



**KAWERAU DISTRICT COUNCIL**  
**Activity Management Plan 2020**

**Roading**



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## Version History

Version	Date	Notes	Author
2015	2015	Final version: AMP - 2015	Tom McDowall
1a	20/10/2017	First revision for 2018	Hanno vd Merwe
1b	27/11/2017	Review: NZTA	Simon Fendall
1c	8/12/2017	Submission to NZTA	Hanno vd Merwe
1d	23/02/2018	External review	David Fraser
2	20/03/2018	Submission to Council	Hanno vd Merwe
2a	24/8/2020	First Revision for 2020	Tina Mitchell
2b	28/1/2021	NZTA	Rob Bullick
2c	20/3/2021	Revision 2021	Tina Mitchell
2d	9/04/2021	Management Review	Hanno vd Merwe
2e	20/07/2021	Post Audit Review amendments	Tina Mitchell



# **SECTION ONE**

## Executive Summary



## 1.2.PURPOSE OF THE PLAN

The overall purpose of this Asset Management Plan is to describe Council's strategies for the management of its roading assets. The Plan enables Council to meet the present and expected future needs of the Community over a ten-year period (according to the 10 year Long Term Plan) and into the future (according to the 30 year Infrastructure Strategy).

The Plan details the assets Council owns and describes how the maintenance, renewal and replacement of these assets will be managed and funded to meet required levels of service for Council's Roading Activity in the most cost effective way for households and businesses.

The Asset Management Plan collates high-level management, financial, engineering and technical information from various sources into a single document. It is a tool for communicating complex asset management information and strategies with stakeholders and interested parties.

The level of provision of asset management for the roading asset was evaluated in 2017 by an independent auditor. The appropriate level was recommended to be raised from the Council's asset management policy of "Basic" to "Core" due to the higher risk to the health and well-being of the community in the event of roading assets failing to deliver an appropriate level of service.

The latest assessment of the current roading asset management level shows a gap to meet the level required for "Core". The improvement actions list provided in this Activity Management Plan specifies those actions required to address this gap.

## 1.3.ASSET DESCRIPTION

The community is served by a 41 km roading network (excluding SH 34) which provides access to all the properties within the community and enables travel in and around the district. Footpaths, kerbs and channels, bridges, culverts, street lights and traffic signs are managed as part of the roading asset.

### Key Statistics

Population served (2018)	7,460
Length of Roads (kms)	41
Length of Kerbs (kms)	72
Area of Footpaths (m2)	73km
Structures: 1 bridge, 5 culverts	6
Street Lights	764

According to the One Network Road Classification assessment, the majority (63%) of roading corridors are 'Low Volume' / 'Access' roads, 27% are 'Primary Collector', leaving 9% as 'Secondary Collector' roads and three 'Primary collectors' roads. The section of SH34 (Tamarangi Drive) that runs through the District is owned and managed by the Waka Kotahi (NZTA) and is not part of this plan.

The replacement and optimised depreciated values of the assets are as follows:

Asset Type	GRC (Gross Replacement Cost) 2019 (\$m)	ODRC (Optimised Depreciated Replacement Cost) 2020 (\$m)
Pavement Formation	1.73	1.74
Pavement Structure	9.55	3.58
Pavement Surface	3.48	1.17
Kerbs and Channels	8.29	4.40
Footpaths	7.55	3.58
Structures	1.42	0.59
Street Lighting	3.45	1.36
Traffic Services	0.52	0.35
<b>TOTAL</b>	<b>35.99</b>	<b>16.77</b>

## 1.4.LEVELS OF SERVICE

### Customer levels of service

A resident satisfaction survey conducted in January 2020 by the National Research Bureau showed that 95 percent of respondents were satisfied with the roading network. The main reasons given by those who were not very satisfied included potholes or rough roads, poor condition or need of upgrading, and not liking or thinking there are too many speed humps.

A separate question about footpaths indicated that 81 percent of residents were satisfied. In relation to footpaths, people who were not very satisfied cited tree roots lifting footpaths, uneven, cracked, rough, potholed surfaces, poor condition or maintenance/upgrading being needed.

### **Technical levels of service**

Council monitors and reports its actual performance against measures and targets described in the Long Term Plan (LTP).

### **New Zealand Transport Agency agreement service levels**

The Government, through Waka Kotahi (NZTA), provides part of the funding to maintain and improve roads. Council has an agreement with NZTA to maintain roads to set standards in order to receive funding.

Performance measure guidelines have been developed for Road Controlling Authorities to deliver under the ONRC and moving forward, toward the outcomes focused on under the One Network Framework.

These performance measures are intended to provide a level of service in keeping with the classification of road and set technical outcome measures for the provision of roading infrastructure. Kawerau District Council has started to apply these performance measures to the District network where it can deliver and monitor the identified levels of service through its Road Maintenance Contract.

### **Constraints to levels of service**

Constraints that may influence Council's ability to deliver the required levels of service include issues relating to capacity (road corridor width and underground services), reliability of the stormwater system (removal of rainwater from roads) and road roughness

### **Resource consents**

Consents relevant to roading relate to stormwater discharges and are described in the Stormwater Asset Management Plan.

### **Significant negative effects**

The roading network has the potential to have negative effects on environmental wellbeing through pollution and to public safety through traffic accidents.

## **1.5. FUTURE NEEDS**

The Kawerau District has experienced low general population growth in demand for additional services however has continued to experience a consistent increase in residents over the age of 65. In the 2013 census, the total population of the Kawerau District was 6,363, a decrease of 8.1% or 561 people since the 2006 census. Despite the predicted further decline, the 2018 census showed a modest growth of general population to 7,460. Council hopes to bolster these gains with economic development initiatives, such as the development of a new industrial park and promotion of the natural environment.

While there has been traffic growth due to an increased number of vehicles per household and people becoming more mobile, the existing roading network has significant spare capacity. There has been minimal change in roughness indicating that the current road strength is sufficient for the existing volume of heavy vehicles, which is not significant.

There is considerable room for further uptake of alternate forms of transportation in a town as small as Kawerau. Many residents who work and school locally walk or cycle while a significant portion of the mobility impaired population use mobility scooters due to the lack of public transport available. Improvement to this section of the network will encourage greater participation and improve safety.

Adjustments made in 2012 to the boundary between Whakatane and Kawerau districts enabled the creation of an industrial park on SH34 opposite the existing mill site. Industrial development is occurring as a result.

Council has very recently undertaken two new residential developments. These industrial and residential developments will likely result in a small addition to the network however, the majority of any additional traffic will not significantly affect the existing road network.

Any additional roading infrastructure will be constructed by the developer and vested in Council or built by Council and funded by the developer according to the financial contributions policy.

## **1.6. STRATEGIC CONTEXT – KEY ISSUES**

Key issues facing Kawerau District influencing its roading activity are:

- Population decline without a corresponding decrease in traffic, leading to a reduced number of ratepayers funding the maintenance and upkeep of ageing transport infrastructure.

The council has initiated economic development initiatives to arrest population decline. The most recent population estimate from NZ statistics is 7,460 suggests a small increase. Long-term population growth estimates however remain uncertain.

- Industrial development in the industrial area will result in more traffic in the industrial area. This may in turn require additional roads and infrastructure.

Increased industry increases the rating base that will offset additional development maintenance costs.

- Addressing safety issues relating to alcohol, speed and inattention are addressed as a joint initiative with other Eastern Bay Councils.  
Incidences related to alcohol, speed and inattention have been very low in the district; however, it may become more of an issue in the future.
- Ensuring Council continues to deliver value for money while at the same time meeting Community expectations.
- An aging population with a need to utilise mobility scooters requires appropriate infrastructure to ensure safe movement around the district.
- A desire to actively encourage alternative forms of transport such as walking and cycling can be brought about in a small town by providing safe and accessible shared access links between residential areas and significant destinations such as the CBD, schools or industrial areas.  
Council's asset management system is aligned with the Government Policy Statement to improve economic growth and productivity, road safety; and value for money.

## 1.7. LIFECYCLE MANAGEMENT

### 1.7.1. Critical Assets

#### Sealed Pavement

The land between road reserve boundaries is vested in the Council. It includes service lanes and pedestrian access ways.

The pavement surface provides the layer on which traffic travels. On sealed roads, it also protects the pavement formation from water.

#### Structures

Structures include one bridge, five culverts and several small retaining walls.

### 1.7.2. Other Assets

Assets in the roading network that have been assessed as non-critical include footpaths, kerbs and channels, street lighting and traffic services.

### 1.7.3. Maintenance plan

Maintenance includes grass mowing on roadsides, pothole repair, weed spraying, removing litter and sweeping grit from channels, inspecting and maintaining the bridge, inspecting streetlights and repainting road markings.

### 1.7.4. Renewal/replacement

An ongoing renewal and replacement programme is underway for the pavement surface, footpaths, kerb and channel and street lighting. Other assets in the roading network are renewed or replaced on an 'as required' basis.

The two box culverts under River Road are being replaced in the 2020/21 year to improve flow in times of extreme rain events.

There is significant stormwater infrastructure renewal needing to be undertaken beginning in the 2020/2021 year and funding is being sought to allow those works to continue throughout the new NLTP.

### 1.7.5. Safety-related works

Minor improvement projects are associated with safety improvements for the road user. This programme is determined annually and based on NZTA funding criteria. Activities that we undertake in this category include intersection improvements, signage and traffic calming.

### 1.7.6. New assets

Further development at the new industrial park on SH34 may require the construction of new roads and footpaths. These additional works to be undertaken by the developer.

The development of two subdivisions by Council has resulted in two new access roads as part of the project.

### 1.7.7. Deferred maintenance and disposal plan

There is no known deferred maintenance or specific disposals identified in the Plan.

## 1.8. FINANCIAL SUMMARY

The roads in the District meet the current traffic demands with significant spare capacity. Accordingly, with low-level population growth predicted, demand on the network is expected to remain at similar levels to current. Therefore, improvement of assets is not deemed necessary for the foreseeable future.

The funding is based on maintaining the infrastructure in its current condition. This includes funding for asset replacement as the assets reach the end of their useful life. The funding required for current and future asset renewal is being collected through Council rates. The NZTA portion of the funding required to replace assets is not being collected.

The risk associated with this is that NZTA funding levels may change with time and therefore Council may be over or under funding for future replacement.

## 1.9. ASSET MANAGEMENT SYSTEMS AND PROCESSES

### **Asset management outcomes**

Responsibility for asset management outcomes lies with the Manager, Operations and Services.

### **Accounting and asset management systems**

Ozone software is used for accounting and billing. All financial reporting, including valuation, as well as pavement information, is currently held in Excel spreadsheets.

Some electronic information is held about roading structures and traffic services.

Council holds hard copy plans for all roads built since 1995 and some of the roads developed prior to that.

All roading asset data including roughness rating survey results and reseals is required to

be on the asset and maintenance management software tool RAMM.

The information currently held by Council is not of the required standard. The current data held has enabled Council to provide the necessary reports to the NZTA in a very basic manner. A significant data validation programme currently underway utilising an independent contractor during 2020/2021 will remedy this situation.

### **Key information flows and processes**

Key information flows and process linkages are those that relate to incorporating Kawerau's Community Outcomes, preparing and adhering to Council's annual budgets, environmental monitoring and compliance and to ongoing asset management that maintains levels of service to the Community.

## 1.10. MONITORING AND IMPROVEMENT PLANNING

Improvement items are outlined in section 9 of the Plan. The key improvements identified focus on improving the inventory database and reviewing anticipated lives.





# SECTION TWO

## Introduction



## 2.1.PURPOSE OF THE PLAN

The overall purpose of this Asset Management Plan is to describe Council's strategies for the management of its roading assets. The Plan enables Council to meet the present and expected future needs of the Community over a ten-year period (according to the 10 year Long Term Plan) and into the future (according to the 30 year Infrastructure Strategy).

The Plan details the assets Council owns and describes how the maintenance, renewal and replacement of these assets will be managed and funded to meet required levels of service for Council's Roding Activity in the most cost effective way.

The asset management plan collates high-level management, financial, engineering and technical information from various sources into a single document. It is a tool for communicating complex asset management information and strategies with stakeholders and interested parties.

## 2.2.ASSET DESCRIPTION

The Kawerau District has a 41km network of roads (excluding SH 34), which provides access to properties and enables the movement of vehicles and people around the Community.

The network consists of:

- Sealed Pavement
- Kerbs and Channels
- Footpaths
- Structures (Bridge and Culverts)
- Street Lighting
- Traffic Services

**Table 1: Key statistics**

Population served (2013)	7,460
Length of Roads (kms)	41
Length of Kerbs (kms)	72
Area of Footpaths (m2)	73km
Structures: 1 bridge, 5 culverts	6
Street Lights	764
Following the completion of two residential and one industrial development, there will be additional infrastructure vested to Council and included in RAMM in the near future.	

According to the One Network Road Classification, all roads owned by the Kawerau Roding Controlling Authority meet the criteria for Low volume Level 1 with a little under half of all roads classified as 'Low Volume', the rest split between 'Access' and 'Primary Collector' and a small number of 'Secondary Collector' roads.

There is a section of State Highway 34 which runs through the District which is owned and maintained by Waka Kotahi Zealand Transport Agency (NZTA) and is not part of this plan.

The geology of the Kawerau District is the result of the Tarawera Eruption. The soil is ash/pumice, is relatively recent in terms of geological age and is poorly compacted. However, it is highly porous and will compact with work, which makes for a good roading foundation.

The topography of the District is generally flat to rolling and roads are generally on the flat.

## 2.3.OBJECTIVES OF ASSET OWNERSHIP

Council provides a roading network so that people and goods can move around the District in a manner that is safe, affordable and consistent with regional transportation strategies and the overarching strategic priorities of the GPS (Government Policy Statement on transport). The provision of roading is vital to the needs and aspirations of those who live in, visit, or pass through the District.

The roading asset is managed to ensure that the most cost-effective long-term options are implemented and agreed levels of service are met.

Council has established policies and procedures to ensure:

- The quality and extent of the existing roading network is maintained
- The community continues to have a real say about its roading needs
- The roading corridor remains a place where other essential services (phone power, water, sewer etc.) can be placed
- Funding is adequate for roads to be effectively maintained at least to existing engineering and safety standards; and
- Council meets its statutory obligations in the provision of its roading network.

The Roding activity goal is to provide and maintain a system of roads and footpaths for the safe and comfortable passage of vehicles and pedestrians, cyclists and other vulnerable road users (such as mobility scooters) in and through the district.

The Roding activity involves:

- Management and monitoring of the roading network.
- Repairing or replacing streetlights, footpaths, kerbs, carriageway, bridges and culverts.
- Planning to meet future requirements and improving operations.

- one industrial (Spencer Ave)

Council's principal objectives are:

- To ensure that all of the public systems continue to provide a high quality roading network.
- To anticipate the time when it may be necessary to extend, upgrade or renew the existing roading network and to plan accordingly.
- To ensure the maintenance of the public infrastructural assets in perpetuity, so that there is no diminution in value, and to forecast the estimated future costs.
- To put in place a sound management regime for all matters relating to the roading network in the future.

## 2.4. GOVERNMENT POLICY STATEMENT ON TRANSPORT

The current draft 2021 Government Policy Statement on Land Transport (GPS) sets out the government's priorities for expenditure from the National Land Transport Fund over the next 10 years.

The GPS highlights Government's strategic priorities for transport are:

- Improving Freight Connections
- Climate Change
- Road safety; and
- Better Travel Options

The Kawerau District is blessed with natural resources that allow further industrial development. An effective roading network will increase productivity and allow efficient use of these resources. The existing network is sufficient for any currently proposed industrial expansion. Should further development be required, infrastructure would either be constructed by the developer and vested in Council or built by Council and funded by the developer according to the financial contributions policy.

The Kawerau road network has historically experienced very low incidences of accidents related to poor physical characteristics. In addition to the ongoing minor safety improvement projects aimed toward traffic calming that including a \$105,000 bid for continuation of funding further installation of speed humps, there are five specific safety focused lane realignment projects identified for the following locations:

- residential (outside Putauaki Primary School, Fenton Mill Rd),
- commercial (Islington St),
- commercial (Town Centre)
- commercial (Liverpool St), and

The improvement to ensure there is free and unobstructed flow in the carriageway, provide additional protections to pedestrians and access to businesses. An application in the 2021/24 NLTP under the Low Cost / Low Risk Improvement work category for \$920,000 was included to finance these projects.

Council has identified three opportunities to formalise existing pathways as shared access, currently used extensively as informal walking links between residential areas of town with significant destinations:

- Tarawera River Walk (linking residential to Tarawera High School and the Industrial area)
- Stoneham and Hansen Walks (linking residential to the Town Centre)

An application in the 2021/24 NLTP under Low Cost / Low Risk Improvement work category for \$222,000 has been made to finance these projects.

During Council's upgrade of the Streetlight network to LED during the 2015/2018 NLTP it was decided at that time to not include the installation of Photocell Sensors as the town was being served adequately by Horizon's ripple plant.

Following an unexpected third party notification to Council from Horizon Energy in late December 2020, Council was advised that the ripple plant controlling the day/night switch for the District streetlights will be decommissioned in the next few years. The decision to decommission due to the plant requiring a necessary and expensive upgrade to the equipment.

Council was not included in any discussion regarding this situation and was only made aware of the plan through a third party. Consequently, we have urgently added a further Low Cost / Low Risk Improvement work category project valued at \$45,000 to undertake the installation of the photocell sensors to the 2021/24 NLTP funding bid.

This project is to be undertaken in conjunction with programmed maintenance and fault repairs to reduce the additional cost. Council has negotiated the timing with Horizon to ensure the upgrade is completed before the decommissioning takes place.

Management of the Kawerau transport network is undertaken via the asset and maintenance management software tool RAMM to ensure that value for money is consistently achieved for network maintenance, renewal and operation.

## 2.5. EXTERNALLY-MANDATED LEGISLATION

The Local Government Act 2002 (LGA) vests ownership of local roads in the local authority of the district where they are situated and empowers local authorities to administer, develop, maintain and control these roads.

The land between road reserve boundaries is the roading asset. For the local roads, this land is vested in the local authority and for State Highways in the Government. The road reserve includes service lanes and pedestrian access ways, which are a feature in the Kawerau District.

Council may close roads and sell the land, acquire additional land for road and may assign rights of occupation of parts of the road reserve for underground utilities etc., subject to appropriate legal processes and in accordance with statutes, primarily the Local Government Act.

### 2.5.1. Road designations

As a road controlling authority, Council has the statutory right to form and maintain public roads. Where appropriate, land required for road can be re-designated and purchased. This power may be used not only for providing new roads, but also for the realignment or widening of existing roads to improve safety and service.

### 2.5.2. Zoning and easements

Utilities (phone, power, water, sewer etc.), in accordance with their enabling legislation, are allowed access to the road reserve. Council controls the location of the installed infrastructure and the quality and timeliness of reinstatement. Councils and the Government have the ability to over-ride other zoning requirements to form public roads.

### 2.5.3. Contribution to Council Community Outcomes

The Roothing activity contributes primarily to the provision and maintenance of a network of public roads and footpaths.

Council infrastructure and services are aimed to be accessible, age-friendly, effective, efficient and affordable, now and for the future.

## 2.6. LINKS TO OTHER STRATEGIC DOCUMENTS

Public infrastructure supports activity that contributes toward the economic, social, cultural and environmental wellbeing of the Community. In addition to roads and footpaths, Council owns the water supply infrastructure, stormwater and wastewater (sewerage) systems, and the District's public parks, reserves, buildings and facilities. The parts that make up those networks and structures and the tools and equipment used to manage and maintain them, are known as Council's assets.

Every three years, Council develops a Long Term Plan which sets out the range and level of services it will provide to meet identified Community needs and Community Outcomes.

Changes made to the Local Government Act in 2014 mean councils are now required to develop a 30 year Infrastructure Strategy that will be reflected in the long-term plan.

Each year Council adopts an Annual Plan, which contains the budget for Council services. Council's ability to deliver services and to do so at a reasonable cost depends on the condition, performance and risk profile of its assets. In this way, Council's asset management planning underpins the 30-year Infrastructure Strategy and is therefore closely linked to its Annual Plan and Long Term Plan.

This Asset Management Plan is developed in conjunction with the Kawerau District Council Long Term Plan 2021-2031. It will underpin and be integrated into both that document, and the Annual Plans made over the next ten years.



# **SECTION THREE**

## Levels of Service



### 3.1. NEW ZEALAND TRANSPORT AGENCY AGREEMENT SERVICE LEVELS.

For many years, the Government, through the Waka Kotahi (NZTA), has provided funding primarily to maintain and improve roads. It provided that Council will maintain roads to set standards in order to receive the funding. Through the latest Government Policy Statement on Land Transport, NZTA is able to adjust the strategic direction on four priorities – safety, better travel options, improving freight connection and climate change. The GPS2021 via the National Land Transport Fund looks to support a wider range of outcomes, one of which being improving multi-modal options to move people around our cities and towns.

Preliminary performance measure guidelines have been developed for Road Controlling Authorities to deliver under the ONRC. These performance measures are intended to provide a level of service in keeping with the classification of road and set technical outcome measures for the provision of roading infrastructure.

The Kawerau District Council employs some of these measures in determining levels of service and commit to including more measures as applicable to its network.

### 3.2. CUSTOMER LEVELS OF SERVICE

The National Research Bureau undertakes an independent survey to measure the level of customer satisfaction with the services provided by Council. The results of these surveys for the Roding Network are shown below.

**Table 2: NRB Survey Results – Roding Network**

	2007 %	2008 %	2009 %	2011 %	2014 %	2017 %	2020 %
Very/Fairly Satisfied	91	96	91	89	93	97	95
Not Very Satisfied	9	4	9	10	6	2	5

The main reasons why people were not very satisfied were:

- Traffic issues/need speed bumps, mentioned by 3% of all residents,
- Poor condition/ need attention, 2%,
- Others, 0.2%

The One Network Road Classification (ONRC) has identified a set of Customer Level of Service Outcomes intended to reflect fit for purpose outcomes relating to the function of the road. Council's own current Levels of Service ensure that the standard of the Kawerau roading network consistently exceeds these standards.

Council also measures the level of customer satisfaction with footpaths and the survey results are as follows:

**Table 3: NRB Survey Results – Footpaths**

	2007 %	2008 %	2009 %	2011 %	2014 %	2017 %	2020 %
Very/Fairly Satisfied	82	84	73	80	75	85	81
Not Very Satisfied	18	16	27	20	24	14	16

The main reasons why people were not very satisfied were:

- Uneven/cracked/rough surfaces, mentioned by 7% of all residents,
- Tree roots lifting footpaths, 5%,
- Poor condition/need maintenance/upgrading/repairing, 4%
- Unsafe/dangerous/have fallen/tripped, 4%

Council's annual footpath renewal programme has been between \$167,100 and \$173,000 during the 3 years of the 2019-2021 National Land Transport Programme funding round. This funding level replaces approximately one to two percent of the District's footpaths per year, grinds out uneven surface 'lips' and allows Council to remove large street trees which cause footpaths to lift.

Based on the level of continued concern around footpath tripping hazards and the ongoing issues caused by tree roots, the application for footpath maintenance has been increased for the 2022-2024 NLTP: Y1 \$170,000, Y2 \$175,000, Y3 \$180,000.

Roads are tested annually for roughness. A vehicle determines the roughness with sensitive monitoring equipment travelling over the roads and measuring undulations. The lower the number, the smoother the road. The target roughness set by the NZTA for urban roads with Kawerau volumes is 110 to 140 (excluding speed bumps). Kawerau District Council set an average rating target of 90 or less for all district roads. The average roughness achieved in Kawerau is as shown in the table below. The road roughness survey was unable to be undertaken during the 2019/2020 year as scheduled due to the extended Covid-19 lockdown. The survey will be undertaken in 2020/2021 as planned. There is no reason to believe that the result will be significantly different to previous years.

**Table 4: Average Road Roughness**

Year	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Rating	75	78	78	74	79	70	71	75	75

### 3.3. TECHNICAL LEVELS OF SERVICE

Council will continue to monitor and report its actual performance against measures and targets described in the LTP. All reporting is produced through quarterly reports to the Council by the Manager, Operations and Services.

**Table 5: Technical levels of service**

Levels of Service	Measures	Target
<b>Roading</b>		
Council provides a network of roads that facilitates the safe movement of people and vehicles around the District.	The change from the previous financial year in the number of fatalities and serious injury crashes on the local road network, expressed as a number.	Increase of zero or less.
Road Quality.	The average quality of ride on a sealed local road network, measured by smooth travel exposure.	Not less than 95%.
Road maintenance.	The percentage of the sealed local road network that is re-surfaced.	>5% per annum.
Response to service requests. (Roothing)	The percentage of customer service requests relating to roads to which Council responds within the timeframe specified.	90% within 14 days 100% within 28 days.
Council maintains community satisfaction levels	Community satisfaction with roading	Not less than 91%
	Community satisfaction with footpaths	>77%
Council provides an appropriate network of footpaths for pedestrian use	Percentage of footpaths that fall within the level of service or service standard for the condition of footpaths set out in the Long Term Plan.	>95%.
Response to service requests.	The percentage of customer service requests relating to footpaths to which Council responds within the timeframe specified.	100% within 14 days.

### 3.4.CONSTRAINTS TO LEVELS OF SERVICE

**Table 6: Constraints to Levels of Service**

Constraint	Component	Comments
Capacity	Road Corridor Width	Carriageway width limits traffic volumes. In Kawerau, this is not a problem.
	Underground Services	Berm width limits the number of services that can be installed. In Kawerau, this is not a problem.
Reliability and Security of Service	Stormwater	Flooding during very heavy rain may block sections of road for short periods due to a combination of intentional design and cesspit lids blocking with debris.
		During extreme weather events, the culverts on River Road have from time to time become blocked resulting in localised flooding. Newly designed replacement culverts funded at a rate of 75% by NZTA are being installed during September 2020 along with a regular programme of clearing excess vegetation from the streambed.
		Roads could wash out from surface flooding. This has not occurred in Kawerau.
Road Roughness	Asphalt versus chip seal	Smoother roads reduce vehicle operating costs. Asphalt is much more expensive than chip seal so only limited areas can be justified.
Environmental Performance	Contaminated stormwater	All existing discharge points to natural waterways are covered by resource consents. Because the stormwater comes almost exclusively from the roading network there is unlikely to be unknown contaminants in the stormwater from other sources.
Other Capabilities	Safety	Physical characteristics of a road influence road safety. There have been no roads accidents recorded as being due to poor physical characteristics. The main contributors to accidents are driver related. Council is involved in both driver education and physical safety audits

### 3.5.RESOURCE CONSENTS

Stormwater collected on roads is channelled into rivers through the stormwater network. The resource consent conditions that control this process are described in the Stormwater Asset Management Plan.

### 3.6.SIGNIFICANT NEGATIVE EFFECTS

The roading network has the potential to have negative effects on the wellbeing of the environment, residents and society in general, mainly through pollution from vehicles and traffic accidents. The following consequences of the roading network are managed as described to ensure sustainable service with minimal impact:

- Stormwater runoff from roads concentrates and flows faster than that from vegetation areas, with potential to overflow the capacity of the stormwater infrastructure and damage waterways.
- Stormwater runoff contains small particles to which hydrocarbon and heavy metal by-product of engines and tyres bond. This, concentrated by rainfall, presents a threat to receiving waters.
- Spillage of contaminant due to insecure loads or vehicle accidents can cause a threat to the environment.
- Traffic contributes to air pollution and noise levels.
- People who use the roading network are at risk of personal injury due to how they and others use the network.
- Road works create additional temporary hazards and potential for additional pollutants.



The negative effects are minimised as follows:

- Cesspits enable some of the grit to be trapped for retrieval and disposal to landfills where contaminants are contained without discharge to receiving waters.
- During accident responses, the Council and the New Zealand Fire Service work together to contain spill contaminants as quickly as possible.
- In partnership with Central Government and the Regional Council, road rules are developed which aim to control traffic noise and emissions. Enforcement is provided by the New Zealand Police.
- Traffic accidents are in the main attributable to drivers not using roads safely. Council works with other agencies (Police, ACC, Toi Te Ora Public Health, NZTA, Road Safety Groups etc.) to improve driver behaviour. However, even when the risks are known, users still break recommended road safety practices.
- Qualified engineers assess Road design layout. Road improvements are constructed, upgraded, sign posted and illuminated appropriately to comply with design standards for safe alignment, driving performance, sight lines and vehicle design.
- Road workers are required to comply with additional temporary standards of signposting and safety to manage any risks created by their presence.



**SECTION FOUR**  
Risk Management



## 4.1. RISKS

### 4.1.1. *Physical Risks*

Physical risks are generally:

- As a result of the inevitable natural process of deterioration.
- Because of actions of other parties working in the vicinity of the assets.
- Because of natural disasters (earthquakes/flooding).

Durable materials, good workmanship, and careful planning will not always be sufficient to prevent physical damage by persons or natural events (severe flooding, earthquakes). In the last 25 years, there has been no damage to the roading network due to natural disasters despite the Edgumbe earthquake occurring during this time. This indicates that the roading network is exposed to minimal risk from natural disasters.

### 4.1.2. *Financial Risks*

Commercial risks are those that result in decreased cash flow and/or inability to fund the works that are required. They include loss of a major ratepayer (requiring the fixed cost burden to be absorbed by the remaining ratepayers), the failure to take advantage of any available subsidies and replacing roading network assets before end of life, resulting in less than optimal life-cycle cost.

### 4.1.3. *Health and Safety Risk*

These are health and safety risks to people and property, as a result of the physical actions or omissions of Council staff or contractors, or failure

of equipment. The practice of employing reputable contractors for maintenance and new works minimises health and safety risks.

### 4.1.4. *Environmental Risk*

There are environmental risks consequential to the construction and operation of the roading network and/or physical actions or omissions of Council staff or contractors. These risks are managed by good practice and compliance with the conditions of resource consents, such as stormwater runoff.

### 4.1.5. *Regulatory Risk*

This is the risk of prosecution due to failure to comply with legislation. The New Zealand Police or Department of Labour could charge Council with negligence if due care is not taken with roading works, especially if an accident were to happen.

Bay of Plenty Regional Council could prosecute Council if due care is not taken with spills on roads or if Council failed to rectify potential or actual pollution caused by roading activities.

Regulatory risks are managed by good practice and complying with the conditions of resource consents.

#### **Insurance**

Council has adequate insurance in place to ensure the infrastructure can be restored in the event of a natural disaster and still keep functioning financially.

#### **Civil defence and emergency response plans**

Council has separated essential staff for recovering the water supply system in the event of a natural disaster. The key areas have been identified and responses proposed.

## 4.2. RISK MITIGATION

Council actions taken to mitigate risks are set out in the table below.

**Table 7: Risk Mitigation**

Key Exposure	Class of Risk Probability	Residual Exposure Consequence	Mitigation
<b>Physical</b>			
Seismic Event	Medium	Significant	Earthquake Design Standards Access can be gained from both ends of road except for cul-de-sacs Insurance cover
Flood Event/ Road Closed	Medium	Low	Staff available 24/7 Flooding normally short term Alternative routes available
Damage by Others	High	Moderate	Staff available 24/7. Only use reputable contractors
<b>Commercial</b>			
Poor contractor/staff performance	Low	Low	Only use reputable contractors/trained staff Work undertaken in small parcels reduces impact of poor performance
Loss of Subsidy	Medium	High	Comply with NZTA agreement conditions NZTA does not change subsidy rates rapidly
Loss of computer records	Medium	Low	Data collected are backed up regularly
Injury to persons or property due to incorrect signage or operations	Medium	Medium	Use reputable contractors Monitor safety practices of contractors/staff
Injury to road or footpath users	High	Medium	Education enforcement initiatives undertaken Remedy defects in asset quickly. Offer support to person injured
<b>Environmental</b>			
Complaints about road noise, vibration	Low	Low	Complaints dealt with promptly
Waterway contaminated by construction or spillage runoff	Low	Medium	Spillage dealt with promptly Construction activities closely controlled
<b>Regulatory</b>			
Failure to have correct signs in place	Low	Moderate	Sign installers have knowledge of regulations Very few signs in Kawerau



## **SECTION FIVE**

### Future Needs



## 5.1. CURRENT CAPACITY

Notwithstanding any traffic growth due to the number of vehicles per household increasing and people becoming more mobile, the existing roads have significant spare capacity. There has been minimal change in roughness indicating that the current road strength is sufficient for the existing volume of heavy vehicles.

Significant change in heavy traffic in the urban area is not expected, as industrial development is likely to occur close to the State Highway.

## 5.2. FUTURE DEMAND

Kawerau District is experiencing and is expected to continue to experience zero to very low growth in demand for additional roading. A number of empty residential sections in the town, subdivided some years ago are still yet to be developed. Even if these sections were occupied, the existing roading network would cope with the additional demand.

The boundary between Whakatane and Kawerau districts was adjusted in 2012 to create a new industrial park on SH34 opposite the existing mill site. Industrial development is occurring as a result. The majority of this additional traffic would be on the state highway.

In response to the nationwide demand for housing, Council has very recently undertaken two new residential developments.

These industrial and residential developments will likely result in a small addition to the network however, the majority of any additional traffic will not significantly affect the existing network.

Any new roading infrastructure will either be constructed by the developer and vested in Council or built by Council and funded by the developer according to the financial contributions policy.

The GPS highlights Government's strategic priorities for transport are:

- Economic growth and productivity
- Road safety; and
- Value for money

Given the current static population in the District and the fact that industrial growth associated with the mill is generally serviced by the state highway, the strategic priorities from the GPS that impact on the District's road assets are Road safety, and Value for Money.

## 5.3. TRENDS

### Population growth

The Kawerau population had fallen between the 2006 and 2013 census, however the 2018 census found growth of 17.2% in 5 years against all projections for the district. Into the future, it is projected to rise with medium projections indicating a population of 8,000 by 2028.

Council is engaging in economic development initiatives to attempt to reverse this trend, and indeed the latest 2018 census for Kawerau was 7,460 that may indicate resurgence in the town. It is however, the more responsible approach to make projections based on Statistics New Zealand figures until robust information can support a more optimistic outlook.

As is the case with the rest of NZ, the population is aging with an increasing fraction of the population receiving state funded superannuation and job seeker benefits.

The average income in respect to the national average is expected to continue to decrease and there will be an increased requirement for external funding to maintain the infrastructure in the future.

**Table 8: Statistics NZ Population Projections – Kawerau District**

Projected Range	Population Change 2006–2043 (NZ Stats)							
	2006 Census	2013 Census	2018 Census	2023	2028	2033	2038	2043
High				8,110	8,410	8,650	8,830	8,970
Medium	6,921	6,363	7,460	7,910	8,000	8,020	7,970	7,860
Low				7,720	7,610	7,410	7,140	6,800

### **5.3.1. Vehicle traffic**

The number of traffic movements on roads is a measure of their use and trends in traffic volumes are indicators of growth. There is potential for a gradual return to smaller and more economical private transport vehicles due to increased cost of fuel. However, the effect of such changes on traffic volumes is likely to be negligible.

Commercial and industrial road use has the potential to impose high and/or seasonal demands on the roading network, although this is not expected to occur in Kawerau.

Increasing numbers of vehicles per household, a tendency for more parents to drive children to school, additional activities, and generally becoming more mobile has driven the per-head demand for roads upwards. This in turn is tempered by fluctuating fuel charges and the desire to become healthier through using alternative modes of transport.

Council is involved in initiatives to encourage a change in driving behaviour and reduce vehicle usage through increased use of alternative modes of transport.

This is being done for environmental and community health reasons rather than reducing congestion.

Overall, the existing network has sufficient capacity to accommodate predicted changes in volume without any detectable impact.

### **5.3.2. Cycle traffic**

There is one cycleway in the District installed and maintained by the large industries. It provides access to the industries from SH 34.

Council is involved in an initiative to encourage cycling as a health promotion activity. The existing roads are not heavily trafficked so additional cycle use on the roads could be accommodated. However, following central government focus on proactive encouragement of active forms of transportation, opportunities have been identified to encourage cycling in the future.

### **5.3.3. Pedestrians**

The existing network of footpaths has sufficient capacity to accommodate anticipated changes in volume without any detectable impact.

Along with an increasing aged and physically challenged population, we are anecdotally witnessing an increase in mobility scooters and power chairs.

This increase has necessitated consideration of footpath widths in particular those that make up main thoroughfares linking residential areas with the town centre, schools and industry.

### **Public transport – total mobility**

There are limited school bus services that transport children to schools within and outside Kawerau.

There is a bus service part funded through Bay of Plenty Regional Council that connects Kawerau with surrounding areas. There is also a daily bus service to and from areas outside of Kawerau and a number of courtesy coaches run by clubs and hotels for patrons.

The existing network has sufficient capacity to accommodate predicted changes in volume without any detectable impact.

### **5.3.4. Alternatives to road transport**

The only freight alternative to road transport in the District is the railway.

The rail line is currently used exclusively to convey timber, pulp and paper. Transporting the rail tonnage by road would have a significant impact on the State Highway.

Full utilisation of the railway corridor should be encouraged, not only to protect highways from greater wear and tear, but also to maintain a healthy competition between the competing modes of transport.

There is currently no use by tourism of the rail line, however there is potential for use in the future to link Kawerau with Tauranga and Mount Maunganui should a demand present itself. There will be no negative impact to the roading network by any foreseen changes in road transport.

### **5.3.5. Road Safety**

Road safety is an important consideration in the Roding activity. Council participates in the Eastern Bay Road Safety Committee to help achieve road safety outcomes. The Committee is focused on improving road safety in the Eastern by undertaking initiatives that are reviewed annually. The local initiatives are based on the New Zealand's road safety strategy 2010-2020,

**Safe Roads and Roadsides** - that are predictable and forgiving of mistakes. Their design encourages safe travel speeds.

During the course of the 2021 NLTP Council intends to continue its programme of installing traffic calming measures including speed humps (cushions) & raised pedestrian crossings in locations identified by staff, contractors and submissions from the public.

**Safe Speeds** - that suit the function and level of safety of the road. People drive to the nature of the road and the conditions, and they understand and comply with the speed limits.

**Safe Vehicles** - that prevents crashes and protects road users, including pedestrians and cyclists, in the event of a crash.

**Safe Road Use** - by road users who are skilled and competent, alert and unimpaired. They comply with road rules, take steps to improve safety, and expect safety improvements.

Council's main areas of focus are safe roads and roadsides, safe speeds and safe road use. The main activity is in education and working with at-risk groups.

The NZTA is a significant financial contributor to road safety and all programmes delivered are required to be NZTA approved.

## 5.4. VALUE FOR MONEY

In terms of the strategic priorities of the GPS, the District's strategic priority is delivering value for money in the provision of services across its road network. This involves ongoing vigilance in managing the network to achieve the best whole of life costs while providing levels of service that fit the purpose of the individual roads making up the network.

Council's tactical approach to achieving this is outlined in the next section of this plan, "Lifecycle Management. Council committed to the implementation of the requirements of the ONRC.

## 5.5. NEW CAPITAL REQUIREMENTS

There are no new significant capital requirements during the life of the Plan. Council will replace existing assets only.

Any new land developments in the industrial park or any future residential development would see additional roads constructed by the developer and vested in Council or funded from Council's financial contributions policy.





## **SECTION SIX**

### Lifecycle Management



## 6.1. Asset definitions

The assets and components that make up the Kawerau District Road Network are described in the table below.

**Table 9: Roading Assets**

Asset	Description
Pavement Formation	The land between road reserve boundaries.
Pavement Structure	The crushed aggregate placed on the pavement formation (earth) and under the pavement surface.
Pavement Surface	The chip seal or hot mix material that vehicles run on.
Kerb and Channels	The concrete edging between the grassed berm and the pavement surface.
Footpaths	The concrete strip in the grassed berm for pedestrian to walk on.
Structures	Bridge, culverts and retaining walls.
Street Lighting	Street light, poles, brackets and underground cables.
Traffic Services	Painted lines on road, street signs, regulatory signs, posts, raised pedestrian crossings, speed humps and cushions.

## 6.2. Critical Assets

### Pavement formation

The land between road reserve boundaries is a roading asset. This land is vested in the Council and for State Highways vested in the Government. The road reserve includes service lanes and pedestrian access ways, which are a feature in Kawerau's roading network.

Council may close a road and sell it, acquire additional land for road and may assign rights of occupation of parts of the road reserve for underground utilities etc., subject to appropriate legal processes and in accordance with statutes, primarily the LGA.

Most road reserves in the District are 20-metres wide, but some are smaller. Several road reserves also have recreation reserve between the road reserve and the visible road reserve boundary, and therefore appear wider than they are.

### Pavement surface

The pavement surface provides a smooth-riding, durable, skid-resistant wearing layer on which traffic travel. On sealed roads, it also protects the pavement formation from the ingress of water.

### Structures

Structures include one bridge, five culverts and several small retaining walls. The bridge is across the Tarawera River on Waterhouse Street (Reserve bridges are included in the Community Facilities and Property Asset Management Plan). It is single lane, has a concrete deck on steel girders and cannot

carry HPMV vehicles. Built in 1960, the bridge is 30 metres long. It is the main access to the Tarawera Falls and to the forest areas east of Kawerau.

Bridge traffic load is light. Heavy vehicles removing logs from the forest use an alternative private road (McKee Road).

There are five culverts of various diameters in the District, with a total length of 168 metres. They are located under River Road (two box culverts originally built 1957 and 1973); Valley Road (Armco large built 1985), Bell Street (box culvert built 1957), Beattie Road (pipe built 1985) and farm entrance Valley Road (pipe 2006). The two box culverts under River Road were redesigned with replacement to be concluded in April 2021 to improve flow in times of extreme rain events.

## 6.3. Other Assets

### Street lighting

There are currently 764 streetlights recorded in the District database. Some are attached to power poles not owned by Council. In these situations, only the lantern and bracket are treated as Council assets. These assets being separately identified for valuation and funding purposes.

Following recent land developments in both residential and industrial, it is anticipated that there will be a number of new assets to be vested in Council during this financial year.

Street lighting is provided in urban areas to support road traffic safety, assist pedestrian

movement and safety, to be a deterrent to crime and to a lesser extent, to enhance the amenity of a neighbourhood.

The design of the River Road culverts carrying the Pumphouse Spring overflow stream were found to be a significant cause of flooding in the Fraser Street area. Designs were commissioned for replacement culverts that provided a larger free flowing structure. These new culverts are being installed from November 2020 and due for completion in April 2021.

Street lighting assets are individually recorded in Council's RAMM database. The database has recently been found to have a number of errors and omissions therefore is being subjected to a Data Validation project undertaken by WSP. The database also contains a number of amenity lights that are not part of the roading asset.

### **Traffic services**

Traffic services assets include traffic signs, road markings, guardrails, sight rails, amenity signs and other roading furniture owned by Council are currently only recorded in the asset register.

The purpose of traffic services assets is to provide advisory and regulatory information and/or physical guidance to all road users and to improve safety in the road environment. For speed, parking and other regulations to be enforceable, the signs must comply with the prescribed standard. Signs are therefore a key component in the road safety and enforcement partnership with the New Zealand Police and other Government Agencies.

Road sign assets along with their condition assessment and installation dates will be recorded in RAMM as part of the wider Data Validation project being undertaken during 2020/2021. Any assets found to be in a poor condition as a part of the survey will be programmed for replacement before the conclusion of the current NLTP.

### **Kerb and channel**

The whole town has concrete kerb and channel on both sides of the sealed carriageway. Approximately 60% of the kerb and channel is one-piece slip formed. The other 40% was constructed using a combination concrete base and block backing or concrete base and then concrete backing. The concrete base and block backing kerbs have poor finish, weak concrete, collect dirt, grow weeds and look shabby.

### **Footpaths**

Almost all roads have footpaths on both sides of the street. Footpaths are made of concrete, cobblestones, hotmix or chip seal, with most being concrete and a small section of chip seal. The town centre has cobblestones, concrete and some hotmix.

The surface of the concrete footpaths is sound. The problem is that tree roots lift sections of footpath causing unevenness. To rectify this, lifted sections are removed and replaced. In some instances, the offending tree is removed.

Approximately 30 percent of the town centre concrete footpaths were replaced in 1997. Replacement of the remaining 70 percent is programmed to commence during the 2020/2021 year and will improve the appearance of the town centre. The extensive replacement of the severely worn concrete cobblestones in the town centre with cut concrete along with other landscaping work is currently underway.

## **6.4. Maintenance Plan**

### **Sealed Pavement**

- Crack sealing
- Preventative maintenance on the wearing course.
- Localised pavement repairs, like dig outs, small areas of asphalt removal and relaying (hand work).
- Pavement failure repairs (other than potholes), i.e. Sink hole repairs
- Spraying chipseal road with lichen killer
- Potholes repaired as they occur.

### **Kerb and Channel**

Spraying for weeds, removal of litter and sweeping grit from the channels is the maintenance undertaken.

### **Footpaths**

Trip hazard elimination by either grinding or packing behind raised lips caused by tree root lifting as a temporary measure to provide the opportunity to programme section replacement of areas of multiple failures.

The new NLTP includes an application of \$60,000 for the cost of footpath maintenance.

### **Structures**

Maintenance requirements on the bridge are minimal (e.g. painting handrails, waterway clearance). The bridge is fully inspected on a two-yearly frequency with the waterway and general condition checked annually.

Maintenance of the culverts involves keeping the entrances clear of weeds and debris.

Maintenance of the retaining wall involves replacing broken boards and removing graffiti.

### **Street lighting**

Inspections are carried out weekly in-house along with the maintenance contractor undertaking a thorough patrol monthly. Lamp replacements, cleaning and other general maintenance are undertaken as faults are reported.

In addition, public complaints are attended to at least weekly with section outages attended to on the same day. Management of vegetation affecting street light performance occurs on an annual basis.

### **Traffic services**

Road markings are re-painted annually. They are not treated as a capital item by Council, but are by NZTA. All road signs installed comply with the Manual of Traffic Signs and Markings. They are generally mounted on white-painted timber or steel posts. The sign substrate (surface to be painted) panel may be aluminium or tough plastic sheet. Most signs have retro reflective properties.

## **6.5. Renewal/Replacement**

### **Pavement formation**

The pavement formation under the pavement structure does not deteriorate in Kawerau due to the quality of the soil (Tarawera ash) and low traffic loading (small number of heavy vehicles). Therefore, there is little demand to refurbish or replace the pavement formation.

This year weakness in the structure of Fletcher Ave has resulted in a plan to address the pavement integrity with an additional \$50,000 each year for the next three years allocated in the 2022 NLTP application.

### **Pavement surface**

The surface of a sealed road is regarded as a capital component because it is designed for a life expectancy in excess of one year, before it requires resealing.

There are several products that can be applied, including chip seals of various sizes; structural asphaltic concrete that also forms part of the pavement and bituminous slurry seals. Chip seals comprise by far the majority of Kawerau road surfaces.

Asphaltic concrete (or 'hotmix') is used selectively in special situations (roundabouts, parking areas, town centres) where chip seal does not perform well due to the scrubbing action of turning traffic or where a higher quality surface is required.

Normally resealing occurs because the bitumen is becoming brittle with age and is allowing water into the base course, rather

than the surface wearing out. The life cycle used for bitumen roads is 15-18 years. This can vary from road to road depending on traffic volumes. The hotmix roads are expected to give 20 years of service.

The NZTA monitors the average reseal life of the network. Roads are selected for resealing due to ageing and visual condition of the current seal surface. Surface failure significantly influences the life of the pavement formation that is costly to replace.

Bitumen is a significant component of reseal costs. Increases in bitumen prices will influence future costs, as the annual reseal length must be maintained to ensure ongoing road quality. Increasing the area of hotmix around the town improves the level of service, but at an increased cost. The resealing programme meets the requirement to keep the surface in a quality condition.

The 2021/24 NLTP application includes funding for programme of resealing set at \$130,000 per year.

### **Kerbs and channels**

The kerb and channel replacement programme began in 1992 and has been ongoing since then. Between 500 and 1000 metres is being replaced annually at current funding levels. This programme meets the requirement to maintain the kerb and channel in a good quality condition.

Also included in the 2021/24 NLTP, Drainage Renewals is a \$600,000 application funding for a stormwater renewal programme.

### **Footpaths**

Renewal funding applied for to the value of \$465,000 over the period of the 2021/24 NLTP will continue to see the footpath network maintained in a quality condition.

There is a need to accommodate the increasing number of alternate forms of pedestrian transport modes (mobility scooters, power chairs etc.) and the corresponding requirement for them to share the footpath with foot traffic.

Council intends to begin increasing the width of the existing footpath network along key routes as part of programmed replacements.

### **Structures**

Major works (bridge painting, wing wall replacement and total culvert replacement etc.) are included in the estimates when required. This work is carried out to sustain the integrity of the structures and achieve optimal whole of life costs. There is no planned significant renewal for roading structures within the scope of this AMP or for the 2021/24 NLTP.

### **Street lighting**

Street lighting asset renewals are as follows:

- A programme has been developed for the replacement of degraded poles and outreaches throughout the district is planned requiring an additional \$126,000 spread over the next three years allocated in the 2021/24 NLTP application.
- Almost all the lights in the District were upgraded with LEDs during the period 2017/18 to 2018/19. The cost of the upgrade was approx. \$280,000.
- Following the upgrade, the projected maintenance requirements are significantly reduced in the long term and especially in the years immediately following the upgrade.
- Following an unexpected announcement from Horizon Energy regarding the planned decommissioning of the Ripple Plant controlling the district's streetlights, Council has urgently developed a plan for the installation of photocell sensors. These installations will be undertaken at a cost of \$45,000 alongside any maintenance/fault fixing work rather than a separate project. It is anticipated that this will save on costs and should be successfully completed prior to the decommissioning of the ripple plant.

### **Traffic services**

Replacement of signs is often necessary due to damage rather than due to age.

The current funding available ensures replacement of signs occurs at the appropriate frequency.

### **6.6. New Assets**

Ongoing industrial/commercial development at the new industrial park on SH34 and future residential housing developments in town will require the construction of new roads and footpaths by the developers, to then be vested with Council.

### **6.7. Deferred Maintenance**

Currently there is no known deferred maintenance with the roading network and the full service potential of the asset is being maintained. Council policy is to avoid any deferred maintenance.

### **6.8. Disposal Plan**

There are no disposals foreseen during the life of the Plan.



**SECTION SEVEN**  
Financial Forecasts



## 7.1.Future Requirements

**Table 10: Financial Forecasts**

	Estimate 2021- 2022	Estimate 2022- 2023	Estimate 2023- 2024	Estimate 2024- 2025	Estimate 2025- 2026	Estimate 2026- 2027	Estimate 2027- 2028	Estimate 2028- 2029	Estimate 2029- 2030	Estimate 2030- 2031
<u>Expenditure</u>										
Personnel costs	162,218	166,122	168,596	171,469	174,903	178,746	182,850	187,244	192,108	197,291
Materials	354,519	357,209	359,586	369,552	379,859	390,815	401,328	412,677	424,354	436,158
Internal charges	214,000	218,280	222,650	226,880	230,960	235,120	239,120	243,190	247,330	251,280
Depreciation	868,981	870,934	872,883	949,546	951,543	953,597	1,034,548	1,036,723	1,038,961	1,127,160
Overheads	390,650	392,460	409,360	408,090	421,700	439,160	440,090	453,830	477,030	476,870
	<b>1,990,368</b>	<b>2,004,995</b>	<b>2,033,075</b>	<b>2,125,537</b>	<b>2,158,965</b>	<b>2,197,438</b>	<b>2,297,936</b>	<b>2,333,664</b>	<b>2,379,783</b>	<b>2,488,759</b>
<u>Asset Renewals</u>										
	1,095,960	872,510	829,920	565,870	582,280	599,170	616,540	634,420	652,820	671,750
	<b>3,086,328</b>	<b>2,877,505</b>	<b>2,862,995</b>	<b>2,691,407</b>	<b>2,741,245</b>	<b>2,796,608</b>	<b>2,914,476</b>	<b>2,968,084</b>	<b>3,032,603</b>	<b>3,160,509</b>

## 7.2. Funding Policy

### 7.2.1. Subsidised Portion of Activity

Roads and footpaths provide both public and private benefits but it is not possible for Council to determine the proportion of each or to charge each group of users. For these reasons, Council has assessed the subsidised portion of the activity as 100 percent public good.

### 7.2.2. Non-Subsidised Portion of Activity

Central government does not subsidise pavement surfaces and footpaths in the central business district. Because the CBD area is a focal point for the whole community, the whole community benefits from its roads. This portion of the activity has therefore also been assessed as 100 percent public good.

**Table 11: Funding Sources for Roading**

	2021/ 2022	2022/ 2023	2023/ 2024
<b>Subsidised portion</b>			
Government (NZTA)	75%	75%	75%
General rates	25%	25%	25%
<b>Non-subsidised portion</b>			
General rates	100%	100%	100%

## 7.3. VALUATION

The roading network infrastructure is valued on a three-yearly cycle. Assets are valued at fair value determined on a depreciated replacement cost basis. The most recent revaluation is effective as at 30 June 2019.

### 7.3.1. Asset basis of valuation

**Replacement Cost** Today's cost of replacing the asset with the same or a similar asset and depreciated over the life of the asset.

**Optimised Depreciated Replacement Cost** Today's cost of replacing the asset with another asset which provides the same level of service (or a lesser level of service if demand has reduced) most efficiently and depreciated over the life of the asset to reflect its current value and remaining economic life.

The replacement cost assigned to each asset has been determined by suitably qualified and

experienced professional persons and has been peer reviewed.

### 7.3.2. Expenses

Maintenance and operating costs are expensed in the year they are accrued. The capitalisation threshold for roading assets has been set at \$500 or the actual value of individual components where they are identified in the asset register.

### 7.3.3. Changes in asset valuation

The costs associated with renewing assets and providing new or improved asset infrastructure are capitalised and depreciated in accordance with the assessed economic life of each asset. This applies also, where a developer provides infrastructure to be taken over as public assets by Council.

## 7.4. Capitalisation threshold

The following definitions are used for asset management purposes and the financial treatment is summarised below:

**Maintenance** is work done that is of an operational nature that can contribute to the asset life reaching its maximum potential but neither increases the value nor extends the remaining life of any asset.

**Renewal** is work done to replace an existing asset and recorded in the asset register. The cost of replacement must be greater than \$500 and is a capital expenditure recorded in the asset register as a new asset and uniquely identified.

If the asset replaced is discarded or sold, it must be removed from the asset register and any residual value must be formally written off.

An addition to the asset register is required when a new asset is created with a value exceeding \$500. A new asset must be uniquely identified, and recorded in the asset register. The record in the asset register requires an assessment of the asset's remaining life expectancy (based on straight-line depreciation or estimated remaining life).

Where the asset register recognises an individual component worth less than \$500, the threshold does not apply and the additional value is capitalised.



## 7.5.Key Assumptions

The current valuation and renewal profiles are based on data currently available.

### 7.5.1. Asset condition

In the case of the roading network, the condition is taken as being directly related to age, unless better information is available.

The roughness and visual inspections provide information on the road deterioration.

### 7.5.2. Replacement cost

The projected replacement costs and depreciated values shown in the table below have been derived from Council's asset register.

**Table 12: Replacement Costs**

Asset Type	GRC 2019 (\$m)	ODRC 2020 (\$m)
Pavement Formation	1.73	1.74
Pavement Structure	9.55	3.58
Pavement Surface	3.48	1.17
Kerbs and Channels	8.29	4.40
Footpaths	7.55	3.58
Structures	1.42	0.59
Street Lighting	3.45	1.36
Traffic Services	0.52	0.35
<b>TOTAL</b>	<b>35.99</b>	<b>16.77</b>

### 7.5.3. Depreciated value and life expectancy

Straight-line depreciation has been adopted for all assets. The life expectancies used to calculate depreciation are shown in the table below.

**Table 13: Asset Life Expectancies**

Asset	Average Life Expectancy (Years)
Street Lighting	12
Street Lighting – Cabling	30
Street Lighting - Poles	60
Kerb and Channel	100
Footpaths	80
Pavement Surface	18
Pavement Structure	80
Bridge	80
Carparks	13
CCTV	7
Minor safety	12

#### **7.5.4. Population**

Further sustained decline in population as predicted by Statistics New Zealand may erode the rating base of the District, placing a higher burden on the remaining ratepayers for infrastructure replacement. Population trends are reviewed as frequently as reliable data can be obtained.

#### **7.5.5. Other assumptions**

- All expenditure is stated in 2020 values, with allowance made for the inflation over the planning period.
- All costs are GST exclusive.
- Operational costs are generally shown to increase in relation to inflation.
- Renewal costs are based on anticipated replacement requirements.
- The costs of insurance and risk mitigation are included in the forecasts.
- Climatic and other environmental trends are expected to continue as they have in the past.
- The plan provides scope for some growth in industrial/commercial demand.

## **7.6. Development Contributions /Financial Contributions**

Section 102 of the Local Government Act requires a local authority to adopt a development contributions or financial contributions policy.

There is spare capacity in Council's infrastructure that means it can cope with some growth without a resulting increased demand for services.

Therefore, Council does not need to extend infrastructure to cope with increasing demand.

Council's policy is to retain the provisions of the District Plan that allow the assessment of financial contributions rather than assess development contributions under the LGA.

### **7.6.1. Financial contributions**

New subdivisions or developments may require the extension of Council infrastructure networks for water supply, wastewater disposal and roading.

Council's financial contributions policy provides that the cost of these extensions is the responsibility of those who create the demand.

Developers may be required to make financial contributions to meet the full cost of additional infrastructure necessary to support their subdivision or development.



## **SECTION EIGHT**

### Asset Management Systems & Processes



## 8.1. Responsibilities for Asset Management Outcomes

The Asset & Contract manager is responsible for the development of this asset management plan, including maintaining the integrity of Council's asset information, communicating Council's future projects and meeting the obligations for funding of Waka Kotahi Land Transport New Zealand.

The Engineering manager is responsible for the identification, planning, programming and undertaking of works required for the maintenance and development of Council's roading assets.

The Manager, Finance & Corporate Services is responsible for providing an overview of the development of this asset management plan, for ensuring that future projects are incorporated in Council's Long Term Plan and that there is consistency between these documents.

The Manager, Operations and Services is responsible for delivering the outcomes for the Roothing activity. This includes ensuring that the assets are maintained and operated to Council's requirements, that adequate budgeting for maintenance, operating and improvement costs are provided.

## 8.2. Accounting and Asset Management Systems

### **Billing/accounting system**

Council uses the Ozone software for its accounting and billing systems. It does not store or compute asset management information.

All formal asset management financial reporting including valuation is currently held in Excel spreadsheets.

### **Procurement strategy**

All procurement to replace, add new or maintain roading assets will be done according to the Kawerau District Council Procurement Policy and Council's Roothing Procurement Strategy updated in April 2020 and formally endorsed by Waka Kotahi NZ Transport Agency in May 2020.

Procurement opportunities are utilised when available in order to reduce costs and improve efficiency of the procurement process. Recently, the street light LED upgrade was done in collaboration with the Whakatane District Council and the purchase of luminaries was done in bulk that resulted in significant savings.

### **Electronic Storage of Asset Data**

Currently, roading information required to meet NZTA requirements is stored on RAMM (see below). Not all the information about the roading network is currently stored electronically.

## **Road Assessment and Maintenance Management system (RAMM)**

Central Government adopted RAMM in the 1990s as the accepted roading information management software. Since that time, Council has stored roughness rating surveys, re-seal and some streetlight data in RAMM.

A significant data validation project is underway utilising WSP due to conclude before June 2021 to ensure that all data relating to the Roothing activity in Kawerau is complete and accurate with processes in place to ensure data compliance moving forward.

### **Pavement**

Pavement information is currently stored in Excel spreadsheets. This information will be entered and stored in RAMM both as part of the data validation project or as works are undertaken for future programming.

### **Surfaces**

Surface information will be stored in RAMM and updated annually.

### **Structures**

Little information about the bridge or culverts is currently held electronically. This information will be entered and stored in RAMM both as part of the data validation project or as works are undertaken for future programming.

### **Street lighting information**

Information about the street lighting is being entered into RAMM, both as part of the data validation project or as maintenance work on the lights is undertaken. This information will be entered and stored in RAMM for future work programming.

### **Traffic services**

No electronic information is currently held on these assets. This information will be entered and stored in RAMM for future work programming.

### **As-built processes and asset management form**

Renewals, replacements and additions to roading assets are included in the asset register. However, it is undertaken annually rather than as it occurs. It is planned in future to update the information on asset renewals, replacements and additions as they happen. This will be done in RAMM with the exception of Stormwater which is kept and maintained in AssetFinda.

### **Hard copy plans**

Council holds plans for all roads developed since 1995. There are some plans of roads developed prior to this. It is intended the relevant plans will be archived and the asset information stored electronically as a part of Council's data validation and broader Records Management Upgrade projects.

## 8.3. Key Information Flows and Processes

Key information flows and process linkages include:

- Translating the Community Outcomes into detailed levels of service that can be embodied into Asset Management Plans
- Preparation of annual budgets and ongoing reporting
- Ongoing compliance monitoring and reporting of environmental performance
- Ongoing management of the asset to ensure that service levels are maintained

### 8.3.1. Performance & Condition Monitoring

Performance monitoring programmes include:

- Annual measuring of road surface roughness
- Updating of roughness data in the RAMM programme in conformity with NZTA requirements
- Updating reseal data in RAMM annually
- Periodic measurement of traffic flows at established sites to provide data for the computation of benefit cost ratios and traffic growth trends
- Compliance with performance measures as specified for Road Controlling Authorities to deliver under the ONRC are continuing to be addressed. These performance measures are intended to provide a level of service in keeping with the classification of road and set technical outcome measures for the provision of roading infrastructure.
- Accident monitoring
- Contractor/staff performance (includes safety, hazard identification and environmental performance).

### 8.3.2. Policies for renewing assets

Renewal of components in the network with larger components to improve capacity is treated

purely as renewal capital expenditure. This is because additional capacity cost of the larger component is not material compared to renewal cost of same sized component.

### 8.3.3. Constructing new assets

There has been little demand for additional capacity for many years. Recent nationwide housing demand pressures are incentivising the creation of additional housing developments across the country resulting in additional related infrastructure. This prompted Council to initiate the development of two residential subdivisions, one specifically designed for retirees.

Economic downturn has also prompted both local and central government to focus on economic development incentives and projects that has seen significant public funding invested in private commercial enterprise.

Funding to provide additional capacity is treated on its merits, but in most cases, the funding would be sought from the developers.

### 8.3.4. Assets vested in Council

Subdivisions, both industrial and residential include roading networks. These are installed at the developer's expense to approved Council standards and then vested in Council.

'As built' new works occur either due to subdivisions, or the installation of new assets. In both instances, detailed records of new works are obtained. These new assets are added to the asset register.

### 8.3.5. Asset disposal

Most of the components are essential to continuing provision of the service. Extensive decommissioning and disposal is very unlikely.



## **SECTION NINE**

### Monitoring Improvement Planning



## 9.1.Asset Management Performance Measures

The broad objectives of asset management are:

- To optimise the life of the assets
- To minimise life cycle costs
- To maintain agreed levels of service

## 9.2.Improvement Actions

**Table 14: Improvement Actions**

Improvement Item	Comment	By When	By Whom	Cost
Review population projections	Information will be provided by Statistics NZ	2021	ACM	\$0
Review traffic flow data	Undertake traffic flow surveys	5 yearly	EM	\$6,000
Review asset life expectancy	Expert advice required	2020-21 and 3 yearly thereafter	MOS	\$3,000
Add Streetlight information to RAMM	RAMM Data Validation programme	2021	ACM Contractor	\$10,000
Add Footpath and Kerb & Channel information to RAMM	RAMM Data Validation programme	2021	ACM Contractor	\$6,000
Add Pavement information to RAMM	RAMM Data Validation programme	2021	ACM Contractor	\$6,000
Add Traffic Services information to RAMM	RAMM Data Validation programme	2021	ACM Contractor	\$6,000
Add Structures information to RAMM	RAMM Data Validation programme	2021	ACM Contractor	\$2,000
Annually update roading upgrades to RAMM	Resource	Annually	EM	\$2,000
Input asset replacement costs RAMM	Resource	Annually	EM	\$1,000
Conduct asset revaluations	Resource	2020-21 and 3 yearly thereafter	MFCS	\$1,000
Implement the requirements of the One Network Road Classification (ONRC)	Underway	Ongoing	ACM	\$0
Peer review AMP	Agreement with WBOP to peer review AMP	2021	ACM	\$1,000

ACM = Asset and Contract manager

EM = Engineering manager

MOS = Manager, Operations and Services

MFCS = Manager, Finance and Corporate Services

### **9.2.1. ONRC and ONF**

The NZTA developed the One Network Road Classification (ONRC). This was established as a functional classification for roads that is to be applied nationally with the intention of ultimately providing the road users a more consistent experience.

The current project to evolve the ONRC to a new One Network Framework (ONF) aims to align the ONRC more closely with Central Government's outcomes focus areas of greater livability and prosperity through a 'Movement and Place' approach. The intention being to move away from simply focusing on 'roads, cars & trucks' to the broader question of how people get from one place to another in the context of community wellbeing, economic activity and growth.

The system provides customer and performance levels of service pertinent to the road classification involved. It is to be utilised by Road Controlling Authorities (RCA) to provide performance and costing information by classification.

### **9.3. Monitoring and Review Procedures**

The two main measures used to grade the roading network are the 'road condition rating' and 'road roughness'. The two provide a standardised measure of the status of discrete sections of roading and the RAMM treatment selection programme uses this information to

give a first order prioritisation and appropriate treatment for deficient sections. The information provides a very useful 'first cut' for priority works when the forward roading programme is being prepared.

Road roughness is a reproducible measure of the riding quality of the road. All roads in the District are roughness surveyed each year. It is measured by a standardised vehicle and is expressed in 'NAASRA' units that are a measure of the vertical displacements of the vehicle relative to the road. The higher the NAASRA units – the rougher the road is. A newly constructed road would generally have a roughness of <70. The higher the roughness, the more likely the road is in need of rehabilitation. Condition indicators include seal cracking, pot-holing, edge break, rutting, shoving, scabbing, flushing, drainage and shoulder condition. In urban areas, the roughness may be due to trenches, manholes, fire hydrants and the like, so a visual inspection is required to verify if failure is occurring before programming in rehabilitation.

The Leadership Team will monitor and review improvement items on a six monthly basis. This plan will be reviewed annually as part of annual plan development.





# SECTION TEN

Appendices



## 10.1. APPENDIX A – DETAILED ASSET DESCRIPTION\*\*

(\*\* information prior to completion of the data validation project due to completion in 2021)

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
<b>STREET LIGHTING</b>				
Street Lights - various	SODIUM H/P 70W / Mercury 80W		57	1995
	SODIUM H/P 150W /Mercury 250W		194	1995
	SODIUM H/P 250-400W		17	1995
	PD BECON 100W & POLE		6	1995
	LED XSP1 29 W		29	2016
	LED XSP1 67 W		150	2016
	LED XSP2 101 W		71	2016
	LED Mini 17 W		120	2015
	CABLING UNDERGROUND		9,400	1985
	STREET POLES (6-8M)		409	1970
	STREET POLES (8-18M)		35	1970
	LIGHTING ARMS		251	1970
	STREET POLES (6-8M)		24	2006
<b>FOOTPATHS</b>				
Footpaths - various	Zone 1	Concrete	41,312	1957
	Zone 1	Concrete	235	2001
	Zone 1	Concrete	1,338	2002
	Zone 1	Concrete	3,000	2003
	Zone 1	Concrete	364	2009
	Zone 1	Concrete	362	2010
	Zone 2	Concrete	13,408	1965
	Zone 2	Concrete	168	2002
	Zone 2	Concrete	300	2003
	Zone 2	Concrete	120	2008
	Zone 2	Concrete	423	2009
	Zone 2	Concrete	309	2010
	Zone 3	Concrete	11,143	1973
	Zone 3	Concrete	189	2001
	Zone 3	Concrete	193	2002
	Zone 3	Concrete	300	2003
	Zone 3	Concrete	98	2008
	Zone 3	Concrete	345	2009
	Zone 3	Concrete	252	2010
	Zone 4	Concrete	14,133	1978
	Zone 4	Concrete	10	2001
	Zone 4	Concrete	508	2002
	Zone 4	Concrete	1,200	2003
	Zone 4	Concrete	127	2008
	Zone 4	Concrete	446	2009
	Zone 4	Concrete	325	2010
	Zone 5	Concrete	8,446	1985
	Zone 5	Concrete	175	2002
	Zone 5	Concrete	600	2003
	Zone 5	Concrete	76	2008
	Zone 5	Concrete	267	2009
	Zone 5	Concrete	195	2010

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
<b>KERBS &amp; CHANNELS</b>				
Kerb and channel - various	Zone 1	Concrete	28,320	1957
	Fergusson St - 287m (Zone 1)	Concrete	287	2001
	Bowen St - 183m (Zone 1)	Concrete	183	2001
	Onslow & Grey St - 445m (Zone 1)	Concrete	445	2001
	Mackenzie St - 450m (Zone 1)	Concrete	450	2002
	Zone 2	Concrete	11,137	1965
	Zone 3	Concrete	9,177	1973
	Zone 4	Concrete	10,300	1978
	Zone 5	Concrete	8,915	1985
	Grey St - 230m (Zone 1)	Concrete	230	2003
	Mackenzie St - 200m (Zone 1)	Concrete	200	2003
	Vogel St - 70m (Zone 1)	Concrete	70	2003
	Plunket St - 30m (Zone 6)	Concrete	30	2003
ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
<b>STREET LIGHTING</b>				
<b>PAVEMENT SURFACE</b>				
Seal - various	ATKINSON STREET	Chip Seal	1,854	2001
	BALLANCE STREET	Chip Seal	3,600	2000
	BALLANTRAE	Chip Seal	2,800	1991
	BALLANTRAE	Chip Seal	500	1991
	BEATTIE ROAD	Chip Seal	2,300	1999
	BEATTIE ROAD	Chip Seal	6,200	1999
	BELL STREET	Chip Seal	933	2001
	BELL STREET	Chip Seal	3,319	2001
	BELL STREET	Chip Seal	3,215	2001
	BLDISLOE STREET	Chip Seal	1,000	1990
	BLUNDELL AVENUE	Chip Seal	1,600	1994
	BOSS ROAD	Chip Seal	1,300	1994
	BOWEN STREET	Chip Seal	2,400	1991
	BROWNE STREET	Chip Seal	600	1991
	COATES ST	Chip Seal	950	1999
	COBHAM DRIVE	Chip Seal	1,600	1998
	COBHAM DRIVE	Chip Seal	2,000	1999
	COBHAM DRIVE	Chip Seal	1,700	1999
	DELAMERE DRIVE	Chip Seal	1,500	1996
	DIPPIE PLACE	Chip Seal	400	1999
	DOMETT STREET	Chip Seal	5,600	2004
	DOUG WILSON CRES	Chip Seal	600	1999
	DUMP ROAD	Chip Seal	400	1998
	DUMP ROAD	Chip Seal	3,960	1971
	EMME ALLAN ROAD	Chip Seal	1,000	1998
	FENTON MILL RD (SOUTH)	Unsealed	0	1981
	FENTON MILL RD (SOUTH)	Chip Seal	2,000	1996
	FENTON MILL ROAD	Chip Seal	11,000	1992
	FENTON MILL ROAD	Chip Seal	3,400	1992
	FENTON STREET	Chip Seal	1,600	1988
	FENTON STREET	Chip Seal	5,500	2004
	FERGUSSON STREET	Chip Seal	700	1991
	FITZGERALD STREET	Chip Seal	2,000	2004

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	FITZROY STREET	Chip Seal	800	1992
	FLETCHER AVENUE	Chip Seal	6,294	2006
	FLETCHER AVENUE	Chip Seal	2,162	1995
	FLETCHER AVENUE	Asphaltic	1,600	2006
	FLETCHER AVENUE	Chip Seal	144	2005
	FORBES PLACE	Chip Seal	900	1991
	FORSAITH STREET	Chip Seal	2,000	2004
	FOX STREET	Chip Seal	837	2002
	FRASER STREET	Chip Seal	700	2009
	FREYBERG STREET	Chip Seal	1,000	2004
	GALWAY STREET	Chip Seal	6,456	2002
	GLASGOW STREET	Chip Seal	3,740	1992
	GORDON STREET	Chip Seal	2,200	2008
	GREY STREET	Chip Seal	5,500	2008
	HADLEY STREET	Chip Seal	1,400	1995
	HAHURU ROAD	Chip Seal	1,100	1995
	HALL STREET	Chip Seal	3,328	2001
	HARDIE AVENUE	Chip Seal	2,500	1998
	HARDIE AVENUE	Chip Seal	4,000	1998
	HARDIE AVENUE	Chip Seal	3,000	1998
	HAY PLACE	Chip Seal	500	1999
	HINEMOTU AVENUE	Chip Seal	2,400	2004
	HOBSON STREET	Chip Seal	2,600	2008
	HOLLAND CRESCENT	Chip Seal	1,000	1998
	HOLYOAKE CRESCENT	Chip Seal	4,500	2000
	ION ROAD	Chip Seal	2,000	1994
	ISLINGTON STREET	Chip Seal	3,000	1990
	JERVOIS STREET	Chip Seal	600	1991
	JULIAN ROAD	Chip Seal	900	1998
	KIRK CRESCENT	Chip Seal	2,025	2001
	LIVERPOOL STREET	Chip Seal	1,700	1990
	LIVERPOOL STREET	Chip Seal	2,500	1990
	MACKENZIE STREET	Chip Seal	1,000	2004
	MACKENZIE STREET	Chip Seal	1,200	2004
	MANUKORIHI STREET	Chip Seal	475	1956
	MANUKORIHI STREET	Chip Seal	1,320	2008
	MARSHALL STREET	Chip Seal	1,100	1994
	MARSHALL STREET	Chip Seal	350	1994
	MASSEY STREET	Chip Seal	2,000	2004
	MASSEY STREET	Chip Seal	3,300	2004
	MAWAKE ROAD	Chip Seal	1,300	1995
	NEELY PLACE	Chip Seal	700	1991
	NEWELL STREET	Chip Seal	6,892	2002
	NORMANBY STREET	Chip Seal	2,800	1991
	NORRIE STREET	Chip Seal	1,500	2004
	ONSLow STREET	Chip Seal	3,000	1997
	ONSLow STREET	Chip Seal	10,552	2001
	ONSLow STREET	Chip Seal	850	1997
	OPUNOKI DRIVE	Chip Seal	547	2001
	OWEN ROAD	Chip Seal	1,000	1999

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	PAORA STREET	Chip Seal	1,350	1956
	PARIMAHANA DRIVE	Chip Seal	700	1997
	PARIMAHANA DRIVE	Chip Seal	700	1997
	PAYNE CRESCENT	Chip Seal	567	2001
	PETER LIPPA DRIVE	Chip Seal	5,800	1995
	PLUNKET STREET	Chip Seal	1,000	1992
	PLUNKET STREET	Hotmix	1,500	2008
	PLUNKET STREET	Hotmix	1,500	2009
	PLUNKET STREET	Hotmix	1,500	2010
	POLLEN STREET	Chip Seal	3,311	2001
	PORRITT DRIVE	Chip Seal	7,038	2001
	RAMSDEN PLACE	Chip Seal	300	1999
	RIVER ROAD	Chip Seal	8,800	2000
	RIVER ROAD	Chip Seal	9,800	2009
	RIVER ROAD	Chip Seal	2,600	2009
	RIVER ROAD	Chip Seal	3,300	1997
	RIVER ROAD	Chip Seal	1,600	1997
	RIVER ROAD	Chip Seal	1,100	1997
	RIVER ROAD	Chip Seal	2,200	1997
	RIVER ROAD	Chip Seal	3,520	1991
	RIVER ROAD	Chip Seal	6,270	2010
	RIVER ROAD	Chip Seal	4,895	2010
	ROBINSON STREET	Chip Seal	2,600	1991
	ROBINSON STREET	Chip Seal	400	1991
	RYDER PLACE	Chip Seal	2,000	1996
	RYDER PLACE	Chip Seal	400	1996
	SAVAGE STREET	Chip Seal	584	2001
	SEDDON STREET	Chip Seal	370	2000
	SEWELL STREET	Chip Seal	600	2004
	SHEPHERD ROAD	Chip Seal	800	1999
	SHORT STREET	Chip Seal	600	1983
	SPENCER AVENUE	Chip Seal	3,865	2002
	STAFFORD STREET	Chip Seal	807	2002
	STOUT STREET	Chip Seal	739	2001
	SYME CRES	Chip Seal	2,300	1996
	SYME CRES	Chip Seal	600	1996
	TE ARIKI PLACE	Chip Seal	700	2004
	TUWHARETOA	Chip Seal	3,600	1995
	VALLEY ROAD	Chip Seal	1,800	1993
	VALLEY ROAD	Chip Seal	6,100	1993
	VALLEY ROAD	Chip Seal	11,500	1994
	VALLEY ROAD	Chip Seal	3,900	1996
	VALLEY ROAD	Chip Seal	2,200	1996
	VOGEL STREET	Chip Seal	3,500	2000
	WALTER NASH AVENUE	Chip Seal	2,250	2000
	WARD STREET	Chip Seal	3,947	2001
	WATERHOUSE STREET	Chip Seal	2,025	2001
	WELD STREET	Chip Seal	1,700	1990
	WELD STREET	Chip Seal	400	1990
	WHITTAKER STREET	Chip Seal	1,060	2002

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	WINDLEY PLACE	Chip Seal	1,400	1995
	SERVICE LANES	Chip Seal	4,900	1995
	SERVICE LANES	Chip Seal	2,300	1995
	SERVICE LANES	Chip Seal	1,400	1985
	SERVICE LANES	Chip Seal	711	2001
	SERVICE LANES	Chip Seal	1,500	1993
	SERVICE LANES	Chip Seal	1,200	2001
	CARPARKS	Chip Seal	2,400	2006
	CARPARKS	Chip Seal	1,670	1998
	CARPARKS	Chip Seal	3,750	2002
	CARPARKS	Chip Seal	4,400	1992
	CARPARKS	Chip Seal	300	1998
	CARPARKS	Chip Seal	1,700	2004
	CARPARKS	Chip Seal	1,500	2001
	CARPARKS	Chip Seal	450	2001
	CARPARKS	Chip Seal	870	2010
	CARPARKS	Chip Seal	330	2001
	CARPARKS	Chip Seal	4,400	1985
	CARPARKS	Chip Seal	5,200	1988
	CARPARKS	Chip Seal	450	1997
	CARPARKS	Chip Seal	300	1970
	CARPARKS	Chip Seal	1,200	1997
	CARPARKS	Chip Seal	200	1970
	CARPARKS	Chip Seal	806	2001
	CARPARKS	Chip Seal	600	2002
	CARPARKS	Chip Seal	1,000	1990
	CARPARKS	Chip Seal	1,260	1965
	CARPARKS	Chip Seal	400	2003
	CARPARKS	Chip Seal	1,378	2005
	CARPARKS	Chip Seal	250	1975
	CARPARKS	Chip Seal	200	1970
	CARPARKS	Chip Seal	214	2001
	WALKWAY	Chip Seal	900	2001
	BELL STREET	Asphaltic	209	1992
	FLETCHER AVENUE	Asphaltic	292	1990
	MACKENZIE STREET	Asphaltic	643	1988
	MANUKORIHU DRIVE	Asphaltic	408	1991
	MASSEY STREET	Asphaltic	254	1980
	MASSEY STREET	Asphaltic	669	1980
	MASSEY STREET	Asphaltic	708	1980
	MASSEY STREET	Asphaltic	862	1980
	RIVER ROAD SLIP LANE	Asphaltic	201	1991
	SHORT STREET	Asphaltic	734	1983
	SPENCER AVENUE	Asphaltic	308	1989
	VALLEY ROAD	Asphaltic	270	1986
	VALLEY ROAD	Asphaltic	176	1993
	VALLEY ROAD	Asphaltic	201	1993
	VALLEY ROAD ROTARY	Asphaltic	488	1993
<b>Pavement structure</b>	ATKINSON STREET	Basecourse	1,854	1958
	BALLANCE STREET	Basecourse	3,600	1958

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	BALLANTRAE	Basecourse	2,800	1972
	BALLANTRAE	Basecourse	500	1972
	BEATTIE ROAD	Basecourse	2,300	1983
	BEATTIE ROAD	Basecourse	6,200	1984
	BELL STREET	Basecourse	900	1967
	BELL STREET	Basecourse	3,200	1960
	BELL STREET	Basecourse	3,100	1965
	BLDISLOE STREET	Basecourse	1,000	1956
	BLUNDELL AVENUE	Basecourse	1,600	1976
	BOSS ROAD	Basecourse	1,300	1977
	BOWEN STREET	Basecourse	2,400	1956
	BROWNE STREET	Basecourse	600	1956
	COATES ST	Basecourse	950	1958
	COBHAM DRIVE	Basecourse	1,600	1966
	COBHAM DRIVE	Basecourse	2,000	1966
	COBHAM DRIVE	Basecourse	1,700	1967
	DELAMERE DRIVE	Basecourse	1,500	1981
	DIPPIE PLACE	Basecourse	400	1984
	DOMETT STREET	Basecourse	5,600	1956
	DOUG WILSON CRES	Basecourse	600	1984
	DUMP ROAD	Basecourse	400	1971
	DUMP ROAD	Basecourse	3,960	1971
	EMME ALLAN ROAD	Basecourse	1,000	1982
	FENTON MILL RD (SOUTH)	Basecourse	7,215	1981
	FENTON MILL RD (SOUTH)	Basecourse	2,000	1981
	FENTON MILL ROAD	Basecourse	11,000	1972
	FENTON MILL ROAD	Basecourse	3,400	1975
	FENTON STREET	Basecourse	1,600	1956
	FENTON STREET	Basecourse	5,500	1956
	FERGUSON STREET	Basecourse	700	1956
	FITZGERALD STREET	Basecourse	2,000	1956
	FITZROY STREET	Basecourse	800	1956
	FLETCHER AVENUE	Basecourse	8,200	1959
	FLETCHER AVENUE	Basecourse	2,000	1959
	FORBES PLACE	Basecourse	900	1972
	FORSAITH STREET	Basecourse	2,000	1956
	FOX STREET	Basecourse	600	1956
	FRASER STREET	Basecourse	700	1965
	FREYBERG STREET	Basecourse	1,000	1956
	GALWAY STREET	Basecourse	6,300	1956
	GLASGOW STREET	Basecourse	3,740	1964
	GORDON STREET	Basecourse	2,200	1956
	GREY STREET	Basecourse	5,500	1956
	HADLEY STREET	Basecourse	1,400	1980
	HAHURU ROAD	Basecourse	1,100	1980
	HALL STREET	Basecourse	3,328	1958
	HARDIE AVENUE	Basecourse	2,500	1982
	HARDIE AVENUE	Basecourse	4,000	1982
	HARDIE AVENUE	Basecourse	3,000	1983
	HAY PLACE	Basecourse	500	1984

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	HINEMOTU AVENUE	Basecourse	2,400	1965
	HOBSON STREET	Basecourse	2,600	1956
	HOLLAND CRESCENT	Basecourse	1,000	1967
	HOLYOAKE CRESCENT	Basecourse	4,500	1967
	ION ROAD	Basecourse	2,000	1977
	ISLINGTON STREET	Basecourse	3,000	1956
	JERVOIS STREET	Basecourse	600	1956
	JULIAN ROAD	Basecourse	900	1983
	KIRK CRESCENT	Basecourse	2,025	1975
	LIVERPOOL STREET	Basecourse	1,700	1956
	LIVERPOOL STREET	Basecourse	2,500	1964
	MACKENZIE STREET	Basecourse	1,000	1961
	MACKENZIE STREET	Basecourse	1,200	1957
	MANUKORIHU STREET	Basecourse	1,795	1956
	MARSHALL STREET	Basecourse	1,100	1976
	MARSHALL STREET	Basecourse	350	1976
	MASSEY STREET	Basecourse	2,000	1961
	MASSEY STREET	Basecourse	3,300	1957
	MAWAKE ROAD	Basecourse	1,300	1980
	NEELY PLACE	Basecourse	700	1977
	NEWELL STREET	Basecourse	6,800	1956
	NORMANBY STREET	Basecourse	2,800	1956
	NORRIE STREET	Basecourse	1,500	1956
	ONSLow STREET	Basecourse	3,000	1956
	ONSLow STREET	Basecourse	10,300	1956
	ONSLow STREET	Basecourse	850	1958
	OPUNOKI DRIVE	Basecourse	500	1965
	OWEN ROAD	Basecourse	1,000	1983
	PAORA STREET	Basecourse	1,350	1956
	PARIMAHANA DRIVE	Basecourse	700	1977
	PARIMAHANA DRIVE	Basecourse	700	1978
	PAYNE CRESCENT	Basecourse	567	1969
	PETER LIPPA DRIVE	Basecourse	5,800	1980
	PLUNKET STREET	Basecourse	5,500	1958
	POLLEN STREET	Basecourse	3,311	1958
	PORRITT DRIVE	Basecourse	7,038	1969
	RAMSDEN PLACE	Basecourse	300	1984
	RIVER ROAD	Basecourse	8,800	1956
	RIVER ROAD	Basecourse	9,800	1956
	RIVER ROAD	Basecourse	2,600	1958
	RIVER ROAD	Basecourse	3,300	1958
	RIVER ROAD	Basecourse	1,600	1965
	RIVER ROAD	Basecourse	1,100	1965
	RIVER ROAD	Basecourse	2,200	1968
	RIVER ROAD	Basecourse	9,790	1971
	RIVER ROAD	Basecourse	3,300	1973
	ROBINSON STREET	Basecourse	2,600	1956
	ROBINSON STREET	Basecourse	400	1956
	RYDER PLACE	Basecourse	2,000	1981
	RYDER PLACE	Basecourse	400	1981



ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	SAVAGE STREET	Basecourse	584	1958
	SEDDON STREET	Basecourse	370	1958
	SEWELL STREET	Basecourse	600	1956
	SHEPHERD ROAD	Basecourse	800	1984
<b>PAVEMENT</b>				
	SHORT STREET	Basecourse	600	1957
	SPENCER AVENUE	Basecourse	3,865	1976
	STAFFORD STREET	Basecourse	600	1956
	STOUT STREET	Basecourse	739	1958
	SYME CRES	Basecourse	2,300	1982
	SYME CRES	Basecourse	600	1982
	TE ARIKI PLACE	Basecourse	700	1966
	TUWHARETOA	Basecourse	3,600	1980
	VALLEY ROAD	Basecourse	1,800	1986
	VALLEY ROAD	Basecourse	6,100	1975
	VALLEY ROAD	Basecourse	11,500	1978
	VALLEY ROAD	Basecourse	3,900	1981
	VALLEY ROAD	Basecourse	2,200	1982
	VOGEL STREET	Basecourse	3,500	1968
	WALTER NASH AVENUE	Basecourse	2,250	1967
	WARD STREET	Basecourse	3,947	1965
	WATERHOUSE STREET	Basecourse	2,025	1958
	WELD STREET	Basecourse	1,700	1956
	WELD STREET	Basecourse	400	1956
	WHITTAKER STREET	Basecourse	600	1956
	WINDLEY PLACE	Basecourse	1,400	1980
	SERVICE LANES	Basecourse	4,900	1984
	SERVICE LANES	Basecourse	2,300	1984
	SERVICE LANES	Basecourse	1,400	1985
	SERVICE LANES	Basecourse	711	1984
	SERVICE LANES	Basecourse	1,500	1984
	SERVICE LANES	Basecourse	1,200	1984
	CARPARKS	Basecourse	2,400	2008
	CARPARKS	Basecourse	1,670	1960
	CARPARKS	Basecourse	3,750	1960
	CARPARKS	Basecourse	4,400	1965
	CARPARKS	Basecourse	300	1965
	CARPARKS	Basecourse	1,700	1960
	CARPARKS	Basecourse	1,500	1960
	CARPARKS	Basecourse	450	1960
	CARPARKS	Basecourse	330	1985
	CARPARKS	Basecourse	870	2010
	CARPARKS	Basecourse	4,400	1985
	CARPARKS	Basecourse	5,200	1980
	CARPARKS	Basecourse	450	1995
	CARPARKS	Basecourse	300	1970
	CARPARKS	Basecourse	200	1970
	CARPARKS	Basecourse	550	1970
	CARPARKS	Basecourse	600	1965
	CARPARKS	Basecourse	1,000	1990

ASSET	DESCRIPTION	MATERIAL	QTY	YEAR
	CARPARKS	Basecourse	1,260	1965
	CARPARKS	Basecourse	378	1995
	CARPARKS	Basecourse	1,000	2009
	CARPARKS	Basecourse	250	1975
	CARPARKS	Basecourse	200	1970
	CARPARKS	Basecourse	214	1965
	CARPARKS	Basecourse	900	1960
	DUMP ROAD	Basecourse	400	1971

\*\* The information currently held by Council is not of the required standard. The current data held has enabled Council to provide the necessary reports to the NZTA in a very basic manner. A significant data validation programme planned utilising an independent contractor during 2020/2021 will remedy this situation.

## 10.2. APPENDIX B –ASSET VALUATION & DEPRECIATION

Category of assets	Valuation at 30 June 2019 (\$000)	Acquisitions (Net) 2019/20 (\$000)	Accumulated Depreciation (\$000)	Valuation at 30 June 2020 (\$000)
Bridges & Culverts	573.6	33.1	17.8	588.9
Pavement Structure	3,456.7	266.6	129.7	3,593.6
Pavement Surface	1,285.8	161.1	288.3	1,158.6
Pavement Formation	1,737.1	0	0	1,737.1
Footpaths	3,452.5	240.8	114.4	3,578.9
Kerb & Channel	4,356.5	128.7	80.2	4,405.0
Street Lighting	1,439.2	103.2	184.1	1,358.3
Traffic Services	117.8	35.1	15.0	137.9
Miscellaneous	261.9	6.2	54.5	213.6
<b>Total</b>	<b>16,681.1</b>	<b>974.8</b>	<b>884.0</b>	<b>16,771.9</b>