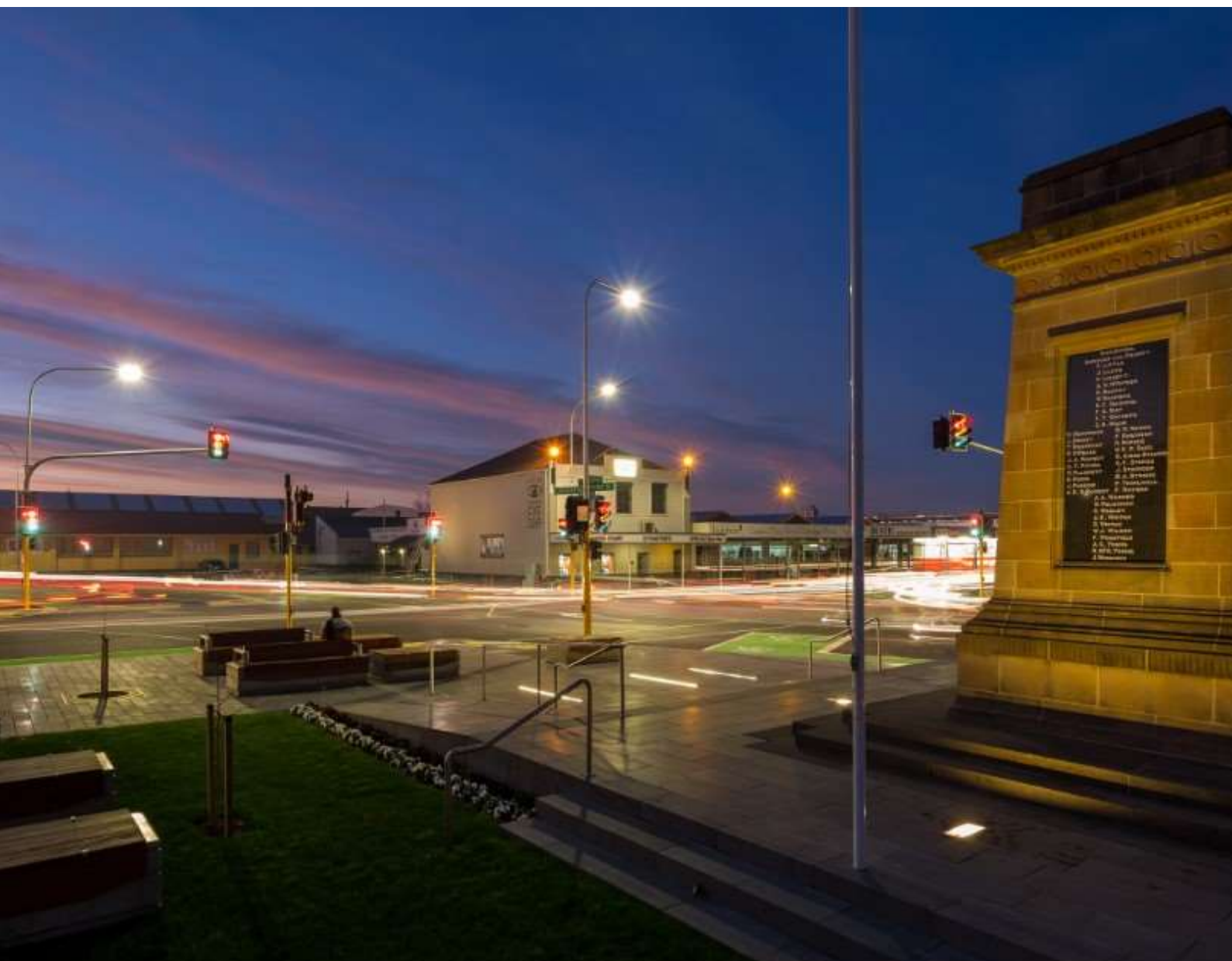


# Activity Management Plan 2021 Transportation Executive Summary

Roading | July 2021



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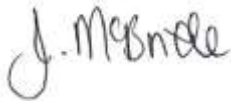

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**Prepared by**  
**Waimakariri District Council**  
**215 High Street,**  
**Private Bag 1005**  
**Rangiora 7440,**  
**New Zealand**  
[waimakariri.govt.nz](http://waimakariri.govt.nz)

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Action	Name	Position	Signed	Date
Prepared by	Yvonne Warnaar	Asset Planning Engineer (Roding)		17 February 2021
	Simon Collin	Infrastructure Strategy Manager		17 February 2021
Reviewed by	Joanne McBride	Roding and Transport Manager		17 February 2021
Approved by	Gerard Cleary	Manager Utilities and Roding		17 February 2021
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## 1 Background Information

This executive summary of the Roothing Activity Management Plan (AMP) is intended to provide a brief overview of roading and transport infrastructure, outline the key issues which require consideration and discuss the potential solutions.

### The Purpose of the Plan

Roads are fundamental to ensuring there is a high quality of life in the Waimakariri District. The transport activity provides people with access to employment, services, education, and recreation, as well as providing for the movement of goods to support a thriving economy. The road corridor also provides access for critical services such as power, telecommunications, water supply and waste disposal. The Council considers that the provision of effective and efficient transportation systems is a key component of its goals to provide high quality living and productive environments.

The purpose of the 2021 Roothing Activity Management Plan is to detail how the council will manage the roading and transport network assets over their life cycle to ensure their long-term performance for the district.

This plan has been developed to align with the Council policies and plans, Road Safety Strategy, Walking and Cycling Strategy, the Government Policy Statement (GPS), the New Zealand Transport Strategy (NZTS), the Regional Land Transport Strategy (RLTS), and Greater Christchurch Urban Development Strategy (UDS).

### Council Goal

**Purpose:** To make Waimakariri a great place to be, in partnership with our Communities guided by our outcomes, through the following roles:

- As a service provider;
- As a funder of activities by others;
- As an advocate on behalf of our community;
- As a regulator under legislation

The following goal for the provision of transport infrastructure in the Waimakariri District Council has been developed from the Community Outcomes. Our Transportation goal is:

*“To plan, provide, maintain, develop and improve the transport network so that Waimakariri is a great place to be and transport is accessible, convenient, reliable and sustainable”*

## Key issues

A key component of the preparation of the Roothing Activity Management Planning is the utilisation of the Strategic Business Case process. Various methods are used to confirm the key factors causing issues for residents and users of the Waimakariri transportation system, how these might be resolved and what we gain by resolving them. Amongst these were 'Investment Logic Workshops', which were used in 2018 to determine key issues affecting stakeholders.

Those identified at the time were, including:

- Travel time / congestion,
- Safety,
- and the effects of land use changes on the network.

Three years on one of these problems has been somewhat mitigated. The introduction of the Western Belfast Bypass and the Northern Corridor including the extra lanes on the Waimakariri River Bridge, have shortened travel times between Waimakariri District and Christchurch City. However, safety continues to be a concern for the District, as does they high rate of growth in the District. The Problem statements of the 18-21 AMP have therefore been modified in recognition of the need to continue progress on original problems, and to recognise new issues of both local and national concern.

The new Strategic Problem statements include:

Large increases in volumes of both light and heavy vehicles have contributed to these identified issues / effects:

- Congestion delays are impacting on business productivity and personal time availability
- Increased traffic often results in an increasing crash rate including those due to a greater likelihood of conflict at intersections, and more risky behaviour as people try to make up lost time
- Land use change can mean higher population density, more cars, and more freight inflicting damage at a more rapid rate.

Growth in population and subdivisions has been rapid in recent years. This has resulted in more vehicles on the road, more assets to manage and maintain, and increased stress on many of the existing assets.

The AMP explores alternative options to resolve these issues, ranks these options to determine the best solution to the identified issues, and determines a means to fund and implement them.

## **Asset Growth**

In the past three years there have been the following increases in roading assets.

- Roads – 10.6 km (0.69%)
- Kerb and Channel – 35.1 km (8.56%)
- Footpaths – 57.5 km (8.36%)
- Signs - 1676 (9.9%)
- Street lights - 196 (3.87%)
- Traffic Signals - 1 set (since 2017)

Note that the relatively low percentage increase of roads compared to other assets is due to most of the increase being in urban areas with associated assets such as footpath, kerb and channel, and traffic signals.

The length of unsealed roads has decreased in the last three years due to several lengths of road being sealed through a combination of developer, resident and Council contributions. The length of unsealed roads with traffic volume greater than 200 vehicles per day (one of Council's Level of Service measures) has reduced to less than 2% of the network. This proportion is expected to stay roughly the same over the next three years, which will mean while the rural vehicle traffic will increase and the urban traffic will increase by more in real terms.

The District's population is expected to continue to grow for the foreseeable future, although the rate of growth is likely to be lower than in recent years – down from 2.4% in 2020 to an average of 1.9% per annum over the next 10 years.

## **Traffic Growth**

Overall travel on the network has increased from 371 million vehicle kilometres travelled in 2016/17 to 437 million in 2019/20. This is a 17.6% increase or an average of 5.9% per annum.

## **Asset Description**

A key goal of Waimakariri District Council is to provide a safe, responsive and sustainable network. To achieve this, Council manages the following asset with a replacement cost of \$1,028 million.

Table 1: Change in Replacement Cost of Roothing Assets Included in this Plan

Asset Group	Replacement Cost 2017 (\$000)	Replacement Cost 2020 (\$000)
Road Carriageway	612,001	700,042
Bridges and Road Structures	116,170	117,880
Footpath and Cycleways	38,506	42,129
Road Drainage	147,367	140,982
Streetlights	9,940	11,461
Traffic Services	10,023	14,360
Passenger Transport	261	342
Traffic Signals	844	844

## 2 Levels of Service

The Levels of Service developed in this Plan are based on the District's Community Outcomes. The Community Outcomes are the result of public consultation carried out up to and during preparation of the 2006/16 Long Term Plan (LTP).

While transport contributes to almost all community outcomes in some measure, those specific to transport are as follows:

### Services

Transport is accessible, convenient, reliable and sustainable

- The standard of our District's roads is keeping pace with increasing traffic numbers.
- Communities in our District are well linked with each other and Christchurch is readily accessible by a range of transport modes.
- Public transport serves our District effectively.
- Opportunities to increase the occupancy of commuter vehicles is actively encouraged.

In establishing the Levels of Service the Council has considered its legal obligations, comments made to it through formal consultation processes, the results of customer surveys, sound engineering practice, affordability and economic efficiency.

Prior to this AMP period, Council had a wide range of Roothing Performance measures. These have now been consolidated to just six. Five of these measures are set by the Department of Internal Affairs.



Table 2: LTP Level of Service

Roads and Footpaths							
Community Outcome	Council Response	Level of Service	New Measure	Targets	Performance 2017/18	Performance 2018/19	Performance 2019/20
<p>Crime, injury and harm from road accidents, gambling, and alcohol abuse are minimised</p> <p>There is a safe environment for all</p> <p>The standard of our District's roads is keeping pace with increasing traffic numbers</p> <p>Transport is accessible, convenient, reliable, affordable and sustainable</p>	<p>Designing and maintaining roads to protect the safety of all road users (including pedestrians and cyclists).</p>	<p>The road network is increasingly free of fatal and serious injury crashes.</p>	<p>* 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. (DIA measure)</p>	<p>Reduction in fatalities and serious injury crashes</p>	<p>There were the same number of fatalities and 5 more serious crashes in Waimakariri District for the 2017/18 financial year compared with the previous one</p>	<p>One less fatality and six fewer serious injury crashes on Waimakariri local roads for the whole of 2018/19 financial year compared with 2017/18.</p>	<p>One more fatality and 9 fewer serious crashes on Waimakariri local roads for the whole of 2019/20 financial year compared with 2018/19-8</p>
		<p>Maintaining and developing the District's roads, footpaths, cycleways and passenger transport facilities to provide a convenient, accessible, responsive, sustainable and comfortable transport network.</p>	<p>Sealed roads provide a level of comfort that is appropriate to the road type.</p>	<p>* The average quality of ride on a sealed road network, measured by smooth travel exposure. (DIA measure)</p>	<p>95% for rural and 75% for urban roads</p>	<p>96%/81%</p>	<p>98% / 81%</p>
	<p>Optimised programmes are delivered that are affordable and at a cost so that service productivity is improving.</p>	<p>* The percentage of the sealed local road network that is resurfaced annually. (DIA measure)</p>	<p>5%</p>	<p>3.2%</p> <p>A larger proportion of asphaltting was carried out this year compared with chipseal, which impacted on the overall programme</p>	<p>6%</p>	<p>4.45%</p>	
	<p>Footpaths are safe, comfortable and convenient.</p>	<p>* The percentage of footpath that falls within the level of service or service standard for the condition of footpaths. (DIA measure)</p>	<p>95% of footpaths rated better than very Poor</p>	<p>98.9%</p>	<p>98.7%</p>	<p>99%</p>	
	<p>Requests for service will be responded to in a prompt and timely manner.</p>	<p>* The percentage of customer service requests relating to roads and footpaths responded to within service delivery standards. (DIA measure)</p>	<p>95%</p>	<p>96%</p>	<p>97.1%</p>	<p>96.4%</p>	
	<p>Unsealed roads provide a level of comfort that is appropriate to the road type.</p>	<p>The percentage of unsealed roads that carry more than 200 vehicles per day.</p>	<p>No more than 5%</p>	<p>0.75%</p>	<p>0.8%</p>	<p>0.91%</p>	

## Future Demand

The Waimakariri District experienced significant growth following the 2010 and 2011 Canterbury earthquakes. The District is expected to continue to grow in future years, albeit at lower rates than those experienced in recent years. Statistics New Zealand (StatsNZ) projects low medium and high growth rates of 0.6%, 1.4%, and 2.1% pa respectively for Waimakariri District through to 2048. This equates to total population increase of 6,300, 28,400, or 51,200 between 2016 and 2048.

StatsNZ also forecasts more people over 65 and fewer young people in the District. Older people are more likely to have difficulty driving safely due to the effects of aging such as deteriorating eyesight and reaction time and greater likelihood of serious injury when they do crash

The OECD International Transport Forum (2013) concluded that car use was declining internationally. However, this trend tends to be less pronounced in rural areas, and there is no evidence of declining car usage in the Waimakariri District. Vehicle kilometres travelled measures the quantity of travel in the District rather than just vehicle ownership or length of the network. VKTs in WDC increased from 330 million in 2014/15 to 401 million in 2019/20

As population increases, any reduction in car usage that does occur is likely to be accompanied by a corresponding increase in walking, cycling and public transport usage. Council's walking and cycling strategy promotes improved walking and cycling infrastructure, including new cycleways and footpaths.

The construction of the Christchurch Northern Corridor was also completed late 2020 and this project has also included a cycle facility, which links Christchurch City to Waimakariri District (including a walking and cycling clip on the Motorway Bridge). This has been a key project for unlocking walking and cycling opportunities between Waimakariri and Christchurch City.

Alongside this, Waimakariri District Council are currently developing a Walking & Cycling Network Plan which identifies gaps and key projects in the network. Increases in demand will continue to increase as more facilities are provided.

Waimakariri District Council has been working with the Greater Christchurch partners to develop and agree a package of Travel Demand Management initiative to help promote changes in travel behaviour within the Greater Christchurch area.

The first stage of Park & Ride facilities have been delivered over the 2020/21 year along with peak hour express bus services, to provide time and cost effective alternatives for peak hour commuters.

Much of the population growth in the District is expected to occur in Rangiora, Kaiapoi, and Woodend (including Pegasus and Ravenswood). In addition, there is expected to be continuing demand for rural-residential and larger “lifestyle” type blocks close to Christchurch city. Proposed changes to the District Plan will allow the traditional 10 acre (2.5 ha) blocks east of Mandeville to be subdivided further, while the blocks west will no longer be able to subdivide below 20 ha.

Other likely land use changes include the continuing demand for ongoing gravel extraction. The previous conversion to dairy has largely occurred and is likely to remain fairly static. Some logging will continue, but is very dependent on the international market and harder to programme ahead for.

### **What changes might this lead to?**

The anticipated population growth, demographic changes, car use trends and land use changes would suggest the following future transport trends:

- A continuing increase in car usage;
- A possible reduction in the proportion of trips at peak time due to aging population; i.e. fewer trips to work and taking children to or from school
- Increased pedestrian demand and footpath usage;
- Increased cycle numbers; and
- Increasing numbers and size of heavy vehicles.

Generally, the District’s roads and intersections are far from their ultimate capacities and many are unlikely to reach those points in the near future. However, there are some parts of the network that are having difficulty meeting the demand and where growth will put them under strain with longer delays at peak times being more likely in future, or where significant deterioration of the road will be likely to occur. This deterioration is particularly the case where the roads carry a higher than usual proportion of heavy traffic.

### **How will we deal with these issues?**

The general approach to be taken in assets development to meet future trends is as follows:

- Maintaining and using the existing transport infrastructure efficiently and effectively;
- Targeted investment in infrastructure improvements for both capacity and safety outcomes;
- Increased emphasis on walking, cycling and public passenger transport to provide greater transport choice, integration, flexibility and to promote good public health outcomes;
- Ensuring growth areas and development support modal choice and provide opportunities for people to travel less, especially by private motor vehicle;
- Implement travel behaviour change programmes to encourage more efficient travel patterns, noting that these will be limited by lack of NZTA funding and the impact of Christchurch earthquakes; and
- Funding the growth component of projects from development and financial contributions.
- While new motorway infrastructure constructed to the north west of Christchurch has reduced travel time to and from our city neighbour, there is still congestion in Waimakariri District itself, particularly in Rangiora. A number of the projects planned for the 21-31 Long Term Plan (LTP) are included in Table 1.5 of this chapter of the AMP.

Major programmes and costs to meet the demand described above are shown below. The full detail is shown in **Section 6 - [The Lifecycle Management Plan](#)**

Table 3: Major Projects and Costs

Project	Ten Year Costs	Years
Charles Upham and Oxford Lehman's intersections	\$2.1m	23/24, 25/26-26/27
Ohoka Road intersection improvements (Island and Robert Coup)	\$2.3m	21/22-22/23, 28/29-29/30
Kaiapoi Roading improvements - Williams St south intersections.	\$2m	28/29-29/30
Southbrook Road improvements including Southbrook Road/Torlesse Street/Coronation Street Intersection Improvements	\$3.8m	21/22-22/23. 24/25/25/26-26/27
Marsh Road/Railway Road Intersection	\$1m	27/28-28/29
Skew Bridge replacement	\$11m	28/29-30/31
New footpaths	\$1m	21/22-30/31
Walking and Cycling Projects	\$4.25	21/22-30/31
Park and Ride – Rangiora and Kaiapoi	\$1.5mm	24/25-25/26
Park and Ride Ravenswood	\$1.9m	21/22, 29/30
Passenger Transport Infrastructure - Shelters & Seats	\$1.23m	21/22-30/31
Tram Road safety improvements including McHughs Road	\$6.3m	20/21-25/26, 28/29-30/31
Support for MUBA (Area directly adjacent to KTC) (Growth portion)	\$1.125m	21/22-24/25
Rangiora Woodend Road Improvements including Boys Road	\$3.25m	21/22-23/24, 26/27-27/28
North West Arterial Rangiora (Lehman's Rd to River Road)	\$2.2m	30/31
West Rangiora Route Improvements	\$7.7m	2021/22-2030/31

Many of the demand assumptions above are based on an underlying assumption that transport in the future will be delivered in similar ways to transport in the comparatively recent past, with some changes brought about through technology changes including, much higher use of digital connectivity (including Skype / Zoom / Online shopping etc.) reducing the need for people to travel, the possible introduction of autonomous vehicles and increasing numbers of electric vehicles in the fleet. Other changes could also include driverless 'drone' taxis, and 'jetpacks', both technologies currently in their infancy and not yet publicly available but still feasible, and with the potential to radically alter private and light commercial transport.

Until such time as this becomes more commonplace and is widely accepted, the development of technology, and changes in public attitudes towards transport will be monitored, along with

population, demographic and land use trends. Expected transport demand will be reviewed and revised accordingly.

### **3 Risk Management**

This section outlines the risk management process proposed for the WDC road network. The objective of risk management is to identify the specific risks associated with the ownership and management of road network assets and assist with the process of mitigating of these risks.

Previously risk identification was very much oriented to individual tasks or smaller scale operational issues. While these still form an important component of risk identification, this AMP begins the journey to focussing on Risk at a more strategic level, by considering Risk in one of three categories:

1. Safety
2. Sustainability, and
3. Resilience

These will be explored further in Section 5, but briefly, while safety is an ongoing journey that we constantly strive to better our performance in order to take care of our citizens, sustainability in its many forms is becoming a bigger part of our day to day business and requires additional consideration, for example the effects of roading runoff contamination on wildlife in the adjacent waterways. Resilience addresses how we will react in a physical emergency, how it affects not only our physical transport assets, but also access to other key infrastructure and communication.

### **4 Life Cycle Management**

The in house Roding team of the Council undertakes programme management, routine network management, investigations and reporting, and management of the Roding and transport assets. Physical works are carried out by external contractors, while specialist professional services (including bridge inspections and structural advice, road safety audits and advice, transport planning, traffic assessments, traffic counting, road condition rating and surveys) are provided by external consultants.

The Life Cycle Management Plan focuses on key asset groups (road carriageway, bridges and road structures, footpaths & cycleway, road drainage, streetlights, traffic services, and passenger transport). Management strategies focus on lifecycle activities (operation, maintenance, renewal, creation) for each asset group to improve the decision-making and evaluation of options associated with each asset, and to optimise lifecycle costs. Programme

management can include travel demand management and behavioural change, e.g. rather than dealing with congestion by building more roads, encouraging moves to walking, cycling and public transport reduces the number of trips by private motor vehicles.

### **Asset Condition, Performance and Capacity**

The transport assets have to be maintained to a good condition to protect health and safety, and to meet the customer level of service. Established asset management practices help to ensure this is achieved and that associated budgets are in place and met.

The following tables document the condition, performance and capacity of the assets based on best information currently available.

Table 4: Summary of Asset Condition, Performance and Capacity

Road Carriageway	
Condition	Performance/ Capacity
<p>The condition of the sealed road is assessed by roughness, condition rating and surface age. The 2020 roughness surveys indicate that overall average of 80% of all urban roads and 98% of all rural roads users experience smooth travel within the Waimakariri District Council. Both percentages are above the targeted LOS of 75% and 95% respectively.</p> <p>Formal condition rating is not undertaken on unsealed roads. Condition is monitored through contractor and Council staff inspections as well as service requests received from road users. The latest satisfaction survey indicated a very slight increase in customer satisfaction with how unsealed roads are being managed.</p>	<p>The 2020 customer satisfaction survey indicated an increase in the percentage of households satisfied with the carriageway network compared to previous years. However, urban roads, and adjacent rural roads are likely to experience continued traffic growth, as the population increases and new development occurs.</p> <p>Unsealed rural roads are likely to be particularly susceptible to increasing maintenance requirements due to increasing heavy vehicles associated with new dairy farm conversions, gravel extraction and other land use changes. These impacts require specific strategies to be developed to enable the network to cope.</p>
Bridges and Road Structures	
Condition	Performance/ Capacity
<p>The condition of all bridges has been assessed as being generally in good to average condition. There is no formal condition rating for the remaining road structures, however the condition of these assets is assessed through the routine inspections undertaken by the road network maintenance contractor.</p>	<p>The majority of bridges in the district have adequate capacity to cater for the most of the projected future loading and traffic volumes, however some strengthening/widening may be required for HPMV capacity.</p>
Footpath & Cycleways	
Condition	Performance/ Capacity
<p>The 2017 condition rating indicated that 93% (307 km) of the footpath network is in average to excellent condition, with 6.0% (9.8km) in poor condition and 0.5% (4km) in very poor condition, programmed to be replaced over the next three years. Condition rating has been carried out for 2020 but is currently being validated</p>	<p>District wide satisfaction with the footpaths has risen from 81.1% for town footpaths in 2016 to 83.7% in 2019 and from 59.3% to 59.6% for small settlement footpaths</p>



<b>Road Drainage</b>	
<b>Condition</b>	<b>Performance/ Capacity</b>
<p>The 2017 condition rating of the surface water channel indicated that 76% (449 km) of the SWC network is in average to excellent condition. The priority in the next 10 years programme will be replacing the 3 km of very poor SWC, and those of the 14 km of poor which deteriorate further in the 10 year period.</p> <p>No formal condition rating is undertaken for the remaining drainage assets. A recent review by the maintenance contractor indicated a number will require closer inspection and rating during the next however they are inspected regularly through maintenance inspections and based on these inspections they are considered to be in a good condition.</p>	<p>The existing drainage systems are generally adequate except in flood conditions. Attention has been given over the last 3 years to ensuring at-risk areas are upgraded where possible, and sumps in high risk areas are given highest priority at times of potential flooding.</p> <p>There has also been a move to ensure detritus which might contaminate waterways is being captured in sumps through the use of reusable insets. These were initially used in conjunction with other environmental drainage assets such as swales to capture silt, but there is a move to also use these in central urban areas to catch detritus.</p>
<b>Streetlights</b>	
<b>Condition</b>	<b>Performance/ Capacity</b>
<p>The condition of the overall street lighting inventory has not been rated in any formal way however, overall condition of the street light assets is still considered satisfactory based on maintenance inspections, RAMM data and the number of service requests.</p>	<p>The majority of the older streetlights do not comply with the national standard for street lighting, however the levels of complaints are low which indicates that the community is satisfied with the service levels provided and there are no identified safety issues. Generally when poles have been replaced the lamps are upgraded at the same time, and advantage has been taken of increased subsidy by NZTA for LED replacement to accelerate this programme.</p>
<b>Traffic Services</b>	
<b>Condition</b>	<b>Performance/ Capacity</b>
<p>There is no formal condition rating system for the traffic services assets. However the condition of these assets is assessed through the routine inspections undertaken by the road network maintenance contractor and the annual day and night safety inspections carried out by the professional Service Providers. In general, the condition of the traffic services assets is considered to be good.</p>	<p>The performance of the traffic services in the district is considered adequate based on road users complaints, crash data, safety audits and road inspections. However, this is a critical group of assets and there are continued plans to improve these. Particularly, an assessment of the suitability of traffic facilities for an older population is a project which will need to be investigated in the future.</p>
<b>Public Transport</b>	
<b>Condition</b>	<b>Performance/ Capacity</b>
<p>The majority of the bus shelters and seats are in excellent condition, having been constructed following the review of the bus service in 2005. The main driver for maintenance/renewal is vandalism.</p>	<p>The current bus service is monitored by Ecan, however potential changes in service are consulted with the District. There is more focus on actively encouraging alternative modes of travel including public transport and to complement this Park and Ride facilities are being developed.</p>

## **Routine Operation and Maintenance Plan**

Operational activity is work or expenditure that is necessary to provide or keep the asset functioning. It has no effect on asset condition, where routine maintenance is the day-to-day work required to keep assets operating at required service levels, and falls into two broad categories:

- **Planned Maintenance:** Inspection and maintenance works planned to prevent asset failure.
- **Unplanned Maintenance:** Action to correct asset malfunctions and failures on an as-required basis (i.e. urgent repairs).

Council's operations and maintenance strategy is intended to retain the required levels of service, mitigate risk and minimise costs by monitoring the condition and performance of assets, implementing a balanced programme of planned, and unplanned works.

To achieve this, assets are monitored through routine proactive inspections, testing and the analysis of customer complaints and condition reports. Service levels are managed by assessing the condition of assets against levels of service, the levels of customer expectation, and implementing appropriate action. One way of minimising asset ownership costs is by identifying, evaluating and introducing new technologies and equipment that may improve operational and management efficiencies.

## **Renewal / Replacement Plan**

Renewals are programmed with the objective of achieving:

- A net benefit to the national and/or local economy from the renewals.
- The lowest life cycle cost for the asset, i.e. it is uneconomic to continue repairing the asset.
- An affordable cash flow profile
- Other savings by co-ordinating renewal works with other planned works within the road reserve or adjacent to it.
- Reduced risk: The risk of failure and associated financial and social impact or potential failure can justify replacement or renewal of an asset. For example, the effect or impact and extent of discontinuation of a service, the potential extent of property damage, increased risk of crashes or other health risk.

## Creation/Acquisition/Augmentation Plan

New capital projects are identified by the Council as a response to growth and demand or to better meet customer needs or achieve target LOS. The major projects and Rooding assets groups are considered and prioritised through the development of the Council's Long Term Plan (LTP). The projects may be partially funded by external funding sources such as the New Zealand Transport Agency, or other third party contributions.

## 5 Financial Summary

The forecast expenditure requirements over the ten years planning period to continue to manage the Rooding and transport activities are presented in the figure below. The financial forecasts presented in the plan are based on 2021 dollars.

Figure 1: Total Expenditure and Revenue 2021-2031 (\$000)

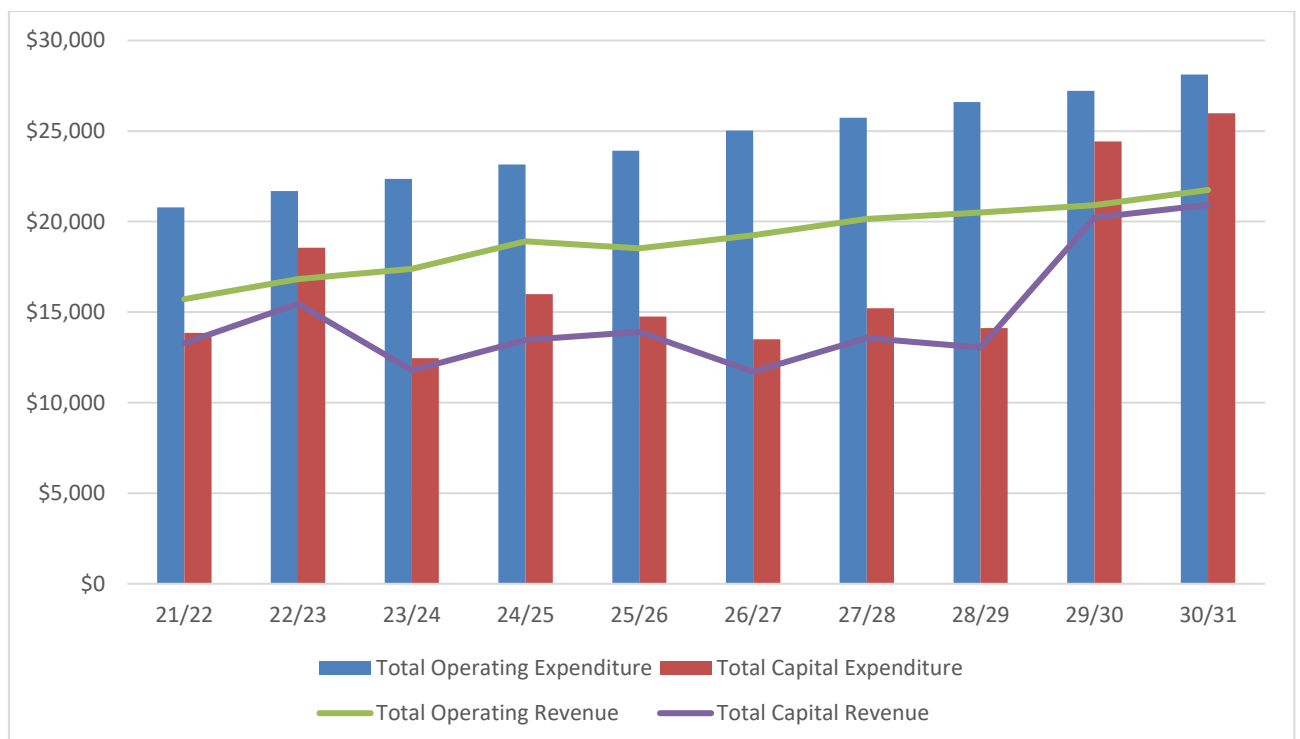


Table 5: Total Expenditure and Revenue 2021-2031 (\$'000)

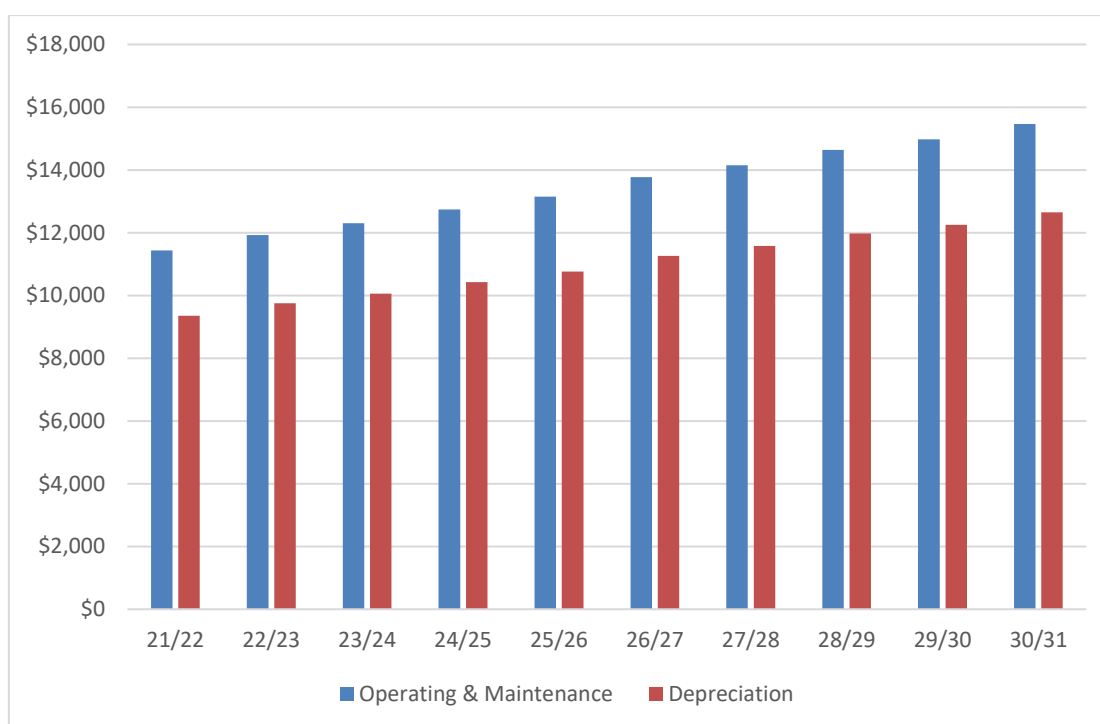
Financial Year	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31
Total Operating Expenditure	\$20,789	\$21,681	\$22,361	\$23,157	\$23,908	\$25,034	\$25,734	\$26,609	\$27,222	\$28,112
Total Capital Expenditure	\$13,849	\$18,553	\$12,464	\$15,990	\$14,748	\$13,498	\$15,214	\$14,116	\$24,426	\$25,980
Total Operating Revenue	\$15,717	\$16,824	\$17,382	\$18,903	\$18,530	\$19,253	\$20,155	\$20,501	\$20,913	\$21,744
Total Capital Revenue	\$13,297	\$15,470	\$11,783	\$13,459	\$13,908	\$11,711	\$13,573	\$13,035	\$20,216	\$20,926
Total Revenue	\$29,014	\$32,294	\$29,165	\$32,362	\$32,437	\$30,964	\$33,727	\$33,536	\$41,129	\$42,670
Net Expenditure	\$34,638	\$40,234	\$34,825	\$39,147	\$38,656	\$38,531	\$40,948	\$40,724	\$51,648	\$54,092

## Operating Expenditures

The operation and maintenance expenditure is projected at \$490 million over the 30-year planning period for activities undertaken by the council to operate and maintain the network.

The expenditure forecast is based on historical costs, contract rates and projected expenditure for future maintenance requirements. Allowances are made for predicted growth in the network, and inflation. 45% of the operating expenditure is considered depreciation. The breakdown of budget is shown below:

Figure 2: Operations and Maintenance Cost Requirements 2021-2031

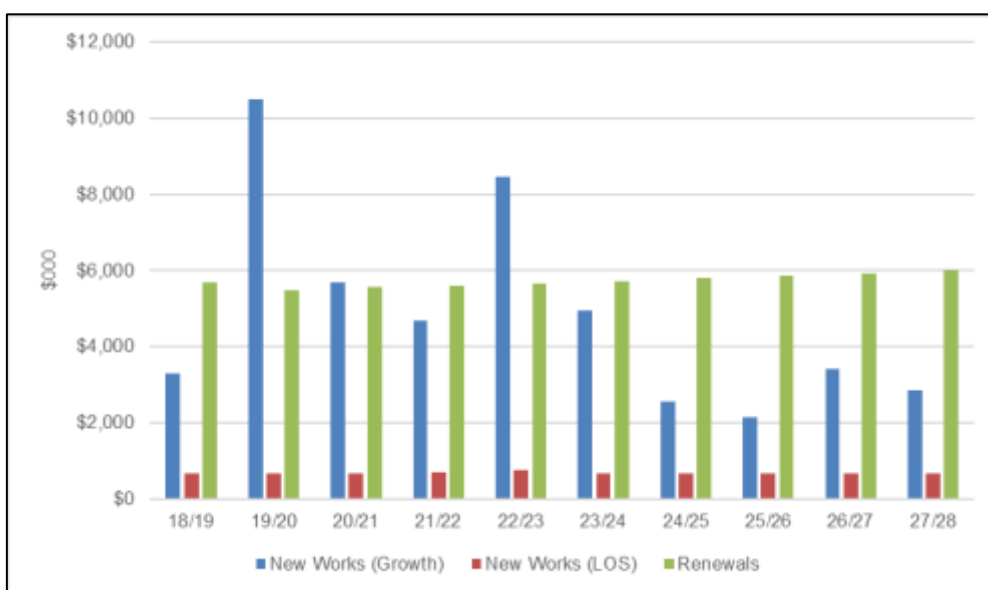


## Capital Expenditure

Capital expenditure includes renewals and new projects.

Renewal work does not increase the asset’s design performance but restores, rehabilitates, replaces, or renews an existing asset to its original capacity. New work is the creation of a new asset or extension of an existing asset beyond its current capacity to meet or improve a level of service or to cater for growth.

Figure 3: Capital Cost Requirements 2021-2031



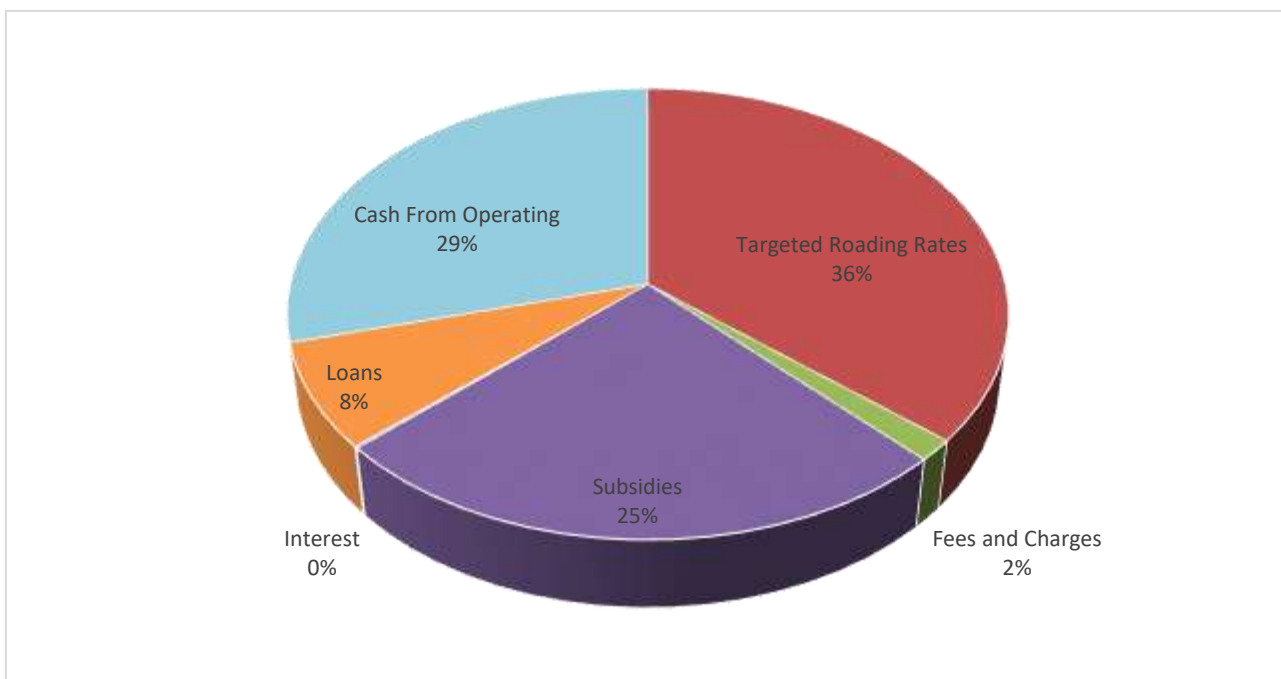
## Revenue/ Funding

Funding for capital development and maintenance of the Roding network comes from a variety of sources as per the table below:

Table 6: Funding Source by \$ (10 years)

Funding Source	\$000
Targeted Roding Rates	122,576
Fees and Charges	4,989
Subsidies	77,996
Interest	287
Loans	28,319
Reserves	-
Cash From Operating	109,136
<b>Total</b>	<b>343,303</b>

Figure 4: Funding Sources by %



Funding for operation and maintenance of the Roding and transport network is provided from Roding rates, fees and charges, and financial assistance received from NZTA. Funding for capital expenditure is provided from commercial loan, depreciation, development/financial contributions, and NZTA financial assistance.

### Valuation

The Council undertakes a full independent valuation of its Roding assets annually. These assets were revalued using the asset register as at 30 June 2020. The following table summarises the valuation of the transport network assets as at 30 June 2020.

Table 7: Asset Valuation as June 2020

2020 Valuation	30 June 2020		
Asset Description	Replacement Cost	Total Accumulated Depreciation	Depreciated Replacement Cost
Formation	\$381,544,819.90	\$0.00	\$381,544,819.90
Sealed Pavement Surface	\$59,016,107.01	\$26,177,114.56	\$32,838,992.45
Sealed Pavement Layers	\$238,277,942.60	\$74,033,883.07	\$164,244,059.53
Unsealed Pavement Layers	\$21,203,326.17	\$1,421,114.44	\$19,782,211.74
Drainage	\$55,340,127.24	\$15,176,438.80	\$40,163,688.44
Surface Water Channels	\$85,641,425.95	\$21,289,402.89	\$64,352,023.06
Footpath	\$42,129,491.06	\$10,657,479.01	\$31,472,012.05
Traffic Facilities	\$1,208,340.71	\$412,817.23	\$795,523.49
Signs	\$6,919,212.99	\$2,860,252.59	\$4,058,960.40
Railings	\$1,438,130.51	\$548,428.35	\$889,702.16
Street Lights	\$11,460,953.96	\$3,758,868.42	\$7,702,085.54
Minor Structures	\$1,258,656.27	\$490,935.96	\$767,720.31
Islands	\$3,878,144.49	\$621,333.30	\$3,256,811.19
Bridges and Bridge Culverts	\$117,879,794.84	\$50,339,839.67	\$67,539,955.17
Traffic Signals	\$914,552.78	\$140,880.72	\$773,672.06
Total	\$1,028,111,026.48	\$207,928,788.99	\$820,182,237.48

## Asset Management Practices

An asset management system is a combination of processes, data and software applied to provide the essential outputs for effective asset management. The Council utilises a number of these aspects for the effective management of their assets.

The primary asset management tool and data register used by Council for road and transport infrastructure assets is the Road Asset Maintenance Management (RAMM) database. The use of RAMM or an equivalent asset management system is a prerequisite of the New Zealand Transport Agency for obtaining Government subsidy for Roding work.

The following systems are also operated by the Council to help manage the assets:

- Pavement Deterioration Model (dTIMS)
- Geographical Information System (GIS)
- TechOne Accounting/ Financial/Non-roading Asset Management Systems
- Total Record and Management System (TRIM)

The Council employs a team of nine to manage the Roothing and Transport assets. Specialist professional services are provided by external consultants.

### **Monitoring and improvement Programme**

The Council is committed to an ongoing improvement philosophy for asset management. The traditional approach of improving the asset management plan has moved to a new plan which incorporates more than just the evidence gathering and analysing and aims to improve how the network is managed, including such issues as communications, resourcing and delivery improvements. A number, but not all improvements were actioned, and the new improvement plan seeks to emphasise the most important improvements and not just a long wish list. Of particular importance are plans to improve performance monitoring and evidence gathering, to better inform decision making.

This plan was peer reviewed by Infrastructure Associates in February 2021, and recommendations from the peer review not immediately acted on have been included in the improvement plan where considered appropriate.

The Council through the Roothing team has committed itself to improving systems, data, processes and organisational practices to raise the level of advancement in the AMP.

The AMP is a living document which is relevant and integral to daily AM activity. To ensure the plan remains useful and relevant the following on-going process will be undertaken:



Table 8: Improvements

Action	Timing
Formal adoption of the plan by the Council	Three yearly
Review and reporting against KPI's	Quarterly
Revise the plan annually to incorporate new knowledge resulting from the AM improvement programme	Annually
Formally review three yearly to assess adequacy and effectiveness.	2022/23
Track progress of implementing the improvement programme quarterly.	Quarterly
Review condition assessment information (following condition rating)	Varies from 1-4 years

A number of items requiring improvement have been identified during preparation of this plan. It is intended to prioritise these improvements and develop an action plan to implement them.