

# Marlborough District Council - Road Asset Activity Management Plan 2018-2021





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## 1.0 STRATEGIC CONTEXT

### 1.1 PURPOSE

As part of our statutory obligations, Marlborough District Council, must undertake a 3 year Strategic and Programme Business Case review of our existing Road Asset Activity Management Plan. The purpose of the exercise is to ensure that our region is strategically aligned with national transport policy and that our investments achieve the requirements set out within the Government Policy Statement on Land Transport and Regional Land Transport Plan. It provides us an opportunity to reflect on how we are progressing with the current 10 year plan, what changes have occurred and whether we need to re-prioritise our investment objectives.

This document aligns with the New Zealand Transport Agency's purpose. Which is to contribute to an effective, efficient and safe land transport system.

*"Put simply, we focus on building a better transport system for New Zealanders. This is because transport has a major part to play in the country's economic growth and productivity, the smooth functioning of our communities, and the quality of life of our citizens."*

The current Regional Land Transport Plan states: *"The Top of the South vision is of an efficient and resilient network that is well able to bounce back from unplanned events."*

The overall objective of the current Road Asset Activity Management Plan 2015-2018 is:

*"To meet the existing and future communities required levels of service through the creation, operation, renewal or replacement and disposal of road assets in the most cost-effective way using the most efficient management techniques."*

In the 2017/18 year Council has budgeted, in its subsidised roading programme, to spend a total of \$11.5million with \$6.04 million on the maintenance and management of the network and a further \$5.46 million on renewals. The operating costs of this activity represent approximately 20% of Council's total activity revenues (2012-2022 LTP).

The level of expenditure on roads, the demands of growth and the increasing age of the infrastructure means that it is vitally important that sound practices and systems are in place to ensure investment in the road network provides value for money.

### 1.2 STRATEGIC ALIGNMENT WITH NZTA

NZTA Has developed a Long Term Strategic View for Planning and Investment.

A key point of alignment with Marlborough Roads will be the "Inter-regional journeys" where SH1 is identified as a nationally significant journey connecting regions that sustain our economy. It links major urban areas and production centres to the port of Picton.

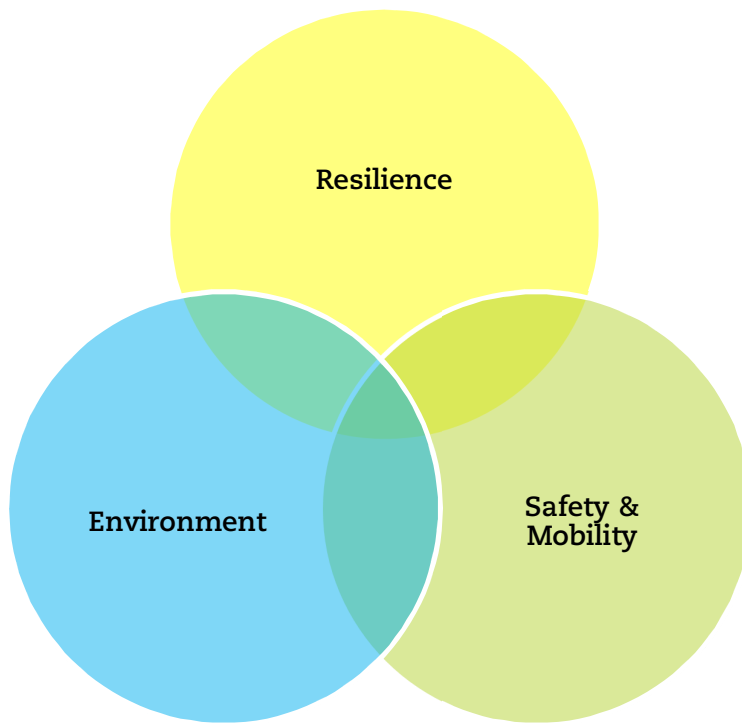
Inter-regional journeys aim to provide a safe, reliable and resilient network, which is needed to support economic growth and to provide confidence for investment. The Road Asset Activity Management Plan will support the strategic objective for SH1 in Marlborough.

### 1.3 STRATEGIC DIRECTION

There are currently no known transforming drivers that would affect the current strategic direction of activity management planning for transport in Marlborough.

Transforming drivers would be external pressures that require significant intervention to sustain the current levels of service. These could be external pressures that would contribute to a change of use or result in a cost effect change that is greater than 10% of current activity management costs.

## 1.4 EXECUTIVE SUMMARY



Marlborough District Council land transport activities are based around Resilience, Safety and Mobility and Environment.

Our priority problems are associated with bridge deterioration, unsealed road deterioration and dust control, landslips and flooding, and conflicting road network use.

Our critical bridge assets, linking communities, industries and recreational activities are deteriorating meaning that safety and access is at risk.

Parts of our unsealed roading network, supporting our primary industries, tourism and local communities, are negatively affecting safety and ease of movement through the region.

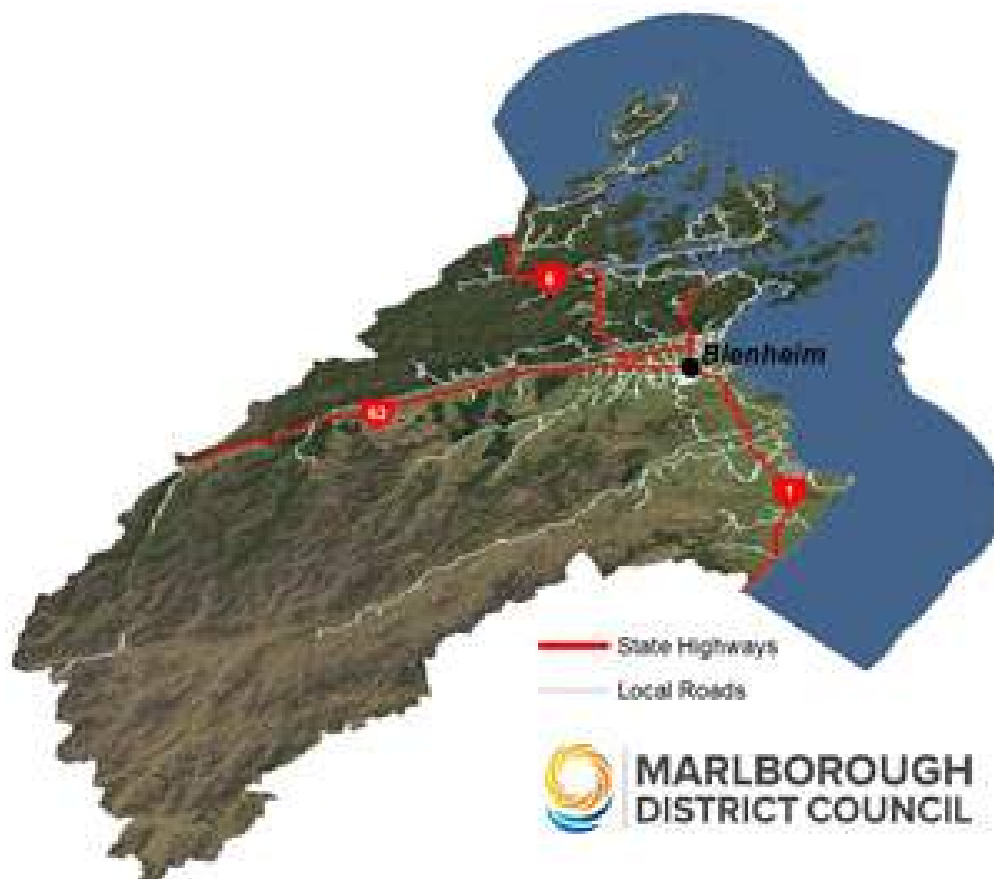
Our road network is susceptible to closures by slips and flooding meaning that accessibility, mobility and resilience is unreliable.

The increases in viticulture, forestry, tourism and people retiring in the area is resulting in parts of our network now being used by many different people for many different purposes, creating conflicts on the network.

Our investment programme is targeted towards raising our levels of service for our customers, as defined in the One Network Road Classification, by increasing resilience, improving safety and increasing accessibility.

## 2.0 OVERVIEW

Marlborough is situated in the north-east corner of the South Island, accessible by ferry, train, air, or road. The road network administered by Marlborough District Council, (Council) as at July 2016 consists of 1,535 kilometres of formed road and is Council's largest infrastructure asset with an optimum depreciated replacement value of \$513 million excluding land (June 2016).



The transport network consists of the following key elements:

- 1,535 km of formed road
  - 899 km sealed,
  - 635 km unsealed
- 234 km of footpath
- 332 km of kerb and channel
- 367 bridges
- 9 footbridges
- 18 wharves
- 7,058 m of retaining walls
- 6,058 culverts
- 2,936 m guard rail
- 7,544 m sight rail
- 4,759 streetlights
- 13 off street car parks
- 9,386 traffic signs street furniture and features



The One Network Road Classification (ONRC) is a major shift in the road management framework at national and regional levels. It divides New Zealand's roads into six categories based on how busy they are, whether they connect to important destinations, or are the only route available. These categories are identified in the graphic on the right.

The most important concept behind the ONRC is that it places the customer at the heart of every investment decision.

Consequentially, once a road has been classified under the ONRC, it should be maintained to the Customer Level of Service (CLOs) for roads of its type. The CLOs are:

- **Mobility**
- **Safety**
- **Amenity**
- **Accessibility**

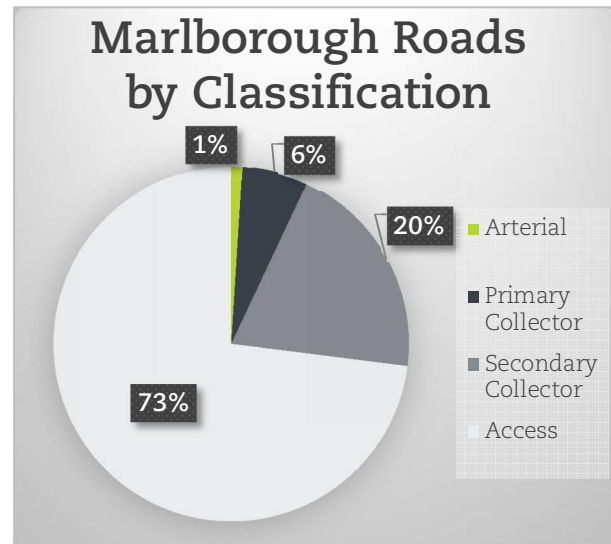
The focus of the ONRC shifts from technical solutions to customer outcomes, and because of this the performance measures do not prescribe specific operational tasks – but rather an appropriate solution and work programme for the region, providing it demonstrates good customer focus (specifically including road users and tax/rate payers). There are three types of ONRC performance measures:

- **Customer Outcome**
- **Technical Output**
- **Cost Efficiency**

Value-for-money is a key consideration, with an opportunity for smarter activity management and greater collaboration.

Within the context of these road classifications, there are regional requirements and priorities that reflect the nature and makeup of the local community and associated economy, within the geographic context of Marlborough.

Marlborough's roads have been classified, with the following distribution shown in the graph opposite.



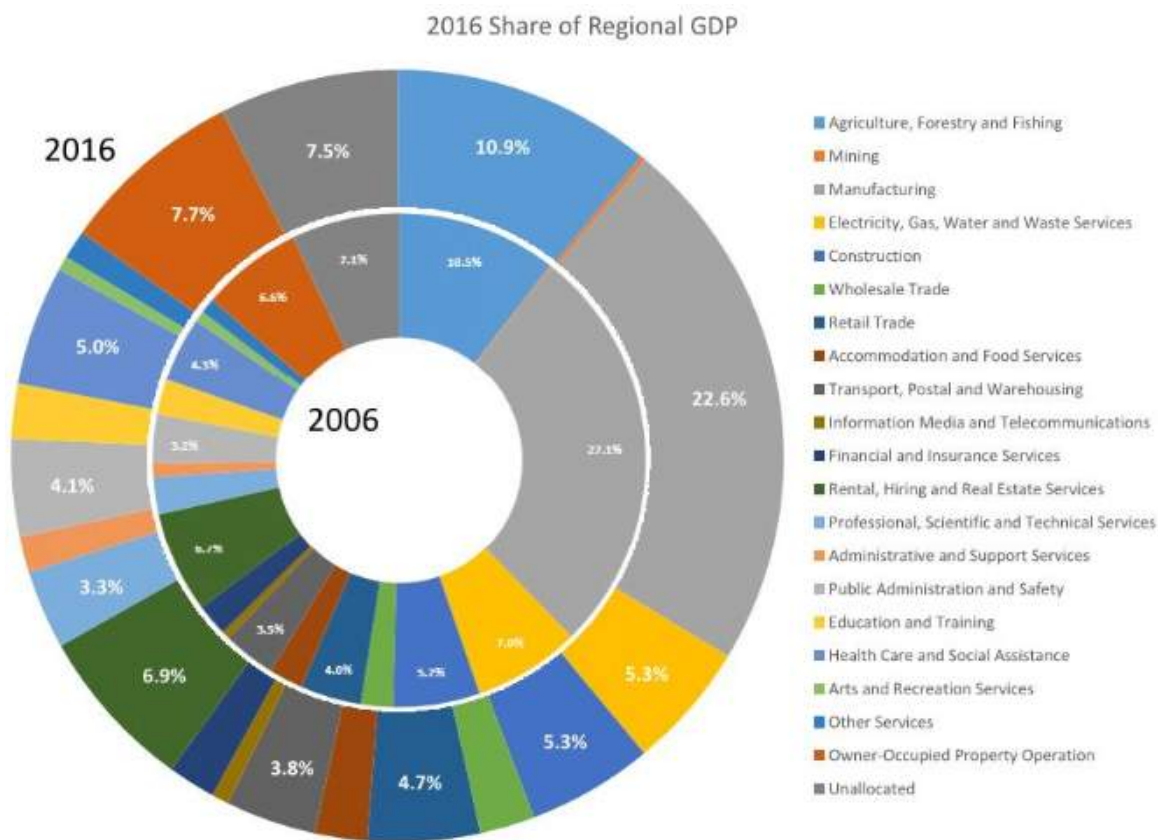
### 3.0 ECONOMIC AND POPULATION GROWTH

| GDP 2016               |                    |                 |
|------------------------|--------------------|-----------------|
| LEVEL                  | REGIONAL GROWTH    | NATIONAL GROWTH |
| \$2,212                | 1.7%               | 2.5%            |
| million in 2010 prices | Marlborough Region | New Zealand     |

We recognise the important role that local roads have in connecting communities, businesses and markets and that our transport network enables economic growth for the region in our primary and secondary sectors.

Source: <https://ecoprofile.infometrics.co.nz/Marlborough+Region>

The Infometrics 2016 publication of the regions GDP statistics prove the area is continuing to grow overall, albeit with some industries increasing and others decreasing.



Primary sector industry associated with viticulture, forestry, aquaculture, agriculture, salt manufacturing and aviation equates to approximately 34% of the regional GDP. Secondary sector industry associated with construction, utilities, tourism related services, professional services, and public services required to support the primary sectors also equates to approximately 39% of the regional GDP.

Our road network is key infrastructure that supports our GDP. Our Primary Industries use the whole of the network whilst our supporting secondary industries are generally focused around our townships and villages.

### 3.1 PRIMARY INDUSTRY SECTORS



#### Viticulture

Viticulture has seen significant growth over the past 15 years and now dominates the lowland sections of the Wairau and Awatere Valley. Over the last decade the Marlborough District has successfully converted most of the land formerly dedicated to cropping and stone fruit orchards into viticulture so that it is now New Zealand's largest grape growing region producing 77% of New Zealand's total wine production.



#### Forestry

Forestry is another industry that has seen significant growth in the last decade. The movement of logs is heavily dependent on road transport. The forestry harvest in the Marlborough Region is expected to increase significantly once economic factors improve.

The forestry sector in the region has reached a sustainable yield of 1,000,000 cubic metres of raw product per annum (requiring transporting over the Council's Roding Network), which is likely to continue for the foreseeable future. (Source: Merrill and Ring, Forestry Consultants/Farm Forestry Assn.)



#### Aquaculture

The Marlborough Sounds has a significant mussel and salmon farming industry with farms located throughout the Sounds and manufacturing and distribution facilities located around the region. Marlborough currently produces more than 90% of New Zealand's green shell mussel exports. Salmon farming is also well established within the Sounds with current production around 7,500 tonnes a year it is expected to continue to grow.



#### Agriculture

The requirement for land for vineyard development has seen a significant reduction in both pastoral and horticultural land use within Marlborough. Most remaining orchard and cropping land is located within the lower Wairau Valley.

Dairy farming is mainly located within the Kaituna and Rai Valley areas whilst sheep and deer farming is generally confined to the upper Wairau Valley, upper Awatere Valley and south of Seddon. No growth in dairy farming is expected and some conversion to viticulture use may occur.



#### Salt Manufacturing

The salt works at Lake Grassmere on the coast south of Seddon produces 60,000 to 70,000 tonnes of salt per year predominately for the domestic markets. The majority of the harvested salt is transported to Picton for shipping.

This production cartage is all via SH 1 (Grassmere to Picton) and has a minimal impact on the Council's roading network.



### Aviation

The Top of the South is home to Air Nelson, HNZ Global and the NZ Defence Force facility at Marlborough Airport. Aviation makes a considerable contribution to the Top of the South's economy, with a combined contribution to the Top of the South's GDP of \$98 million in 2012.

Both airports are served by SH6 and the adjoining local road network which are identified as key journey routes. Marlborough also is home of the Aviation Heritage Centre, attracting national and international visitors.

## 3.2 SECONDARY INDUSTRY SECTORS



As the ferry transit point for Wellington and entrance to the Marlborough Sounds, Picton is geared for tourism. Port Marlborough, in the Marlborough Sounds, is the main portal for freight and tourists travelling between the North and South Islands.

The Marlborough region, in particular the Marlborough Sounds, is renowned as an area of natural beauty in New Zealand. The Sounds are approximately 20% of New Zealand's total coastline length with numerous bays and waterways.

The other main focus of tourism is the viticulture development and associated wineries and restaurants. Marlborough promotes itself as "the gourmet province".

Other tourism related activities include high profile rural accommodation and access to the Nelson Lakes National Park for fishing, skiing, hunting and other alpine pursuits.

Tourism is predicted to continue as a growth industry, the marine farming industry may expand with legislative change, forest harvests are predicted to increase, although the timing of this increase will be influenced by wider external economic factors, and although grape growing in conjunction with wine production has experienced challenges in the past years it is at this stage predicted to continue to grow.



### Owner Occupied Property Operation

The demand for additional office space is growing in the region, especially in Blenheim. Initiatives being considered to help meet this demand include the Small Business Incubator and Community and Small Business Support Centre. The Incubator initiative is to incubate and grow local start-up and home based businesses, whilst the Business Centre focuses on time-share use by Marlborough small businesses, local community groups, after school tutoring, and visiting public and private advice agencies.



### Rental, Hiring and Retail Services

People relocating to the area, as a function of the primary industry growth, retirement and tourism is increasing demand for rental, hiring and retail services.



### **Electricity, Gas, Water and Waste Services**

The Council provides Marlborough's urban areas and main townships with the essential utility services of sewerage reticulation and treatment, water supply and stormwater disposal.

The levels of service provided depend on the size of the urban population and the cost of servicing the particular area. Generally, standards are being improved throughout the district. However, urban growth is creating some funding challenges.



### **Healthcare and Social Assistance**

A comprehensive range of health services is available in the region including a hospital in Blenheim. Community organisations and services are available in the region, provided by both smaller local groups and larger national organisations such as the Plunket Society to support children's development and an hospice which provides to those with life-limiting illness.



### **Construction**

The construction sector is largely driven by the primary industries in the region. The Marlborough economy is strong, creating hundreds of new jobs which is attracting more people to the region, consequently putting pressure on housing demand.

There are about 2200 construction workers in Marlborough at present, another 500 could be needed. Building companies reported being fully booked for up to 18 months in advance, and many companies are struggling to find skilled workers to meet demand.



### **Retail Trade**

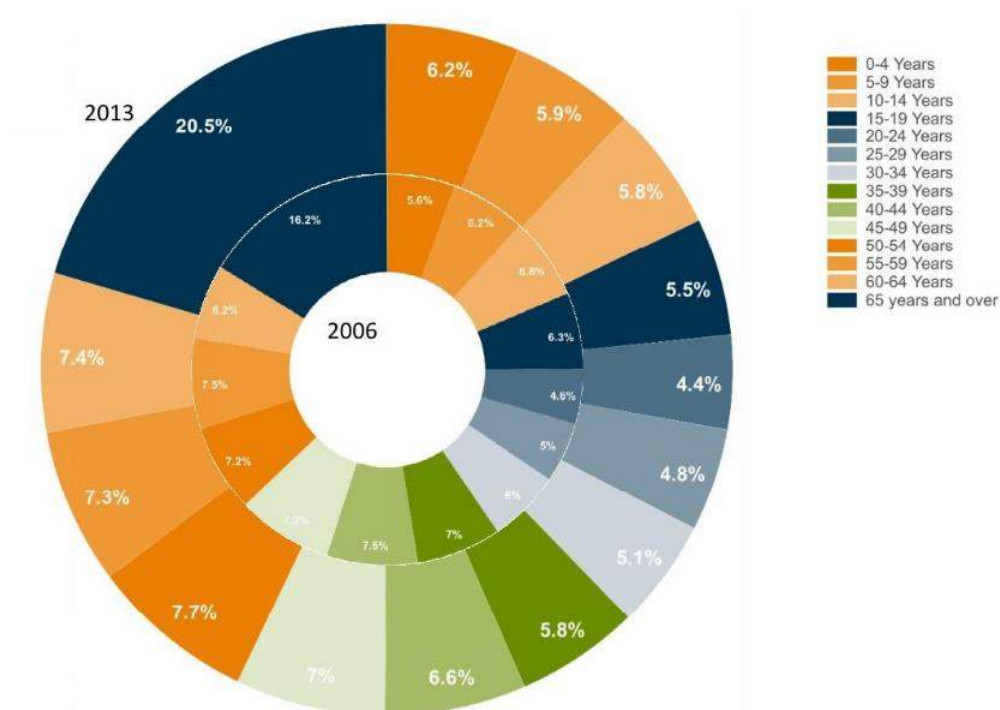
Consumer confidence is high and new businesses to Marlborough are "coming in and trying new things". An influx of new residents to the region has had a positive effect to the revival of new businesses.

## 4.0 DEMOGRAPHICS

The resident population of the Marlborough region, at the time of the 2013 census was 43,416. There are 17,943 households with the majority of these located in the larger towns and serviced settlements with the balance in un-serviced settlements and rural areas.

The main population of Marlborough is centred in the town of Blenheim (24,183), followed by Picton (4,056), which is 25km north of Blenheim.

The following chart shows the demographic composition of Marlborough District for 2013 and 2006. One feature of this comparison is the increase in those aged 60 and above.



Source: <https://ecoprofile.infometrics.co.nz/Marlborough+Region>

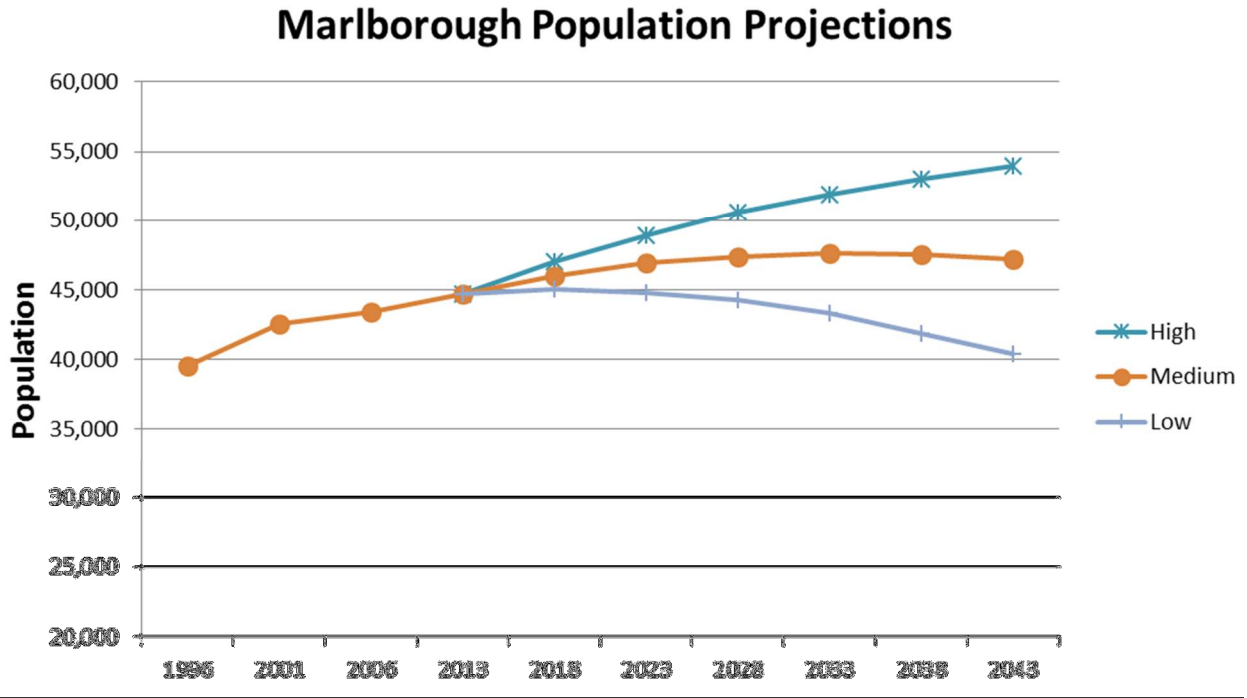
The district's population is expected to increase over the next ten years as a result of the employment opportunities created primarily in the viticulture, forestry and tourism industries. This increase will impact on the roading network both in demands for increased levels of service and network capacity (e.g. increased seal width).

It is anticipated that approximately 75% of new development will be in and around the existing towns and serviced settlements and the balance in rural areas and small un-serviced villages. There is increasing pressure for development of commercial complexes in the district that is placing pressure on the development rules under the existing District Plan. This is affecting urban fringe areas and can have an impact on the roading infrastructure as demand in these areas can alter significantly in a relatively short period of time.

In order to help plan for growth the Council have identified the following key factors:

- Demographic/Population Trends
- Being "Smart and Connected"
- New Residential Dwellings and Subdivision Activity
- Vehicle Usage Trends
- Modal shift including Public Transport and Walking and Cycling

The following population projection graph shows high medium and low forecasts out to 2043. The current perception is that high growth will continue to increase into the future over the short to medium term.

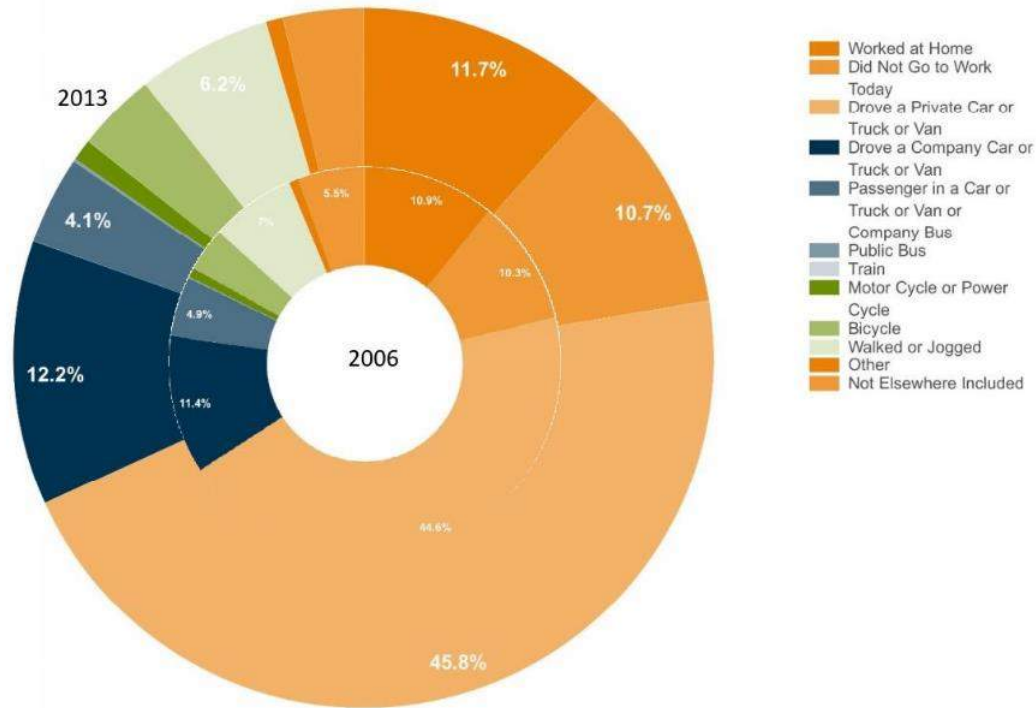


Marlborough District Council has developed a number of strategies and studies for the future development of the Region including;

- Marlborough Townships and Small Settlements Growth Study, July 2007
- Blenheim Urban Strategy
- Northern Marlborough Growth Strategy
- Southern Marlborough Growth Strategy
- Parking studies
- Network Accessibility Plans

The existing road network in the study area is generally in reasonable condition both from a safety and capacity perspective. There are however significant actions and opportunities that can assist in achieving a sustainable transport system into the future.

The following chart shows the means of travel to work within Marlborough District for 2013 and 2006. One feature of this comparison is the increases in those who drive a private or company car/truck/van to work, or who worked from home. Public transport usage is showing a decline, as are those who walk to work.



Source: <https://ecoprofile.infometrics.co.nz/Marlborough+Region>

In addition to private and commercial road use, the following modes of transport also need to be considered in support of the community:



### Public Transport

The Blenheim area currently has one 44 seat passenger bus operating in Blenheim on weekdays and Saturday mornings. This service completes a series of loops around the town’s suburban area and provides a school run service in the mornings and afternoons. This service is operated by the Council and subsidised by the NZTA. The service commenced 9 years ago on a 2 day per week basis and has grown to the current service. Council monitors the occupancy rates of the service and is reviewing the future strategy.



### Walking and Cycling

The vision of the Marlborough District Council Walking and Cycling Strategy is that *Marlborough people and visitors walk and cycle safely for travel, health and enjoyment*. The objectives of the Strategy are to encourage and support people in Marlborough to choose walking and cycling for an active and healthy lifestyle, and to develop a safe, convenient and attractive travel network for walking and cycling.





### Mobility

The ageing population within the area require better mobility in and around the area. Designated mobility routes need to be carefully planned within the context of other road users within the transport network. Due to the growth of the different modes of transport, modifications will be required to accommodate the requirements of mobility scooters.

Blenheim town centre has good parking capacity, however improvements in disabled parking placement and facilities may be required.



### Campervans

The tourism industry brings a significant amount of campervans to our region and they are a key mode of transport for our visitors.

Scenic look outs, beaches and other naturally beautiful places are often off the 'beaten track'. Transport challenges associated with access roads and current customer levels of service need to be considered to ensure the safety of all road users including tourists.

## 5.0 STAKEHOLDER ENGAGEMENT PROCESS AND OUTCOMES

### 5.1 STAKEHOLDER CONSULTATION PROCESS

The customers, road users, are important to the Council. They take a proactive approach in engaging with them and regularly attend regional and local work group meetings. The Council has a hotline for any reactive incidents that need resolving so that they can respond quickly and efficiently in the event of unforeseen activities occurring on the network.

### 5.2 SUMMARY OF STAKEHOLDERS CONSULTED

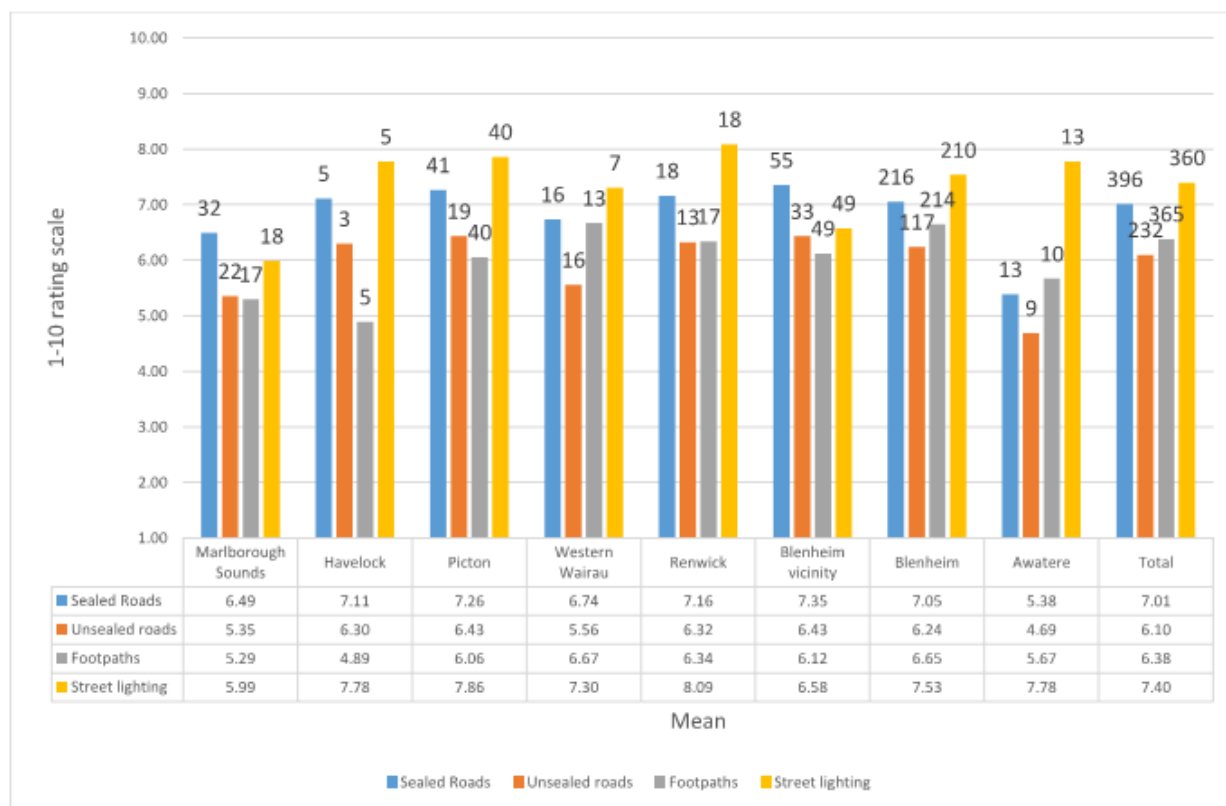
Marlborough Roads have consulted with the following key stakeholders over the past three years:

- Road Transport Association
- Marlborough ratepayers
- Top of South Roding Advisory Group
- Okiwi Bay Rate Payers
- Police
- Wood group (forestry)
- Sounds Advisory Group
- Seddon rate payers
- Tenneson Inlet /Duncan Bay
- Renwick Smart
- Wine growers group
- D'urville Island Roding committee
- Access and mobility forum
- French Pass Roding committee
- Flaxbourne settlers
- Rural Advisory Group
- Cissy Bay Roding Committee
- Havelock Community
- Anikiwa / Tirimoana rate payers
- Kenepuru and Central Sounds Rate Payers
- Port Underwood roading committee
- Picton Smart and Connected
- Ngakuta Bay rate payers
- Wairau valley community
- Ports of Marlborough
- Top of South Freight Forum
- Picton business association
- AA
- Marlborough District Council staff and customer services
- Awatere Valley roading committee

This Strategic Case has been consulted with, and endorsed by, the Regional Transport Committee.

### 5.3 CUSTOMER SATISFACTION

The Marlborough District Council 2016 Annual Residents Survey provides customer satisfaction evidence across the roading network. Our residents perceive the roading and footpath networks as a high priority (8.2 out of 10) with a reasonable level of performance (6.7 out of 10).



Regarding Roads and Footpaths, in most instances, the provision of Street lighting and sealed roads gained the highest satisfaction ratings across the district (79.2% and 71.5% respectively). Footpaths at 62.2% was up a little from 60.6% in 2015. Unsealed roads at 50.0% was down from 51.3% in 2015. Negative comments for the unsealed roads included poor maintenance or lack of maintenance. Over time, the overall satisfaction with road and footpaths has increased slightly.

Note: This does not apply to State Highways. Unsealed roads are located mainly in Awatere, Marlborough Sounds and some in Western Wairau.

### 5.4 CUSTOMER OUTCOMES - LEVELS OF SERVICE

The introduction of the ONRC system by the Transport Agency nationally has allowed us standardise our roading classification.

**NATIONAL**

These roads make the largest contribution to the social and economic wellbeing of New Zealand by connecting major population centres, major ports or international airports, and have high volumes of heavy commercial vehicles or general traffic.

**REGIONAL**

These roads make a major contribution to the social and economic wellbeing of a region and connect to regionally significant places, industries, ports and airports. They are major connectors between regions and, in urban areas, may have substantial passenger transport movements.

All national and regional roads in the region are part of the state highway network and are the responsibility of the New Zealand Transport Agency. This activity management plan focuses on the remaining road classifications as expanded on below.

## ARTERIAL

These roads make a significant contribution to social and economic wellbeing, linking regionally significant places, industries, ports or airports. They may be the only route available to important places in a region, performing a 'lifeline' function.

Arterial roads are in generally good condition but do experience capacity issues at peak times, especially around intersections. Some intersections are not ideal with regards to safety. Cycling and walking communities are growing and more requests for improved cycling and pedestrian facilities at crossing points are being submitted.

## PRIMARY COLLECTOR

These are locally important roads that provide a primary distributor/collector function, linking significant local economic areas or population areas.

Primary Collector roads are generally perceived to be in good condition.

In urban environments there are ongoing requests received for the road surfacing to be improved.

In rural environments there are ongoing requests to improve signage, reduce road deterioration, and provide seal widening.

## SECONDARY COLLECTOR

These roads link local areas of population and economic sites. They may be the only route available to some places within this local area.

Secondary Collector roads need to be constantly monitored, maintained and renewed to ensure our primary industry sectors are supported. Viticulture, forestry and aquaculture sectors are requesting increased seal widening and the rehabilitation of pavements.

Resilience issues from flooding and slips are experienced across all Secondary Collector roads.

## ACCESS

This is often where your journey starts and ends. These roads provide access and connectivity to many of your daily journeys (home, school, farm, forestry etc). They also provide access to the wider network.

Access roads in rural areas are typically unsealed and we see a significant customer demand for increasing the level of service on these routes.

Access roads in urban areas are in generally good condition but can experience challenges with trees, vegetation, drainage which can result in resilience issues.

## 6.0 SUMMARY OF CURRENT LAND TRANSPORT ACTIVITIES, PROBLEMS, BENEFITS, OUTCOMES AND PRIORITIES



The 4 Regional Objectives as stated in the current Regional Land Transport Plan are still valid for the region and are as follows:

- A sustainable transport system that is integrated with well planned development, enabling the efficient and reliable movement of people and goods to, from and throughout the region
- Supporting economic growth through providing better access across the Top of the South's key journey routes
- Communities have access to a resilient transport system
- Communities have access to a reliable transport system

These objectives can be grouped under three headings – **Resilience**, **Environment** and **Safety and Mobility**.



**Resilience** is the ability of a network to withstand, recover, and operate at the desired level of service, when subjected to significant disruptions and shifting circumstances.

The roading network becomes particularly critical in a natural disaster. Access of emergency response, the delivery of ongoing community support and access for the reinstatement of lifeline, communications etcetera are critical functions which must be maintained or reinstated as soon as practical.

The first stage of resilience is reducing risk by ensuring the network is:

- Kept operational through timely and appropriate maintenance intervention
- Kept in sound condition through timely and appropriate renewals
- Regularly undertake preventative maintenance
- Ensure all design of roading renewals and upgrades take account of possible future conditions.

The second stage is being prepared for when the inevitable happens. Emergency Management Plans should be well understood, kept up to date and that the key contacts are aware of the responsibilities and processes required.

The third and final stage of resilience is recovery, how the network is returned to a required level of service once the dust has settled. The key elements of this stage are to follow the set processes for the management of recovery. The recent storm and earthquakes experienced in the region have been a timely reminder of the importance of resilience and why our successful activity plan programmes are crucial to the regions success.



## **Environment**

### **Environment**

The ability to protect the natural and built environment, including quality and aesthetics.

The Marlborough Region enjoys being New Zealand's sunniest climate, receiving almost 2,500 hours of bright sunshine per annum. Summers in Blenheim are warm and dry. Winters are sunny and generally pleasant, although frosts and chilly nights are more common in Blenheim than in most North Island locations.

The dry weather however brings environmental challenges to the roading network associated with dust and severe thunderstorms resulting in flash flooding, landslides which all pose a risk to the health and safety of our users and condition of our network.



## **Safety & Mobility**

### **Safety and Mobility**

The ability to safely access and reliably move throughout the network.

The land transport network allows for the movement of freight and visitors, both of which are essential to our economic well-being. Access and/or mobility restrictions can impact on an individual's, or a community's, ability to participate in commerce and any other activities.

Development pressure, due to primary industry, tourism and elderly retirees, will result in continued growth in the region. As such the transport network will need to adopt to meet the demand.

The Marlborough Regional Land Transport Committee have determined the vision for the Marlborough RLTP to be:

*The Top of the South vision is of an efficient and resilient network that is well able to bounce back from unplanned events.*

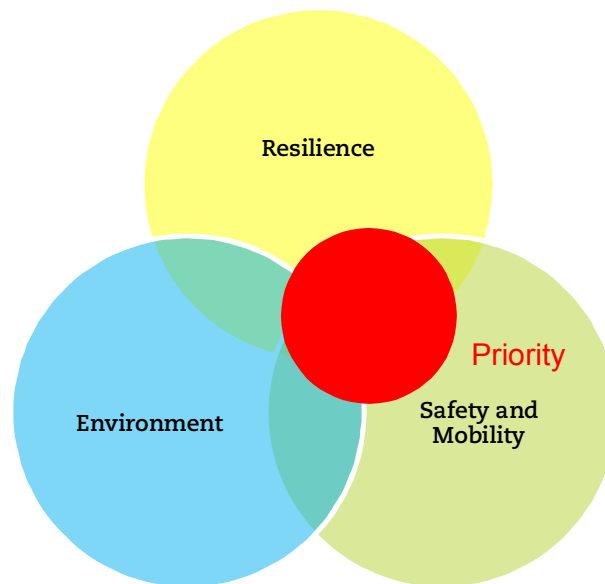
The common activities within Marlborough District have been categorised accordingly, where applicable, and are listed below.

Activities relating to environment being undertaken on the network are :

- Erosion and Sediment Control
- Flood Protection Works
- Weed Control,
- Unsealed road maintenance and dust control
- Flooding repairs
- Landslip repairs
- Drainage maintenance and renewals

Activities relating to resilience being undertaken on the network are:

- Bridge and culvert maintenance and renewals
- Unsealed road maintenance and dust control
- Intersection upgrades
- Flood Protection Works
- Landslip Prevention Work
- Wharves maintenance



Activities relating to **safety and mobility** being undertaken on the network are:

- Unsealed road maintenance and dust control
- Landslip prevention work
- Flood prevention works
- Pavement renewals and maintenance
- Bridge and culvert maintenance and renewals
- Road safety promotional campaigns
- Public transport improvements
- Footpath maintenance and upgrades
- New traffic lights for crossings and intersections
- LED Street light upgrades
- Roundabout renewals and maintenance
- General streetscape amenity improvements
- Cycleway maintenance and improvements

Identified external problems on the network include:

- Lack of general non car based mobility
- Peak time ring road congestion
- Limited town access for elderly due to walking distance from parking
- New vineyards
- Pedestrian and cycle safety in townships
- Potential new high school access conflicts
- Urban spread with migration of business and communities

## 6.2 DESCRIPTION OF ROAD NETWORK PRIORITY PROBLEMS

The priority problems associated with **Safety and Mobility, Resilience**, and **Environment** are summarised below:

- **Deterioration of Bridges and Culverts**
- **Deterioration of Unsealed Roads and Dust Control**
- **Landslips**
- **Flooding**
- **Conflicting Road Network Use**

These problems and their significance are described in more detail below.



### **Deterioration of Bridges and Culverts**

**In a sparsely populated, large region like Marlborough, bridges and culverts are integral to linking roads across waterways and fundamental in allowing people to connect.**

The Marlborough District Council has more than 360 bridges on its transport network. Currently 28 bridges are posted for not meeting Class 1 criteria, of which all are posted for restricted speeds, and seven are also posted for restricted weight.

When bridges fail to meet transportation needs, they become a major focal point for community concern. It is important that maintenance and renewal programmes continue to build in resilience, improve customer levels of service across the region and ensure they meet the relevant classification for the needs of those crossing.

Consequences of bridge failures can be significant and costly. There can be long diversions. Where no alternative access is in place communities can be cut off for days or weeks until a temporary crossing can be created.

Given the large number of bridges in Marlborough, conditions assessments will take a reasonable time. Deferring maintenance costs for bridges will increase risks associated with safety and resilience.



### **Deterioration of Unsealed Roads and Dust Control**

**With some 700km of unsealed roads in the region, around 45% of the overall network, there is a significant investment programme required to maintain and ensure road users are safe and remain connected.**

Access associated with the forestry industry is one of the main drivers for the region's transport investment. Eleven percent of the region's GDP is generated from the industry, which is heavily reliant on the unsealed transport network and on some approved routes, has to cater for High Productivity Motor Vehicles (HPMV).

Tourist and locals frequently use the unsealed road network as they provide access to remote places of natural outstanding beauty and rural homes. The unsealed network also services the rural businesses such as farms, vineyards and forestry.

Unsealed roads require more frequent maintenance as they deteriorate rapidly when exposed to increased traffic such as logging truck. This rapid deterioration from increased traffic is exacerbated during wet weather through rills and/or scouring.

When maintenance is deferred the road can become impassable for standard two wheel drive vehicles, they can cause damage to vehicles and become inherently less safe to drive.

Consequences of this are increased crashes, damage to vehicles from flying gravel, rutting and potholes, dust nuisance to vehicle occupants and adjacent residents. In the wet there can be aquaplaning and damage/loss of control from unseen potholes.



### Landslips

**Where transport networks and landslides meet, is a significant safety concern and can present significant access issues.**

The geology, soils, topography and climate in some parts of Marlborough combine to create the potential for land instability. The most obvious example is the land in the Marlborough Sounds where much of the geology is fractured schist with limited topsoil.

This type of land is naturally unstable where it occurs on steep slopes and especially in times of intense rainfall as well as earthquake events.

It is difficult to determining the locations and likelihood of landslips as well as an accurate understanding of the level of risk. Consequently, this makes investment in proactive measures difficult to justify and results in a much greater reactive programme of work with maintenance programmes identified for areas of known previous slips.

Landslips have the same connectivity issues as bridges and as they happen in steep terrain there is much less opportunity for adjacent temporary alternative routes.

As with bridges consequences of landslips can be significant and costly. Long diversions are likely to be required and if there is no alternative access communities can be cut off for days or weeks until the slip is removed and road established again.



### Flooding

**Residents and visitors to Marlborough typically enjoy a sunny and warm climate. However, sudden and sometimes severe storms do occur. The road network is needed to provide access to communities in need of help during these events.**

Flooding often results in the need to close roads due to them being submerged and from the damage caused by erosion from moving flood water. It can take considerable effort to bring the network back to an acceptable level of service following a significant rainfall event.

Flooding where roads are washed out are costly to repair and as with other events, temporary diversions or alternative routes are likely to be required. Without them communities will be isolated until the road is reopened, or a temporary link is established.

Where flooding and scour is likely, preventative measures can be used to reduce the risk of road erosion. As with landslips preventative works are difficult to identify and are usually incorporated into the repair of areas where flooding has occurred in the past.

Where flood erosion measures have been implemented, they must be maintained in order to be effective. Otherwise the benefit will be literally washed away.



### Conflicting Road Network Use

**The increases in viticulture, forestry, tourism and an aging demographic is resulting in the transport network being used for many different purposes.**

Commercial road use is increasing due to substantial growth in viticulture and a sustained forestry industry.

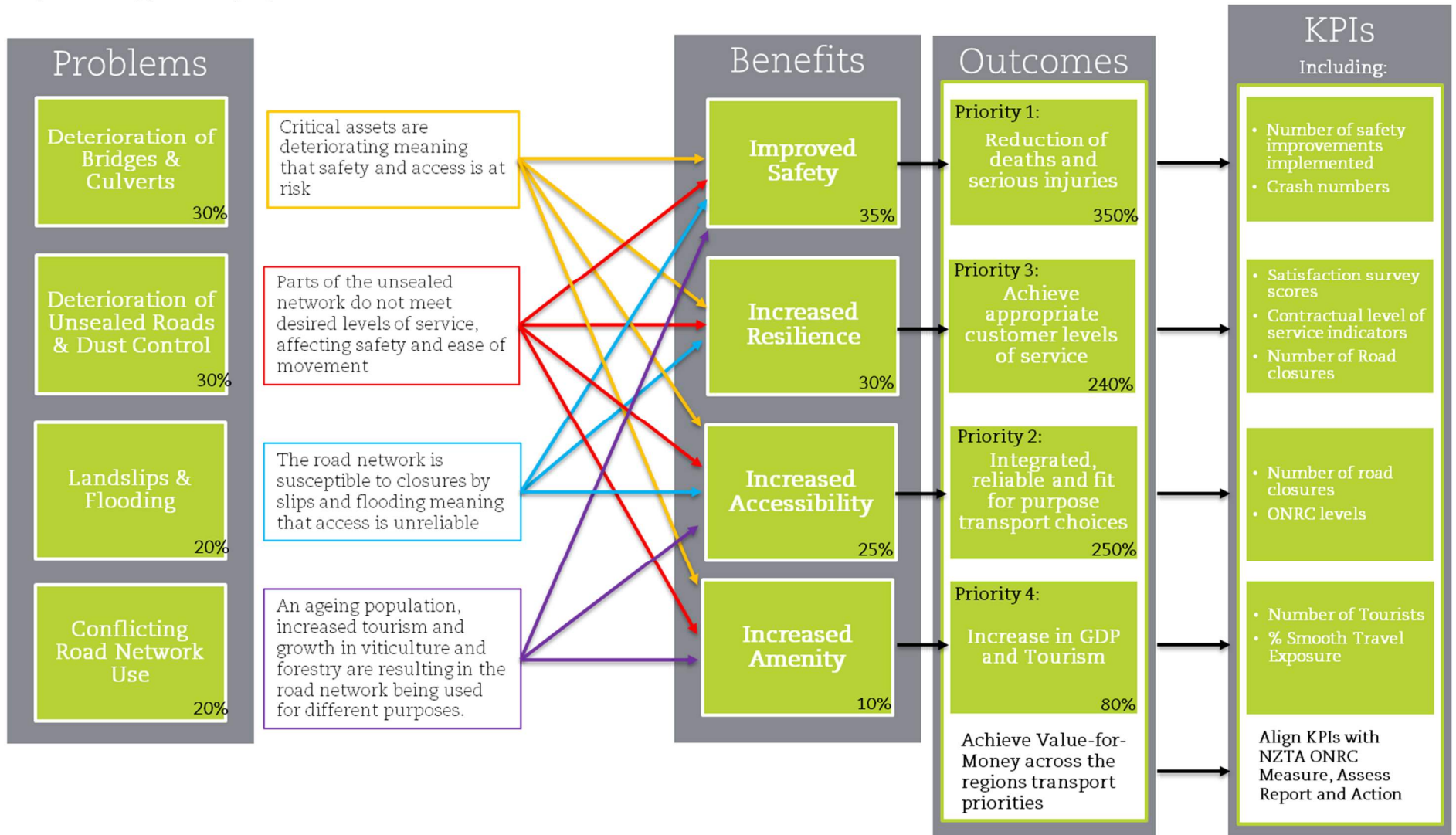
Personal road use is increasing from growth in tourism and population growth that includes people retiring to the region. Personal mobility uses a range of transport modes that have conflicting requirements on road space and their own safety needs.

A key challenge is providing a safe transport network that affordably meets the needs of those that use it. Changing demographics can alter the focus of investment. Financial pressure could result in the remoter parts of the network being under funded from a focus on higher priority roads.



### 6.3 IDENTIFICATION OF ROAD NETWORK PRIORITY BENEFITS AND OUTCOMES

The Investment Logic Map below has been developed through informed discussion. Its purpose is to communicate the investment story in a simple diagram, using plain language.



## 6.4 CONFIDENCE IN DELIVERY

Marlborough District Council has recently had a low delivery compared to programme. This has primarily been due to recent earthquake events and the impact this has had on the availability of contractors. Prior performance has been very high.

The Core programme of works is where there is no adjustment to the level of service required. Where a positive adjustment is made, could be considered Enhanced.

A key part of delivery is procurement for the infrastructure services. Smart procurement practices are expected to be the norm. Marlborough Council would consider itself to have embraced 'smart buyer' principles, with a self-assessment score of 59, Appendix 12, and will seek to improve through demonstrating greater alignment with the key attributes of smart buyers. These being;

- An improved understanding of costs that better inform their decision making process
- An understanding of the impact delivery models and supplier selection criteria can have on the value of contracts
- Robust forward work programmes that are communicated to the industry and supported by budgets that allows the work to be completed
- Knowledge of the network to determine treatments required based on physical evidence and supported by knowledge of the costs involved
- In house expertise that aids the decision making process and allows acceptance of innovative solutions possibly with or without the involvement of consultants
- A clear understanding of risk and how it is allocated and managed
- An understanding that lowest price will not always deliver desirable outcomes
- An understanding of whole-of-life value-for-money.

By driving intelligent investment in maintaining the district's transport network, Marlborough District will deliver on customers' expected levels of service. They will ensure that key industry sectors and communities have access to a transport system that aligns with the strategic policy direction set by national government and as directed by the Regional Land Transport Plan.

There is a risk that an extension of earthquake reconstruction works in Kaikoura, and other locations, will have a negative impact on the availability and cost efficiency of design/construction services over the short-term, and which could result in under-delivery of the transport programme until the market supply of resources normalises. Due to the rapid, concentrated focus on reconstruction works, it is expected that the risk of under-delivery is low. It is further expected that any reduction in work over the next year, could be offset by increases in market capability in following years.

## 6.5 MINOR IMPROVEMENTS

In **Principle** these are prioritised small projects up to \$1,000,000 which align with governing documents, expected expenditure and, apart from funding authorizations, otherwise follow standard processes. The **Policy** linkage is with Safer Journeys, the One Network Road Classification, Marlborough Regional Land Transport Plan, and parent documents. The **Process** is based on a 'live' prioritised list where potential projects are evaluated and ranked accordingly. These projects are identified through the various Marlborough Roads network management routines and safety processes. Data inputs come from routine driveovers and audits by contracting partners; feedback from Councillors and Council staff; stakeholder and community feedback; safety inspections; Strategy Studies; Crash Reduction Studies; Safety Performance Reviews; and the Forward Work Plan. Priorities are:

1. Sites with repeated Fatal or Serious Injuries over a 10 year period.
2. Sites of Fatal or Serious Injuries, with priority to roads with higher volumes.
3. Other projects with maintenance, capacity, or efficiency benefits, with priority to sites with highest Social Cost, and/or best value-for-money.

The prioritised list is regularly reviewed. Lower scoring projects are monitored, such that fringe projects do not get perpetually ignored, to the detriment of the wider network. The list is reviewed annually by the Council's Assets and Services Committee and then confirmed by full Council.


## 7.0 LINKS TO THE ONRC CUSTOMER OUTCOMES




**Safety**  
Customer Outcome Performance Measures



**Safety**  
Technical Output Performance Measures



**Resilience**  
Customer Outcome Performance Measures



**Amenity**  
Customer Outcome Performance Measures



**Amenity**  
Technical Output Performance Measures



**Accessibility**  
Customer Outcome Performance Measures



**Accessibility**  
Technical Output Performance Measures



**Travel Time Reliability**  
Customer Outcome Performance Measures



**Cost Efficiency Performance Measures**

The four central problems identified, directly link back to the three broad categories of **Safety and Mobility, Resilience**, and **Environment**, and provide measurable improvements in these areas.

- The Safety and Mobility category ties directly back into two ONRC CLoS with respect to Mobility, which also includes Resilience, and Safety.
- As noted, Resilience is a subset of the ONRC CLoS with respect to Mobility.
- The third category, Environment, ties back into the ONRC through CLoS for Resilience of the route, Amenity and Accessibility.

More specifically:

- Improving the Bridges and Culverts Level of Service will increase mobility, resilience, safety and accessibility of the network.
- Improving the unsealed roads Level of Service will increase the mobility, amenity, safety and the accessibility of the network.
- Addressing areas prone to Flooding increase the resilience, safety and accessibility of the network
- Addressing areas prone to Landslips will increase mobility, resilience, safety, and accessibility of the network.
- Providing for customers changing uses of the network will increase the mobility, safety and accessibility of the network.

## **8.0 GEOSPATIAL REPRESENTATION OF THE ONRC, PRIMARY INDUSTRIES AND REGIONS PROBLEMS**

A digital geospatial mapping exercise has been undertaken to spatially present the ONRC, primary industries, bridges, unsealed roads and areas of landslips and flooding. The data has been obtained from a number of databases including LINZ, NZTA RAMM GIS and Marlborough District Council.

During the process duplication and errors in the data were evident and should be cleansed and verified into a 'single source of truth'. It is recommended that this is undertaken as part of the improvement plan (Refer to Section 17.0).

The maps are presented below the following summary of each category:

### **8.1 ONE ROAD NETWORK CLASSIFICATION**

The data has been obtained from the NZTA RAMM GIS Database and modified to reflect the unsealed and sealed proportions of the low volume and access roads. Following review of the data it was evident that the metadata had duplication on naming conventions, in particular National and Low Volume roads. These need to be checked and the metadata amended to reflect actual outputs. It is important that this work is done as it sets the Customer Level of Service required for the particular element of the road network.

### **8.2 PRIMARY INDUSTRIES**

Primary Industries associated with the vineyards, forestry, aquaculture and agriculture were obtained from the Marlborough Council database. No data was available for Aviation or Salt Manufacturing and it is recommended that these primary industries be mapped, as part of the improvement plan (Refer to section 16.0) to complete the data set.

In respect to tourism, the data available mainly related to 'areas of beauty' which would suggest an area that may see tourists visiting. As part of the improvement plan we recommend that a detailed analysis of tourist movements is aligned with different categories of tourism to provide a better understanding of the geospatial road network use (Refer to Section 17.0).

In respect to growth across the primary industries sector and tourism it was unclear if growth in the individual sectors had been considered. It is recommended that this be checked and the data set modified to suit (refer to Section 16.0).

### **8.3 BRIDGES**

The bridge and culvert data has been colour coded to reflect the current replacement programme which is explained in more detail in section 10.0. An initial alignment of the ONRC to the bridges was attempted as part of the strategic case review. Unfortunately the Metadata provided some evidence that the information had errors and will need to be verified as part of the improvement plan (Refer to section 17.0). The maps do however give a visual representation of which bridges are on what roads and is a powerful way to demonstrate the customer levels of service for each bridge on the ONRC

### **8.4 UNSEALED ROADS**

An initial alignment of the ONRC to the bridges was attempted as part of the strategic case review. Unfortunately the Metadata provided some evidence that the information had errors and will need to be verified as part of the improvement plan (Refer to section 17.0). The maps do however give a visual representation of the unsealed and sealed roads.

### **8.5 LANDSLIPS AND FLOODING**

Data was obtained from the Marlborough District Council GIS database. It is evident that the data needs to be assessed to align the outcomes to the roading network. For example the data shows a significant number of landslips in Blenheim, however landslips are known to be prevalent in the Sounds instead. Additional data should be obtained to identify the different types of landslips and flooding events classifications and then be aligned to the roading network (Refer to section 17.0).

**Legend**

**LANDSLIP**  


**FLOODING**  


**ONRC**

-  ARTERIAL
-  PRIMARY COLLECTOR
-  SECONDARY COLLECTOR
-  LOW VOLUME - UNSEALED
-  ACCESS ROAD - SEALED
-  ACCESS ROAD - UNSEALED
-  nz-state-highway-centrelines

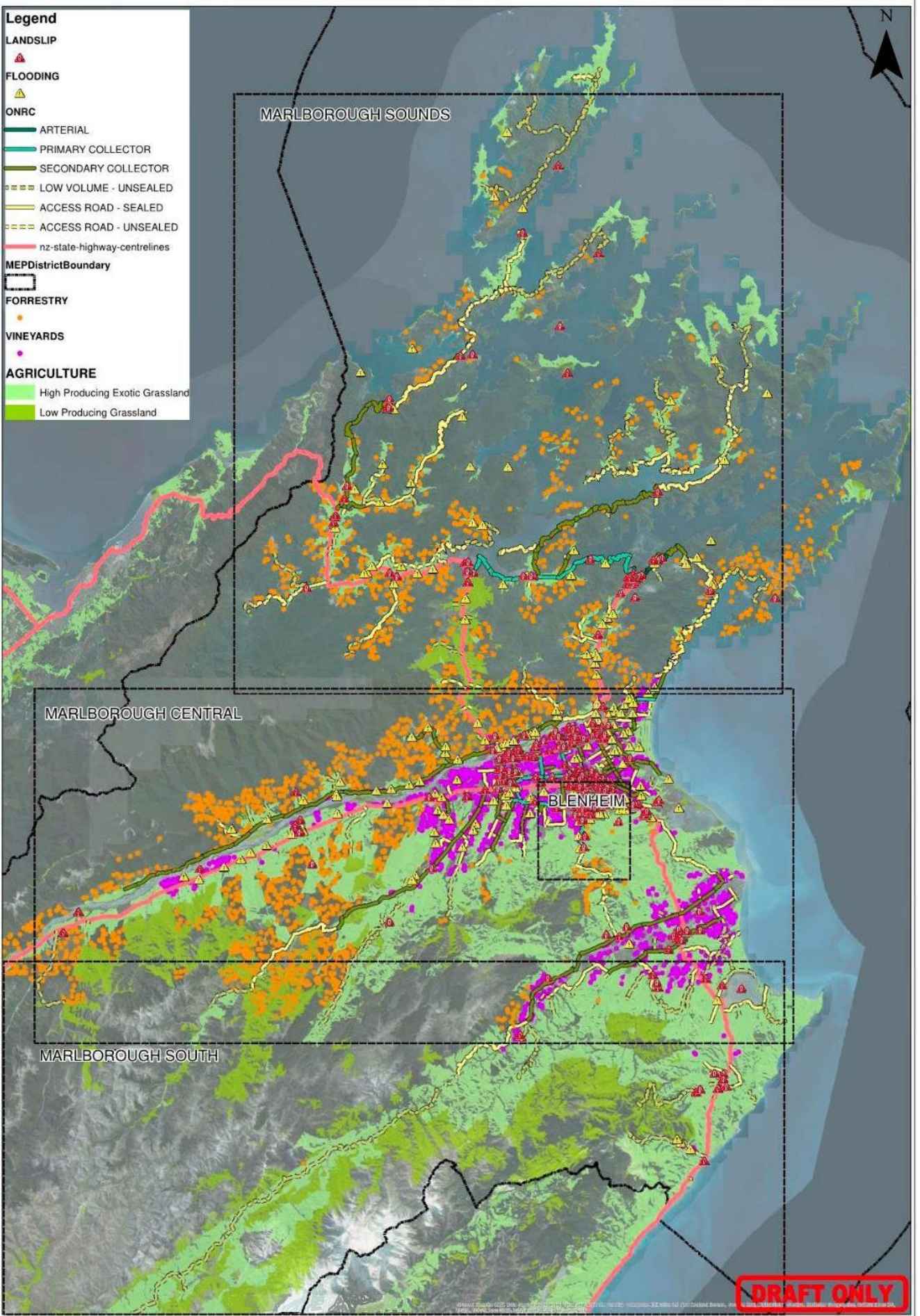
**MEPDistrictBoundary**  


**FORRESTRY**  




**VINEYARDS**  


**AGRICULTURE**

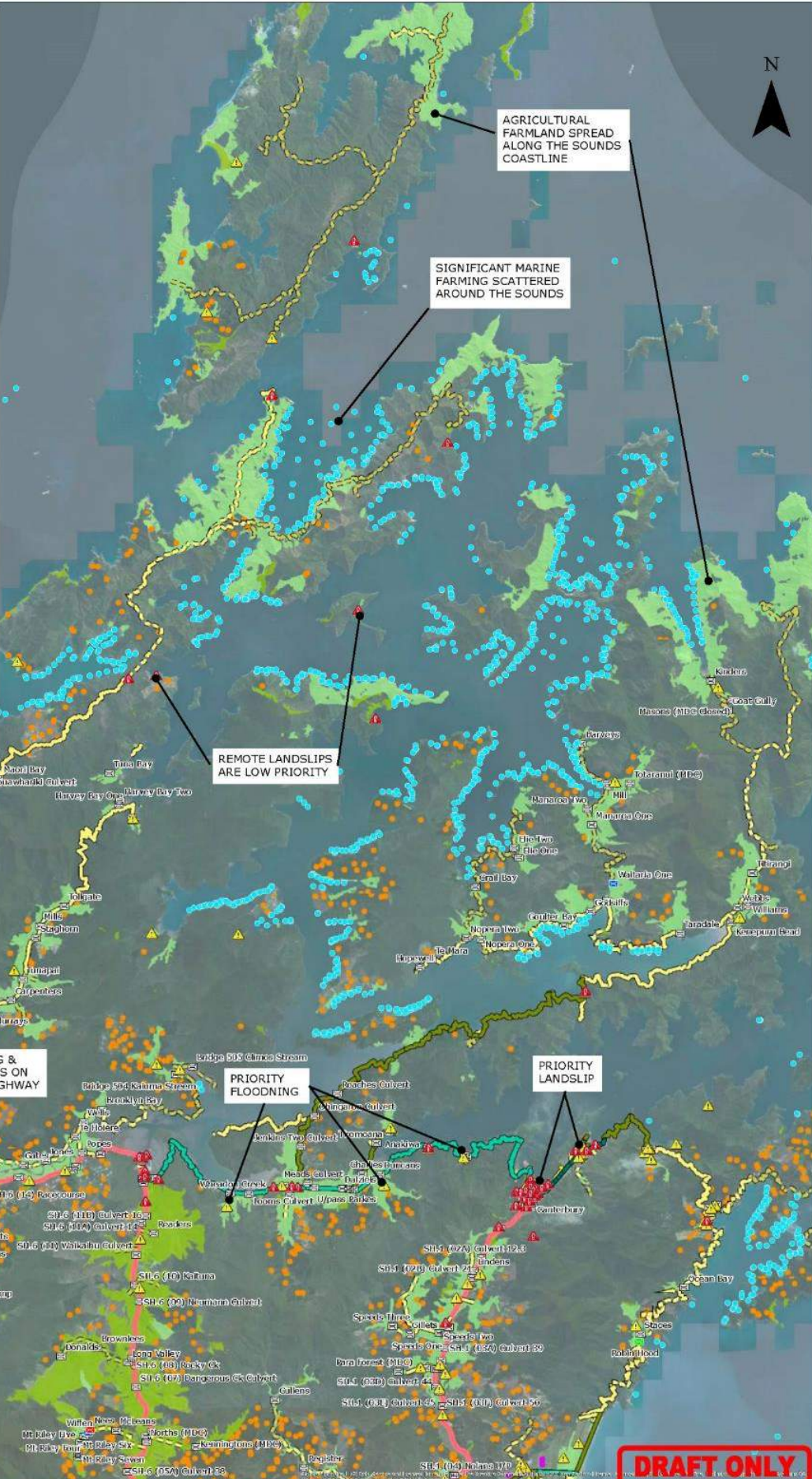
-  High Producing Exotic Grassland
-  Low Producing Grassland



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|   |  |  | page 29   |                                  | <p>A1</p> <p>REV</p> <p>R1</p>  |

- Legend**
- Bridges - MDC**
- <all other values>
  - Aherns
  - Butterfly
  - Neals
  - Nees
  - Robin Hood
  - Waitaria One
  - Wiffen
- LANDSLIP**
- ▲
- FLOODING**
- ▲
- ONRC**
- ARTERIAL
  - PRIMARY COLLECTOR
  - SECONDARY COLLECTOR
  - LOW VOLUME - UNSEALED
  - ACCESS ROAD - SEALED
  - ACCESS ROAD - UNSEALED
  - nz-state-highway-centrelines
- TOURISM**
- 
- MEPDistrictBoundary**
- 
- MarineFarm / MarineFarm**
- 
- FORRESTRY**
- 
- VINEYARDS**
- 
- AGRICULTURE**
- AGRICULTURE**
- High Producing Exotic Grassland
  - Low Producing Grassland



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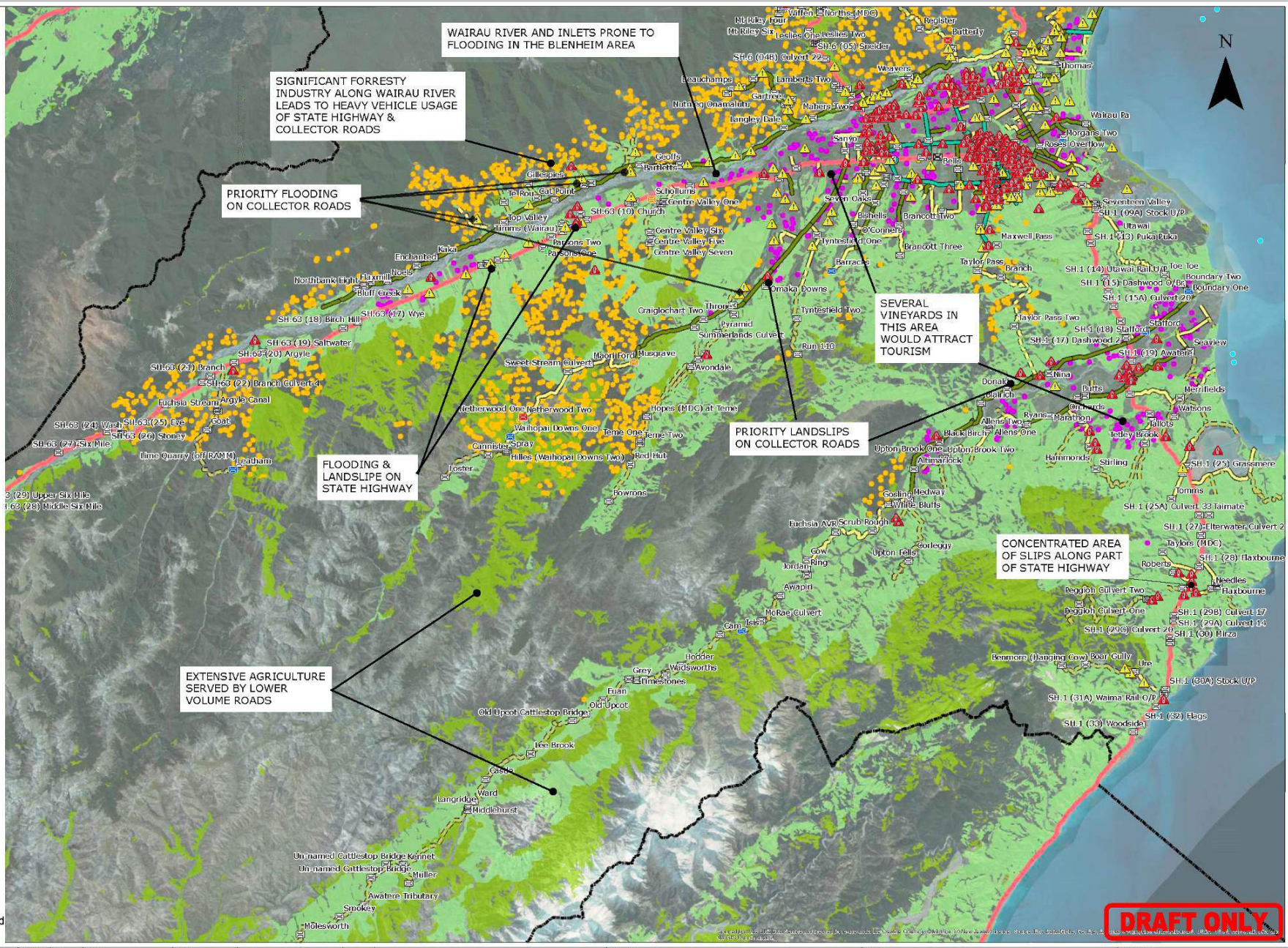


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| TITLE:   | MARLBOROUGH SOUNDS           |
| DATE:    | page 36 BEST BUSINESS CASE   |

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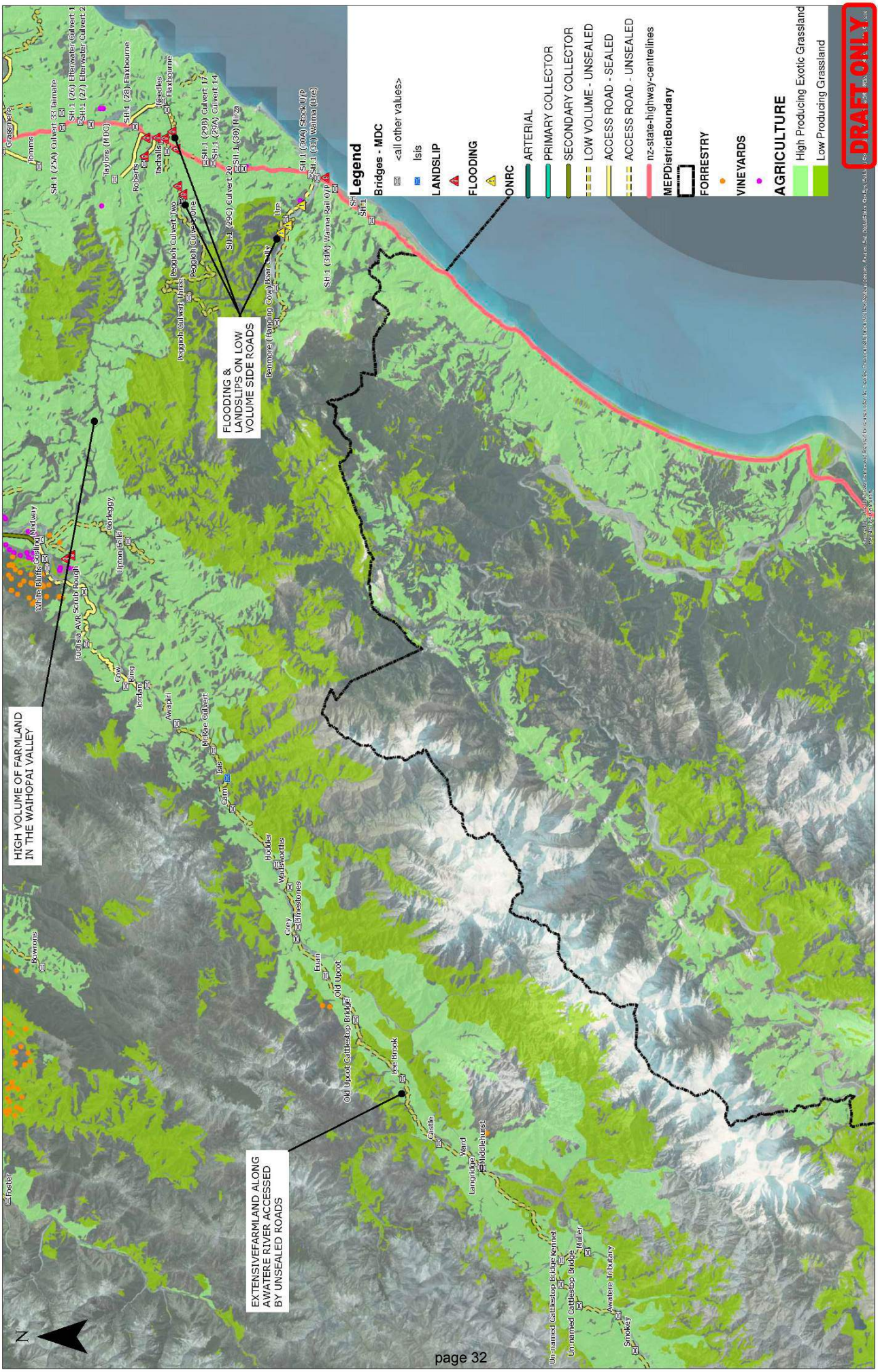
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- <all other values>
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  - Blinks
  - Boundary One
  - Butterfly
  - High St
  - Isis
  - Leatham
  - Morgans Two
  - Musgrave
  - Nees
  - Netherwood One
  - Netherwood Two
  - O'Connors
  - Parsons Two
  - Schollums
  - School Road
  - Stafford
  - Waihopai Downs One
  - Wiffen
- LANDSLIP**
- Landslip
- FLOODING**
- Flooding
- ONRC**
- ARTERIAL
  - PRIMARY COLLECTOR
  - SECONDARY COLLECTOR
  - LOW VOLUME - UNSEALED
  - ACCESS ROAD - SEALED
  - ACCESS ROAD - UNSEALED
  - nz-state-highway-centrelines
- TOURISM**
- Tourism
- MEPDistrictBoundary**
- District Boundary
- AQUACULTURE**
- Aquaculture
- FORRESTRY**
- Forrestry
- VINEYARDS**
- Vineyards
- AGRICULTURE**
- High Producing Exotic Grassland
  - Low Producing Grassland



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HIGH VOLUME OF FARMLAND IN THE WAITOPOAI VALLEY

FLOODING & LANDSLIPS ON LOW VOLUME SIDE ROADS

EXTENSIVE FARMLAND ALONG AWATERE RIVER ACCESSED BY UNSEALED ROADS

**Legend**

- Bridges - MDC
- <all other values>
- Isis
- LANDSLIP
- FLOODING
- ONRC
- ARTERIAL
- PRIMARY COLLECTOR
- SECONDARY COLLECTOR
- LOW VOLUME - UNSEALED
- ACCESS ROAD - SEALED
- ACCESS ROAD - UNSEALED
- nz-state-highway-centrelines
- MEPDistrictBoundary
- FORRESTRY
- VINEYARDS
- AGRICULTURE
  - High Producing Exotic Grassland
  - Low Producing Grassland

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# Business Case Activity Management Plan - Programme Case



## 9.0 PROGRAMME CASE - LINK TO STRATEGIC CASE

The programme of works detailed within the existing Marlborough District Council Roading Assets – Activity Management Plan 2015 – 2018 are generally being delivered as originally intended.

Undertaking the 2018-2021 Strategic Case review has highlighted the need to consider the main roading problems. These are associated with ageing bridge infrastructure, unsealed road network deterioration, landslip and flood prone areas of the network and conflicting road network uses being generated due to regional GDP growth in the primary industries, tourism and being a desirable place for people to retire.

Critical thinking around investment in these problems will enable the Marlborough region to achieve an increased level of service associated with safety, resilience, accessibility and amenity. The success of these will depend on achieving value for money using the following key customer outcomes.

### Reduction of deaths and serious injuries



Our existing activity management plan is split between our maintenance, renewals and capital works programmes associated with the following activities:

### Integrated, reliable and fit for purpose transport choices



- AMP Section 6.1 - Sealed Roads
- AMP Section 6.2 - Unsealed Roads
- AMP Section 6.3 – Drainage Facilities
- AMP Section 6.4 – Bridges and Culverts
- AMP Section 6.5 – Other Structures
- AMP Section 6.6 – Environmental
- AMP Section 6.7 – Footpaths
- AMP Section 6.8 – Vehicle Crossings
- AMP Section 6.9 – Cycleways
- AMP Section 6.10 – Traffic Services
- AMP Section 6.11 – Street Furniture
- AMP Section 6.12 – Street Lighting
- AMP Section 6.13 – Car Parks
- AMP Section 6.14 – Wharves / Jetties
- AMP Section 6.15 – Legal Roads
- AMP Section 6.16 – Misc Activities
- AMP Section 6.17 – Minor Works
- AMP Section 6.18 – Special Purpose Roads
- AMP Section 6.19 – Management
- Public Transport

### Achieve appropriate customer levels of service



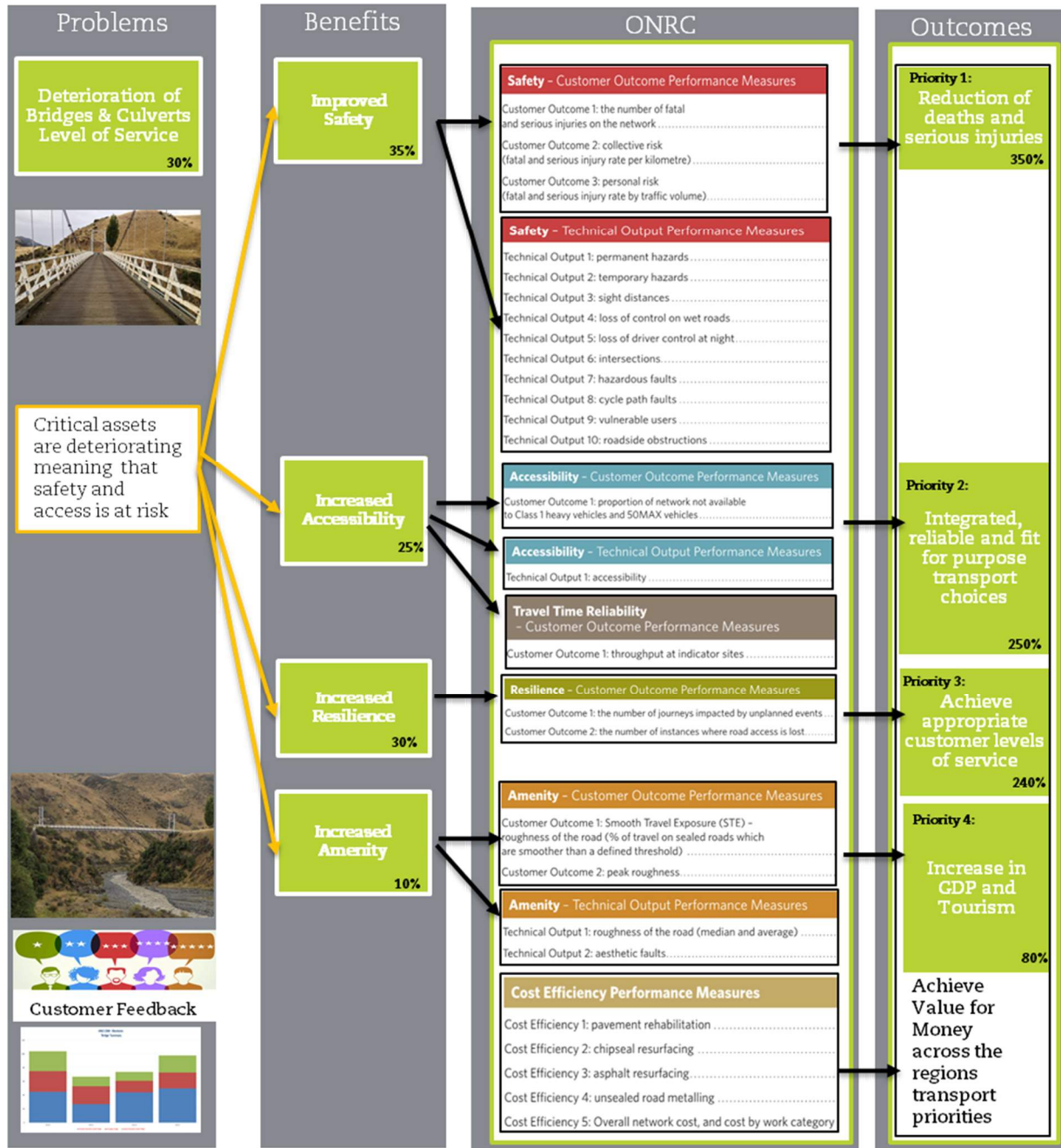
### Increase GDP and Tourism



The problem areas facing the region are associated with their corresponding AMP sections below. Each problem area is discussed in more detail through the Programme Case

| Bridges and Culverts   | Unsealed Roads and Dust Control  | Landslips and Flooding   | Conflicting Road Network Use   |
|--|--|--|--|
|  <ul style="list-style-type: none"> <li>• AMP Section 6.4 – Bridges and Culverts</li> </ul> |  <ul style="list-style-type: none"> <li>• AMP Section 6.2 - Unsealed Roads</li> </ul> |   <ul style="list-style-type: none"> <li>• AMP Section 6.3 – Drainage Facilities</li> <li>• Emergency Works</li> </ul> |  <ul style="list-style-type: none"> <li>• AMP Section 6.7 – Footpaths</li> <li>• AMP Section 6.9 – Cycleways</li> </ul> |
| <ul style="list-style-type: none"> <li>• Incident Response</li> </ul>  |  |  |  |

# 10.0 DETERIORATION OF BRIDGES AND CULVERTS LEVEL OF SERVICE

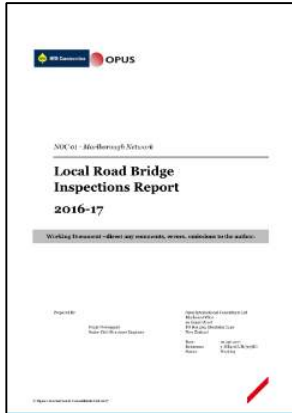


Investment in ageing bridge and culvert infrastructure assets is a key requirement for connecting customers across the regions road network. Investment will achieve benefits associated with Safety, Accessibility, Resilience and Amenity.

This section of the programme case explores the problems facing our bridge assets. It reviews the current evidence available to demonstrate the need to invest in the improvement plan activities. The existing data needs to be aligned with the ONRC and further work is required in respect of stakeholders. It is inappropriate at this stage to develop a long list of options without the necessary evidence to support the options being considered. There is a risk that the wrong option could be selected based on the current assumptions and understanding of constraints.

There is a commitment to achieving and demonstrating value for money, by undertaking a critical assessment of options using the Transport Agencies Investment Assessment and Multi-Criteria Analysis Assessment framework. Consequently, the Marlborough regions long list assessment framework has been developed for use during the 2018 – 2021 AMP period (Refer to section 16.0) which demonstrates the intent over the next 3 years.

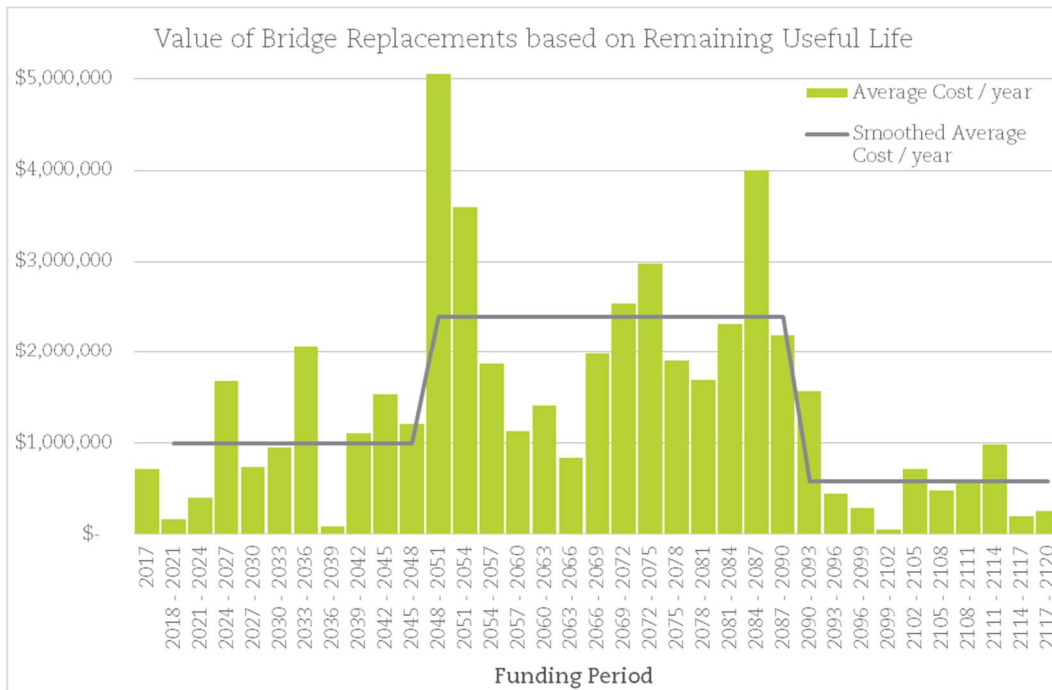
## 10.1 THE PROBLEM EXPLAINED



Continuing investment into Bridge and Culvert asset management planning allows and enables consideration of the balance between Maintenance, Renewals and Capital Works.

Detailed inspections allow for determination of the remaining useful life of the bridge and culvert asset stock. The current bridge replacement spending profile is summarised in the graph below.

The smoothed investment profile needs to be more than doubled from current level for the period 2048-2051 and continues at this level of investment for 42 years. This is a significant increase over an extended period. Alternative options should be considered to ensure a financially viable future spend that demonstrates value for money.



The customer request management system (CRMS) has provided the current evidence of complaints received about Bridge and Culvert Assets.



The chart above shows an increasing complaint trend over the last 3 years, raising from 69 to 98 complaints per year. The maximum number of complaints were recorded in 2013/2014, which was attributable to the Canterbury earthquakes. Similarly 2016 / 2017 were affected by the Kaikoura earthquakes, however there is still a significant number of complaints being received that need to be addressed.

## 10.2 BENEFIT 1 - IMPROVED SAFETY



At present there is limited safety data associated with bridges and culverts. It is not evident from the current ONRC data available what proportion of the Customer Outcome Performance Measures has been a result of bridge and culvert defects. The Technical Output Performance Measures have not been incorporated into the Bridge Asset Management programme.

| Safety - Customer Outcome Performance Measures  |
|---|
| Customer Outcome 1: the number of fatal and serious injuries on the network .....         |
| Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre) .....   |
| Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume) ..... |

| Safety - Technical Output Performance Measures            |
|---|
| Technical Output 1: permanent hazards .....               |
| Technical Output 2: temporary hazards .....               |
| Technical Output 3: sight distances .....                 |
| Technical Output 4: loss of control on wet roads .....    |
| Technical Output 5: loss of driver control at night ..... |
| Technical Output 6: intersections .....                   |
| Technical Output 7: hazardous faults .....                |
| Technical Output 8: cycle path faults .....               |
| Technical Output 9: vulnerable users .....                |
| Technical Output 10: roadside obstructions .....          |

Over the 2018 – 2021 AMP programme the Council will be committed to aligning and obtaining the necessary information to support future AMP reviews using the business case approach.

To achieve this, the Customer Survey questions database will need to be reviewed so that meaningful bridge and culvert data can be recorded. The Asset Management Plan will need to incorporate the Technical Output Performance Measures and align to the One Network Road Classification. Undertaking these tasks will allow the establishment of a baseline of Customer Levels of Service to Bridge Assets and ONRC Customer Levels of Service (Refer to Section 16.0)

## 10.3 BENEFIT 2 - INCREASED ACCESSIBILITY

| Accessibility - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles ..... |

| Accessibility - Technical Output Performance Measures |
|---|
| Technical Output 1: accessibility .....               |

| Travel Time Reliability - Customer Outcome Performance Measures |
|---|
| Customer Outcome 1: throughput at indicator sites .....         |

There are a number of bridges around the region that have weight and speed limits. It is recommended that this data be aligned to the bridge asset management and ONRC so that they can be assessed on criticality and customer level of service required. (Refer to section 17.0).

There is no ONRC data available in respect of Accessibility - Technical Output Performance or Travel Time Reliability - Customer Outcome Performance. These performance measures should be assessed from a bridge perspective and how this type of asset can contribute to achieving the roading network requirements (Refer to section 17.0).

## 10.4 BENEFIT 3 - INCREASED RESILIENCE

| Resilience - Customer Outcome Performance Measures                            |
|---|
| Customer Outcome 1: the number of journeys impacted by unplanned events ..... |
| Customer Outcome 2: the number of instances where road access is lost .....   |

There is no ONRC data available in respect of Resilience – Customer Outcome Performance Measures. These performance measures should be assessed from a bridge perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)

## 10.5 BENEFIT 4 - INCREASED AMENITY

| Amenity - Customer Outcome Performance Measures  |  |
|--|--|
| Customer Outcome 1: Smooth Travel Exposure (STE) - roughness of the road (% of travel on sealed roads which are smoother than a defined threshold) ..... |  |
| Customer Outcome 2: peak roughness .....   |  |

| Amenity - Technical Output Performance Measures                      |  |
|--|--|
| Technical Output 1: roughness of the road (median and average) ..... |  |
| Technical Output 2: aesthetic faults.....                            |  |

There is no ONRC data available in respect of Amenity Customer Outcome and Technical Output Performance Measures. These performance measures should be assessed from a bridge perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)

## 10.6 COST EFFICIENCY

Achieving value for money across the bridge maintenance, renewals and capital works programmes does not lend itself to the Cost Efficiency Performance Measures.

| Cost Efficiency Performance Measures                               |  |
|--|--|
| Cost Efficiency 1: pavement rehabilitation .....                   |  |
| Cost Efficiency 2: chipseal resurfacing .....                      |  |
| Cost Efficiency 3: asphalt resurfacing .....                       |  |
| Cost Efficiency 4: unsealed road metalling .....                   |  |
| Cost Efficiency 5: Overall network cost, and cost by work category |  |

There is no ONRC data available in respect of Cost Efficiency Performance Measures. These performance measures should be assessed from a bridge perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0).

## 10.7 2018 - 2021 AMP PROGRAMME

The 2018 - 2021 AMP bridge programme will continue to be delivered through the 'remaining useful life' approach adopted within our asset management plan and current investment profile as detailed within section 15.4.

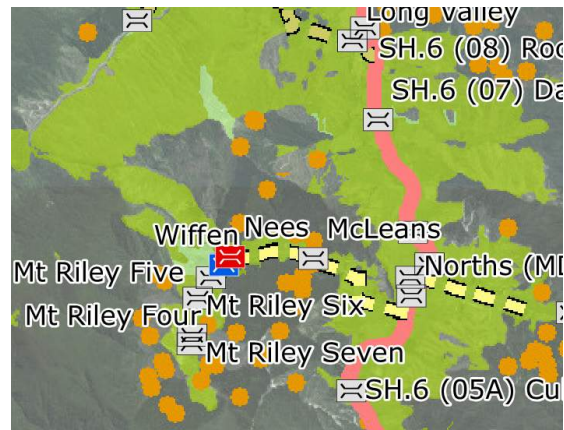
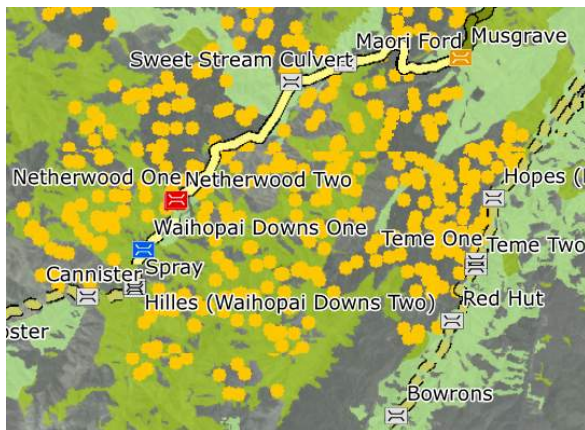
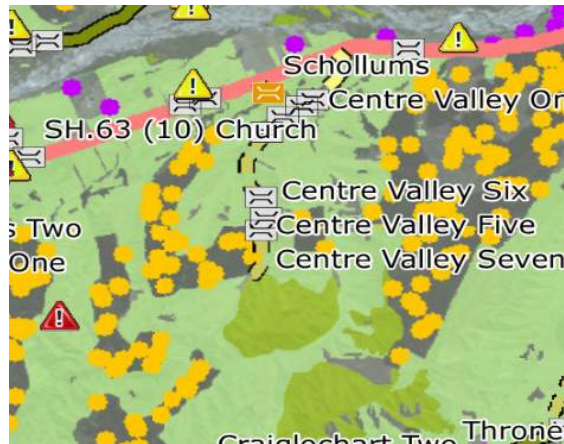
| Marlborough District Council                          |                         |                                      |              |                      |           |                                      |              |  |  |
|---|-------------------------|--------------------------------------|--------------|----------------------|-----------|--------------------------------------|--------------|--|--|
| Roading Assets - Activity Management Plan 2018 - 2021 |                         |                                      |              |                      |           |                                      |              |  |  |
| Bridge No   | Bridge Name             | Road                                 | Replace Cost | RUL Adjusted (years) | ODRC      | Predicted Replacement Period (years) | Replace Cost | Comments   |  |
| 344   | PARSONS NO.2            | PARSONS ROAD (698)                   | \$116,820    | 2                    | \$4,136   | 2017                                 | \$116,820    | Medium Forestry Usage, currently propped           |  |
| 370   | ROBIN HOOD BAY          | FORT UNDERWOOD ROAD (712)            | \$144,540    | 3                    | \$8,247   | 2017                                 | \$144,540    |  |  |
| 321   | O'CONNORS               | BROOKBY ROAD (474)                   | \$181,170    | 4                    | \$9,221   | 2017                                 | \$181,170    | Quarry Access                                      |  |
| 300   | NEALS                   | TUNAKINO VALLEY ROAD (789)           | \$130,680    | 6                    | \$10,228  | 2017                                 | \$130,680    |  |  |
| 35  | BLICKS                  | BLICKS ROAD (82)                     | \$138,600    | 8                    | \$14,167  | 2017                                 | \$138,600    |  |  |
| 286   | MUSGRAVE                | WAIHOPAI VALLEY ROAD (805)           | \$415,800    | 3                    | \$13,781  | 2018 - 2021                          | \$415,800    | High Forestry Usage - potential for HPMV upgrade   |  |
| 393   | SCHOLLUMS               | SCHOLLUMS ROAD (749)                 | \$72,270     | 3                    | \$2,831   | 2018 - 2021                          | \$72,270     |  |  |
| 303   | NETHERWOOD NO.1         | WAIHOPAI VALLEY ROAD (805)           | \$126,720    | 5                    | \$8,864   | 2021 - 2024                          | \$126,720    | Medium Forestry Usage - potential for HPMV upgrade |  |
| 470   | VERCOES                 | TINLINE ROAD (781)                   | \$87,120     | 6                    | \$6,819   | 2021 - 2024                          | \$87,120     |  |  |
| 30  | BIROH                   | TINLINE ROAD (781)                   | \$134,640    | 6                    | \$10,538  | 2021 - 2024                          | \$134,640    |  |  |
| 304   | NETHERWOOD NO.2         | WAIHOPAI VALLEY ROAD (805)           | \$219,120    | 6                    | \$17,150  | 2021 - 2024                          | \$219,120    | Medium Forestry Usage - potential for HPMV upgrade |  |
| 302   | NEES                    | MT RILEY ROAD (659)                  | \$144,540    | 6                    | \$10,414  | 2021 - 2024                          | \$144,540    |  |  |
| 57  | BUTTERLY                | WAIKAKAHO ROAD (808)                 | \$483,120    | 7                    | \$52,224  | 2021 - 2024                          | \$483,120    |  |  |
| 199   | HIGH ST                 | HIGH STREET (BLENHEIM) (271)         | \$3,052,742  | 7                    | \$201,231 | 2024 - 2027                          | \$3,052,742  | Overweight vehicles banned                         |  |
| 1   | AHERNS                  | WAKAMARINA ROAD (814)                | \$87,120     | 8                    | \$9,580   | 2024 - 2027                          | \$87,120     |  |  |
| 409   | STAFFORD CREEK          | REDWOOD PASS ROAD (722)              | \$158,400    | 9                    | \$17,867  | 2024 - 2027                          | \$158,400    |  |  |
| 512   | KEITH COLEMAN - OFFRAMM | KEITH COLEMAN LANE (659)             | \$64,548     | 9                    | \$6,633   | 2024 - 2027                          | \$64,548     |  |  |
| 21  | BARRACKS                | BARRACKS ROAD (451)                  | \$100,980    | 9                    | \$11,874  | 2024 - 2027                          | \$100,980    |  |  |
| 233   | LEATHAM                 | LEATHAM ROAD (615)                   | \$164,340    | 9                    | \$19,324  | 2024 - 2027                          | \$164,340    |  |  |
| 477   | WAIHOPAI DOWNS          | WAIHOPAI VALLEY ROAD (805)           | \$144,540    | 9                    | \$16,996  | 2024 - 2027                          | \$144,540    |  |  |
| 482   | WAITARIA NO.1           | MANAROA ROAD (632)                   | \$148,500    | 9                    | \$17,461  | 2024 - 2027                          | \$148,500    |  |  |
| 41  | BOUNDARY CREEK NO.2     | REDWOOD PASS ROAD (722)              | \$158,400    | 9                    | \$19,157  | 2024 - 2027                          | \$158,400    |  |  |
| 496   | WIFFEN                  | MT RILEY ROAD (659)                  | \$237,600    | 9                    | \$26,699  | 2024 - 2027                          | \$237,600    |  |  |
| 276   | MORGANS NO.2            | MORGANS ROAD (656)                   | \$361,350    | 9                    | \$39,569  | 2024 - 2027                          | \$361,350    | Restricted to 30% Class 1                          |  |
| 394   | SCHOOL                  | MORSE STREET (657)                   | \$87,120     | 10                   | \$9,593   | 2024 - 2027                          | \$87,120     |  |  |
| 205   | ISIS                    | AWATERE VALLEY ROAD3 (JORDAN-LIMEST) | \$250,470    | 10                   | \$26,469  | 2024 - 2027                          | \$250,470    |  |  |

These map extracts have been taken from the GIS plans found in section 8.0. The programme confirms the location of the bridges in respect to our primary industries to be undertaken during the 2018 – 2021 AMP period.

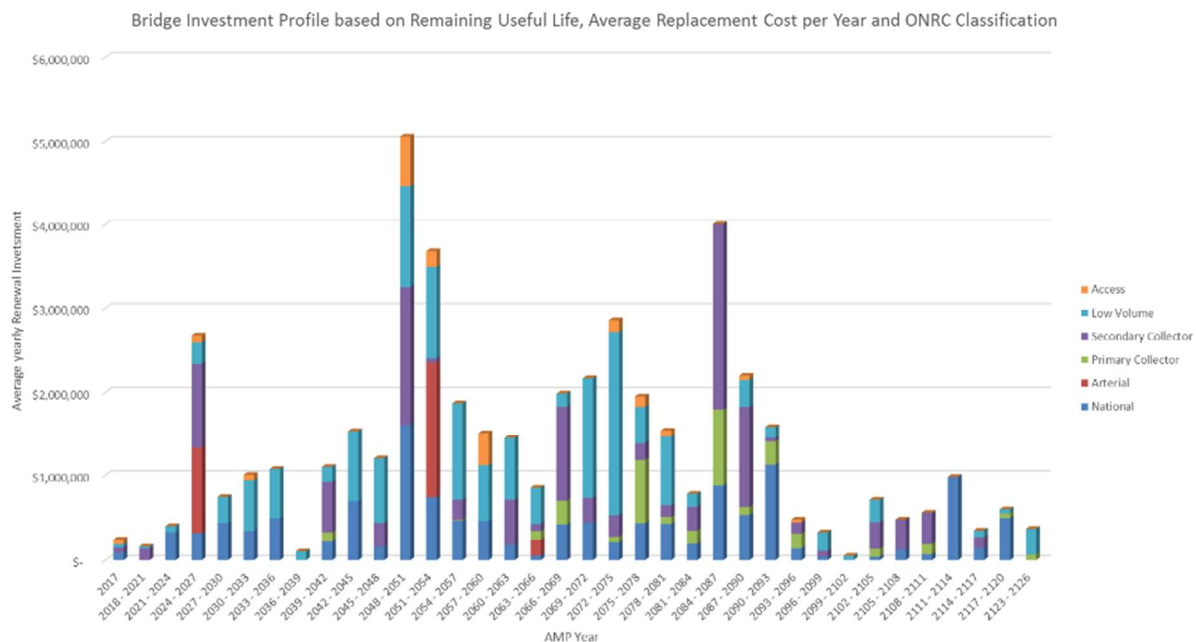
In summary we will be investing in replacing bridges to support our growing forestry and agriculture industries, in the as shown on the GIS plan 141027-SK02 and 03.

The bridges that will be replaced as a priority will include the following:

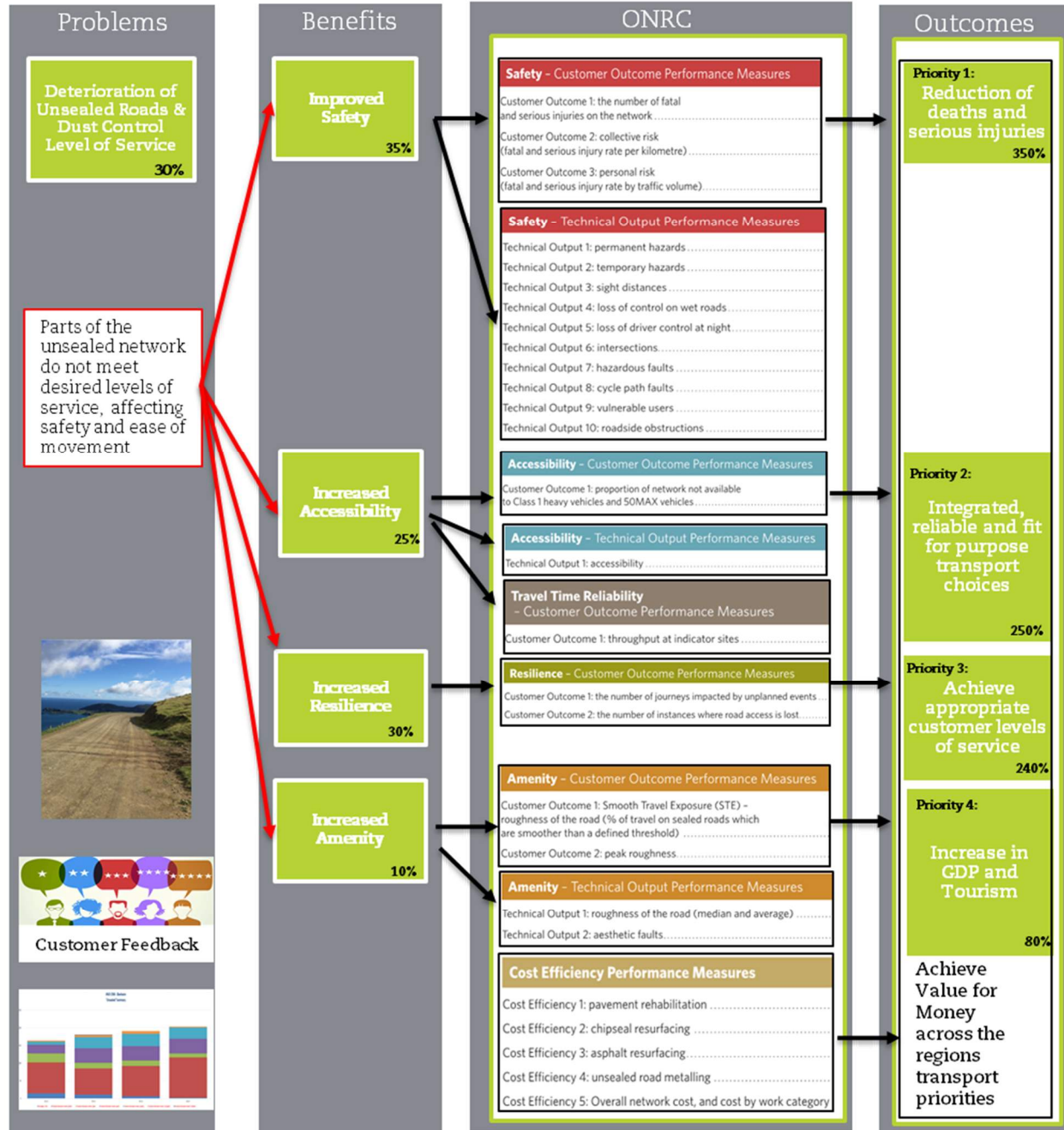
- Musgrave
- Schollums
- Netherwood No. 1
- Netherwood No. 2
- Nees



Consolidating the data from the mapping and asset management plan did identify data inaccuracies. However, expenditure is roughly in line with the current asset management plan. An initial review of the data suggests that our Bridge investment should consider our Arterial and Secondary Collector roads and potentially look to move improvements forward into the 2021 – 2024 AMP programme. As discussed previously (section 10.0) our priority during the 2018 – 2021 AMP is to verify data so that a robust and informed decision can be assessed on the preferred way forward.



# 11.0 DETERIORATION OF UNSEALED ROADS LEVEL OF SERVICE



Investment in the unsealed road infrastructure assets is a key requirement for connecting customers to remote areas on the regions road network. Investment here will achieve benefits associated with Safety, Accessibility, Resilience and Amenity.

This section of the programme case explores the problems facing our unsealed road network and associated dust problems. A review of the current evidence available to demonstrate the need to invest in the improvement plan activities will be carried out. Existing data needs to be aligned with the ONRC and further work is required in respect of stakeholders. It is inappropriate at this stage to develop a long list of options without the necessary evidence to support the options being considered. There is a risk that the wrong option could be selected based on the current assumptions and understanding of constraints.

There is a commitment to achieving and demonstrating value for money, by undertaking a critical assessment of options using the Transport Agencies Investment Assessment and Multi-Criteria Analysis Assessment framework. Consequently, the Marlborough regions long list assessment framework has been developed for use during the 2018 – 2021 AMP period (Refer to section 16.0) which demonstrates the intent over the next 3 years.



## 11.1 THE PROBLEM EXPLAINED



Significant growth in the regions primary industries and tourism is putting greater pressure on our rural unsealed networks. The higher number of vehicles using the unsealed network associated with vineyards, forestry, agriculture and aquaculture along with increasing numbers of tourists provides challenges in respect to pavement strength, width and ride quality.



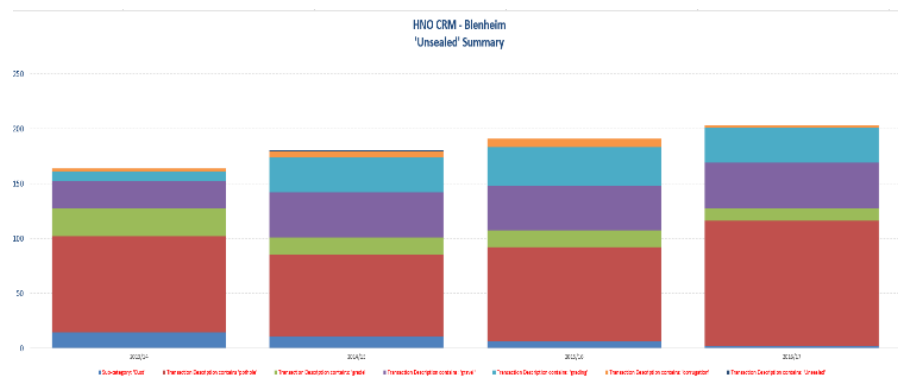
The Marlborough District Council 2016 Annual Residents Survey confirms customers around the region are experiencing difficulties in relation to the unsealed road network. In particular the unsealed network in Awatere is well below the average and there are concerns in the Western Wairau and Sounds.



The chart below shows an increasing complaint trend over the last 4 years, raising from approximately 160 to over 200 complaints per year. There is a significant proportion of complaints around potholing, grading and gravel which suggests that the structural adequacy of the unsealed pavements is unsuitable and deteriorating. A steady decrease has been seen in the amount of complaints around dust which could be a factor of the severe weather the region has experienced in recent years, washing the fines from the top surface of the unsealed road pavement.



The CRMS database has provided the current evidence of complaints received about Unsealed Roads and Dust Control



The region experiences challenges in relation to the quality of aggregate, its limited supply, and RMA requirements. RMA requirements have limited gravel sources, increased cartage distances thus increasing costs. Gravel sources in the Sounds are extremely limited, so this requires cartage from sources in the Wairau and Waihopai rivers. These cartage distances are well in excess of the 100km, which can more than double costs of gravel by the time it is placed.

## 11.2 BENEFIT 1 - IMPROVED SAFETY



There is presently limited safety data for Unsealed Roads and Dust Control. It is not evident from the current ONRC data available what proportion of the Customer Outcome Performance Measures and Technical Output Performance Measures have not been considered in respect of unsealed roads and dust control.

| Safety - Customer Outcome Performance Measures  |  |
|---|--|
| Customer Outcome 1: the number of fatal and serious injuries on the network .....         |  |
| Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre) .....   |  |
| Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume) ..... |  |

There is current available safety data for low volume and access roads. As a large proportion of these networks are unsealed it gives an indication of the safety ONRC performance measures. The following charts and sections provide an overview of the Customer Outcome Performance Measures.

| ONRC Category        | Urban (Km) | Rural (Km)   | TOTAL LENGTH (Km) | Urban Journeys | Rural Journeys | ANNUAL TOTAL JOURNEYS TRAVELLED (M Veh Km) |
|----------------------|------------|--------------|-------------------|----------------|----------------|--|
| Arterial             | 14         | 1            | 15                | 31             | 1              | 32   |
| Primary Collector    | 22         | 62           | 84                | 24             | 25             | 49   |
| Secondary Collector  | 29         | 256          | 285               | 14             | 33             | 46   |
| Access               | 60         | 507          | 568               | 8              | 23             | 31   |
| Low Volume           | 59         | 515          | 574               | 2              | 6              | 8  |
| <b>TOTAL NETWORK</b> | <b>183</b> | <b>1,342</b> | <b>1,525</b>      | <b>78</b>      | <b>87</b>      | <b>166</b>                                 |

Table 1: Network Statistics for network length (km) and journeys travelled (Million vehicle km) by ONRC Class - Sourced from ONRC performance measures reporting tool

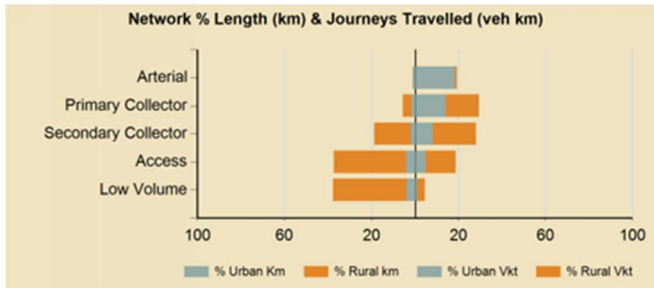


Figure 1: Network Percentage Length and Journeys Travelled - Sourced from ONRC performance measures reporting tool

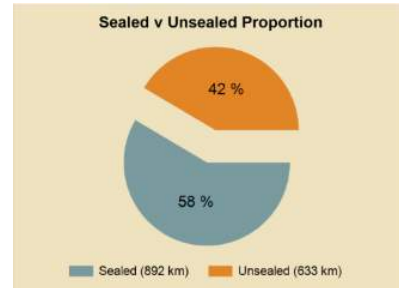


Figure 2: Sealed v Unsealed - Sourced from ONRC performance measures reporting tool

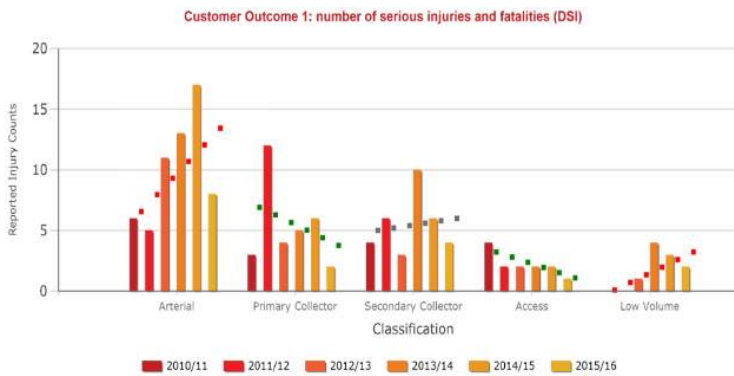


Figure 3: Serious injuries and fatalities (DSI) by ONRC category - Sourced from ONRC performance measures reporting tool

Customer outcome 1: number of serious injuries and fatalities data confirms a decreasing trend across access roads but an increasing trend on low volume roads. It could be argued, from the available data, an average of 2-3 injury counts per year across these networks, but is unclear whether these are attributable to the unsealed network or not.

As part of the improvement plan work during the 2018 – 2021 AMP programme there will be a conscious effort to differentiate the data across the unsealed and sealed parts of the low volume and access road network (refer to section 17.0)

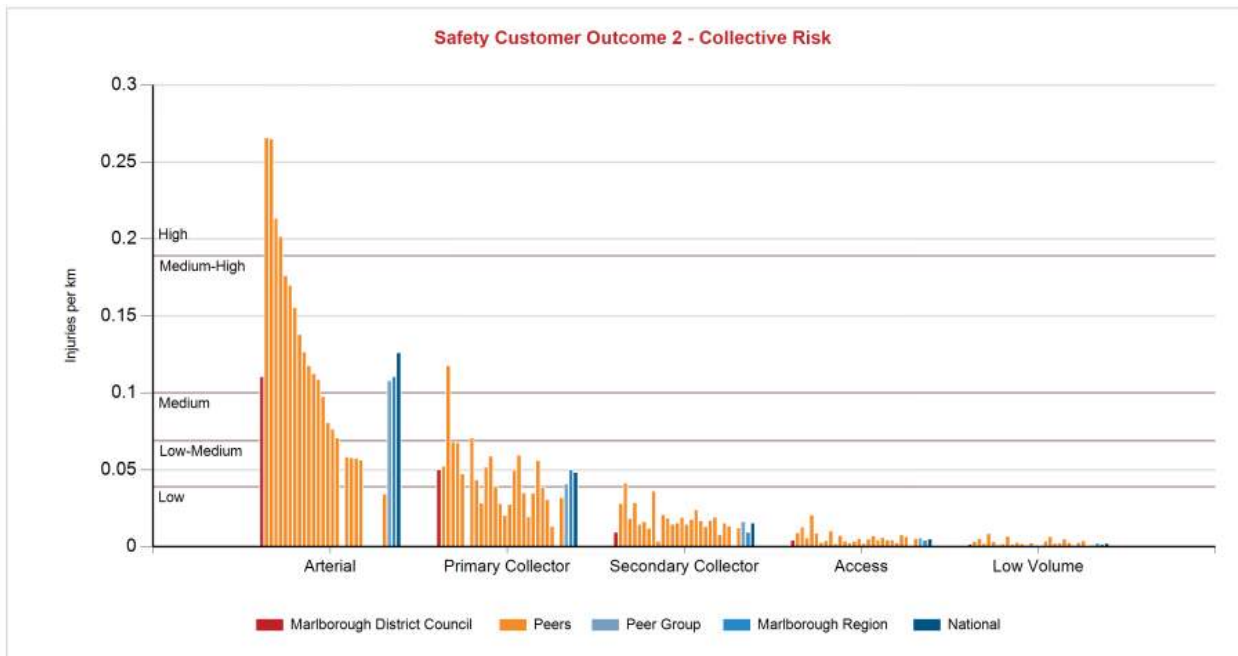


Figure 4: Serious injuries and fatalities (DSI) per km of road by ONRC category (low/medium ratings per KiwiRAP) - Sourced from ONRC performance measures reporting tool

Safety customer outcome 2 – collective risk chart above shows the regions injuries for access and low volume roads are low.

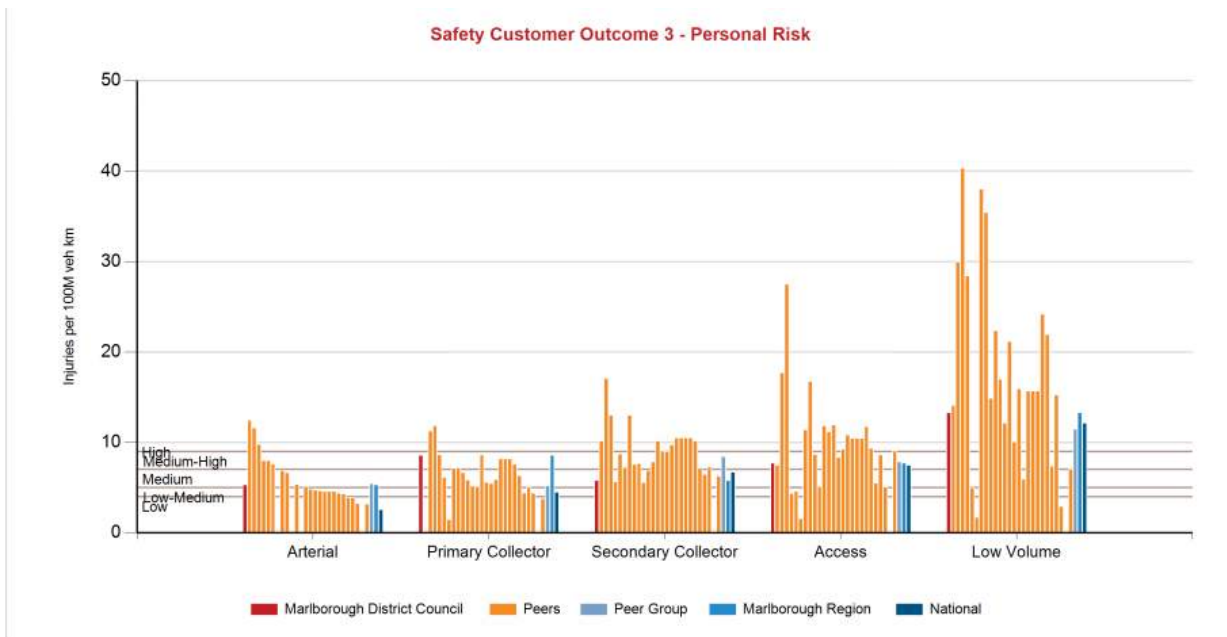


Figure 5: Serious injuries and fatalities (DSI) per 100 Million vehicle km by ONRC category (Low/medium/high ratings per KiwiRAP) - Sourced from ONRC performance measures reporting tool

Customer outcome 3 – personal risk chart above provides evidence that the region’s access and low volume roads are in the medium to high and high number of injuries per 100M vehicle km. It is unsure at this stage what contributes to the unsealed proportion of these road network as previously discussed.

In comparison to peers the region appears to be average across access and low volume road networks, which is unacceptable due to the consequences that result from this.

As part of the improvement plan work during the 2018 – 2021 AMP programme there will be a conscious effort to differentiate the data across the unsealed and sealed parts of the low volume and access road network (refer to section 17.0). A baseline can then be established to allow setting of a specific target through the AMP period.

| Safety - Technical Output Performance Measures            |
|---|
| Technical Output 1: permanent hazards .....               |
| Technical Output 2: temporary hazards .....               |
| Technical Output 3: sight distances .....                 |
| Technical Output 4: loss of control on wet roads .....    |
| Technical Output 5: loss of driver control at night ..... |
| Technical Output 6: intersections .....                   |
| Technical Output 7: hazardous faults .....                |
| Technical Output 8: cycle path faults .....               |
| Technical Output 9: vulnerable users .....                |
| Technical Output 10: roadside obstructions .....          |

There is limited data available for the technical output performance measures. Data has only been obtained for the following:

- Technical Output 5
- Technical Output 6
- Technical Output 9

Access and low volume road data has been compiled during a couple of years, but not on a regular yearly basis resulting in insufficient data being available.

Over the 2018 – 2021 AMP programme there will be a commitment to aligning and obtaining the necessary information to support future reviews AMP using the business case approach.

### 11.3 BENEFIT 2 - INCREASED ACCESSIBILITY

| Accessibility - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles ..... |

| Accessibility - Technical Output Performance Measures |
|---|
| Technical Output 1: accessibility .....               |

| Travel Time Reliability<br>- Customer Outcome Performance Measures |
|--|
| Customer Outcome 1: throughput at indicator sites .....            |

There is no ONRC data available in respect of Accessibility Technical Output Performance or Travel Time Reliability Customer Outcome Performance. These performance measures should be assessed from an unsealed road perspective and identify how this type of asset can contribute to achieving the roading network requirements (Refer to section 17.0).

### 11.4 BENEFIT 3 - INCREASED RESILIENCE

| Resilience - Customer Outcome Performance Measures                          |
|---|
| Customer Outcome 1: the number of journeys impacted by unplanned events ... |
| Customer Outcome 2: the number of instances where road access is lost ..... |

There is no ONRC data available in respect of Resilience Performance Measures. These performance measures should be assessed from a unsealed road perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)

### 11.5 BENEFIT 4 - INCREASED AMENITY

| Amenity - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: Smooth Travel Exposure (STE) - roughness of the road (% of travel on sealed roads which are smoother than a defined threshold) ..... |
| Customer Outcome 2: peak roughness .....   |

| Amenity - Technical Output Performance Measures                      |
|--|
| Technical Output 1: roughness of the road (median and average) ..... |
| Technical Output 2: aesthetic faults .....                           |

There is no ONRC data available in respect of Amenity Performance Measures. These performance measures should be assessed from a unsealed road perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)

## 11.6 COST EFFICIENCY

| Cost Efficiency Performance Measures                               |  |
|--|--|
| Cost Efficiency 1: pavement rehabilitation .....                   |  |
| Cost Efficiency 2: chipseal resurfacing .....                      |  |
| Cost Efficiency 3: asphalt resurfacing .....                       |  |
| Cost Efficiency 4: unsealed road metalling .....                   |  |
| Cost Efficiency 5: Overall network cost, and cost by work category |  |

There is limited ONRC data available in respect of Cost Efficiency Performance Measures. These performance measures should be assessed from an unsealed road perspective across the following performance measures:

- Cost Efficiency 1
- Cost Efficiency 4
- Cost Efficiency 5

The necessary evidence will be compiled as part of the improvement plan (Refer to Section 17.0).

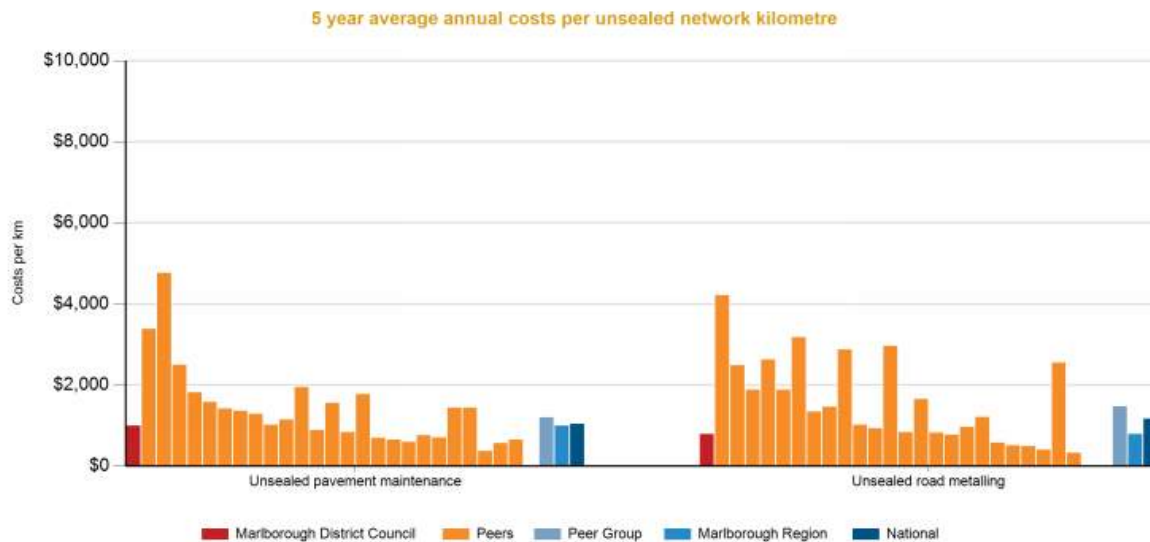
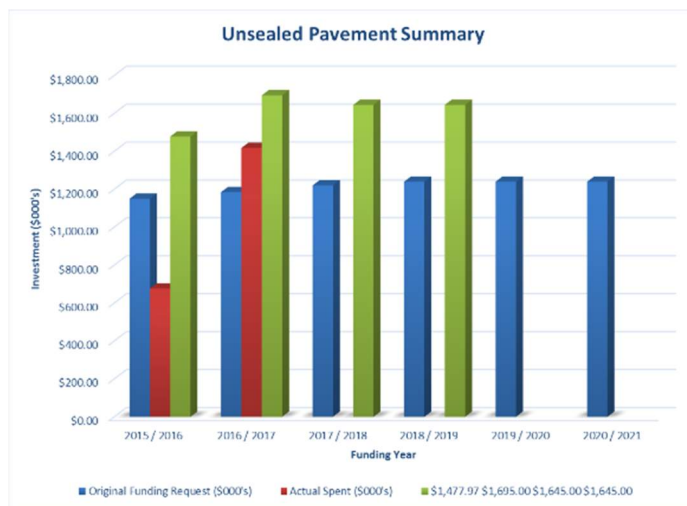


Figure 11: Unsealed road maintenance costs per kilometre - Sourced from NZ Transport Agency TIO Work Category funding reports

In comparison to peers, maintenance and unsealed road metaling programmes in the region appears to be below the average. It is evident that over the next 3 years that the investment profile will need to change in this area to meet the transport priorities for the region.

## 11.7 2018 – 2021 AMP PROGRAMME

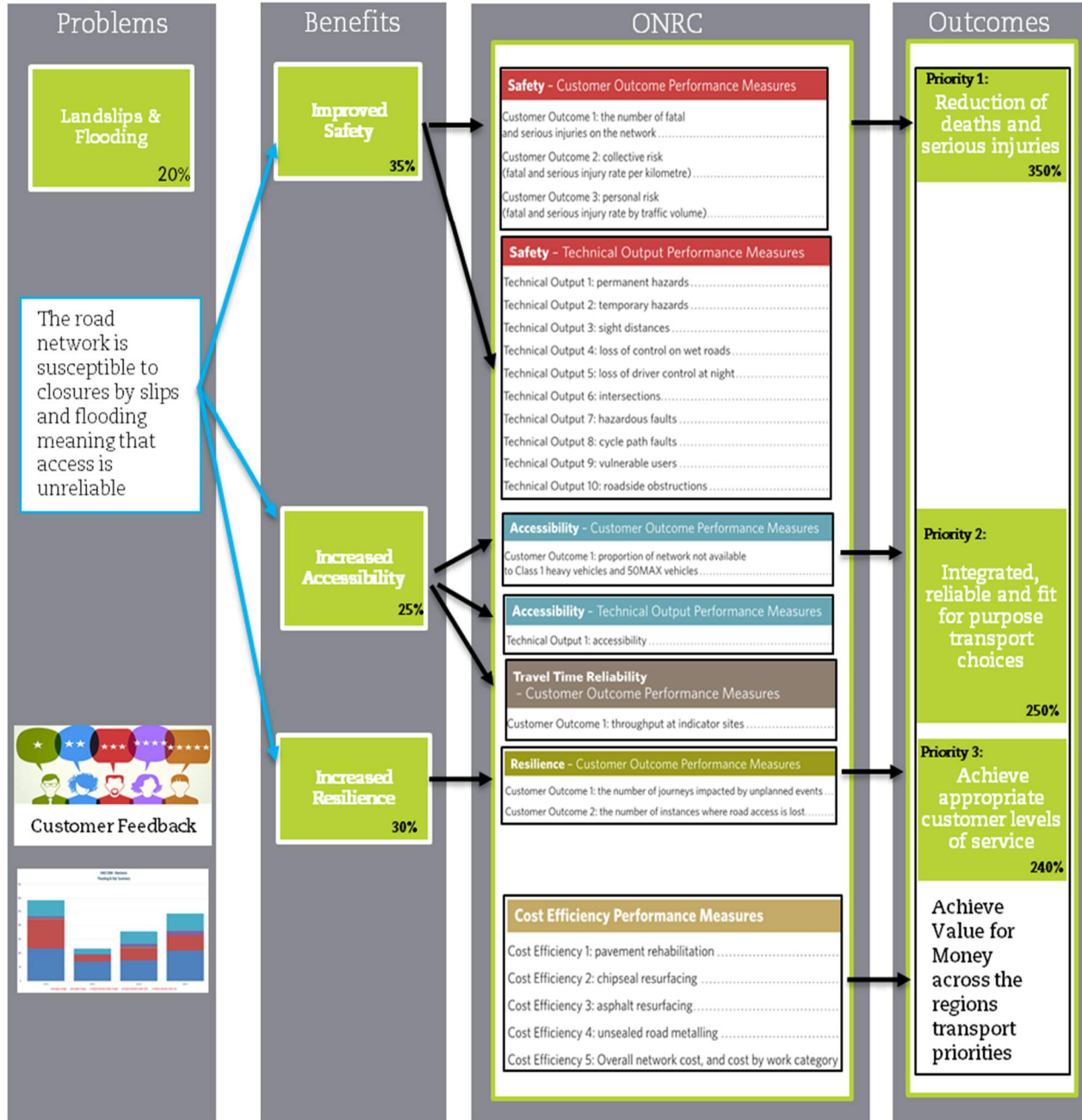


The 2015 – 2018 AMP has seen an increase in investment to help resolve the problems being experienced on the unsealed road network. Budgets from elsewhere have been adjusted to accommodate this increase.

The 2018 – 2021 AMP unsealed road programme will continue to be delivered at the higher investment rate to meet the current demands.

It is important that more time and effort is invested in compiling robust data and evidence to support future AMP reviews. It is therefore intended to begin compiling an asset management plan and customer surveys in line with the ONRC over the next 3 years.

## 12.0 LANDSLIPS AND FLOODING



Investment in protecting the road network from landslips and flooding is a key requirement for protecting and connecting customers around the regions road network. Investment here will achieve benefits associated with Safety, Accessibility and Resilience.

This section of the programme case explores the problems experienced when dealing with significant weather and earthquake events. These often resulting in significant flooding and landslips that disrupt and damage the roading network. A review of the current evidence available will be carried out to demonstrate the need to invest in the improvement plan activities. The existing data needs to be aligned with the ONRC and further work is required in respect of stakeholders. It is inappropriate at this stage to develop a long list of options without the necessary evidence to support the options being considered. There is a risk that the wrong option could be selected based on the current assumptions and understanding of constraints.

There is a commitment to achieving and demonstrating value for money, by undertaking a critical assessment of options using the Transport Agencies Investment Assessment and Multi-Criteria Analysis Assessment framework.

## 12.1 THE PROBLEM EXPLAINED



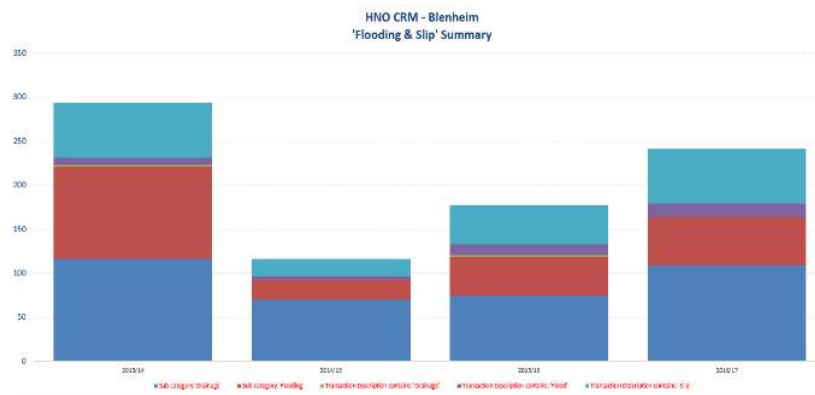
The recent Christchurch and Kaikoura earthquakes and major storm events across the region has resulted in significant disruption to road network customers.

It is evident from the recent events that the network needs to become safer, remain accessible and resilient during and after unplanned events. This has been identified in the Regional Land Transport Plan as; *“The Top of the South vision is of an efficient and resilient network that is well able to bounce back from unplanned events.”*

Having an asset management plan for the region that looks at the implications of different levels of storm and earthquake disaster events, covers risk management activities as well as contingency planning will demonstrate value for money in the investments across the roading network that are appropriately prioritised.



The CRMS database has provided the current evidence of complaints received about landslips and flooding.



The chart above shows an increasing complaint trend over the last 3 years, raising from approximately 110 to 240 complaints per year. The maximum number of complaints were recorded in 2013/2014 and was a result of the canterbury eathquakes. Similarly 2016 / 2017 were affected by the Kaikoura earthquakes, however there is still a signicant number of complaints being recieved that need addressing.

The graph above shows approximately two thirds of the complaints each year are regarding flooding and drainage issues. The remainder are regarding landslips.



The Marlborough District Council 2016 Annual Residents Survey confirms customers around the region are experiencing problems with urban storm water drainage and flood protection. It is unclear how this relates back to the roading network, however there will be a proportion of the results reflective of the roading network.

The graphs below confirm that drainage for the Marlborough Sounds and Blenheim urban areas are perceived as being low, being below 5, and the flood protection measures provided in Marlborough Sounds and Havelock are causing concerns.

Chart 36 Urban storm water drainage mean satisfaction ratings by area

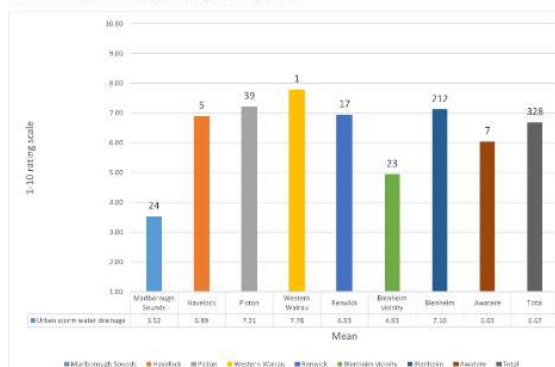
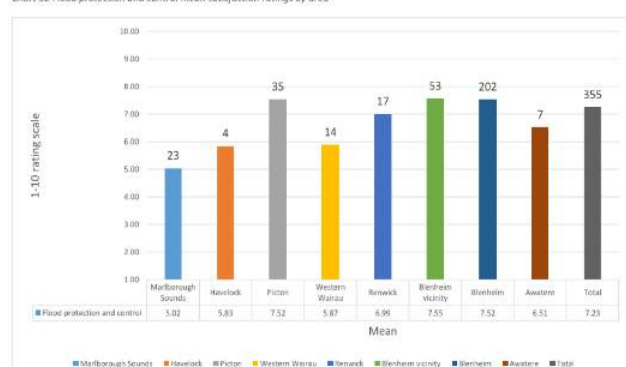


Chart 32 Flood protection and control mean satisfaction ratings by area



**12.2 BENEFIT 1 - IMPROVED SAFETY**



At present there is limited safety data associated with landslips and flooding. It is not evident from the current ONRC data available what proportion of the Customer Outcome Performance Measures has been a result of landslips and flooding.

| Safety - Customer Outcome Performance Measures  |
|---|
| Customer Outcome 1: the number of fatal and serious injuries on the network .....         |
| Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre) .....   |
| Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume) ..... |

| Safety - Technical Output Performance Measures            |
|---|
| Technical Output 1: permanent hazards .....               |
| Technical Output 2: temporary hazards .....               |
| Technical Output 3: sight distances .....                 |
| Technical Output 4: loss of control on wet roads .....    |
| Technical Output 5: loss of driver control at night ..... |
| Technical Output 6: intersections .....                   |
| Technical Output 7: hazardous faults .....                |
| Technical Output 8: cycle path faults .....               |
| Technical Output 9: vulnerable users .....                |
| Technical Output 10: roadside obstructions .....          |

Over the 2018 – 2021 AMP programme there will be a commitment to aligning and obtaining the necessary information to support the future Business Case Approach AMP reviews.

In order to achieve this the Customer Survey questions database will need to be reviewed so that meaningful data associated with landslips, flooding and drainage can be recorded. The proposed Asset Management Plan will need to incorporate the Technical Output Performance Measures and align to the One Network Road Classification. Undertaking these tasks will create the baseline for the stakeholders' expectations of our road network and ONRC Customer Levels of Service (Refer to Section 17.0)

**12.3 BENEFIT 2 - INCREASED ACCESSIBILITY**

| Accessibility - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles ..... |

| Accessibility - Technical Output Performance Measures |
|---|
| Technical Output 1: accessibility .....               |

| Travel Time Reliability - Customer Outcome Performance Measures |
|---|
| Customer Outcome 1: throughput at indicator sites .....         |

There is no ONRC data available in respect of Accessibility Technical Output Performance or Travel Time Reliability Customer Outcome Performance Measures. These performance measures should be assessed from a landslip and flooding perspective and how these types of risks can be managed to achieve a reliable roading network (Refer to section 17.0).

**12.4 BENEFIT 3 - INCREASED RESILIENCE**

| Resilience - Customer Outcome Performance Measures                          |
|---|
| Customer Outcome 1: the number of journeys impacted by unplanned events ... |
| Customer Outcome 2: the number of instances where road access is lost ..... |

There is no ONRC data available in respect of Resilience Customer Outcome Performance Measures. These performance measures should be assessed from a landslips and flooding perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)



## 12.5 BENEFIT 4 - INCREASED AMENITY

| Amenity - Customer Outcome Performance Measures  |  |
|--|--|
| Customer Outcome 1: Smooth Travel Exposure (STE) - roughness of the road (% of travel on sealed roads which are smoother than a defined threshold) ..... |  |
| Customer Outcome 2: peak roughness .....   |  |

| Amenity - Technical Output Performance Measures                      |  |
|--|--|
| Technical Output 1: roughness of the road (median and average) ..... |  |
| Technical Output 2: aesthetic faults.....                            |  |

There is no ONRC data available in respect of Amenity Performance Measures. These performance measures should be assessed from a landslip and flooding perspective and evidence compiled as part of the improvement plan (Refer to Section 17.0)

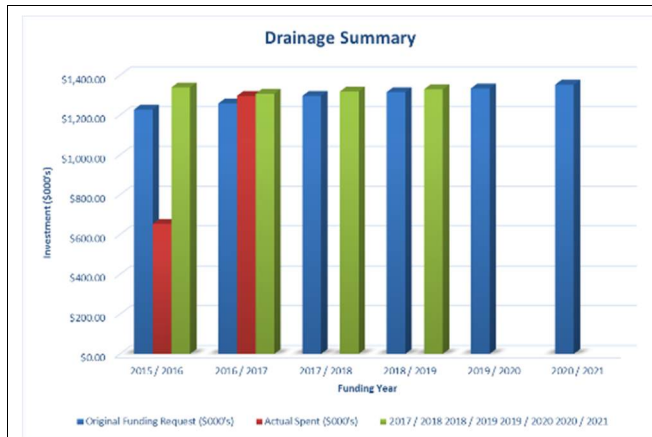
## 12.6 COST EFFICIENCY

| Cost Efficiency Performance Measures                               |  |
|--|--|
| Cost Efficiency 1: pavement rehabilitation .....                   |  |
| Cost Efficiency 2: chipseal resurfacing .....                      |  |
| Cost Efficiency 3: asphalt resurfacing.....                        |  |
| Cost Efficiency 4: unsealed road metalling .....                   |  |
| Cost Efficiency 5: Overall network cost, and cost by work category |  |

Achieving value for money across the emergency works, incident response, drainage and other structures activities will be challenging and will require a risk based approach analysis.

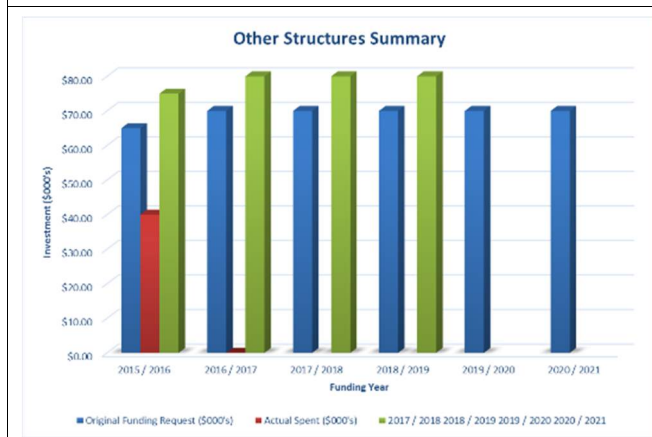
There is no ONRC data available in respect of Cost Efficiency Performance Measures and will need to be considered how the performance measures are aligned as the asset management plan is developed. (Refer to Section 17.0).

## 12.7 2018 - 2021 AMP PROGRAMME



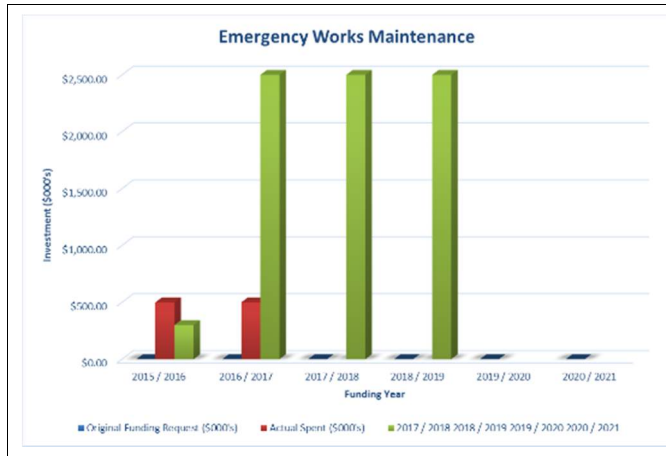
There is a high level of confidence in the RAMM inventory data regarding the number and size of culverts, however there is little information on age or condition.

The current level of service calls for the inspection, monitoring, cleaning and reporting of all culverts and other significant drainage facilities, over the contract period. Where culverts are less than 600mm diameter the present requirement is for any damage to be repaired as a standard routine maintenance activity. Work to larger pipes is categorised differently by the road funding agency and is specifically briefed.



The roading network has a significant quantity of ancillary structures such as retaining walls, cattle stops and concrete fords. In some specific instances there are privately built retaining structures within the legal road. This situation occurs mainly in the steep coastal regions where property owners construct driveways below the public road.

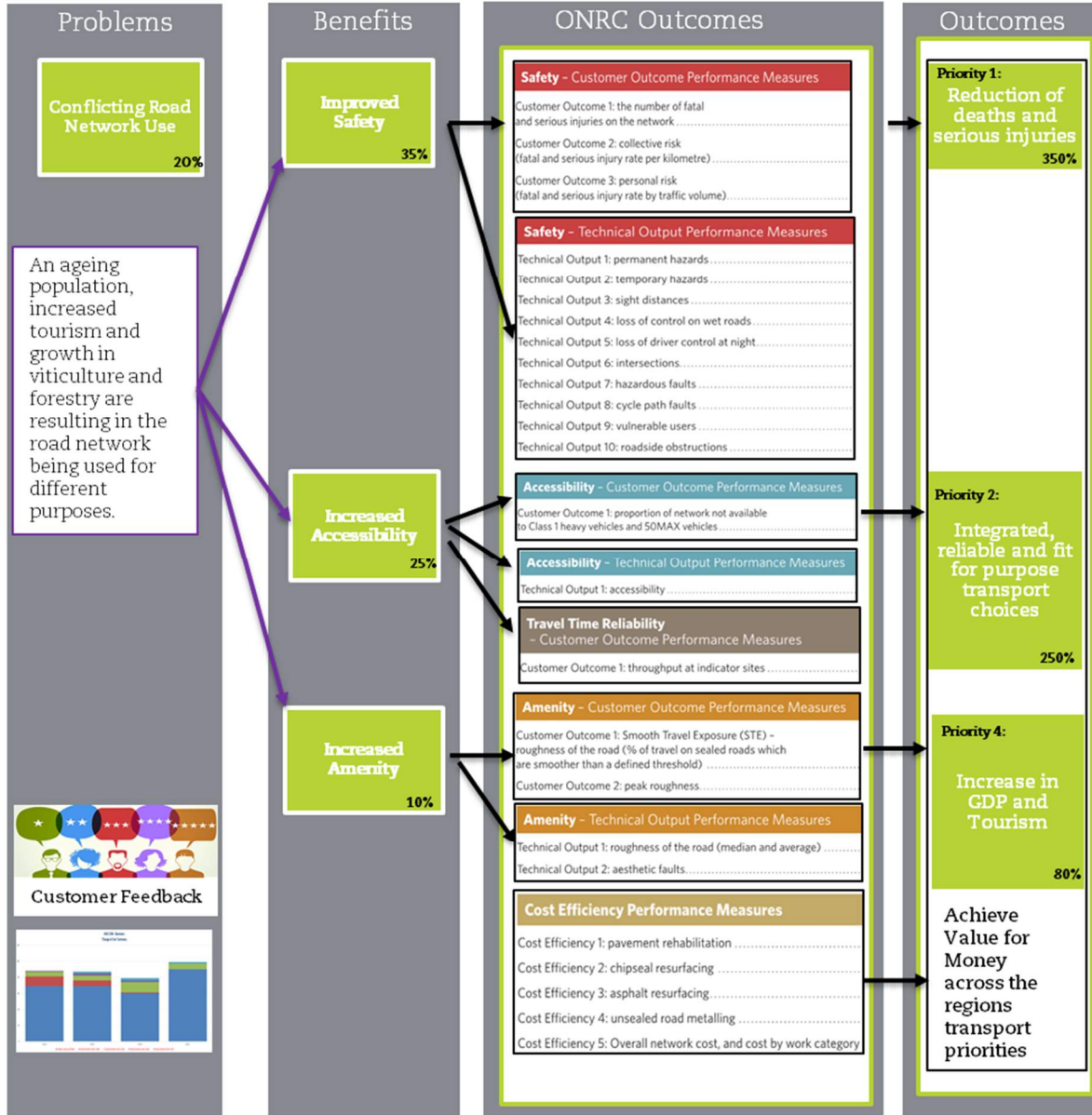
Currently lifecycle management is achieved through the application of a maintenance contract specification which requires the Road Network Maintenance Contractor to have an inspection programme to monitor the condition of the walls and structures.



The unexpected nature, location, extent, frequency, and duration of emergency events is difficult to predict, as is the requirement for Emergency Works Maintenance in any given year.

The majority of the Marlborough Sounds are very unstable and it is just about impossible to prevent landslips happening on Sounds Roads. The focus has been on making it as easy as possible, and as quick as possible, to reopen any roads which do get closed by landslips. This has been achieved, partly, by getting consented spoil disposal sites, plus areas where slip material can be temporarily stored prior to permanent placement.

# 13.0 CONFLICTING ROAD NETWORK USE



Investment in addressing conflicting road network use is a key requirement for ensuring that different types of customers can safely move around our region together. Investment will achieve benefits associated with Safety, Accessibility and Amenity.

This section of the programme case will explore the problems we experience when dealing with the growth of our primary industries along with tourism and demographic challenges relating to our younger and older generations.

A review of the current evidence available will be carried out to demonstrate the need to invest in the improvement plan activities. Existing data needs to be aligned with the ONRC and further work is required in respect of the stakeholders. It is inappropriate at this stage to develop a long list of options without the necessary evidence to support the options being considered. There is a risk that the wrong option could be selected based on the current assumptions and understanding of constraints.

There is a commitment to achieving and demonstrating value for money, undertaking a critical assessment of these options using the Transport Agencies Investment Assessment and Multi-Criteria Analysis Assessment framework.

### 13.1 THE PROBLEM EXPLAINED



Conflicting road network use is becoming a significant challenge across the district. There is growing demands on the roads from increasing commercial activities, population growth and tourism growth.

To address the challenge, Marlborough Council are undertaking a number of initiatives associated with specific routes for walking, cycling, public transport, mobility scooters, freight and the general traffic. A common difficulty is coordinating the various modes of transport within in a finite road corridor width in a way that is equitable and provides maximised benefits to all transport modes.



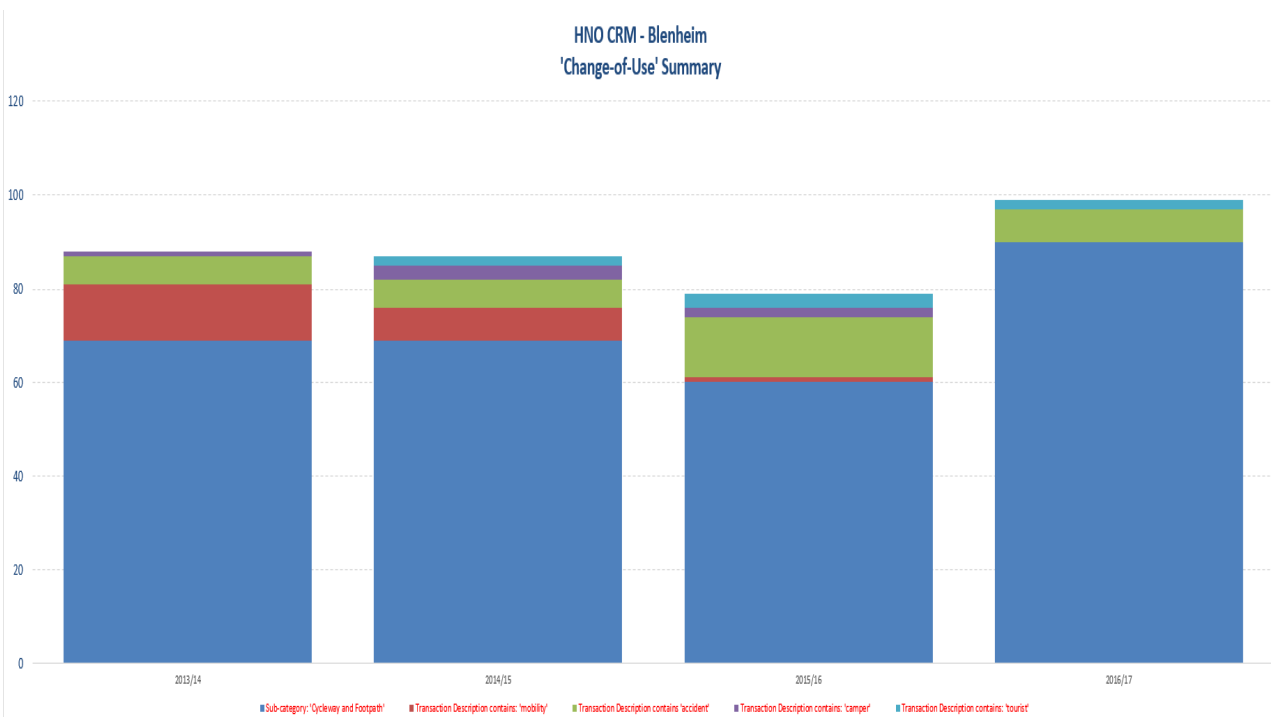
Conflicting road network use in the rural environment predominately involves primary industries with tourism. Tourism numbers are continuing to increase with more people spending longer in the region and exploring the more remote areas, which were typically only used for commercial purposes such as forestry, agriculture and aquaculture in the past.



The chart below shows a relatively constant complaint trend between approximately 85 – 100 complaints per year. The maximum number of complaints were recorded in 2016/2017. The highest number of complaints are associated with vulnerable users - cycling and footpaths. Accidents have been recorded across the data set suggesting that 10 to 20 complaints per year are due to conflicting use. Tourist and camper vans make up the remaining complaints; approximately 10 complaints per year.

The CRMS database provided the current evidence of complaints received on conflicting road network use

The data available is poor and it is intended that a Integrated Transport Network Plan be developed over the next 3 years. This plan will consider all present initiatives and carry out a more defined survey to ensure that the evidence to support future roading investment identifies appropriate work that provides value for money (Refer to Appendix 17.0).



### 13.2 BENEFIT 1 - IMPROVED SAFETY



At present we have no safety data associated with conflicting road network use. It is not evident from the current ONRC data available what proportion of the Customer Outcome Performance Measures has been a result of inadequate provision of assets to accommodate the different modes of transport.

| Safety - Customer Outcome Performance Measures   |
|--|
| Customer Outcome 1: the number of fatal and serious injuries on the network .....        |
| Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre) .....  |
| Customer Outcome 3: personal risk (fatal and serious injury rate by traffic volume)..... |

| Safety - Technical Output Performance Measures           |
|--|
| Technical Output 1: permanent hazards .....              |
| Technical Output 2: temporary hazards .....              |
| Technical Output 3: sight distances .....                |
| Technical Output 4: loss of control on wet roads .....   |
| Technical Output 5: loss of driver control at night..... |
| Technical Output 6: intersections.....                   |
| Technical Output 7: hazardous faults .....               |
| Technical Output 8: cycle path faults .....              |
| Technical Output 9: vulnerable users .....               |
| Technical Output 10: roadside obstructions .....         |

Over the 2018 – 2021 AMP programme there will be a commitment to aligning and obtaining the necessary information to support the future Business Case Approach AMP reviews.

In order to achieve this the Customer Helpline questions database will need to be reviewed so that meaningful data associated with conflicting road network use can be recorded. The proposed Asset Management Plan will need to incorporate the Technical Output Performance Measures and align to the One Network Road Classification. Undertaking these tasks will create the baseline for the stakeholders' expectations of our road network and ONRC Customer Levels of Service (Refer to Section 17.0)

### 13.3 BENEFIT 2 - INCREASED ACCESSIBILITY

| Accessibility - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles ..... |

There is no ONRC data available in respect of Accessibility Technical Output Performance or Travel Time Reliability Customer Outcome Performance. These performance measures should be assessed from a conflicting road network use to achieve an efficient road network (Refer to section 17.0).

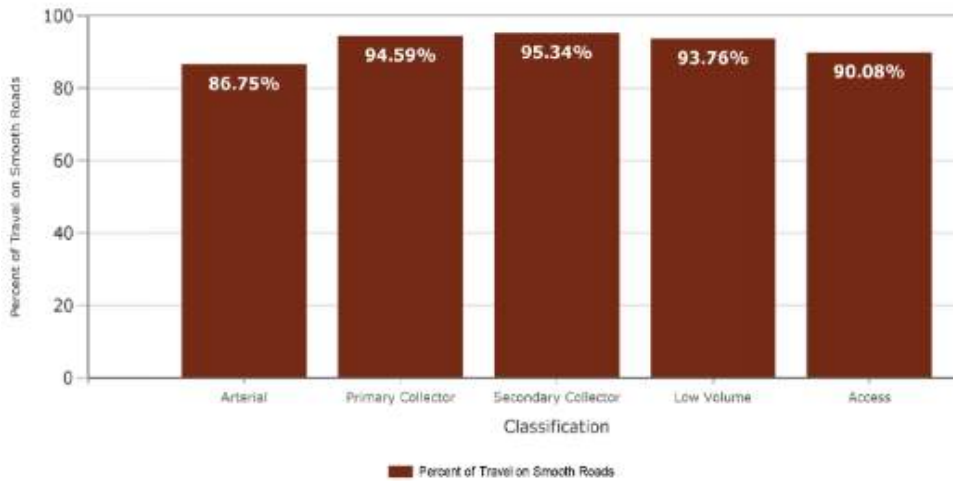
| Accessibility - Technical Output Performance Measures |
|---|
| Technical Output 1: accessibility .....               |

| Travel Time Reliability - Customer Outcome Performance Measures |
|---|
| Customer Outcome 1: throughput at indicator sites .....         |

### 13.4 BENEFIT 4 - INCREASED AMENITY

| Amenity - Customer Outcome Performance Measures  |
|--|
| Customer Outcome 1: Smooth Travel Exposure (STE) - roughness of the road (% of travel on sealed roads which are smoother than a defined threshold) ..... |
| Customer Outcome 2: peak roughness.....  |

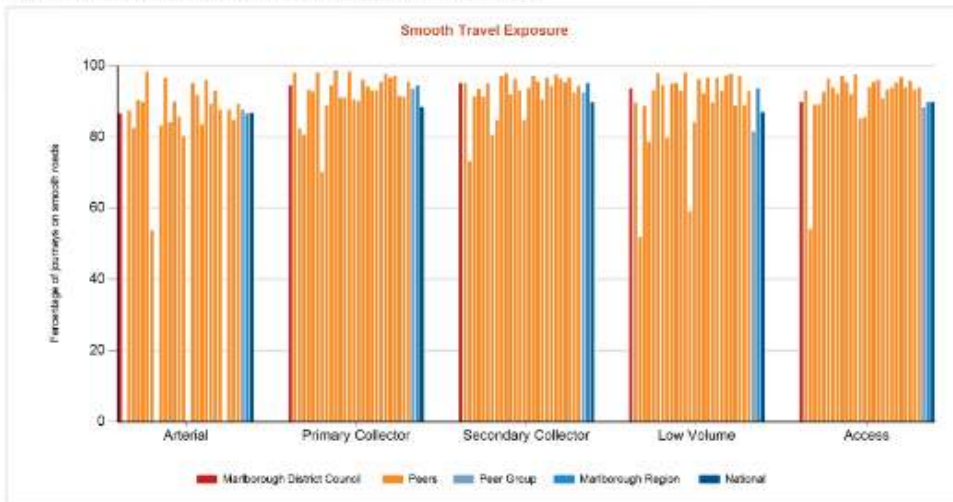
| Amenity - Technical Output Performance Measures                      |
|--|
| Technical Output 1: roughness of the road (median and average) ..... |
| Technical Output 2: aesthetic faults.....                            |



Amenity Customer Outcome 1 – Smooth Travel Exposure

Amenity Customer Outcome 1 - Smooth Travel Exposure (STE)

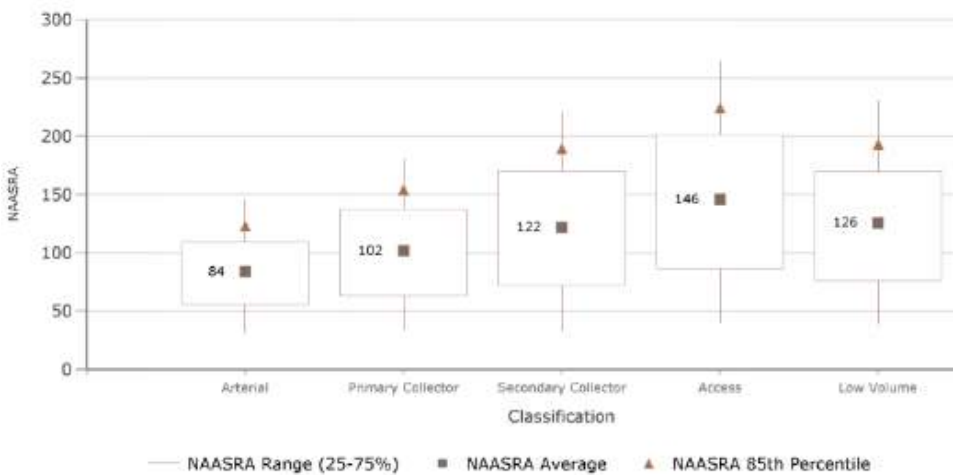
Key Question: How does my network compare nationally and against my peer group?



Amenity Customer Outcome 1 – Smooth Travel Exposure National Comparison

Figure 6: Smooth Travel Exposure by DNRC category (Higher percentage indicates smoother roads) - Sourced from DNRC performance measures reporting tool

**Amenity – Technical Output Performance Measures**  
 Technical Output 1: roughness of the road (median and average) .....  
 Technical Output 2: aesthetic faults.....



Amenity Technical Output 1 – Roughness of the Road (Average)

**13.5 COST EFFICIENCY**

| Cost Efficiency Performance Measures                               |
|--|
| Cost Efficiency 1: pavement rehabilitation .....                   |
| Cost Efficiency 2: chipseal resurfacing .....                      |
| Cost Efficiency 3: asphalt resurfacing .....                       |
| Cost Efficiency 4: unsealed road metalling .....                   |
| Cost Efficiency 5: Overall network cost, and cost by work category |

Cost Efficiency 5 may provide some insight into Conflicting Road Network Use. However this linkage is unclear.

**13.6 2018 - 2021 AMP PROGRAMME**

There are many contributing factors and numerous current activities will relate to this problem, to variable extents. Further development is required to identify the nature and magnitude of this problem.

Collaboration and coordination of different initiatives is essential, such as the reconciliation of cycle-way plans, mobility access routes, public transport, and in consideration of heavy traffic routes.

While some input may be required from other Sections, it is expected that the initial work on this problem will be addressed from Section 6.19 – Management.

# 14.0 ACTIVITY MANAGEMENT PLAN OVERVIEW

## Activity Overview

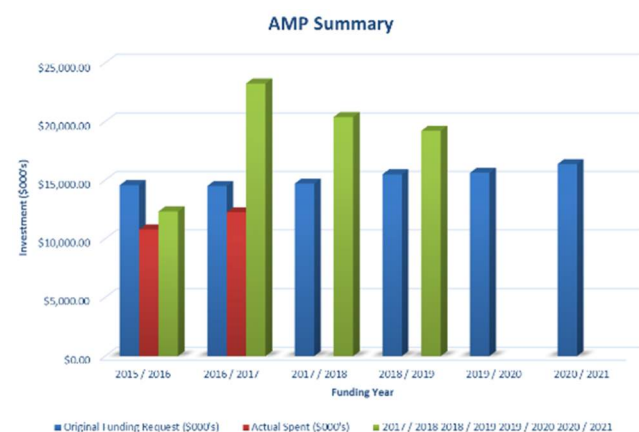
The works being undertaken as part of the Activity Management Plan include the following:

- AMP Section 6.1 - Sealed Roads
- AMP Section 6.2 - Unsealed Roads
- AMP Section 6.3 – Drainage Facilities
- AMP Section 6.4 – Bridges and Culverts
- AMP Section 6.5 – Other Structures
- AMP Section 6.6 – Environmental
- AMP Section 6.7 – Footpaths
- AMP Section 6.8 – Vehicle Crossings
- AMP Section 6.9 – Cycleways
- AMP Section 6.10 – Traffic Services
- AMP Section 6.11 – Street Furniture
- AMP Section 6.12 – Street Lighting
- AMP Section 6.13 – Car Parks
- AMP Section 6.14 – Wharves / Jetties
- AMP Section 6.15 – Legal Roads
- AMP Section 6.16 – Misc Activities
- AMP Section 6.17 – Minor Works
- AMP Section 6.18 – Management
- Public Transport

## Financial Overview

The current Activity Management Plan financials are summarised in the chart and table below. The region has experienced road challenges with significant earthquakes and storm events. The road network has been affected resulting in increased expenditure associated with Emergency Works and Incident Response.

The overall budget for the last 3 years is generally in line with the original budgets. Future investment, based on our current understandings, in the next 3 years will remain generally in line with the original budgets st as part of the 2015 – 2018 AMP.



### Financial Summary of Costs

| W/C No.              | Location    | Original Funding Request (\$000's) |             |             |             |             |             | Actual Spent (\$000's) |             |             |             |             |             |  |
|----------------------|-------------|------------------------------------|-------------|-------------|-------------|-------------|-------------|------------------------|-------------|-------------|-------------|-------------|-------------|--|
|                      |             | 2015 / 2016                        | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 | 2015 / 2016            | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 |  |
| MDC AMP              | Maintenance |                                    |             |             |             |             |             |                        |             |             |             |             |             |  |
|                      | TOTAL       | \$7,524.00                         | \$7,791.35  | \$7,774.33  | \$7,901.10  | \$7,938.78  | \$8,056.40  | \$5,505.96             | \$6,340.97  | \$5,696.72  | \$10,448.81 | \$8,299.28  | \$8,696.72  |  |
|                      | Renewals    |                                    |             |             |             |             |             |                        |             |             |             |             |             |  |
|                      | TOTAL       | \$5,581.95                         | \$5,734.00  | \$5,897.32  | \$6,538.40  | \$6,624.62  | \$7,251.78  | \$4,685.45             | \$5,312.27  | \$6,029.87  | \$7,449.32  | \$7,478.79  | \$7,559.20  |  |
| Capital Improvements |             |                                    |             |             |             |             |             |                        |             |             |             |             |             |  |
| TOTAL                | \$1,469.17  | \$974.37                           | \$1,044.00  | \$1,057.00  | \$1,062.00  | \$1,067.00  | \$596.50    | \$603.50               | \$610.50    | \$5,351.50  | \$4,618.50  | \$2,955.50  |             |  |
| Total Bridges        |             | \$14,575.12                        | \$14,499.72 | \$14,715.65 | \$15,496.50 | \$15,625.40 | \$16,375.18 | \$10,787.91            | \$12,256.74 | \$12,337.09 | \$23,249.63 | \$20,396.56 | \$19,211.42 |  |

## Management and Commercial Case Summary

The business case approach carried out for this Activity Management Plan has identified a number of significant challenges that Marlborough District Council face in relation to the road network. Due to the focus being on the customer, investment into better understanding their needs in more detail is required to more effectively establish desirable levels of service.

This business case process has also highlighted the need to invest in achieving alignment to the ONRC and to carry out initiatives that will provide the evidence required to demonstrate value for money during the next Business Case Approach AMP review.

As noted previously, there is a risk that an extension of earthquake reconstruction works in Kaikoura, and other locations, will have a negative impact on the availability and cost efficiency of design/construction services over the short-term, and which could result in under-delivery of the transport programme until the market supply of resources normalises. Due to the rapid, concentrated focus on reconstruction works, it is expected that the risk of under-delivery is low. It is further expected that any reduction in work over the next year, could be offset by increases in market capability in following years.

Increased commercial focus will be applied to all contract renewals, with focus on smart buyer outcomes, specifically including value-for-money. The number and availability of quality design, construction, and



operations providers is a key consideration, together with an understanding of quality and cost of proposal preparation.

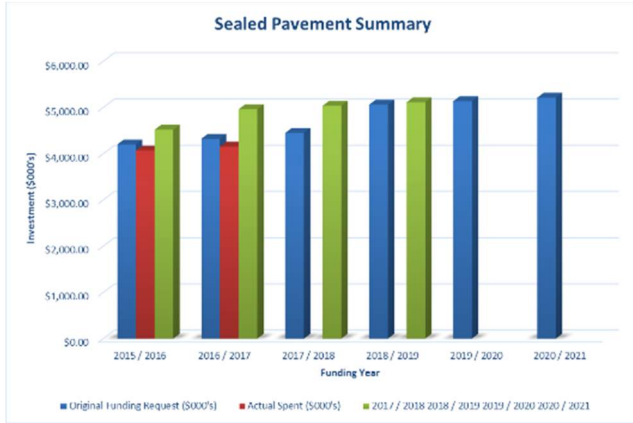
The benefits of an improved commercial focus will likely include incremental improvements in the overall value-for-money that is achieved by investment into Marlborough District roads. An upcoming LED replacement light programme indicates that operational savings are likely. However, these are theoretical savings until proven through implementation and operation. A commercial benefit is expected, and should have a positive effect on any Benefit Cost Analysis.

The changing nature of transportation and asset management also warrants regular reviews of how many (additional) staff are required to effectively achieve the required stakeholder engagement, increase asset monitoring, implement improvements, and deliver the aspirational outcomes.

### **Customer Levels of Service Overview**

The 2018 – 2021 AMP will continue to meet the regions existing customer levels of service. Undertaking the improvement plan initiatives will enable the assessment of where we need to increase our Customer Levels of Service to ensure the identified transport network priorities are achieved.

## 14.1 AMP SECTION 6.1 - SEALED PAVEMENT



### Activity Overview

The works being carried out for sealed pavement include the following maintenance, renewals and capital improvement activities as listed in the table below.

It is possible that there is an increased risk of underlying pavement damage that may have occurred during the earthquake that may not yet become evident for a number of years. This is will require proactive monitoring which is anticipated to be included within the new Network Outcomes Contract (NOC).

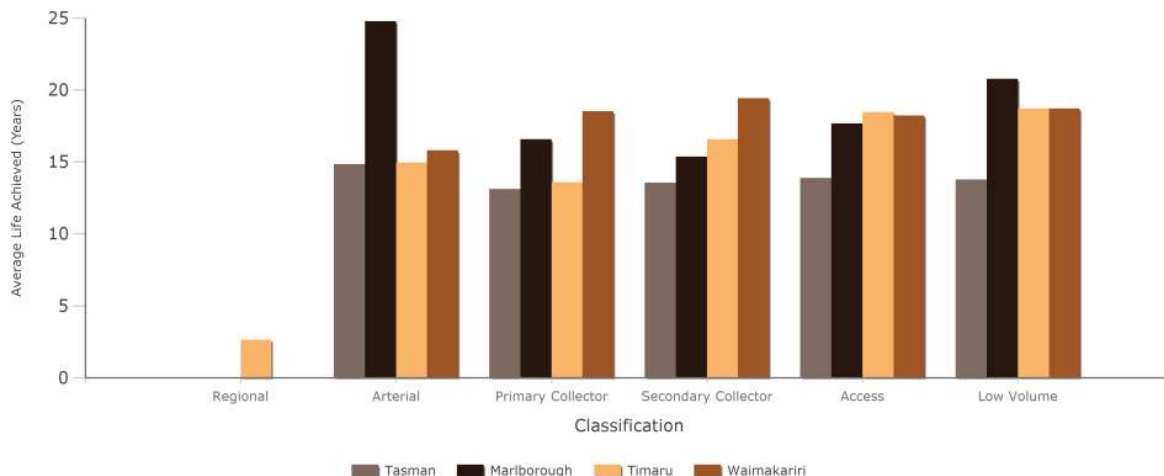
Sealed Pavements  
AMP Table 6.1

| W/C No.    | Location                    | Original Funding Request (\$000's) |                   |                   |                   |                   |                   | Actual Spent (\$000's) |                   |                   |                   |                   |                   |  |
|------------|-----------------------------|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|
|            |                             | 2015 / 2016                        | 2016 / 2017       | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021       | 2015 / 2016            | 2016 / 2017       | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021       |  |
| <b>111</b> | <b>Maintenance</b>          |                                    |                   |                   |                   |                   |                   |                        |                   |                   |                   |                   |                   |  |
| 111        | Sealed Pavement Mtce        | \$1,000.00                         | \$1,030.00        | \$1,060.90        | \$1,076.81        | \$1,092.97        | \$1,109.36        | \$923.61               | \$1,002.93        | \$1,086.93        | \$1,076.81        | \$1,092.97        | \$1,109.36        |  |
|            | <b>TOTAL</b>                | <b>\$1,000.00</b>                  | <b>\$1,030.00</b> | <b>\$1,060.90</b> | <b>\$1,076.81</b> | <b>\$1,092.97</b> | <b>\$1,109.36</b> | <b>\$923.61</b>        | <b>\$1,002.93</b> | <b>\$1,086.93</b> | <b>\$1,076.81</b> | <b>\$1,092.97</b> | <b>\$1,109.36</b> |  |
| <b>212</b> | <b>Renewals</b>             |                                    |                   |                   |                   |                   |                   |                        |                   |                   |                   |                   |                   |  |
| 212        | Maintenance Chip Seals      | \$1,700.00                         | \$1,760.00        | \$1,821.80        | \$2,350.00        | \$2,385.25        | \$2,421.03        | \$1,645.09             | \$1,500.91        | \$2,163.36        | \$2,450.00        | \$2,490.50        | \$2,531.61        |  |
| 212        | Thin Asphaltic Surfacing    | \$300.00                           | \$300.00          | \$300.00          | \$350.00          | \$355.25          | \$360.58          | \$418.01               | \$345.75          | \$50.51           | \$250.00          | \$250.00          | \$250.00          |  |
| 212        | Professional Services       | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            |  |
| 214        | Area Wide Treatments        | \$1,100.00                         | \$1,133.00        | \$1,168.99        | \$1,184.49        | \$1,202.26        | \$1,220.30        | \$1,082.64             | \$1,302.99        | \$1,217.63        | \$1,184.49        | \$1,202.26        | \$1,220.30        |  |
| 214        | Professional Services       | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            |  |
|            | <b>TOTAL</b>                | <b>\$3,100.00</b>                  | <b>\$3,193.00</b> | <b>\$3,288.79</b> | <b>\$3,884.49</b> | <b>\$3,942.76</b> | <b>\$4,001.91</b> | <b>\$3,145.74</b>      | <b>\$3,149.66</b> | <b>\$3,431.49</b> | <b>\$3,884.49</b> | <b>\$3,942.76</b> | <b>\$4,001.91</b> |  |
|            | <b>Capital Improvements</b> |                                    |                   |                   |                   |                   |                   |                        |                   |                   |                   |                   |                   |  |
|            | UnSub Sealed Pavement       | \$100.00                           | \$100.00          | \$100.00          | \$100.00          | \$100.00          | \$100.00          | \$0.00                 | \$0.00            | \$0.00            | \$100.00          | \$100.00          | \$100.00          |  |
|            | <b>TOTAL</b>                | <b>\$100.00</b>                    | <b>\$100.00</b>   | <b>\$100.00</b>   | <b>\$100.00</b>   | <b>\$100.00</b>   | <b>\$100.00</b>   | <b>\$0.00</b>          | <b>\$0.00</b>     | <b>\$0.00</b>     | <b>\$100.00</b>   | <b>\$100.00</b>   | <b>\$100.00</b>   |  |
|            | <b>Total Bridges</b>        | <b>\$4,200.00</b>                  | <b>\$4,323.00</b> | <b>\$4,449.69</b> | <b>\$5,061.30</b> | <b>\$5,135.73</b> | <b>\$5,211.27</b> | <b>\$4,069.35</b>      | <b>\$4,152.59</b> | <b>\$4,518.42</b> | <b>\$5,061.30</b> | <b>\$5,135.73</b> | <b>\$5,211.27</b> |  |

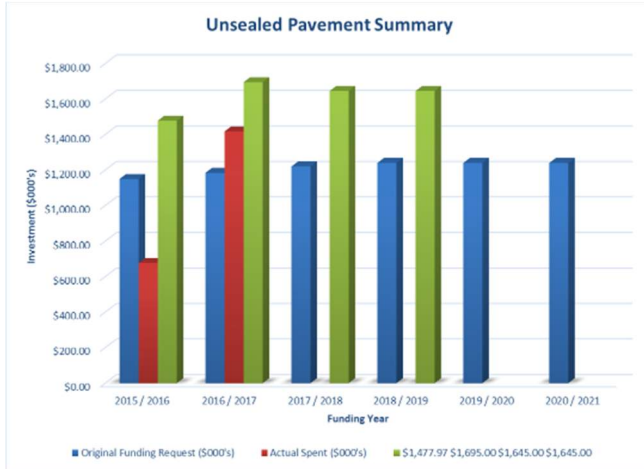
### Customer Levels of Service Overview

Historically the Marlborough network has performed well with regard roughness and rutting and it is considered that the proposed level of investment is sufficient to maintain this condition providing earthquake recovery works are completed in a timely fashion.

An increase in both reseals and pavement rehabilitation is proposed. This has been brought about by the desire to deliver an optimised programme following dTIMS modelling. Generally Marlborough District is able to achieve longer pavement life than comparable peers, reflecting a proactive focus on construction quality over many years.



## 14.2 AMP SECTION 6.2 – UNSEALED ROADS



### Activity Overview

The works being carried out for Unsealed Roads include the following maintenance, renewals and capital improvement activities as listed in the table below.

Council has optimised levels of service within existing budget allocations however it is becoming increasingly difficult to provide acceptable levels of service particularly on those parts of the network where increasing traffic volumes are occurring.

The current specification calling for an average roughness not to exceed 200 NAASRA counts over any 500 metre continuous length appears satisfactory but more investigation is required to ensure this level aligns with public expectation of the condition of unsealed roads.

**UnSealed Pavements  
AMP Table 6.2**

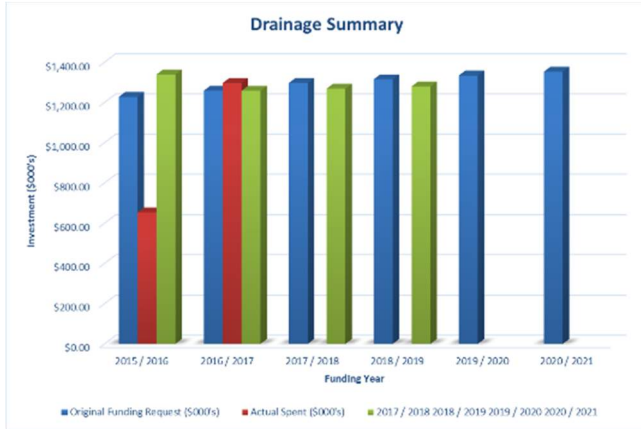
| W/C No. | Location | Original Funding Request (\$000's) |                   |                   |                   |                   | Actual Spent (\$000's) |                   |                 |                   |                   |                   |                   |                   |                   |                   |                   |
|---------|----------|------------------------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|         |          | 2015 / 2016                        | 2016 / 2017       | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021            | 2015 / 2016       | 2016 / 2017     | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021       |                   |                   |                   |                   |
| MDC AMP | 112      | Maintenance                        |                   |                   |                   |                   |                        |                   |                 |                   |                   |                   |                   |                   |                   |                   |                   |
|         | 112      | Unsealed Roads Maintenance         | \$600.00          | \$618.00          | \$636.54          | \$640.00          | \$640.00               | \$640.00          | \$0.00          | \$724.50          | \$664.16          | \$640.00          | \$640.00          | \$640.00          | \$640.00          | \$640.00          | \$640.00          |
|         |          | <b>TOTAL</b>                       | <b>\$600.00</b>   | <b>\$618.00</b>   | <b>\$636.54</b>   | <b>\$640.00</b>   | <b>\$640.00</b>        | <b>\$640.00</b>   | <b>\$0.00</b>   | <b>\$724.50</b>   | <b>\$664.16</b>   | <b>\$640.00</b>   | <b>\$640.00</b>   | <b>\$640.00</b>   | <b>\$640.00</b>   | <b>\$640.00</b>   | <b>\$640.00</b>   |
|         | 211      | Renewals                           |                   |                   |                   |                   |                        |                   |                 |                   |                   |                   |                   |                   |                   |                   |                   |
|         | 211      | Unsealed Road Metalling            | \$550.00          | \$566.50          | \$583.50          | \$600.00          | \$600.00               | \$600.00          | \$471.05        | \$488.33          | \$608.81          | \$850.00          | \$800.00          | \$800.00          | \$800.00          | \$800.00          | \$800.00          |
|         | 211      | Professional Services              | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$0.00          | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            |
|         |          | <b>TOTAL</b>                       | <b>\$550.00</b>   | <b>\$566.50</b>   | <b>\$583.50</b>   | <b>\$600.00</b>   | <b>\$600.00</b>        | <b>\$600.00</b>   | <b>\$471.05</b> | <b>\$488.33</b>   | <b>\$608.81</b>   | <b>\$850.00</b>   | <b>\$800.00</b>   | <b>\$800.00</b>   | <b>\$800.00</b>   | <b>\$800.00</b>   | <b>\$800.00</b>   |
|         |          | Capital Improvements               |                   |                   |                   |                   |                        |                   |                 |                   |                   |                   |                   |                   |                   |                   |                   |
|         | Unsub    | Seal Extensions                    | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$200.00        | \$200.00          | \$200.00          | \$200.00          | \$200.00          | \$200.00          | \$200.00          | \$200.00          | \$200.00          |
|         | Unsub    | Professional Services              | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$5.00          | \$5.00            | \$5.00            | \$5.00            | \$5.00            | \$5.00            | \$5.00            | \$5.00            | \$5.00            |
|         | 325      | R funding seal extension           | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$0.00          | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            |
|         | 211      | Structural Unsealed Upgrading      | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00            | \$0.00          | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            |
|         |          | <b>TOTAL</b>                       | <b>\$0.00</b>     | <b>\$0.00</b>     | <b>\$0.00</b>     | <b>\$0.00</b>     | <b>\$0.00</b>          | <b>\$0.00</b>     | <b>\$205.00</b> | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   | <b>\$205.00</b>   |
|         |          | <b>Total Bridges</b>               | <b>\$1,160.00</b> | <b>\$1,184.50</b> | <b>\$1,220.04</b> | <b>\$1,240.00</b> | <b>\$1,240.00</b>      | <b>\$1,240.00</b> | <b>\$676.05</b> | <b>\$1,417.83</b> | <b>\$1,477.97</b> | <b>\$1,695.00</b> | <b>\$1,645.00</b> | <b>\$1,645.00</b> | <b>\$1,645.00</b> | <b>\$1,645.00</b> | <b>\$1,645.00</b> |

### Customer Levels of Service Overview

The current level of service, as specified in the maintenance contracts, is achieved by the application of a maintenance contract specification which requires intervention to repair potholes and other pavement structural failures, a grading regime to maintain the cross-sectional shape of the pavement and to eliminate corrugations, combined with a patch metalling requirement to address localised wearing course loss. There is a programmed annual application of a specified quantity of maintenance metal to predetermined locations where pavement depth has been reduced or is inadequate for intended loadings.

However, the current investment level is not providing the level of service that the public are demanding. An increase in investment in metal renewals and grading frequency is likely to be required in the new maintenance contract.

### 14.3 AMP SECTION 6.3 - DRAINAGE FACILITIES



#### Activity Overview

The works being carried out for the drainage facilities include the following maintenance, renewals and capital improvement activities as listed in the table below.

There is a high level of confidence in the RAMM inventory data regarding the number and size of culverts however there is little information on age or condition.

As a direct result of the size, location or the attendant geology many culvert pipes and drainage systems are damaged or lost during storm weather events. The process of damage or loss is somewhat unpredictable and the cost of mitigating the risk by installing larger or stronger systems is unevaluated but unlikely to be affordable.

Achieving a very high level of proactive maintenance, coupled to a high level of early intervention during inclement weather, appears to be the most beneficial level of service.

Drainage Facilities  
AMP Table 6.3

| W/C No.    | Location  | Original Funding Request (\$000's) |                   |                   |                   |                   | Actual Spent (\$000's) |                 |                   |                   |                   |                   |                   |
|------------|---|------------------------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|            |   | 2015/2016                          | 2016/2017         | 2017/2018         | 2018/2019         | 2019/2020         | 2020/2021              | 2019/2018       | 2018/2017         | 2017/2016         | 2016/2015         | 2015/2014         | 2014/2013         |
| <b>113</b> | <b>Maintenance</b>                              |                                    |                   |                   |                   |                   |                        |                 |                   |                   |                   |                   |                   |
| 113        | Street Cleaning                                 | \$420.00                           | \$432.60          | \$445.58          | \$450.03          | \$454.53          | \$459.08               | \$174.17        | \$224.98          | \$210.75          | \$135.01          | \$136.36          | \$139.10          |
| 113        | Drainage Maintenance                            |                                    |                   |                   |                   |                   |                        | \$271.73        | \$290.55          | \$249.17          | \$315.02          | \$318.17          | \$319.98          |
| Unsub      | Kerb and Channel Mtce                           | \$25.00                            | \$25.00           | \$25.00           | \$25.00           | \$25.00           | \$25.00                | \$25.00         | \$25.00           | \$25.00           | \$25.00           | \$25.00           | \$25.00           |
|            | <b>TOTAL</b>                                    | <b>\$445.00</b>                    | <b>\$457.60</b>   | <b>\$470.58</b>   | <b>\$475.03</b>   | <b>\$479.53</b>   | <b>\$484.08</b>        | <b>\$470.90</b> | <b>\$540.54</b>   | <b>\$484.91</b>   | <b>\$475.03</b>   | <b>\$479.53</b>   | <b>\$484.08</b>   |
| <b>213</b> | <b>Renewals</b>                                 |                                    |                   |                   |                   |                   |                        |                 |                   |                   |                   |                   |                   |
| 213        | Culvert and Stormwater Renewals                 | \$210.00                           | \$218.00          | \$226.00          | \$228.26          | \$230.54          | \$232.85               | \$0.00          | \$188.66          | \$274.16          | \$252.36          | \$258.78          | \$265.27          |
| 213        | Kerb and Channel Renewals                       | \$390.00                           | \$400.00          | \$410.00          | \$414.10          | \$418.24          | \$422.42               | \$0.00          | \$306.99          | \$390.00          | \$390.00          | \$390.00          | \$390.00          |
| 213        | Other Drainage Works                            | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00          | \$79.79           |                   |                   |                   |                   |
| 213        | Professional Services                           | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 | \$0.00          |                   |                   |                   |                   |                   |
| Unsub      | Kerb and Channel Renewals transferred to subbed | \$92.25                            | \$92.25           | \$100.00          | \$107.75          | \$115.50          | \$123.25               | \$92.25         | \$92.25           | \$100.00          | \$50.00           | \$50.00           | \$50.00           |
|            | <b>TOTAL</b>                                    | <b>\$692.25</b>                    | <b>\$710.25</b>   | <b>\$736.00</b>   | <b>\$750.11</b>   | <b>\$764.28</b>   | <b>\$778.52</b>        | <b>\$92.25</b>  | <b>\$665.69</b>   | <b>\$764.16</b>   | <b>\$692.36</b>   | <b>\$698.78</b>   | <b>\$705.27</b>   |
|            | <b>Capital Improvements</b>                     |                                    |                   |                   |                   |                   |                        |                 |                   |                   |                   |                   |                   |
| Unsub      | New Kerb and Channel Works                      | \$90.00                            | \$90.00           | \$90.00           | \$90.00           | \$90.00           | \$90.00                | \$85.00         | \$85.00           | \$85.00           | \$85.00           | \$85.00           | \$85.00           |
| Unsub      | Professional Services                           |                                    |                   |                   |                   |                   |                        | \$5.00          | \$5.00            | \$5.00            | \$5.00            | \$5.00            | \$5.00            |
|            | <b>TOTAL</b>                                    | <b>\$90.00</b>                     | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>         | <b>\$90.00</b>  | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>    | <b>\$90.00</b>    |
|            | <b>Total Bridges</b>                            | <b>\$1,227.26</b>                  | <b>\$1,257.85</b> | <b>\$1,296.58</b> | <b>\$1,315.14</b> | <b>\$1,333.81</b> | <b>\$1,352.60</b>      | <b>\$663.16</b> | <b>\$1,296.23</b> | <b>\$1,339.07</b> | <b>\$1,257.39</b> | <b>\$1,268.31</b> | <b>\$1,279.35</b> |

#### Customer Levels of Service Overview

The current level of service calls for the inspection, monitoring, cleaning and reporting of all culverts and other significant drainage facilities, over the contract period. Where culverts are less than 600mm diameter the present requirement is for any damage to be repaired as a standard routine maintenance activity. Work to larger pipes is categorised differently by the road funding agency and is specifically briefed.

## 14.4 AMP SECTION 6.4 - BRIDGES AND CULVERTS



### Activity Overview

The works being carried out for the bridges and culverts include the following maintenance, renewals and capital improvement activities as listed in the table below.

The structurally engineered nature of this asset means that these high risk, high value assets require proactive inspection and replacement. When properly designed and managed however, they have a useful life that generally exceeds that of other road assets.

The structures are described within Council's RAMM database, and visual inspections are regularly undertaken to confirm current condition, plus to determine any maintenance or other intervention.

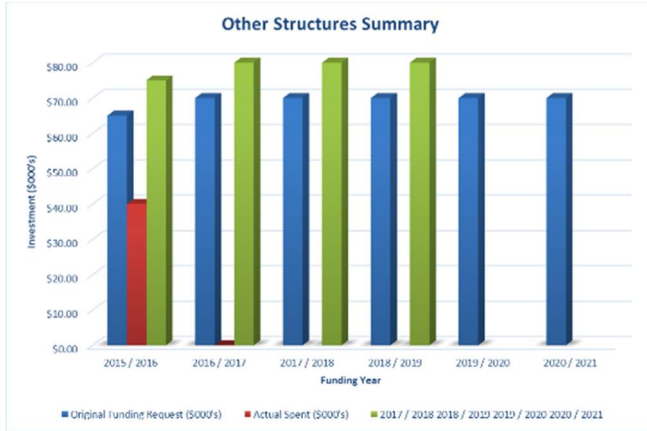
**Bridges & Culverts  
AMP Table 6.4**

| W/C No.              | Location                             | Original Funding Request (\$000's) |                   |                   |                   |                   | Actual Spent (\$000's) |                 |                |                 |                   |                   |                 |
|----------------------|--------------------------------------|------------------------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-----------------|----------------|-----------------|-------------------|-------------------|-----------------|
|                      |                                      | 2015 / 2016                        | 2016 / 2017       | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021            | 2015 / 2016     | 2016 / 2017    | 2017 / 2018     | 2018 / 2019       | 2019 / 2020       | 2020 / 2021     |
| 114                  | Maintenance                          |                                    |                   |                   |                   |                   |                        |                 |                |                 |                   |                   |                 |
|                      | Routine Bridge Maintenance           | \$250.00                           | \$257.50          | \$265.23          | \$272.95          | \$280.68          | \$288.40               | \$270.84        | \$73.35        | \$246.73        | \$292.95          | \$300.68          | \$308.40        |
|                      | <b>TOTAL</b>                         | <b>\$250.00</b>                    | <b>\$257.50</b>   | <b>\$265.23</b>   | <b>\$272.95</b>   | <b>\$280.68</b>   | <b>\$288.40</b>        | <b>\$270.84</b> | <b>\$73.35</b> | <b>\$246.73</b> | <b>\$292.95</b>   | <b>\$300.68</b>   | <b>\$308.40</b> |
| 215                  | Renewals                             |                                    |                   |                   |                   |                   |                        |                 |                |                 |                   |                   |                 |
|                      | Routine Bridge Component Replacement | \$300.00                           | \$300.00          | \$309.00          | \$310.00          | \$310.00          | \$310.00               | \$0.00          | \$0.00         | \$272.41        | \$280.00          | \$280.00          | \$280.00        |
|                      | Professional Services                | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$540.00          | \$540.00               | \$0.00          | \$0.00         | \$0.00          | \$0.00            | \$0.00            | \$0.00          |
|                      | <b>TOTAL</b>                         | <b>\$300.00</b>                    | <b>\$300.00</b>   | <b>\$309.00</b>   | <b>\$310.00</b>   | <b>\$850.00</b>   | <b>\$850.00</b>        | <b>\$0.00</b>   | <b>\$0.00</b>  | <b>\$272.41</b> | <b>\$280.00</b>   | <b>\$280.00</b>   | <b>\$280.00</b> |
|                      | Capital Improvements                 |                                    |                   |                   |                   |                   |                        |                 |                |                 |                   |                   |                 |
|                      | Bridge Replacement (LCLR)            | \$477.67                           | \$477.37          | \$540.00          | \$540.00          | \$540.00          | \$540.00               |                 |                |                 | \$960.00          | \$1,090.00        | \$410.00        |
|                      | Professional Services                | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 |                 |                |                 |                   |                   |                 |
|                      | Maori Ford Waihopai LS funded        | \$500.00                           | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00                 |                 |                |                 |                   |                   |                 |
|                      | <b>TOTAL</b>                         | <b>\$977.67</b>                    | <b>\$477.37</b>   | <b>\$540.00</b>   | <b>\$540.00</b>   | <b>\$540.00</b>   | <b>\$540.00</b>        | <b>\$0.00</b>   | <b>\$0.00</b>  | <b>\$0.00</b>   | <b>\$960.00</b>   | <b>\$1,090.00</b> | <b>\$410.00</b> |
| <b>Total Bridges</b> |                                      | <b>\$1,527.67</b>                  | <b>\$1,034.87</b> | <b>\$1,114.23</b> | <b>\$1,122.95</b> | <b>\$1,130.68</b> | <b>\$1,678.40</b>      | <b>\$270.84</b> | <b>\$73.35</b> | <b>\$519.14</b> | <b>\$1,532.95</b> | <b>\$1,670.68</b> | <b>\$998.40</b> |

### Customer Levels of Service Overview

The Council does have weight and speed restricted bridges. Generally weight restricted bridges have a greater impact on the ability of the road network to meet customer requirements, especially in more remote areas where alternative routes are not so plentiful. Without maintenance, strengthening, and/or replacement of vulnerable bridge inventory, Customers Level of Service will steadily degrade to an unacceptable level – and would incur significant cost to remedy.

**14.5 AMP SECTION 6.5 - OTHER STRUCTURES**



**Activity Overview**

The works being carried out for the other structures include the following maintenance, renewals and capital improvement activities as listed in the table below.

The roading network has a significant quantity of ancillary structures such as retaining walls, cattle stops and concrete fords. In some specific instances there are privately built retaining structures within the legal road. This situation occurs mainly in the steep coastal regions where property owners construct driveways below the public road.

The Other Structures programme has been tracking just below the original budget and will remain in accordance with the original budget request.

**Other Structures  
AMP Table 6.5**

| W/C No.              | Location                                      | Original Funding Request (\$000's) |                |                |                |                | Actual Spent (\$000's) |                |               |                |                |                |                |                |                |
|----------------------|---|------------------------------------|----------------|----------------|----------------|----------------|------------------------|----------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                      |   | 2015 / 2016                        | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021            | 2015 / 2016    | 2016 / 2017   | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    |                |                |
| MDC A/MP             | <b>114 Maintenance</b>                        |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | Other Structure Maintenance                   |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | 114 Retaining Walls (insp)                    | \$30.00                            | \$35.00        | \$35.00        | \$35.00        | \$35.00        | \$35.00                | \$30.00        | \$0.00        | \$25.00        | \$30.00        | \$30.00        | \$30.00        | \$30.00        | \$30.00        |
|                      | 114 Other Structures i.e. Cattlestops / Fords | \$15.00                            | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00                | \$10.00        | \$0.00        |                |                |                |                |                |                |
|                      | <b>TOTAL</b>                                  | <b>\$45.00</b>                     | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b>         | <b>\$40.00</b> | <b>\$0.00</b> | <b>\$25.00</b> | <b>\$30.00</b> | <b>\$30.00</b> | <b>\$30.00</b> | <b>\$30.00</b> | <b>\$30.00</b> |
|                      | <b>215 Renewals</b>                           |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | Other Structure Component Replacement         |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | 215 Retaining Walls                           | \$10.00                            | \$10.00        | \$10.00        | \$10.00        | \$10.00        | \$10.00                | \$0.00         | \$0.00        | \$50.00        | \$50.00        | \$50.00        | \$50.00        | \$50.00        | \$50.00        |
|                      | 215 Other Structures i.e. Cattlestops / Fords | \$5.00                             | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00                 | \$0.00         | \$0.00        |                |                |                |                |                |                |
|                      | 215 Professional Services                     | \$5.00                             | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00                 | \$0.00         | \$0.00        |                |                |                |                |                |                |
|                      | <b>TOTAL</b>                                  | <b>\$20.00</b>                     | <b>\$20.00</b> | <b>\$20.00</b> | <b>\$20.00</b> | <b>\$20.00</b> | <b>\$20.00</b>         | <b>\$0.00</b>  | <b>\$0.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> | <b>\$50.00</b> |
|                      | <b>Capital Improvements</b>                   |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | New Retaining Walls (ref emergency works)     |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | New fords                                     |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
|                      | Professional Services                         |                                    |                |                |                |                |                        |                |               |                |                |                |                |                |                |
| <b>TOTAL</b>         | <b>\$0.00</b>                                 | <b>\$0.00</b>                      | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>          | <b>\$0.00</b>  | <b>\$0.00</b> | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  |                |
| <b>Total Bridges</b> |   | <b>\$65.00</b>                     | <b>\$70.00</b> | <b>\$70.00</b> | <b>\$70.00</b> | <b>\$70.00</b> | <b>\$70.00</b>         | <b>\$40.00</b> | <b>\$0.00</b> | <b>\$75.00</b> | <b>\$80.00</b> | <b>\$80.00</b> | <b>\$80.00</b> | <b>\$80.00</b> |                |

**Customer Levels of Service Overview**

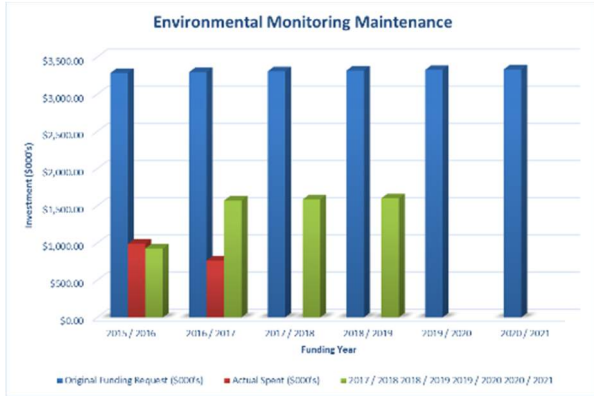
Steel Column Walls and Gabion Walls are monitored as part of the structural integrity inspection regime.

Dry Stone and Rip Rap Walls are not specifically monitored.

Cattle Stops and Concrete Fords are monitored by routine road inspections.

Customer complaints and asset failures are not common, as evidence of effective monitoring, maintenance, and renewals.

## 14.6 AMP SECTION 6.6 - ENVIRONMENTAL MONITORING



### Activity Overview

The works being carried out for the environmental monitoring include the following maintenance activities as listed in the table below.

The environmental monitoring programme includes Street Cleaning, Vegetation Control, Incident Response, and Emergency Works.

Street Cleaning is focused on urban centres while Vegetation Control is primarily an issue in rural areas, with both having an impact on drainage.

Incident Response covers callouts to assist with traffic control at the scene of motor vehicle accidents, the locating and controlling of wandering stock, the first response to slips, washouts and flooding during the onset of storm events, and calls to spills on the road or rubbish dumping in public areas.

The Emergency Response work category provides for unforeseen significant expenditure that arises from a defined, major, short-duration natural event. It provides for the restoration to a standard no better than what existed before the damage.

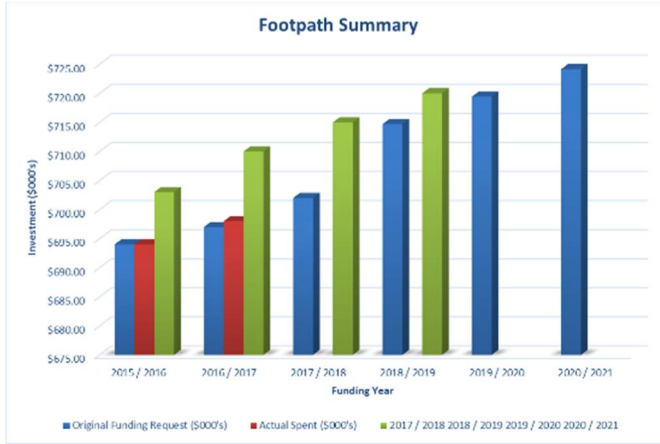
Environmental Monitoring (Street Cleaning + Verges)  
AMP Table 6.6

| MDC A | W/C No. | Location                           | 2015 / 2016                        | 2016 / 2017       | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021       | 2015 / 2016     | 2016 / 2017            | 2017 / 2018     | 2018 / 2019       | 2019 / 2020       | 2020 / 2021       |
|-------|---------|------------------------------------|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|------------------------|-----------------|-------------------|-------------------|-------------------|
|       |         |                                    | Original Funding Request (\$000's) |                   |                   |                   |                   |                   |                 | Actual Spent (\$000's) |                 |                   |                   |                   |
|       |         | <b>Maintenance</b>                 |                                    |                   |                   |                   |                   |                   |                 |                        |                 |                   |                   |                   |
|       | 121     | Other Environmental Main           |                                    |                   |                   |                   |                   |                   |                 |                        |                 | \$245.00          | \$247.66          | \$250.35          |
|       | 121     | Vegetation control                 | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$378.64        | \$285.79               | \$450.15        | \$490.00          | \$495.33          | \$500.70          |
|       | 121     | Incident Response                  | \$200.00                           | \$200.00          | \$205.00          | \$205.00          | \$207.05          | \$209.12          | \$0.00          | \$0.00                 | \$0.00          | \$245.00          | \$247.66          | \$250.35          |
|       | 121     | Ice and frost patrol / gritting    | \$120.00                           | \$125.00          | \$126.25          | \$130.00          | \$131.30          | \$132.61          | \$184.17        | \$47.07                | \$42.00         | \$90.00           | \$90.00           | \$90.00           |
|       | 123     | Operational traffic management     | \$25.00                            | \$25.75           | \$26.52           | \$26.79           | \$27.06           | \$27.33           | \$0.00          | \$0.00                 | \$0.00          | \$60.00           | \$60.00           | \$60.00           |
|       | 121     | Emergency Reinstatement            | \$2,500.00                         | \$2,500.00        | \$2,500.00        | \$2,500.00        | \$2,500.00        | \$2,500.00        | \$0.00          | \$0.00                 | \$0.00          | \$0.00            | \$0.00            | \$0.00            |
|       | Unsub   | Abandoned vehicles                 | \$15.00                            | \$15.00           | \$15.00           | \$17.50           | \$17.50           | \$17.50           | \$0.00          | \$0.00                 | \$0.00          | \$0.00            | \$0.00            | \$0.00            |
|       | Unsub   | Unsub Routine Street Cleaning      | \$425.00                           | \$430.00          | \$435.00          | \$439.50          | \$443.74          | \$448.18          | \$425.00        | \$430.00               | \$435.00        | \$440.00          | \$445.00          | \$450.00          |
|       | Unsub   | Additional Glass Patrol / Clean up | \$0.00                             | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00            | \$0.00          | \$0.00                 | \$0.00          | \$0.00            | \$0.00            | \$0.00            |
|       |         | <b>TOTAL</b>                       | <b>\$3,285.00</b>                  | <b>\$3,295.75</b> | <b>\$3,307.77</b> | <b>\$3,318.79</b> | <b>\$3,326.65</b> | <b>\$3,334.74</b> | <b>\$987.81</b> | <b>\$762.86</b>        | <b>\$927.15</b> | <b>\$1,570.00</b> | <b>\$1,585.65</b> | <b>\$1,601.40</b> |
|       |         | <b>Total Bridges</b>               | <b>\$3,285.00</b>                  | <b>\$3,295.75</b> | <b>\$3,307.77</b> | <b>\$3,318.79</b> | <b>\$3,326.65</b> | <b>\$3,334.74</b> | <b>\$987.81</b> | <b>\$762.86</b>        | <b>\$927.15</b> | <b>\$1,570.00</b> | <b>\$1,585.65</b> | <b>\$1,601.40</b> |

### Customer Levels of Service Overview

Method based Levels of Service are being used for routine street cleaning, rather than a Performance based approach. The Method based approach can be considered less responsive to cleaning expectations by the public. Customer expectation are that emergency situations warrant immediate attention.

## 14.7 AMP SECTION 6.7 - FOOTPATHS



### Activity Overview

The works being carried out for the footpaths include the following maintenance, renewals and capital improvement activities as listed in the table below.

Currently lifecycle management is achieved through the application of a maintenance contract specification which requires the maintenance contractor to have an inspection programme to monitor the condition of the footpaths. A separate contractor is engaged to undertake the physical maintenance and renewal works. The footpaths programme is tracking as expected.

Both asphaltic concrete and sealed footpaths need to be resurfaced midway through their expected life to maintain the life of the asset. Approximately 3.6km of asphaltic concrete and 0.5km of seal will need to be resurfaced annually. Resurfacing is undertaken under the existing renewal budget.

Footpaths  
AMP Table 6.7

|           |                      | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     | 2015 / 2016            | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     |                 |
|-----------|----------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| MDC A AMP | W/C No.              | Original Funding Request (\$000's) |                 |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                 |                 |                 |                 |                 |
|           | Location             |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|           |                      | <b>Maintenance</b>                 |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|           | Unsub                | Concrete Footpath Maintenance      | \$85.00         | \$86.00         | \$87.00         | \$87.87         | \$88.75         | \$89.64                | \$85.00         | \$86.00         | \$87.00         | \$88.00         | \$88.00         | \$88.00         |
|           | Unsub                | Sealed Footpath Maintenance        | \$81.00         | \$82.00         | \$83.00         | \$83.83         | \$84.67         | \$85.51                | \$81.00         | \$82.00         | \$83.00         | \$84.00         | \$84.00         | \$84.00         |
|           |                      | <b>TOTAL</b>                       | <b>\$166.00</b> | <b>\$168.00</b> | <b>\$170.00</b> | <b>\$171.70</b> | <b>\$173.42</b> | <b>\$175.15</b>        | <b>\$166.00</b> | <b>\$168.00</b> | <b>\$170.00</b> | <b>\$172.00</b> | <b>\$172.00</b> | <b>\$172.00</b> |
|           |                      | <b>Renewals</b>                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|           | Unsub                | Footpath Renewals                  | \$435.00        | \$437.00        | \$440.00        | \$443.00        | \$446.00        | \$449.00               | \$410.00        | \$412.00        | \$415.00        | \$420.00        | \$425.00        | \$430.00        |
|           | Unsub                | Professional Services              | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$25.00         | \$25.00         | \$25.00         | \$25.00         | \$25.00         | \$25.00         |
|           |                      | <b>TOTAL</b>                       | <b>\$435.00</b> | <b>\$437.00</b> | <b>\$440.00</b> | <b>\$443.00</b> | <b>\$446.00</b> | <b>\$449.00</b>        | <b>\$435.00</b> | <b>\$437.00</b> | <b>\$440.00</b> | <b>\$445.00</b> | <b>\$450.00</b> | <b>\$455.00</b> |
|           |                      | <b>Capital Improvements</b>        |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|           | Unsub                | New Footpaths                      | \$93.00         | \$92.00         | \$92.00         | \$100.00        | \$100.00        | \$100.00               | \$89.00         | \$89.00         | \$89.00         | \$89.00         | \$89.00         | \$89.00         |
|           | Unsub                | Walking Strategy Implementation    | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |
|           | Unsub                | Professional Services              | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$4.00          | \$4.00          | \$4.00          | \$4.00          | \$4.00          | \$4.00          |
|           | <b>TOTAL</b>         | <b>\$93.00</b>                     | <b>\$92.00</b>  | <b>\$92.00</b>  | <b>\$100.00</b> | <b>\$100.00</b> | <b>\$100.00</b> | <b>\$93.00</b>         | <b>\$93.00</b>  | <b>\$93.00</b>  | <b>\$93.00</b>  | <b>\$93.00</b>  | <b>\$93.00</b>  |                 |
|           | <b>Total Bridges</b> | <b>\$694.00</b>                    | <b>\$697.00</b> | <b>\$702.00</b> | <b>\$714.70</b> | <b>\$719.42</b> | <b>\$724.15</b> | <b>\$694.00</b>        | <b>\$698.00</b> | <b>\$703.00</b> | <b>\$710.00</b> | <b>\$715.00</b> | <b>\$720.00</b> |                 |

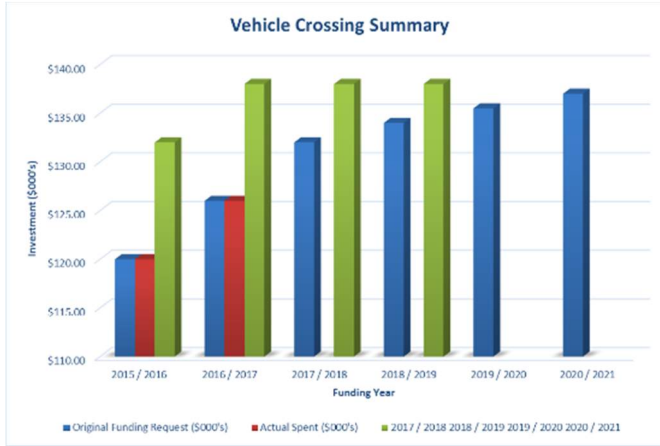
### Customer Levels of Service Overview

Customers commonly complain about the condition of the footpaths.

All footpaths are condition rated on a three yearly basis. This rating is based on a 1 to 5 scale with 1 being excellent and 5 being terrible condition. Council has a Level of Service requirements that at least 95% of footpaths are rated at 4 or better. General maintenance is required in order to retain the integrity of the footpath and to promptly repair defects that are hazardous. Further, accommodations for mobility scooters, or equivalent, must be considered.



## 14.8 AMP SECTION 6.8 - VEHICLE CROSSINGS



### Activity Overview

The works being carried out for the vehicle crossing include the following maintenance, renewals and capital improvement activities as listed in the table below.

The vehicle crossing programme is tracking generally as expected.

There is no current complete database of vehicle crossings within the Council network, although there is limited, but inaccurate, data in the RAMM database. Due to the lack of data, the age and condition of existing vehicle crossings is unknown. However the majority of urban vehicle crossings have been constructed since 1970 and are in reasonable condition.

All new crossings are generally constructed at the cost of the adjoining property owner as part of a subdivision approval.

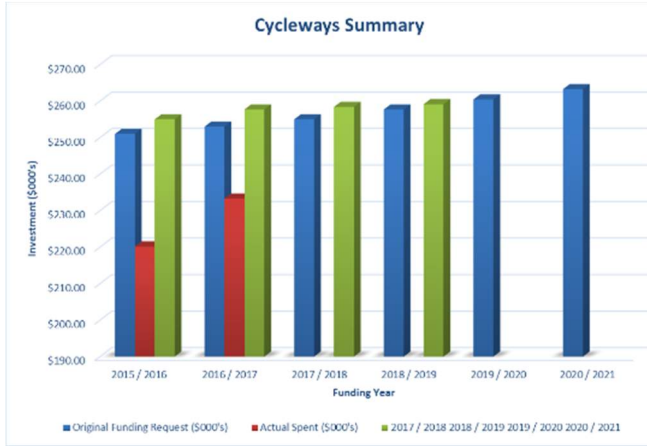
Vehicle Crossings  
AMP Table 6.8

| W/C No.              | Location                           | Original Funding Request (\$000's) |                 |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                 |                 |                 |                 |         |
|----------------------|------------------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------|
|                      |                                    | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     | 2015 / 2016            | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     |         |
| MDC AMP              | <b>Maintenance</b>                 |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |         |
|                      | Unsub Vehicle Crossing Maintenance | \$42.00                            | \$43.00         | \$44.00         | \$45.00         | \$45.50         | \$46.00         | \$42.00                | \$43.00         | \$44.00         | \$45.00         | \$45.00         | \$45.00         |         |
|                      | <b>TOTAL</b>                       | <b>\$42.00</b>                     | <b>\$43.00</b>  | <b>\$44.00</b>  | <b>\$45.00</b>  | <b>\$45.50</b>  | <b>\$46.00</b>  | <b>\$42.00</b>         | <b>\$43.00</b>  | <b>\$44.00</b>  | <b>\$45.00</b>  | <b>\$45.00</b>  | <b>\$45.00</b>  |         |
|                      | <b>Renewals</b>                    |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |         |
|                      | Unsub Vehicle Crossing Renewals    | \$66.00                            | \$71.00         | \$76.00         | \$77.00         | \$78.00         | \$79.00         | \$60.00                | \$65.00         | \$70.00         | \$75.00         | \$75.00         | \$75.00         |         |
|                      | Unsub Professional Services        | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$6.00                 | \$6.00          | \$6.00          | \$6.00          | \$6.00          | \$6.00          |         |
|                      | <b>TOTAL</b>                       | <b>\$66.00</b>                     | <b>\$71.00</b>  | <b>\$76.00</b>  | <b>\$77.00</b>  | <b>\$78.00</b>  | <b>\$79.00</b>  | <b>\$66.00</b>         | <b>\$71.00</b>  | <b>\$76.00</b>  | <b>\$81.00</b>  | <b>\$81.00</b>  | <b>\$81.00</b>  |         |
|                      | <b>Capital Improvements</b>        |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |         |
|                      | Unsub New Vehicle Crossings        | \$12.00                            | \$12.00         | \$12.00         | \$12.00         | \$12.00         | \$12.00         | \$10.00                | \$10.00         | \$10.00         | \$10.00         | \$10.00         | \$10.00         | \$10.00 |
|                      | Unsub Professional Services        | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$2.00                 | \$2.00          | \$2.00          | \$2.00          | \$2.00          | \$2.00          | \$2.00  |
| <b>TOTAL</b>         | <b>\$12.00</b>                     | <b>\$12.00</b>                     | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>         | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  | <b>\$12.00</b>  |         |
| <b>Total Bridges</b> | <b>\$120.00</b>                    | <b>\$126.00</b>                    | <b>\$132.00</b> | <b>\$134.00</b> | <b>\$135.50</b> | <b>\$137.00</b> | <b>\$120.00</b> | <b>\$126.00</b>        | <b>\$132.00</b> | <b>\$138.00</b> | <b>\$138.00</b> | <b>\$138.00</b> | <b>\$138.00</b> |         |

### Customer Levels of Service Overview

Maintenance of vehicle crossings is typically reactive from customer complaints or from inspections completed by the maintenance contractors.

## 14.9 AMP SECTION 6.9 - CYCLE WAYS



### Activity Overview

The works being carried out for the cycle ways include the following maintenance, renewals and capital improvement activities as listed in the table below.

With an increased focus on this mode of transport, new urban cycle ways are planned – in response to growing demand.

Council is also supporting the Coastal Pacific Trail Cycle-path.

Coordination with Mobility, Public Transport, and other road users is required, plus consideration of school location(s) is essential.

Cycleways  
AMP Table 6.9

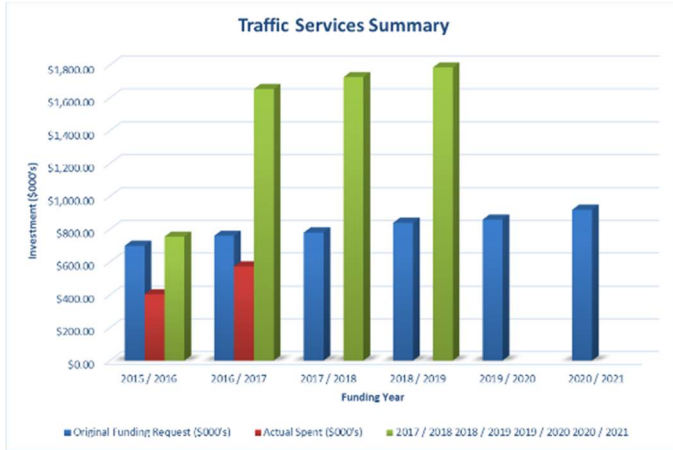
| W/C No.              | Location                    | Original Funding Request (\$000's) |                 |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                 |                 |                 |                 |                 |
|----------------------|-----------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                      |                             | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     | 2015 / 2016            | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     |                 |
| MDC A MP             | <b>Maintenance</b>          |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|                      | 124                         | Cycle Way Maintenance              | \$35.00         | \$35.00         | \$35.00         | \$35.70         | \$36.41         | \$37.14                | \$4.16          | \$15.30         | \$35.00         | \$35.70         | \$36.41         | \$37.14         |
|                      | Unsub                       | Cycle Way Maintenance              | \$100.00        | \$100.00        | \$100.00        | \$102.00        | \$104.04        | \$106.12               | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        |
|                      |                             | <b>TOTAL</b>                       | <b>\$135.00</b> | <b>\$135.00</b> | <b>\$135.00</b> | <b>\$137.70</b> | <b>\$140.45</b> | <b>\$143.26</b>        | <b>\$104.16</b> | <b>\$115.30</b> | <b>\$135.00</b> | <b>\$135.70</b> | <b>\$136.41</b> | <b>\$137.14</b> |
|                      | <b>Renewals</b>             |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|                      |                             | Cycle Way Renewals                 | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 |                 |                 |                 |                 |                 |                 |
|                      |                             | Professional Services              | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 |                 |                 |                 |                 |                 |                 |
|                      |                             | <b>TOTAL</b>                       | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>          | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   |
|                      | <b>Capital Improvements</b> |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |
|                      | Unsub                       | New Cycle Ways                     | \$116.00        | \$118.00        | \$120.00        | \$120.00        | \$120.00        | \$120.00               | \$116.00        | \$118.00        | \$120.00        | \$122.00        | \$122.00        | \$122.00        |
| 452                  | Professional Services       | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |                 |
|                      | <b>TOTAL</b>                | <b>\$116.00</b>                    | <b>\$118.00</b> | <b>\$120.00</b> | <b>\$120.00</b> | <b>\$120.00</b> | <b>\$120.00</b> | <b>\$116.00</b>        | <b>\$118.00</b> | <b>\$120.00</b> | <b>\$122.00</b> | <b>\$122.00</b> | <b>\$122.00</b> |                 |
| <b>Total Bridges</b> |                             | <b>\$251.00</b>                    | <b>\$253.00</b> | <b>\$255.00</b> | <b>\$257.70</b> | <b>\$260.45</b> | <b>\$263.26</b> | <b>\$220.16</b>        | <b>\$233.30</b> | <b>\$255.00</b> | <b>\$257.70</b> | <b>\$258.41</b> | <b>\$259.14</b> |                 |

### Customer Levels of Service Overview

Customer expectations are that the network is safe.

Thereafter, considerations about convenience, aesthetics, connectivity, and other factors, are all secondary to the aspiration of a safe cycle network.

## 14.10 AMP SECTION 6.10 - TRAFFIC SERVICES



### Activity Overview

The works being carried out for the traffic services include the following maintenance, renewals and capital improvement activities as listed in the table below.

Traffic Services encompass all road marking, signage and delineation to aid in the safe and efficient movement of traffic throughout the Council road network.

**Traffic Services  
AMP Table 6.10**

| W/C No.                     | Location                                 | Original Funding Request (\$000's) |                 |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                   |                   |                   |                 |  |  |  |
|-----------------------------|--|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-------------------|-------------------|-------------------|-----------------|--|--|--|
|                             |  | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     | 2015 / 2016            | 2016 / 2017     | 2017 / 2018       | 2018 / 2019       | 2019 / 2020       | 2020 / 2021     |  |  |  |
| MDC A MP                    | <b>122 Maintenance</b>                   |                                    |                 |                 |                 |                 |                 |                        |                 |                   |                   |                   |                 |  |  |  |
|                             | 122 Traffic Services, Signs and markings | \$470.00                           | \$496.10        | \$522.98        | \$549.87        | \$576.75        | \$603.63        | \$155.64               | \$274.91        | \$580.00          | \$752.37          | \$831.75          | \$861.13        |  |  |  |
|                             | Unsub Temp closures for projects         | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$10.00                | \$30.00         | \$15.00           | \$35.00           | \$15.00           | \$35.00         |  |  |  |
|                             | Unsub Signs Mtce                         | \$22.50                            | \$45.00         | \$25.00         | \$45.00         | \$25.00         | \$45.00         | \$10.00                | \$10.00         | \$10.00           | \$12.50           | \$15.00           | \$15.00         |  |  |  |
|                             | <b>TOTAL</b>                             | <b>\$492.50</b>                    | <b>\$541.10</b> | <b>\$547.98</b> | <b>\$594.87</b> | <b>\$601.75</b> | <b>\$648.63</b> | <b>\$175.64</b>        | <b>\$314.91</b> | <b>\$605.00</b>   | <b>\$799.87</b>   | <b>\$861.75</b>   | <b>\$911.13</b> |  |  |  |
|                             | <b>222 Renewals</b>                      |                                    |                 |                 |                 |                 |                 |                        |                 |                   |                   |                   |                 |  |  |  |
|                             | 222 Traffic Services Renewals            | \$171.70                           | \$179.25        | \$187.03        | \$194.80        | \$202.58        | \$210.35        | \$193.41               | \$218.59        | \$105.00          | \$809.47          | \$819.25          | \$829.02        |  |  |  |
|                             | 222 Professional Services                | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |                        |                 |                   |                   |                   |                 |  |  |  |
|                             | <b>TOTAL</b>                             | <b>\$171.70</b>                    | <b>\$179.25</b> | <b>\$187.03</b> | <b>\$194.80</b> | <b>\$202.58</b> | <b>\$210.35</b> | <b>\$193.41</b>        | <b>\$218.59</b> | <b>\$105.00</b>   | <b>\$809.47</b>   | <b>\$819.25</b>   | <b>\$829.02</b> |  |  |  |
|                             | <b>Capital Improvements</b>              |                                    |                 |                 |                 |                 |                 |                        |                 |                   |                   |                   |                 |  |  |  |
| Unsub New Traffic Services  | \$35.50                                  | \$40.00                            | \$45.00         | \$50.00         | \$55.00         | \$60.00         | \$35.50         | \$40.50                | \$45.50         | \$45.50           | \$45.50           | \$45.50           |                 |  |  |  |
| Unsub Professional Services | \$0.00                                   | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.50          | \$0.50                 | \$0.50          | \$0.50            | \$0.50            | \$0.50            |                 |  |  |  |
| <b>TOTAL</b>                | <b>\$35.50</b>                           | <b>\$40.00</b>                     | <b>\$45.00</b>  | <b>\$50.00</b>  | <b>\$55.00</b>  | <b>\$60.00</b>  | <b>\$35.50</b>  | <b>\$40.50</b>         | <b>\$45.50</b>  | <b>\$45.50</b>    | <b>\$45.50</b>    | <b>\$45.50</b>    |                 |  |  |  |
| <b>Total Bridges</b>        | <b>\$699.70</b>                          | <b>\$760.35</b>                    | <b>\$780.01</b> | <b>\$839.67</b> | <b>\$859.33</b> | <b>\$918.98</b> | <b>\$404.55</b> | <b>\$574.00</b>        | <b>\$755.50</b> | <b>\$1,854.84</b> | <b>\$1,726.50</b> | <b>\$1,785.65</b> |                 |  |  |  |

### Customer Levels of Service Overview

Council roads generally comply with the required standards although Road Infrastructure Safety Assessments (RISA) have recommended on-going review. A programme of upgrading sites is implemented on a priority basis as funding permits. However, there is a financial cost to increase the level of service to a standard acceptable to current practices – and this requires additional funding.

## 14.11 AMP SECTION 6.11 - STREET FURNITURE



### Activity Overview

The works being carried out for the street furniture include the following maintenance, renewals and capital improvement activities as listed in the table below.

The street furniture asset includes facilities provided for the convenience of road users, particularly pedestrians in urban areas, and includes litter bins, seats, cycle stands, bus shelters, fences, bollards, information kiosks, CCTV cameras, etc.

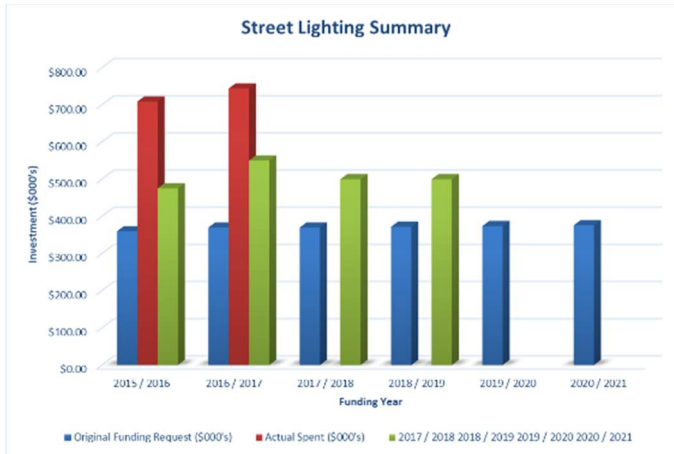
Street Furniture  
AMP Table 6.11

| W/C No.   | Location                           | Original Funding Request (\$000's) |                |                |                |                |                | Actual Spent (\$000's) |                |                |                |                |                |                |  |
|-----------|------------------------------------|------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|--|
|           |                                    | 2015 / 2016                        | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    | 2015 / 2016            | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    |                |  |
| MDC A AMP | <b>121 Maintenance</b>             |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |  |
|           | Unsub Street Furniture Maintenance | \$9.00                             | \$10.00        | \$10.00        | \$11.00        | \$12.00        | \$13.00        | \$9.00                 | \$10.00        | \$10.00        | \$10.00        | \$10.00        | \$10.00        | \$10.00        |  |
|           | <b>TOTAL</b>                       | <b>\$9.00</b>                      | <b>\$10.00</b> | <b>\$10.00</b> | <b>\$11.00</b> | <b>\$12.00</b> | <b>\$13.00</b> | <b>\$9.00</b>          | <b>\$10.00</b> | <b>\$10.00</b> | <b>\$10.00</b> | <b>\$10.00</b> | <b>\$10.00</b> | <b>\$10.00</b> |  |
|           | <b>221 Renewals</b>                |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |  |
|           | Unsub Street Furniture Renewals    | \$40.00                            | \$40.00        | \$40.00        | \$40.00        | \$40.00        | \$40.00        | \$30.00                | \$30.00        | \$30.00        | \$30.00        | \$30.00        | \$30.00        | \$30.00        |  |
|           | Unsub Paver Sealing (Blen CBD)     | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$10.00                | \$10.00        | \$10.00        | \$10.00        | \$10.00        | \$10.00        | \$10.00        |  |
|           | Unsub Professional Services        | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |  |
|           | <b>TOTAL</b>                       | <b>\$40.00</b>                     | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b>         | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> | <b>\$40.00</b> |  |
|           | <b>Capital Improvements</b>        |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |  |
|           | Unsub New Street Furniture         | \$5.00                             | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00                 | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00         | \$5.00         |  |
|           | Unsub Professional Services        | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |  |
|           | <b>TOTAL</b>                       | <b>\$5.00</b>                      | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>          | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  | <b>\$5.00</b>  |  |
|           | <b>Total Bridges</b>               | <b>\$54.00</b>                     | <b>\$55.00</b> | <b>\$55.00</b> | <b>\$56.00</b> | <b>\$57.00</b> | <b>\$58.00</b> | <b>\$54.00</b>         | <b>\$55.00</b> | <b>\$55.00</b> | <b>\$55.00</b> | <b>\$55.00</b> | <b>\$55.00</b> | <b>\$55.00</b> |  |

### Customer Levels of Service Overview

Maintenance and renewal of street furniture is generally reactive to customer complaints.

## 14.12 AMP SECTION 6.12 – STREET LIGHTING



### Activity Overview

The works being carried out for the street lighting include the following maintenance, renewals and capital improvement activities as listed in the table below.

A programme to convert to LED lights is planned, and should provide reduced power and maintenance requirements.

The number of street lights is increasing as new subdivisions are constructed, generally as an expansion of existing urban areas.

Street Lighting  
AMP Table 6.12

| W/C No.              | Location                          | Original Funding Request (\$000's) |                 |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                 |                 |                 |                 |                 |                 |
|----------------------|-----------------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                      |                                   | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     | 2015 / 2016            | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     |                 |                 |
| MDC A/MP             | <b>122 Maintenance</b>            |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|                      | 122 Carriageway Lighting Mtce     | \$240.00                           | \$250.00        | \$250.00        | \$252.50        | \$255.00        | \$257.50        | \$216.78               | \$252.56        | \$200.00        |                 |                 |                 |                 |                 |
|                      | 122 Lighting Power Supply         | \$220.00                           | \$220.00        | \$220.00        | \$220.00        | \$220.00        | \$220.00        | \$317.09               | \$316.44        | \$100.00        | \$350.00        | \$300.00        | \$300.00        | \$300.00        | \$300.00        |
|                      | <b>TOTAL</b>                      | <b>\$220.00</b>                    | <b>\$220.00</b> | <b>\$220.00</b> | <b>\$220.00</b> | <b>\$220.00</b> | <b>\$220.00</b> | <b>\$533.88</b>        | <b>\$568.99</b> | <b>\$300.00</b> | <b>\$350.00</b> | <b>\$300.00</b> | <b>\$300.00</b> | <b>\$300.00</b> | <b>\$300.00</b> |
|                      | <b>222 Renewals</b>               |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|                      | 222 Carriageway Lighting Renewals | \$100.00                           | \$110.00        | \$110.00        | \$112.00        | \$114.00        | \$116.00        | \$90.00                | \$99.00         | \$80.00         | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        |
|                      | 222 Upgrade to new standard       | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$20.00         | \$20.00         | \$20.00         | \$20.00         | \$20.00         | \$20.00         |
|                      | 222 Replace old steel poles       | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$30.00                | \$30.00         | \$30.00         | \$30.00         | \$30.00         | \$30.00         | \$30.00         | \$30.00         |
|                      | 222 Professional Services         | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$5.00                 | \$5.00          | \$5.00          | \$10.00         | \$10.00         | \$10.00         | \$10.00         | \$10.00         |
|                      | <b>TOTAL</b>                      | <b>\$100.00</b>                    | <b>\$110.00</b> | <b>\$110.00</b> | <b>\$112.00</b> | <b>\$114.00</b> | <b>\$116.00</b> | <b>\$135.00</b>        | <b>\$135.00</b> | <b>\$135.00</b> | <b>\$160.00</b> | <b>\$160.00</b> | <b>\$160.00</b> | <b>\$160.00</b> | <b>\$160.00</b> |
|                      | <b>Capital Improvements</b>       |                                    |                 |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|                      | Unsub New Carriageway Lighting    | \$40.00                            | \$40.00         | \$40.00         | \$40.00         | \$40.00         | \$40.00         | \$38.00                | \$38.00         | \$38.00         | \$38.00         | \$38.00         | \$38.00         | \$38.00         | \$38.00         |
|                      | Unsub Undergrounding ??           | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |
|                      | Unsub Professional Services       | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$2.00                 | \$2.00          | \$2.00          | \$2.00          | \$2.00          | \$2.00          | \$2.00          | \$2.00          |
|                      | <b>TOTAL</b>                      | <b>\$40.00</b>                     | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>         | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  | <b>\$40.00</b>  |
| <b>Total Bridges</b> | <b>\$360.00</b>                   | <b>\$370.00</b>                    | <b>\$370.00</b> | <b>\$372.00</b> | <b>\$374.00</b> | <b>\$376.00</b> | <b>\$708.88</b> | <b>\$743.99</b>        | <b>\$475.00</b> | <b>\$550.00</b> | <b>\$500.00</b> | <b>\$500.00</b> | <b>\$500.00</b> | <b>\$500.00</b> |                 |

### Customer Levels of Service Overview

Council receive few complaints about the standard of street lighting within the urban areas.

### 14.13 AMP SECTION 6.13 – CAR PARKS



#### Activity Overview

The works being carried out for the car parks include the following maintenance, renewals and capital improvement activities as listed in the table below.

The Council provides one multi-level car parking building in Blenheim, on street parking (metered and non-metered), plus off-street parking areas (metered, non-metered, and leased).

**Car Parks**  
**AMP Table 6.13**

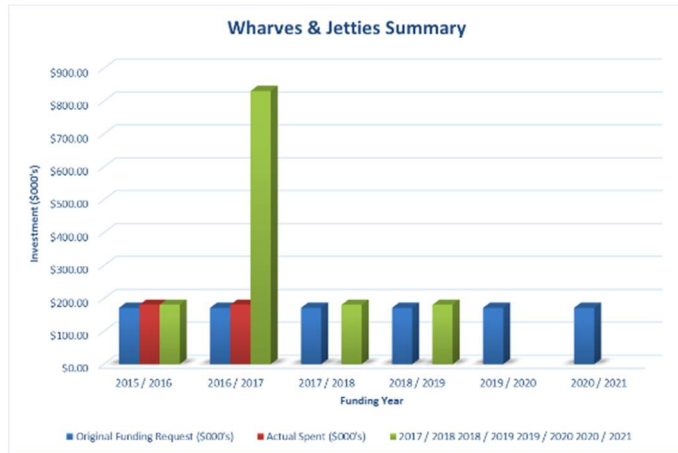
| W/C No. | Location                           | Original Funding Request (\$000's) |                |                |                |                |                | Actual Spent (\$000's) |                |                |                |                |                |                |
|---------|------------------------------------|------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|         |                                    | 2015 / 2016                        | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    | 2015 / 2016            | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    |                |
| MDC AMP | <b>Maintenance</b>                 |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |
|         | Car Park Mtce / Abandoned Vehicles | \$15.00                            | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00                | \$15.00        | \$20.00        | \$25.00        | \$20.00        | \$20.00        |                |
|         | Mtce of new car park building      | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | Enforcement contract               | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | <b>TOTAL</b>                       | <b>\$15.00</b>                     | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b>         | <b>\$15.00</b> | <b>\$20.00</b> | <b>\$25.00</b> | <b>\$20.00</b> | <b>\$20.00</b> |                |
|         | <b>Renewals</b>                    |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |
|         | Car Park Renewals                  | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | Professional Services              | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | Meter Replacement                  | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | <b>TOTAL</b>                       | <b>\$0.00</b>                      | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>          | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  |                |
|         | <b>Capital Improvements</b>        |                                    |                |                |                |                |                |                        |                |                |                |                |                |                |
|         | Construct New Car Parking          | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | Professional Services              | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         |                |
|         | <b>TOTAL</b>                       | <b>\$0.00</b>                      | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>          | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  |                |
|         | <b>Total Bridges</b>               |                                    | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b>         | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$20.00</b> | <b>\$25.00</b> | <b>\$20.00</b> | <b>\$20.00</b> |

#### Customer Levels of Service Overview

The current level of service for parking spaces is generally meeting parking demand. Customers have been known to whinge about not being able to park directly in front of their intended destination, however, parking is usually available in close proximity.

## 14.14 AMP SECTION 6.14 - WHARVES / JETTIES

### Activity Overview



The works being carried out for the wharves and jetties include the following maintenance, renewals and capital improvement activities as listed in the table below.

Nominated public wharves and jetties have strategic importance to the overall transport network in Marlborough Sounds.

Due to the challenging marine environment, the useful life of a jetty structure cannot be estimated with the same level of certainty as bridge structures. Jetty structures generally require frequent repair from storm and boat collision damage, also frequent component replacement to address deterioration. Maintenance works are identified through a two-yearly inspection.

Wharves & Jetties  
AMP Table 6.14

| W/C No. | Location                        | Original Funding Request (\$000's) |                 |                 |                 |                 | Actual Spent (\$000's) |                 |                 |                 |                 |                 |                 |                 |
|---------|---------------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|         |                                 | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021            | 2015 / 2018     | 2016 / 2017     | 2017 / 2018     | 2018 / 2019     | 2019 / 2020     | 2020 / 2021     |                 |
| MDC AMP | <b>Maintenance</b>              |                                    |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|         | Unsub Wharf / Jetty Maintenance | \$60.00                            | \$60.00         | \$60.00         | \$60.00         | \$60.00         | \$60.00                | \$60.00         | \$60.00         | \$60.00         | \$60.00         | \$60.00         | \$60.00         | \$60.00         |
|         | Unsub Power                     | \$4.50                             | \$4.50          | \$4.50          | \$4.50          | \$4.50          | \$4.50                 | \$4.50          | \$4.50          | \$4.50          | \$4.50          | \$4.50          | \$4.50          | \$4.50          |
|         | Unsub Insurance                 | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$9.10          | \$9.10          | \$9.10          | \$9.10          | \$9.10          | \$9.10          | \$9.10          |
|         | <b>TOTAL</b>                    | <b>\$64.50</b>                     | <b>\$64.50</b>  | <b>\$64.50</b>  | <b>\$64.50</b>  | <b>\$64.50</b>  | <b>\$64.50</b>         | <b>\$73.60</b>  | <b>\$73.60</b>  | <b>\$73.60</b>  | <b>\$73.60</b>  | <b>\$73.60</b>  | <b>\$73.60</b>  | <b>\$73.60</b>  |
|         | <b>Renewals</b>                 |                                    |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|         | Unsub Wharf / Jetty Renewals    | \$100.00                           | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00               | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        | \$100.00        |
|         | Unsub Professional Services     | \$7.00                             | \$7.00          | \$7.00          | \$7.00          | \$7.00          | \$7.00                 | \$7.00          | \$7.00          | \$7.00          | \$7.00          | \$7.00          | \$7.00          | \$7.00          |
|         | <b>TOTAL</b>                    | <b>\$107.00</b>                    | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b>        | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> | <b>\$107.00</b> |
|         | <b>Capital Improvements</b>     |                                    |                 |                 |                 |                 |                        |                 |                 |                 |                 |                 |                 |                 |
|         | Sub New wharves (LCLR)          | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$0.00          | \$0.00          | \$650.00        | \$0.00          | \$0.00          | \$0.00          |
|         | Unsub Professional Services     | \$0.00                             | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00                 | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          | \$0.00          |
|         | <b>TOTAL</b>                    | <b>\$0.00</b>                      | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>          | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$650.00</b> | <b>\$0.00</b>   | <b>\$0.00</b>   | <b>\$0.00</b>   |
|         | <b>Total Bridges</b>            | <b>\$171.50</b>                    | <b>\$171.50</b> | <b>\$171.50</b> | <b>\$171.50</b> | <b>\$171.50</b> | <b>\$171.50</b>        | <b>\$180.60</b> | <b>\$180.60</b> | <b>\$180.60</b> | <b>\$830.60</b> | <b>\$180.60</b> | <b>\$180.60</b> | <b>\$180.60</b> |

### Customer Levels of Service Overview

The level of service will vary, dependent on the type of jetty and who is responsible. Council has responsibility for Strategic Jetties and those servicing sites of historical/cultural significance. Local community groups, residents associations, etc have management responsibilities for Community/Amenity Jetties with some financial support from Council. Local community groups, residents associations, etc have ownership responsibilities for Local/Amenity Jetties without financial support from Council.

### 14.15 AMP SECTION 6.15 – LEGAL ROAD



#### Activity Overview

The works being carried out for the legal road include the following maintenance activities as listed in the table below.

The legal road is the land underlying road formations (generally within road corridors). If a formed road does not exist, the land is commonly known as a “paper road”.

**Legal Road  
AMP Table 6.15**

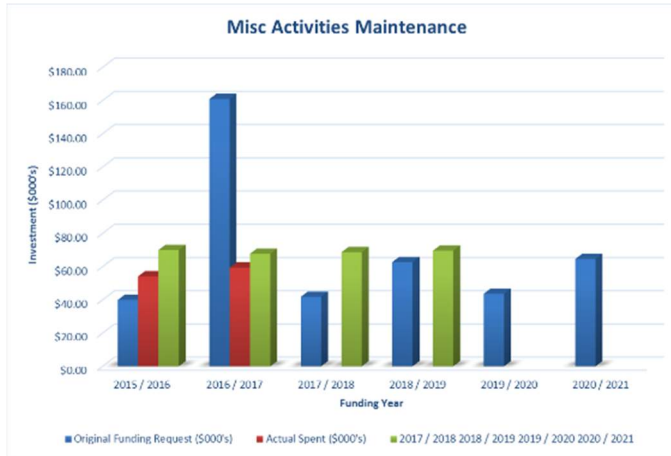
| W/C No. | Location                         | Original Funding Request (\$000's) |                |                |                |                |                | Actual Spent (\$000's) |                |                |                |                |             |
|---------|----------------------------------|------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|----------------|-------------|
|         |                                  | 2015 / 2016                        | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    | 2015 / 2016            | 2018 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021 |
| 123     | <b>Maintenance</b>               |                                    |                |                |                |                |                |                        |                |                |                |                |             |
|         | Unsub                            |                                    |                |                |                |                |                |                        |                |                |                |                |             |
|         | Maintain Legal Roads (Paper Rds) | \$15.00                            | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00                | \$15.00        | \$15.00        | \$15.00        | \$15.00        | \$15.00     |
|         | Inspection, management           | \$0.00                             | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00         | \$0.00                 | \$0.00         | \$0.00         | \$0.00         | \$0.00         |             |
|         | <b>TOTAL</b>                     | <b>\$15.00</b>                     | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b>         | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> |             |
|         |                                  |                                    |                |                |                |                |                |                        |                |                |                |                |             |
|         |                                  |                                    |                |                |                |                |                |                        |                |                |                |                |             |
|         |                                  |                                    |                |                |                |                |                |                        |                |                |                |                |             |
|         | <b>Total Bridges</b>             | <b>\$15.00</b>                     | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b>         | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> | <b>\$15.00</b> |             |

#### Customer Levels of Service Overview

The current network of legal roads; formed roads plus unformed, paper roads, has adequate coverage to service the future needs of the region. Extension of the current legal road network is not considered necessary. Land acquisition for any future development projects is undertaken in association with, and as a charge to, the specific project (such as new subdivisions).



## 14.16 AMP SECTION 6.16 – MISC ACTIVITIES



### Activity Overview

The works being carried out for the misc activities include the following maintenance and renewals activities as listed in the table below.

This activity specifically includes stock effluent dump site at Riverlands Sales Yards.

Further, this section includes maintenance of level crossings.

Misc Activities  
AMP Table 6.16

| W/C No.              | Location                         | Original Funding Request (\$000's) |                 |                |                |                |                | Actual Spent (\$000's) |                |                |                |                |                |  |
|----------------------|----------------------------------|------------------------------------|-----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|----------------|----------------|--|
|                      |                                  | 2015 / 2016                        | 2016 / 2017     | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    | 2015 / 2016            | 2016 / 2017    | 2017 / 2018    | 2018 / 2019    | 2019 / 2020    | 2020 / 2021    |  |
| MDC AMP              | <b>Maintenance</b>               |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
|                      | 131 Level crossing Mtce          | \$30.00                            | \$130.90        | \$31.83        | \$32.75        | \$33.68        | \$34.61        | \$19.20                | \$24.38        | \$35.00        | \$32.75        | \$33.68        | \$34.61        |  |
|                      | UnSub Level crossing Mtce        | \$10.00                            | \$30.00         | \$10.00        | \$30.00        | \$10.00        | \$30.00        | \$35.00                | \$35.00        | \$35.00        | \$35.00        | \$35.00        | \$35.00        |  |
|                      | <b>TOTAL</b>                     | <b>\$40.00</b>                     | <b>\$160.90</b> | <b>\$41.83</b> | <b>\$62.75</b> | <b>\$43.68</b> | <b>\$64.61</b> | <b>\$54.20</b>         | <b>\$59.38</b> | <b>\$70.00</b> | <b>\$67.75</b> | <b>\$68.68</b> | <b>\$69.61</b> |  |
|                      | <b>Renewals</b>                  |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
|                      | Stock Effluent Facility Renewals |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
|                      | Professional Services            |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
|                      | <b>TOTAL</b>                     | <b>\$0.00</b>                      | <b>\$0.00</b>   | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>          | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  | <b>\$0.00</b>  |  |
|                      |                                  |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
|                      |                                  |                                    |                 |                |                |                |                |                        |                |                |                |                |                |  |
| <b>Total Bridges</b> | <b>\$40.00</b>                   | <b>\$160.90</b>                    | <b>\$41.83</b>  | <b>\$62.75</b> | <b>\$43.68</b> | <b>\$64.61</b> | <b>\$54.20</b> | <b>\$59.38</b>         | <b>\$70.00</b> | <b>\$67.75</b> | <b>\$68.68</b> | <b>\$69.61</b> |                |  |

### Customer Levels of Service Overview

The level of service is understood to meet customer expectations.

### 14.17 AMP SECTION 6.17 – MINOR WORKS



#### Activity Overview

The works being carried out for the minor works include the following maintenance, renewals and capital improvement activities as listed in the table below.

The Minor Works Principles, Policies and Process are further described in Section 6.5.

Low Cost Low Risk  
AMP Table 6.17

| W/C No.              | Location        | 2015 / 2016                        | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 | 2015 / 2016            | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 |
|----------------------|-----------------|------------------------------------|-------------|-------------|-------------|-------------|-------------|------------------------|-------------|-------------|-------------|-------------|-------------|
|                      |                 | Original Funding Request (\$000's) |             |             |             |             |             | Actual Spent (\$000's) |             |             |             |             |             |
| Sub                  | Bridge Renewals |                                    |             |             |             |             |             |                        |             |             | \$960.00    | \$1,090.00  | \$410.00    |
|                      | Safety Works    |                                    |             |             |             |             |             |                        |             |             | \$2,169.00  | \$1,826.00  | \$1,523.00  |
|                      |                 |                                    |             |             |             |             |             |                        |             |             | \$3,129.00  | \$2,916.00  | \$1,933.00  |
| <b>Total Bridges</b> |                 | \$0.00                             | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00                 | \$0.00      | \$0.00      | \$3,129.00  | \$2,916.00  | \$1,933.00  |

#### Customer Levels of Service Overview

It is expected the expeditious delivery of minor works projects will improve customer satisfaction.

**14.18 AMP SECTION 6.18 – MANAGEMENT**



**Activity Overview**

The works being carried out for the management include the following maintenance improvement activities as listed in the table below.

This activity includes those costs required for broadly managing the roading network operations and assets.

**Management Costs  
AMP Table 6.19**

| WIC No. | Location                             | Original Funding Request (\$000's) |               |               |               |               |               | Actual Spent (\$000's) |                 |               |                   |                |                 |
|---------|--------------------------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|------------------------|-----------------|---------------|-------------------|----------------|-----------------|
|         |                                      | 2015 / 2016                        | 2016 / 2017   | 2017 / 2018   | 2018 / 2019   | 2019 / 2020   | 2020 / 2021   | 2015 / 2016            | 2016 / 2017     | 2017 / 2018   | 2018 / 2019       | 2019 / 2020    | 2020 / 2021     |
|         | <b>Maintenance</b>                   |                                    |               |               |               |               |               |                        |                 |               |                   |                |                 |
| 151     | Network Management (Incl Inspect)    | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$597.54               | \$811.36        | \$0.00        | \$768.66          | \$11.00        | \$105.00        |
| 151     | Network User Information(Robyn B)    | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$14.31                | \$14.56         | \$0.00        | \$720.03          | \$11.00        | \$105.00        |
| 151     | Management of Asset Inventory        | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$97.50                | \$32.31         | \$0.00        | \$741.41          | \$11.00        | \$105.00        |
| Unsub   | Footpath Condition Rating            | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$15.00                | \$0.00          | \$0.00        | \$0.00            | \$0.00         | \$15.00         |
|         | <b>TOTAL</b>                         | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$724.36</b>        | <b>\$858.23</b> | <b>\$0.00</b> | <b>\$2,230.10</b> | <b>\$33.00</b> | <b>\$330.00</b> |
|         | <b>Renewals</b>                      |                                    |               |               |               |               |               |                        |                 |               |                   |                |                 |
|         | Included in related renewal activity | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00          | \$0.00        | \$0.00            | \$0.00         | \$0.00          |
|         | <b>TOTAL</b>                         | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b>   | <b>\$0.00</b> | <b>\$0.00</b>     | <b>\$0.00</b>  | <b>\$0.00</b>   |
|         | <b>Capital Improvements</b>          |                                    |               |               |               |               |               |                        |                 |               |                   |                |                 |
|         | Included in related capital activity | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00          | \$0.00        | \$0.00            | \$0.00         | \$0.00          |
|         | <b>TOTAL</b>                         | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b>   | <b>\$0.00</b> | <b>\$0.00</b>     | <b>\$0.00</b>  | <b>\$0.00</b>   |
|         | <b>Total Bridges</b>                 | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$724.36</b>        | <b>\$858.23</b> | <b>\$0.00</b> | <b>\$2,230.10</b> | <b>\$33.00</b> | <b>\$330.00</b> |

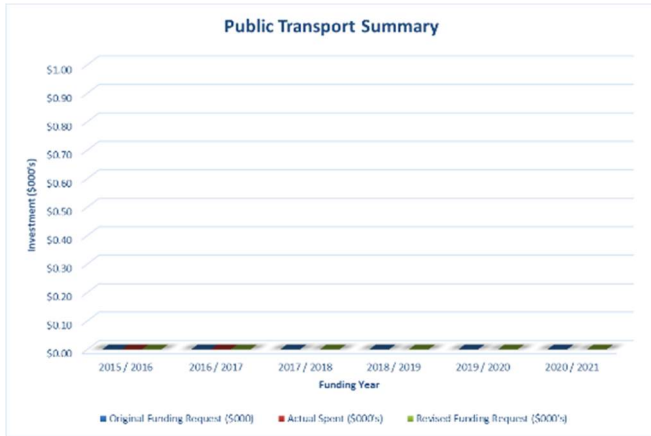
**Customer Levels of Service Overview**

Marlborough Roads provides a shop front and a phone service for customer enquiries and complaints. An after hours phone service is also available.

### 14.19 PUBLIC TRANSPORT

### Activity Overview

An hourly service provides service around Blenheim. This is a sponsored service, and is presently under review.



#### Public Transport

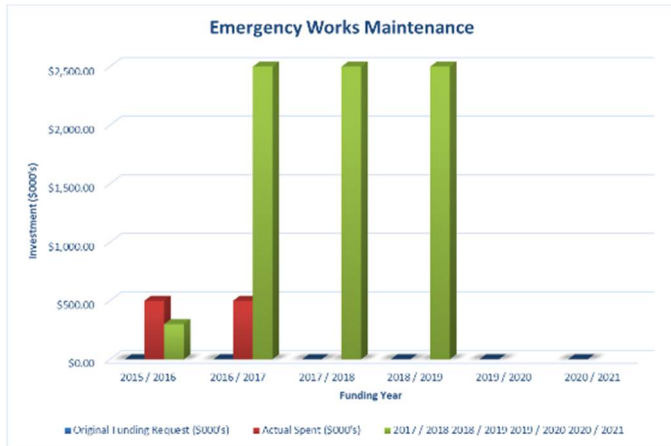
| W/C No               | Location                            | Original Funding Request (\$000's) |               |               |               |               |               | Actual Spent (\$000's) |               | Revised Funding Request (\$000's) |               |               |               |               |
|----------------------|-------------------------------------|------------------------------------|---------------|---------------|---------------|---------------|---------------|------------------------|---------------|-----------------------------------|---------------|---------------|---------------|---------------|
|                      |                                     | 2015 / 2016                        | 2016 / 2017   | 2017 / 2018   | 2018 / 2019   | 2019 / 2020   | 2020 / 2021   | 2015 / 2016            | 2016 / 2017   | 2017 / 2018                       | 2018 / 2019   | 2019 / 2020   | 2020 / 2021   |               |
| MDC AMP              | <b>123 Maintenance</b>              |                                    |               |               |               |               |               |                        |               |                                   |               |               |               |               |
|                      | 5H Bus services, FAR 50%            | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | 5H PT Facility Maintenance, FAR 60% | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | <b>TOTAL</b>                        | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b> | <b>\$0.00</b>                     | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> |
|                      | <b>Renewals</b>                     |                                    |               |               |               |               |               |                        |               |                                   |               |               |               |               |
|                      | PT Facility Renewals                | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | Professional Services               | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | <b>TOTAL</b>                        | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b> | <b>\$0.00</b>                     | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> |
|                      | <b>Capital Improvements</b>         |                                    |               |               |               |               |               |                        |               |                                   |               |               |               |               |
|                      | Construct New PT Facilities         | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | Professional Services               | \$0.00                             | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00        | \$0.00                 | \$0.00        | \$0.00                            | \$0.00        | \$0.00        | \$0.00        | \$0.00        |
|                      | <b>TOTAL</b>                        | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b> | <b>\$0.00</b>                     | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> |
| <b>Total Bridges</b> |                                     | <b>\$0.00</b>                      | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b>          | <b>\$0.00</b> | <b>\$0.00</b>                     | <b>\$0.00</b> | <b>\$0.00</b> | <b>\$0.00</b> |               |

### Customer Levels of Service Overview

It is not known how the hourly service compares with customer expectations.

## 14.20 EMERGENCY WORKS

### Activity Overview



For unplanned emergency events of unknown location, unknown time, unknown type, and unknown magnitude.

### Emergency Works

|          |                      | 2015 / 2016                        | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 | 2015 / 2016            | 2016 / 2017 | 2017 / 2018 | 2018 / 2019 | 2019 / 2020 | 2020 / 2021 |            |
|----------|----------------------|------------------------------------|-------------|-------------|-------------|-------------|-------------|------------------------|-------------|-------------|-------------|-------------|-------------|------------|
| MDC A MP | W/C No.              | Original Funding Request (\$000's) |             |             |             |             |             | Actual Spent (\$000's) |             |             |             |             |             |            |
|          | Location             |                                    |             |             |             |             |             |                        |             |             |             |             |             |            |
|          | 141                  | Maintenance                        |             |             |             |             |             |                        |             |             |             |             |             |            |
|          | Sub                  | Minor Events                       | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00                 | \$0.00      | \$0.00      | \$0.00      | \$500.00    | \$500.00    | \$500.00   |
|          | Unsub                | Emergency Works Reserve            | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00                 | \$300.00    | \$300.00    | \$300.00    | \$2,000.00  | \$2,000.00  | \$2,000.00 |
|          |                      |                                    | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00                 | \$200.00    | \$200.00    |             |             |             |            |
|          | <b>TOTAL</b>         | \$0.00                             | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$500.00               | \$500.00    | \$300.00    | \$2,500.00  | \$2,500.00  | \$2,500.00  |            |
|          | <b>Total Bridges</b> | \$0.00                             | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$0.00      | \$500.00               | \$500.00    | \$300.00    | \$2,500.00  | \$2,500.00  | \$2,500.00  |            |

### Customer Levels of Service Overview

Customer expectations are that emergency events are addressed in a timely and appropriate manner, commensurate with the severity of the event.

## 15.0 IMPROVEMENT PLAN

The section provides a consolidated improvements plan that will be undertaken as part of the 2018 – 2021 AMP.

| ID  | Improvement Activity   | Activity Description   | Section Ref. |
|-----|--|--|--------------|
| 1.0 | GIS Data and Mapping   | ONRC Data and Mapping Verification   | 8.1          |
| 1.1 |  | Primary Industry Data Cleansing and Mapping Verification   | 8.2          |
| 1.2 |  | Primary Industry Growth Mapping  | 8.3          |
| 1.3 |  | Data verification and mapping of bridge data to ONRC   | 8.3          |
| 1.4 |  | Data verification and mapping of unsealed road data to ONRC  | 8.4          |
| 1.5 |  | Consideration of metadata standards for landslips and floods to ensure alignment to ONRC   | 8.5          |
| 1.6 |  | Compiling additional geospatial data for landslips and floods and aligning to ONRC   | 8.6          |
| 2.0 | Bridge Evidence  | Obtain and Align ONRC Safety Data, bridge asset management plan and NZTA Customer Level of Service   | 10.2         |
| 2.1 |  | Obtain and align ONRC accessibility and travel time reliability data, bridge asset management plan and NZTA Customer Level of Service        | 10.3         |
| 2.2 |  | Obtain and align ONRC Resilience data, bridge asset management plan and NZTA Customer Level of Service                                       | 10.4         |
| 2.3 |  | Obtain and align ONRC Amenity data, bridge asset management plan and NZTA Customer Level of Service  | 10.5         |
| 2.4 |  | Obtain and align ONRC cost efficiency, bridge asset management plan and NZTA Customer Level of Service                                       | 10.6         |
| 2.5 |  | Customer helpline alignment to ONRC principles   | 10.2 to 10.6 |
| 2.6 |  | Customer Survey compiled against ONRC principles and send to residents and key stakeholders in the region                                    | 10.2 to 10.6 |
| 2.7 | Align Asset Management Plan to ONRC and develop long List of options | 10.7   |              |
| 3.0 | Unsealed Road Evidence   | Develop Unsealed Road Asset Management Plan that aligns with ONRC requirements   | 11.7         |
| 3.1 |  | Obtain and Align ONRC Safety Data, unsealed road asset management plan and NZTA Customer Level of Service                                    | 11.2         |
| 3.2 |  | Obtain and align ONRC accessibility and travel time reliability data, unsealed road asset management plan and NZTA Customer Level of Service | 11.3         |

|     |                             |  |             |
|-----|-----------------------------|--|-------------|
| 3.3 |                             | Obtain and align ONRC Resilience data, unsealed road asset management plan and NZTA Customer Level of Service                                    | 11.4        |
| 3.4 |                             | Obtain and align ONRC Amenity data, unsealed road asset management plan and NZTA Customer Level of Service                                       | 11.5        |
| 3.5 |                             | Obtain and align ONRC cost efficiency, unsealed road asset management plan and NZTA Customer Level of Service                                    | 11.6        |
| 3.6 |                             | Customer helpline alignment to ONRC principles   | 11.2 - 11.6 |
| 3.7 |                             | Customer Survey compiled against ONRC principles and send to residents and key stakeholders in the region  | 11.2 - 11.6 |
| 3.8 |                             | Align Asset Management Plan to ONRC and develop long List of options   | 11.7        |
| 4.0 | Landslip and Flood Evidence | Develop Landslip and Flood Risk Management Plan that aligns with ONRC requirements   | 12.7        |
| 4.1 |                             | Obtain and align ONRC Safety Data, Landslip and Flood Risk Management Plan and NZTA Customer Level of Service                                    | 12.2        |
| 4.2 |                             | Obtain and align ONRC accessibility and travel time reliability data, Landslip and Flood Risk Management Plan and NZTA Customer Level of Service | 12.3        |
| 4.3 |                             | Obtain and align ONRC Resilience data, Landslip and Flood Risk Management Plan and NZTA Customer Level of Service                                | 12.4        |
| 4.4 |                             | Obtain and align ONRC Amenity data, Landslip and Flood Risk Management Plan and NZTA Customer Level of Service                                   | 12.5        |
| 4.5 |                             | Obtain and align ONRC cost efficiency, Landslip and Flood Risk Management Plan and NZTA Customer Level of Service                                | 12.6        |
| 4.6 |                             | Customer helpline alignment to ONRC principles   | 12.2 - 12.6 |
| 4.7 |                             | Customer Survey compiled against ONRC principles and send to residents and key stakeholders in the region  | 12.2 - 12.6 |
| 4.8 |                             | Align Landslip and Flood Risk Management Plan to ONRC and develop long List of options   | 12.7        |
| 5.0 | Conflicting Network         | Develop Integrated Network Transport Plan that aligns with ONRC requirements   | 13.7        |
| 5.1 |                             | Obtain and align ONRC Safety Data, Integrated Network Transport Plan and NZTA Customer Level of Service  | 13.2        |
| 5.2 |                             | Obtain and align ONRC accessibility and travel time reliability data, Integrated Network Transport Plan and NZTA Customer Level of Service       | 13.3        |
| 5.3 |                             | Obtain and align ONRC Resilience data, Integrated Network Transport Plan and NZTA Customer Level of Service                                      | 13.4        |
| 5.4 |                             | Obtain and align ONRC Amenity data, Integrated Network Transport Plan and NZTA Customer Level of Service   | 13.5        |

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| 5.5 |                      | Obtain and align ONRC cost efficiency, Integrated Network Transport Plan and NZTA Customer Level of Service            | 13.6        |
| 5.6 |                      | Customer helpline alignment to ONRC principles   | 13.2 - 13.6 |
| 5.7 |                      | Customer Survey compiled against ONRC principles and send to residents and key stakeholders in the region              | 13.2 - 13.6 |
| 5.8 |                      | Align Landslip and Integrated Network Transport Plan to ONRC and develop long List of options                          | 13.7        |
| 6.0 | Other AMP Activities | General alignment of all AMP activities to ONRC and Customer Levels of Service   | TBC         |
| 6.1 |                      | Stakeholder Consultation programme to be implemented to gather information around customer expectations and ONRC CLoS. | TBC         |
| 6.2 |                      | Review and revise the base AMP document to align with the Business Case approach.                                      | TBC         |
| 6.3 |                      | Plan activities to address the items identified on this list, and regularly monitor progress.                          | TBC         |



## **APPENDICES**

Appendix 1 – Blank

Appendix 2 – Marlborough District 2016 Annual Survey

Appendix 3 – Marlborough Roads Helpline Database

Appendix 4 - Marlborough Roads RAMM Database

Appendix 5 - Marlborough Roads Pavement Performance Modelling Report

Appendix 6 – Marlborough Roads One Network Road Classification

Appendix 7 – Bridge Evidence

Appendix 8 – Unsealed Road and Dust Control Evidence

Appendix 9 – Landslips and Flooding Evidence

Appendix 10 – Marlborough District Council Mode of Transport Strategies

Appendix 11 – Budgets Spreadsheets and Expenditure Graphs

Appendix 12 – Smart Buyer Self Assessment

Appendix 13 – Existing AMP 2015-2018