGTON ST</b>	773	816	43	417	9.70	PRIMARY COLLECTOR	Asphaltic concrete	15/02/2002	18	22	-4			TAC
<b>WHAKAARI RD</b>	7	153	146	1139	7.80	LOW VOLUME	Single Coat Seal	15/02/2004	18	20	-2	RS		
<b>WOODLANDS CEMETERY ACCESS</b>	3	359	356	1732	4.86	PARKS/RESERVE	Two Coat Seal	15/02/2005	3	19	-16		RS	
<b>WOODLANDS RD</b>	3700	6847	3147	18170	5.77	ACCESS	Void fill seal	15/02/2001	11	23	-12		RS	
<b>WOODLANDS RD</b>	6847	6881	34	184	5.40	ACCESS	Single Coat Seal	18/11/1987	12	36	-24		RS	

