Asset Management Plan

Transport

PAPAIOEA
PALMERSTON
NORTH
CITY


Bus Stop

Asset Management Plan
Executive Summary

Transport

Manaaki whenua, manaaki tangata, haere whakamua. Tihei mauri ora!

No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Palmerston North's population and industrial sector are growing, so we need to make sure people and goods continue to move around the city easily and safely.

With more people on our roads, our transport network is getting busier. Palmerston North has emerged as the primary freight hub for the lower North Island, resulting in more trucks on our roads. At the same time, there is a growing desire to ensure people using all modes of transport can move around the city easily and safely.

It's more than just roads and cars

Our vision for transport is to provide an integrated multi-modal network that connects people and goods with destinations in a safe, efficient and sustainable manner which evolves to meet new transport demands with more options than just private motor-vehicles.

Our transport network supports other strategic priorities, such as climate change response

Well-designed roads and streets help create a city that has great places for all people. Our footpaths, cycle lanes and shared paths provide the facilities to support us to have one of the most active communities in New Zealand. Our streets also have a significant portion of our public vegetation cover – providing opportunities for biodiversity and infrastructure that serves to protect, enhance and preserve the environment.

This Transport Asset Management Plan focuses on our local transport network and the economic, health and safety, climate and financial challenges that surround it. It highlights why we're spending money on the transport network and the benefits we're going to get from this.

NZ Transport Agency-Waka Kotahi is our key investment partner

NZ Transport Agency-Waka Kotahi is a key partner, funding about half of the work we do on our transport network. We've worked closely with NZTA to ensure our investment supports their strategic priorities of improving road safety, providing better travel options, improving freight connections and developing a low carbon transport system.

What we provide

Active and public transport modes are continuing to decline;

2 percent regularly catch the bus to work;

4 percent regularly cycle to work;

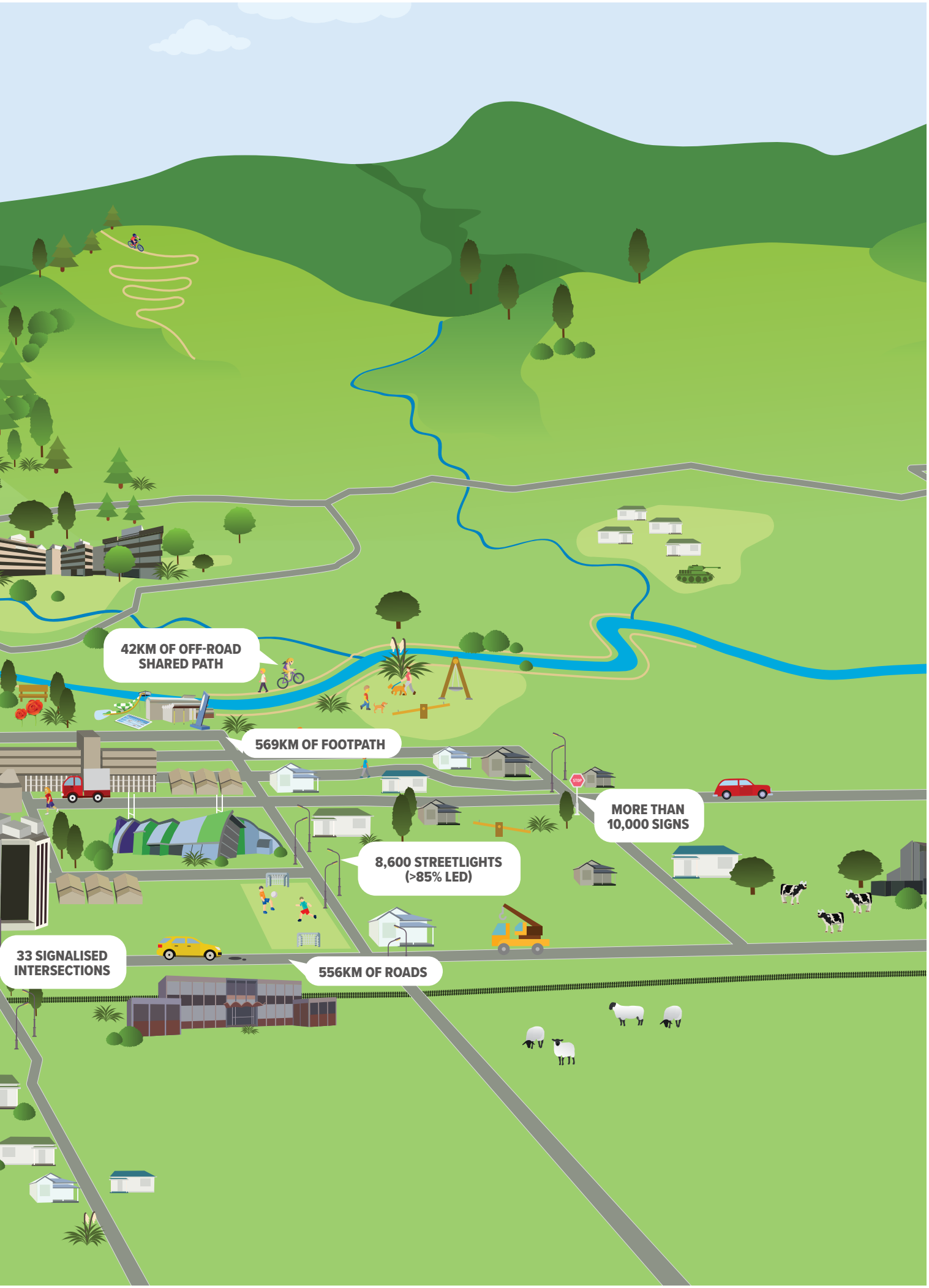
8 percent regularly walk to work;

More than 1500 heavy vehicles travel on Tremaine Ave each day;

More than 400 million kilometers are traveled in vehicles each year;

There is an increasing number of fatal and serious injury crashes;

More than 30 people die or are seriously injured on our roads each year;


42KM OF OFF-ROAD SHARED PATH
569KM OF FOOTPATH
MORE THAN 10,000 SIGNS
8,600 STREETLIGHTS (>85% LED)
33 SIGNALISED INTERSECTIONS
556KM OF ROADS

Everyone is a customer


Pedestrians


Cyclists


Drivers


Communities


Education sector


Bus users


Freight and distribution


Taxis and ride sharing


Businesses

Our level of service

People use the transport network in a variety of ways. Common expectations among users are that our roads and streets provide a safe, reliable, accessible and comfortable journey. We want to create an environment for all transport users, irrespective of their age, ability or mobility.

There are only a few areas that the transport network is delivering the level of service anticipated, and the road asset condition is deteriorating.

Overall satisfaction with the transport network is low compared to other Council services. This is reflected in the transport network failing to deliver on levels of service. Serious road crashes are increasing, and the overall condition of our footpaths is not to the desired standard. The number of people walking, cycling and catching the bus for work or education is declining. This also impacts our ability to reduce transport carbon emissions in the city.

We have some challenges and risks

Our road safety record is getting worse

The number of recorded road crashes causing injuries on our roads and streets has been generally flat over the ten-year period. However, the amount of harm from transport crashes on roads and streets in Palmerston North has been increasing resulting in more deaths and serious injuries from road crashes.

Our roads are deteriorating

The quality of road surfaces in Palmerston North has been steadily decreasing over the past five-years. This has been especially so on our busiest urban roads which have shown a significant drop in the amount of travel on smooth roads. There have been many contributors to this including an increase in the number and size of heavy vehicles on the transport network, poor underlying ground conditions, service and utility trenches and inadequate levels of investment.

Transport is an enabler for economic growth

Palmerston North is the primary freight distribution hub in the lower North Island. This provides a significant economic opportunity for the city, while also placing considerable pressures on existing infrastructure. Increases in the number of heavy vehicle movements associated with this growth are creating safety and efficiency issues on the transport network as well as impacting road quality. The strategic response to these issues has been slow and uncertainty remains over when improvements will be delivered and when growth will occur.

Fewer people are walking, cycling and catching the bus

Palmerston North is a flat, compact city ideal for cycling or walking. However, the same wide roads which are great for vehicles and parking, create challenges for pedestrians and cyclists. Wide and busy roads can be an impediment for pedestrians with lower mobility, deterring them from walking. There are no parts of the transport network where pedestrians, cyclists or buses receive priority over vehicles, despite the adjacent land use.

Our roads and streets don't support our communities

There is a need to seek a better balance for all users of our roads and streets. New initiatives will seek to optimise the transport network based on function, balancing movement and place, "de-tuning" some streets to reduce unnecessary through traffic, reducing speed environments and creating more liveable local streets.

Vehicles are taking unsuitable routes accross the city

Our transport network is open and accessible, providing opportunities for almost all types of vehicles and users to travel on most roads. While this provides choice for drivers, as traffic volumes increase it will result in more issues and conflict. Heavy vehicles rumbling past schools, cars rat-running to avoid busy intersections and buses stopped in cycle lanes are all examples of where the wrong users are travelling on the wrong roads.

Transport is the greatest contributor to carbon emissions in the city

The transport sector produces more than half of our city's greenhouse gas emissions. To address this, we need to encourage or facilitate more sustainable modes of travel, reduce the need to travel and provide opportunities to use alternative fuel sources.

We have 13,900 street trees on our transport network to help offset emissions.

What's our plan?

We're changing how we manage our transport network

Our current method for managing the transport network is not sustainable. There are a number of changes we can make through the management of our transport network that will help us achieve our outcomes.

We're beginning to provide greater priority in our investment and the way we manage the network for pedestrians, cyclists and those catching the bus. There are many benefits from these transport modes, including improved health, environment, economic and social outcomes. This shift will enable change to occur over time. Even if it doesn't happen all at once the trajectory for investment in our transport network will change.

Road safety is being improved by reducing speed limits on our roads. We're already doing this around some of our schools and on some of the fringes of our city. Lower vehicle speeds mean a lower likelihood of a death or serious injury if a crash occurs.

We can take the opportunity to create better places whenever we upgrade and renew our roads. We did this on Cuba Street, by combining several planned renewals at the same time, while also providing a better urban design outcome.

By right sizing asset maintenance and renewals, we'll be able to reduce the long-term costs of our transport assets. By using the most appropriate solution for the road, and implementing it at the right time in the assets life.

We need to invest in our transport network

Our renewal and maintenance budgets – especially those relating to our road structure and surface – are increasing year-on-year to ensure we can continue to deliver the expected level of service. By renewing assets at the right time and to the right level it will also reduce our long-term maintenance costs.

The strategic transport route around Palmerston North is needed to fully enable the economic growth sought from development in the North East Industrial Zone, KiwiRail and other growth areas. In the short-term we're proposing to make improvements to the transport network – alongside Waka Kotahi – that will activate this route. This will allow heavy vehicles to use this route, placing less strain on urban routes. Upgrades to transport infrastructure are also required to support the city's other growth areas including Whakarongo and Kākātangiata.

The City Centre Transformation programme is changing the way streets in our city centre look and operate. It aims to provide a vibrant city centre that will make Palmerston North more attractive for work and play, provide more opportunities for locals and visitors to connect with the city and the people who live here, and bring significant benefits for the local economy.

Changes to our transport infrastructure are needed to deliver the pedestrian, cycling and safety outcomes sought. Long-term programmes are proposed to facilitate uptake of multiple modes of transport and provide a safer journey and better experience for all transport network users.

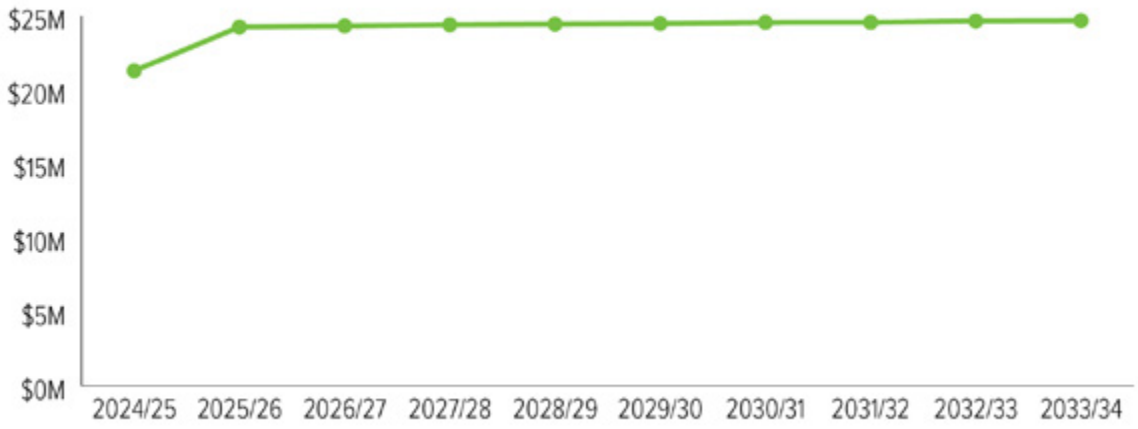

BRISCOES
HOMEWARE
MORE PARKING

How much will it cost?

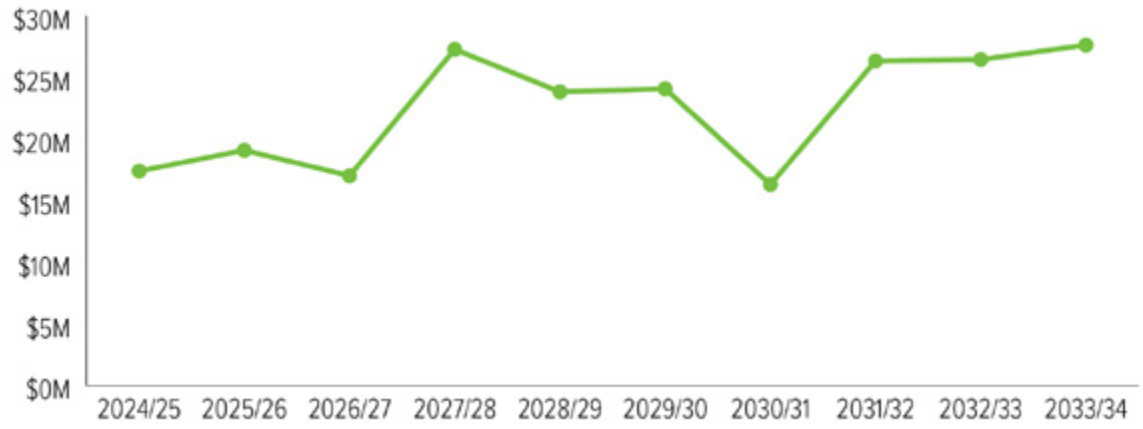
Operations and Maintenance

We are proposing a considerable increase in the level of maintenance required across our transport network. To ensure we can deliver our levels of service. Our roading maintenance contract is delivered by Fulton Hogan.

They ensure that all our streetlights, traffic services, roads, street trees and footpaths are maintained to an acceptable standard. Our maintenance budgets also cover supporting services such as street sweeping and line marking. We are proposing to spend between $6 million to $13 million each year over the next few years on this work.



Renewals

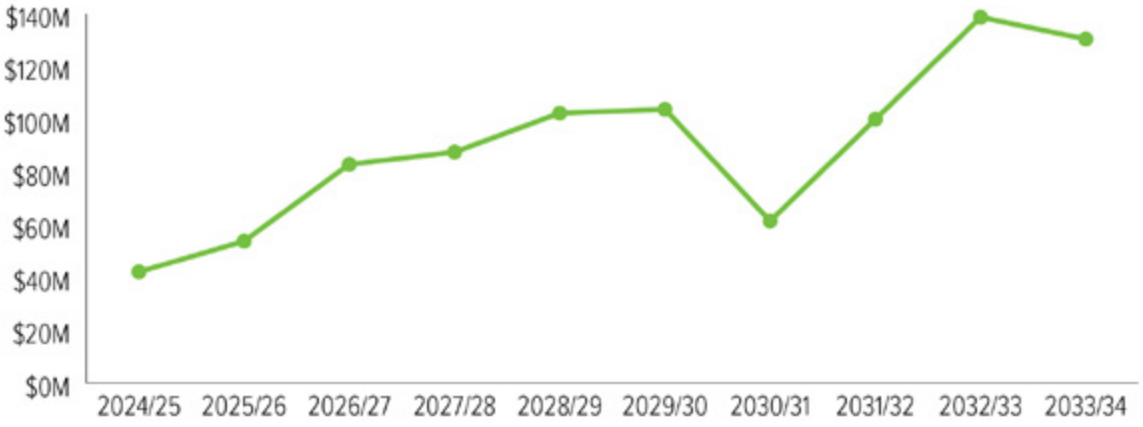


We are proposing to have a considerable increase in our spend in our renewals across the transport network in the city which will see us spend $221 million over the next 10 years on renewing our transport related assets. The largest proportion of these costs will be focusing on resealing our roads, replacement of bridges and structures and renewing our cycleways and shared paths. Parts of the network have been repaired repeatedly and now require rehabilitation because further repair is not possible.

The focus will be to transition to more preventative renewals before our assets fail which will slowly begin to prevent potholes from occurring in the first place, but this will take some time to achieve.

We will also be investing in making our roads safer by replacing some traffic services such as traffic signal systems, road signs and road markings along with raised and signalised crossings where required to keep people safe.

Capital new



With growth expected in future urban areas, we are proposing to spend at least $150 million over the next 10 years. In years 9 and 10 we are proposing to have major upgrades to the Fitzherbert Rd Bridge. Most of our capital new programmes are associated with our partnership with NZ Transport Agency Waka Kotahi for strategic improvements such as the Palmerston North Integrated Transport Initiative (PNITI) which will help get heavy vehicles using the most appropriate travel routes, road safety improvements such as road widening and improved intersections, bridge replacements throughout the city, and infrastructure to support the Te Utanganui Central New Zealand Distribution Hub.

Palmerston North City Council – Transport AMP 2023

1-30-2024

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Status: Final

Whakatauki

Manaaki whenua, manaaki tangata, haere whakamua. Tihei mauri ora!

No reira, e te haukainga o Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Our vision for Papaioea Palmerston North is **"he iti rā, he iti pounamu | small city benefits, big city ambition",** where every resident enjoys the benefits of living in a small city yet has the advantages of a big city.

The city is fortunate to have a range of quality assets that are managed in a way that supports this vision and provides our community with essential services, including the Transport Activity.

Our aim is to:

"Provide an integrated multi-modal transport network that connects people and goods with destinations in a safe, efficient, and sustainable manner and evolves to meet new transport demands with less reliance on private motor vehicles."

1.1 Purpose of this Plan and Key Objectives

This AM Plan is intended to set out how we manage transport in a way that is appropriate for a readership that includes executive management and elected members of the Council, partners, stakeholders, and other interested members and groups of the general community.

This plan demonstrates our management of transport assets to enable the provision of levels of service and achievement of the council's strategic objectives in the most cost-effective manner.

This plan should be read in conjunction with the Strategic Asset Management Plan (SAMP).'

The AMP also provides:

- Supporting evidence for the Long Term Plan (LTP) and Infrastructure Strategy[1]
- To translate Our Strategic Vision and Goals into activity strategies and action plans
- Alignment with the Te Mahere Aranukunuku – Transport Plan.

The AMP planning horizon covers the full lifecycle of our assets with a focus on the activities and expenditure within the first ten years; 1 July 2024 to 30 June 2034.

This AMP also outlines the sustainable and cost-effective development and management of our infrastructure assets ($2 billion worth) to provide the community with the services required and support cultural, social, environmental, and economic wellbeing, it also helps align with council's vision, it encompasses details about activities, assets, Level of services, and associated costs it also serves as crucial input for the 2024-2034 - Long Term Plan (LTP)

Some of the primary goals of this Asset Management Plan are:

- Align asset management with the organization's Strategic Direction, (SAMP)
- Ensuring assets are available to offer appropriate services when needed.
- Assess asset performance and condition, enabling informed decision-making through analysis and evaluation.

This helps identify cost-effective options to respond to changing performance or demand, including capital investment, demand management, and adjust levels of service accordingly.

Iwi aspirations and plans are considered in infrastructure development and service provision.

Annual updates to the Asset Management Plan capture significant changes and improvements. The recently revised Executive summaries format has proven effective for decision-makers during Long Term Plan (LTP) discussions and as an educational tool.

We acknowledge that there is room for enhancing plan accessibility and engagement through improved communication methods, including digital storytelling techniques.

[1] AMP demonstrates regulatory compliance with section 93(7) & 94(1) of the Local Government Act (LGA) 2002 which in Summary requires the 10 Yea Plan/ Long-Term Plan (LTP) to be supported by the information required by Part 1 of Schedule 10

1.2 Iwi, Key Partners, and Stakeholders

A list of key Council partners and stakeholders is included within the SAMP. This section outlines the significant partner and stakeholder relationships.

1.2.1 Rangitane o-Manawatu

Tangata whenua whom we are in partnership with. We have a shared sense of kaitiakitanga/ environmental responsibility that is shaping how we achieve our vision through to how we manage our assets.

1.2.2 Partners

New Zealand Transport Agency – New Zealand Transport Agency – Waka Kotahi

The New Zealand Transport Agency – Waka Kotahi is a key funding partner for complying programmes. Council must provide clear investment decision making to Waka Kotahi to generate co-investment. This is usually in the form of a business case, including this Transport AMP.

Council and New Zealand Transport Agency – New Zealand Transport Agency – Waka Kotahi have a close relationship to manage the transport network within the city. Four state highways run within the Palmerston North boundaries, including State Highway 3 which runs through the city centre. A consistent transport network needs to be provided to transport users irrespective of who controls the part of the network they are travelling on.

Other funders are available on a case-by-case basis such as the innovation fund for transport and waters.

We engage with our partners, at least monthly catch ups at various levels within their organization.

1.2.3 Stakeholders

There are several stakeholders with an interest in, or who receive benefit from the transport activity. External stakeholders include Government organisations, community groups, and private organisations. External stakeholders of Transport are listed in Table 1 below.

Status: Final

Table 1: Stakeholders

Key Stakeholder	Key Outcome Areas						Communication (Method as required through annual plan and project specific consulations/engagements & frequency)
	Safety	Active modes	Travel time reliability	Quality of network w.r.t cost	Functionality	Sustainability	
Ministry of Transport	✓	✓	✓	✓	✓	✓	As required through annual plan and project specific consulations/engagements
New Zealand Police	✓	⊖	✓	⊖	✓	⊖	As required
Horizons Regional Council	✓	✓	✓	✓	✓	✓	Quaterly
Ratepayers	✓	✓	✓	✓	✓	⊖	As required through annual plan and project specific consulations/engagements
Community groups	✓	✓	✓	⊖	✓	✓	As required through annual plan and project specific consulations/engagements
Businesses and NGOs	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Visitors	✓	✓	✓	⊖	⊖	⊖	As required through annual plan and project specific consulations/engagements
Road Transport Association and heavy haulage operators	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Automobile Association	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Schools and education providers	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Other Councils	✓	✓	✓	⊖	✓	✓	As required through annual plan and project specific consulations/engagements
Contractors	✓	⊖	✓	✓	✓	✓	Maintenance contractor – Weekly Capital project contractors – Monthly Other Contractors – As required.

Rangitāne o Manawatū	✓	✓	✓	✓	✓	✓	Bi-monthly Hui
Te Ringa Maimoa (formerly known as REG)	✓	✓	✓	✓	✓	✓	bi-monthly workshops at the officer level and GM Transport & Development on the Leadership Group – board meetings every two months

.

These groups are consulted with as and when required on issues and asset changes that will affect their current activities. This can range from minor information and advice to major consultation input by way of submission or direct discussion.

Status: Final

Table 1: Stakeholders

Key Stakeholder	Key Outcome Areas						Communication (Method as required through annual plan and project specific consulations/engagements & frequency)
	Safety	Active modes	Travel time reliability	Quality of network w.r.t cost	Functionality	Sustainability	
Ministry of Transport	✓	✓	✓	✓	✓	✓	As required through annual plan and project specific consulations/engagements
New Zealand Police	✓	⊖	✓	⊖	✓	⊖	As required
Horizons Regional Council	✓	✓	✓	✓	✓	✓	Quaterly
Ratepayers	✓	✓	✓	✓	✓	⊖	As required through annual plan and project specific consulations/engagements
Community groups	✓	✓	✓	⊖	✓	✓	As required through annual plan and project specific consulations/engagements
Businesses and NGOs	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Visitors	✓	✓	✓	⊖	⊖	⊖	As required through annual plan and project specific consulations/engagements
Road Transport Association and heavy haulage operators	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Automobile Association	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Schools and education providers	✓	✓	✓	⊖	✓	⊖	As required through annual plan and project specific consulations/engagements
Other Councils	✓	✓	✓	⊖	✓	✓	As required through annual plan and project specific consulations/engagements
Contractors	✓	⊖	✓	✓	✓	✓	Maintenance contractor – Weekly Capital project contractors – Monthly Other Contractors – As required.
Rangitāne o Manawatū	✓	✓	✓	✓	✓	✓	Bi-monthly Hui

Te Ringa Maimoa (formerly known as REG)	✓	✓	✓	✓	✓	✓	bi-monthly workshops at the officer level and GM Transport & Development on the Leadership Group – board meetings every two months

1.3 Relationship with other plans

This section outlines the relationships between the Transport AMP and other Council AMPs. These other plans are accessible at https://www.pncc.govt.nz/council-city/official-documents/plans/

Figure 1 shows the relationships between our key planning documents.

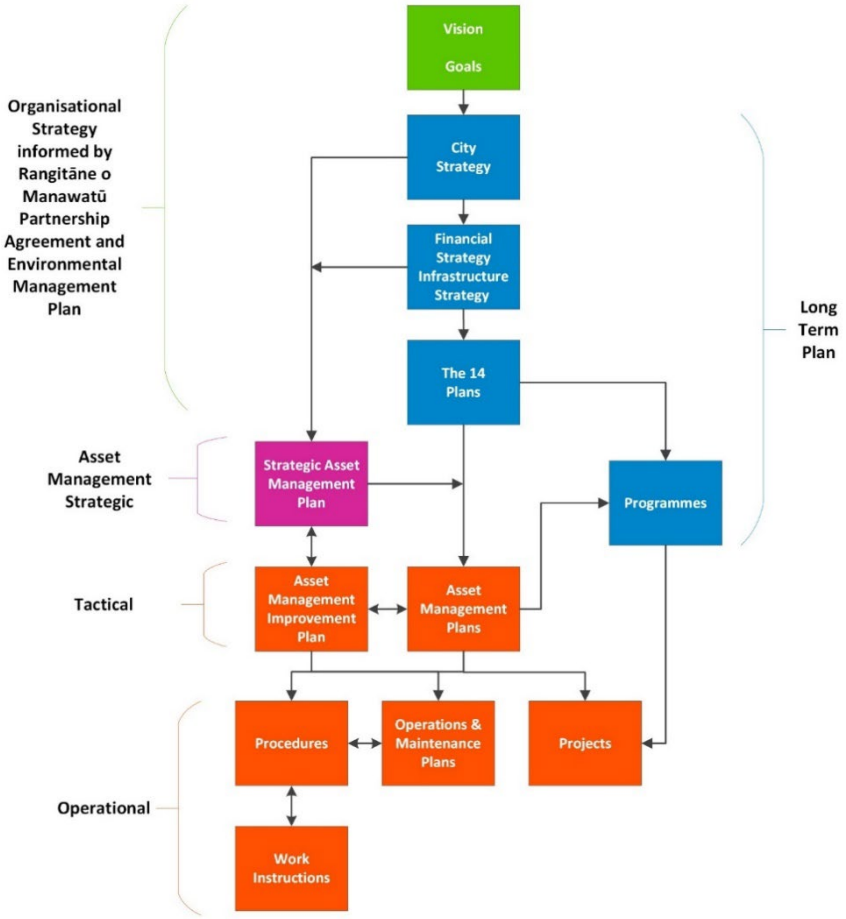


Figure 1: Relationships between planning documents

1.4 AMP framework

Our Asset Management Process is based on the International Infrastructure Management Manual (IIMM) 6th

Table 2 below describes the structure of this AMP.

Table 2: Transport AMP Structure

Section	Description
1. Introduction	What is the purpose of this Asset Management Plan?
2. Strategic Context	Why we invest in the Activity?
3. The Transport Activity	What are the services we provide? Summary of our network What future demands and drivers are there?
4. Levels of service	What level of service do we provide? The desired future state of the service?
5. Risk Management	What are our risks?
6. Life cycle management	Our assets and key issues Summary of how we manage these assets
7. FWP	Summary of our planned works
8. Financial Summary	What will it cost? How will we pay for it?
9. Plan Monitoring and improvement	How do we get better? How do we track progress?

2. Strategic Context

This section contains the relevant strategic context for Transport. The Transport plan primarily contributes to the Palmerston North City Council's goal of an Innovative and growing city. The council-wide strategic context is included in the SAMP, including the Vision, Objectives, Goals, and relevant supporting plans.

This Transport AMP changes the focus of the transport activity to the movement of people and goods, rather than cars and trucks. Our strategic plans set a clear direction for how the transport network should be managed. It seeks an integrated transport network with clear priorities for all users based around place and movement principles and an integrated multi-modal transport network that connects people with destinations. In doing so Council can make better-informed investment decisions, with all transport modes given equal priority.

2.1 Our strategic direction

The strategic direction is driven by four goals which support in achieving our vision of "he iti rā, he iti pounamu | small city benefits, big city ambition."

2.1.1 Strategic priorities

There are clear themes for the Transport activity which come through from our strategic plans. These along with external strategic priorities and drivers influence how and why we invest in the transport activity. The table below highlights the strategic objectives related to the Transport activity.

Table 3: **Strategic priorities**

Strategic plan	Transport related strategic priorities
Urban design	Provide and promote connected, sustainable, accessible, safe, and interesting public spaces
Economic development	Provide opportunities and infrastructure to accommodate business growth
Transport Plan	Objective 1- Provide a safe, low-carbon, integrated, and multi-modal transport network
Transport Plan	Objective 2 - Include active and public transport needs in all transport network planning
Transport Plan	Objective 3 - Encourage communities to make active and public transport choices
Climate change and sustainability	Objective 2 - Promote activities that support low-carbon city outcomes, including those that compensate for activities that produce greenhouse gases

Status: Final

The table below highlights the Transport Activity related actions as noted in our strategic plans

Table 4 - Actions related to Transport Activity

Strategic Plan	Actions related to Transport Activity	Timing
Urban design	Manage parking in accordance with transport and urban design objectives	On going
Economic development	Review the District Plan business zones to protect the city's centres-based business land supply	On going
Transport Plan	Review the Palmerston North Area Traffic Model to support land use planning	On going
Transport Plan	Collect and use transport data to inform transport network prioritising and decision-making	On going
Transport Plan	Maintain and upgrade the road, footpath and cycleway network	On going
Transport Plan	Advocate to central and regional government for policy settings and investment to improve roading network efficiency and provide public and active transportation options	On going
Transport Plan	Maintain the City's bus stops and shelters	On going
Transport Plan	Make improvements to the urban environment to increase safety for cyclists	On going
New and one-off actions		
Transport Plan	Develop plans to support investment in the regional freight ring road (from year 1)	Year 1
Transport Plan	Incorporate the Enabling Good Lives principles in planning for transport (from year 1)	Year 1
Transport Plan	Identify problems with footpaths in Bunnythorpe (year 1)	Year 1
Climate change and sustainability	Identify options to reduce greenhouse gas emissions from transport (from year 1)	Year 1
Transport Plan	Develop a plan to support State Highway 57 interventions that connect the Aokautere growth area to the city (year 1)	Year 2
Transport Plan	Plan and develop a city transit hub (year 2)	Year 2
Transport Plan	Develop the Feilding to Palmerston North shared pathway (year 2)	Year 2
Climate change and sustainability	Implement actions to reduce greenhouse gas emissions from transport (from year 2)	Year 2
Biodiversity and the Manawatu River Plan	Protect, enhance and increase natural areas (e.g. bush remnants, gardens, stream banks, and berms)	On going (new)
Transport Plan	Make safety improvements at State Highway 57 Tennent Drive intersection	On going (new)
Transport Plan	Make road safety improvements around Stoney Creek Road	On going (new)
Transport Plan	Replace the Milson overbridge	On going (new)
Transport Plan	Complete the Ashhurst to Palmerston North shared river pathway (year 3)	On going (new)
Transport Plan	Support cycle skills and safety initiatives	On going (new)
Transport Plan	Improve school crossings across the city to support greater pedestrian safety	On going (new)

2.1.2 Strategic response

In this section, key objectives that need to be achieved to work towards our strategic priorities and overall goals have been presented. These objectives have been split by the network that they pertain to i.e., Transport and Public Transport. The table below highlights what we want to achieve for both our network and the initiatives to help realize these objectives.

Transport Network

What do we want to achieve for the transport network?

- Palmerston North has an integrated transport network with clear priorities for all users based around place and movement principles.
- The Palmerston North Integrated Transport Initiative (PNITI)/ Regional Freight Ring Road is completed.
- Palmerston North has safe streets with zero deaths or serious injuries.
- The urban network supports amenity outcomes, prioritises active and public transport, and directs freight to the Regional Freight Ring Road.
- There is timely provision of transport infrastructure to support city growth and economic development opportunities.
- Rangitāne o Manawatū have opportunities for early involvement in major strategic transport projects.
- Speed limits and traffic speeds are appropriate for the conditions throughout the transport network.
- Street design is responsive to land-use, place, and movement.
- More people choose modes of transport other than motor vehicles.
- New growth areas have well-connected, multi-modal streets.
- Roads are designed to minimise long-term financial liabilities.
- Car-parking management supports strategic transport, land-use planning, and urban design objectives.
- Maintenance and renewal interventions minimise whole of life costs for transport assets.
- Strategic transport projects provide pathways to business and employment opportunities for Māori.

We also want to align with the Regional land transport plan, as that is the key document for prioritise new improvement activities in the region.

Table 5: Transport Network Strategic Response

What actions will we take to achieve this for the transport network?		
Ongoing actions	**Start date**	**Involvement of partners**
Develop, maintain, operate, and renew the transport network to deliver on the Council goals, the purpose of this plan, and the Government Policy Statement on Transport	2024/25	New Zealand Transport Agency – Waka Kotahi KiwiRail Horizons Regional Council Massey University UCOL Palmerston North Airport NZ Defence FoodHQ Rangitāne o Manawatū Landowners and developers Chamber of Commerce Palmy BID CEDA
Prioritise transport programmes that deliver on the Council goals, the purpose of this plan and the Government Policy Statement on Transport		
Develop pathways to business and employment opportunities for Māori		

Status: Final

What actions will we take to achieve this for the transport network?		
Progressively review speed limits throughout the city on a staged basis		New Zealand Transport Agency – Waka Kotahi Local residents
New and one-off actions	**Completion date**	**Involvement of partners**
Collaborate with New Zealand Transport Agency – Waka Kotahi and KiwiRail to deliver an integrated transport solution for the Central New Zealand Distribution Hub	2026/2027	New Zealand Transport Agency – Waka Kotahi KiwiRail Horizons Regional Council
Advocate for speedy delivery of the Palmerston North Integrated Transport Initiative (Regional Freight Ring Road). We as PNCC lead the development of the business case is led by PNCC, supported by New Zealand Transport Agency – Waka Kotahi , Horizons and MDC.	2026/2027	New Zealand Transport Agency – Waka Kotahi Horizons Regional Council MDC
Support New Zealand Transport Agency – Waka Kotahi with the economic assessment and detailed business cases for the Palmerston North Integrated Transport Initiative (Regional Freight Ring Road)	2026/2027	
Complete the Streets and Roads Framework to replace the Street Design Manual	2026/2027	New Zealand Transport Agency – Waka Kotahi
Prepare an Integrated Parking Plan and fund implementation of the actions, e.g. extended enforcement of mobility parks	2026/2027	
Review the Local Area Traffic Management Policy	2026/2027	

Status: Final

Public and Active Transport Network

What do we want to achieve for the public transport network?

- An integrated multi-modal transport network that connects people with destinations and place.
- The transport network prioritises walking and cycling alongside other transport modes.
- Rangitāne o Manawatū have opportunities for early involvement in major active and public transport projects.
- Active transport participation is increased to 15% of all journeys by 2024; to 20% by 2027; and to 30% by 2030.
- There is increased investment in active and public transport as a proportion of the transport budget.
- Active and public transport are genuine mode choices.
- There is a significant mode-shift to active and public transport.
- There are zero deaths and serious injuries from active and public transport.
- The city has a strong cycling culture.
- Walking and cycling journeys are safe and positive experiences.
- An active transport network provides for commuting and recreational users.
- People choose transport modes that reduce carbon emissions.
- Space is prioritised within the transport network for active and public transport.
- Traffic speeds are reduced through street design and speed limit bylaws to encourage the use of active and public transport and keep users safe.
- The benefits and need for active and public transport are well understood by the community.
- There is increased investment in active and public transport.
- Transport costs are transparently communicated.
- Horizons Regional Council delivers a modern, comprehensive, efficient, and reliable bus service in partnership with Council.
- A new urban bus terminal that supports an enhanced bus service and demonstrates that we place value in public transport in partnership with Horizons Regional Council.

Table 6: Public and Active Transport Network Strategic Response

What actions will we take to achieve this for the public transport network?		
Ongoing actions	**Start date**	**Involvement of partners**
Develop, maintain, operate, and renew the active and public transport network to deliver on the Council goals, the purpose of this plan, and the Government Policy Statement on Transport	2024/2025	New Zealand Transport Agency – Waka Kotahi Horizons Regional Council
Prioritise active transport programmes that deliver on the Council goals, the purpose of this plan and the Government Policy Statement on Transport		
Deliver an update to the Urban Cycle Network Masterplan.		
Gather ongoing, consistent active and public transport data		New Zealand Transport Agency – Waka Kotahi

Promote active and public transport culture and provide opportunities for participation (e.g. events)		
Align city active and public transport programmes with Government direction (GPS Transport) and New Zealand Transport Agency – Waka Kotahi guidance to maximise our likelihood of securing funding		
Deliver enhanced behaviour change programmes, including school travel plans		
New and one-off actions	**Completion date**	**Involvement of partners**
Utilise outputs from the Central City Business Case to inform decision making and funding applications for the urban bus terminal	2026/2027	New Zealand Transport Agency – Waka Kotahi Horizons Regional Council
Prepare a pedestrian network improvements plan	2026/2027	New Zealand Transport Agency – Waka Kotahi
Research active transport innovation and trial initiatives such as bike share, scooter share, electric bike fleets, electric bike charging, priority intersections, route finding app and car sharing	2026/2027	

2.1.3 District Plan

The Palmerston North District Plan Section 20: Land Transport provides clear objectives for the management of the land transport system.

The City's land transport networks are maintained and developed to ensure that people and goods move safely and efficiently through and within the city.

The land transport network is safe, convenient, and efficient while avoiding, remedying, or mitigating adverse effects in a way that maintains the health and safety of people and communities, and the amenity values and character of the City's environment.

The safety and efficiency of the land transport network are protected from the adverse effects of land use, development, and subdivision activities.

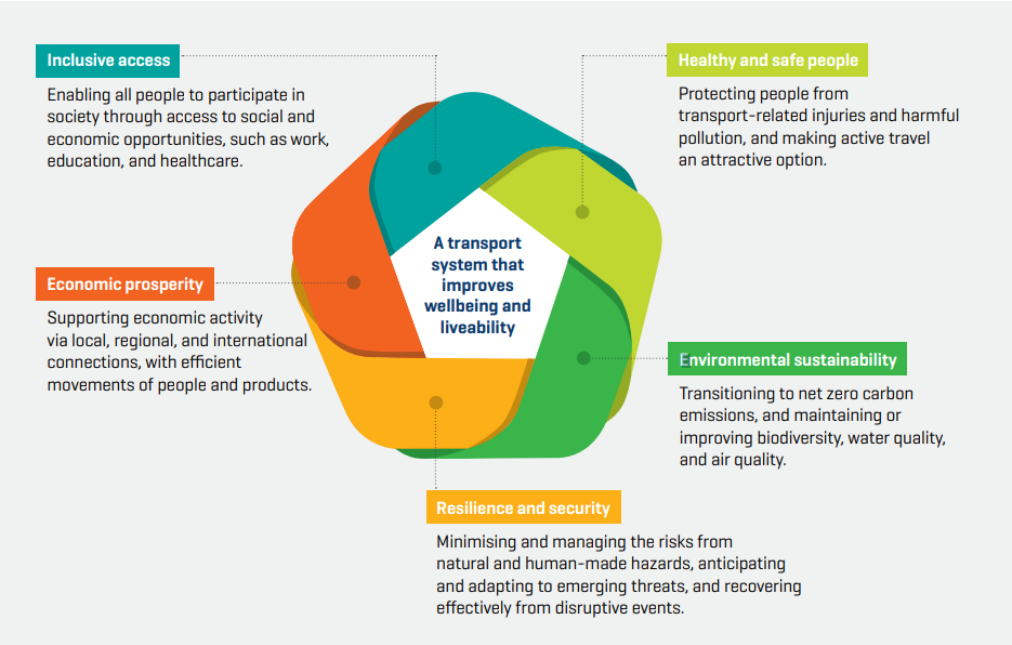
2.2 External strategic direction

2.2.1 Government Policy Statement (GPS) on Land Transport 2021

The Draft GPS provides direction and guidance to those planning, assessing, and making decisions on investment in the transport activity. It sets four big challenges: preventing deaths and serious injuries, decarbonisation, better transport choices for New Zealanders as we move about our cities and regions and improving freight connections.

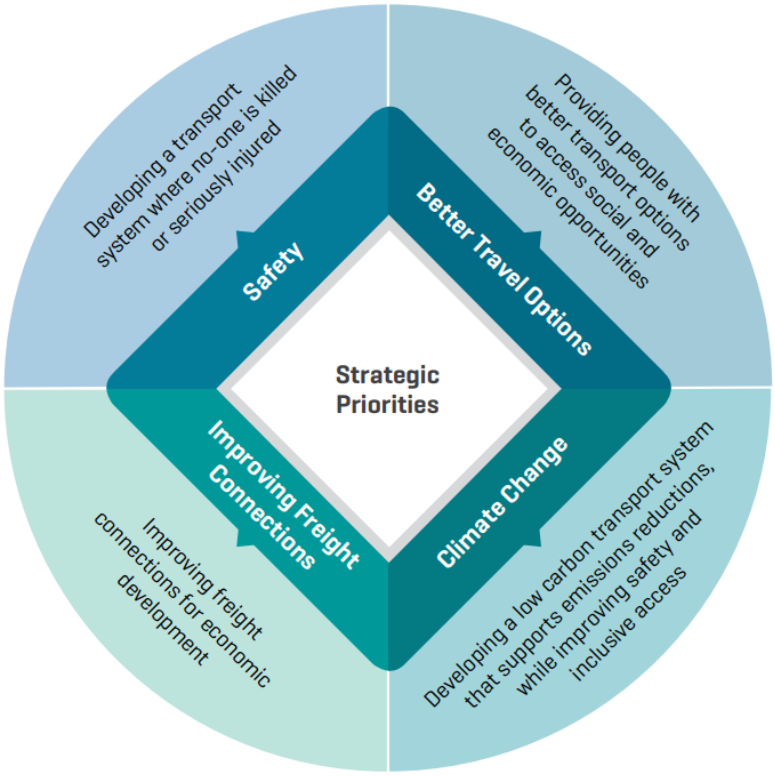
The purpose of the transport system is to improve people's wellbeing and the liveability of places. It does this by contributing to five key outcomes, identified in the Ministry of Transport's Transport Outcomes Framework. Alongside the five outcomes for transport, the Ministry of Transport set mode neutrality as a guiding principle. This means that all modes and options are considered and evaluated to find the best solution.

Figure 2: GPS Transport Outcomes Framework



Strategic priorities have been developed as part of the GPS, to deliver on the outcomes identified. The four strategic priorities in also demonstrate how land transport investment will contribute to improving our communities' wellbeing and liveability. The GPS will be adopted by Government in June 2024.

Figure 3: GPS Strategic Priorities



2.2.2 Government Policy Statement (GPS) on Land Transport 2024

The GPS 2024 is in early engagement, however the indicative priorities discussed below provide an early signal of directions and the results that the Government is intending to achieve through GPS 2024.

It is proposed that emissions reduction becomes an overarching focus for GPS 2024, to ensure that the implications for emissions reduction are a core consideration for all investment decisions. This will be supported by five proposed strategic priorities:

- Sustainable urban development
- Safety
- Integrated freight system
- Maintaining and operating the system
- Resilience

The Draft GPS 2024 was released in August 2023 and builds on the strategic priorities of GPS 2021, including supporting improved transport choices, improving safety, improving freight connections and reducing the impact of transport on our environment. It proposes a strengthened focus on maintaining assets and services and enhancing resilience, recognising recent flood and weather-related recovery efforts.

It also sets out a series of projects the Government has identified as strategically important to New Zealand's transport system in the coming decades.

2.2.3 Arataki

Arataki is New Zealand Transport Agency – Waka Kotahi 's 10-year view of what is needed to deliver on the government's current priorities and long-term objectives for the land transport system. It also highlights what New Zealand Transport Agency – Waka Kotahi views as the main drivers for investment across the country.

Status: Final

Palmerston North - Summary

Palmerston North is the largest centre in the Manawatū-Whanganui region and provides a service hub supporting surrounding areas. Tertiary education, research, logistics and military activities are significant contributors to Palmerston North's economy.

The region is located at the centre of the road and rail networks which connect Hawke's Bay, Wellington, Taranaki, and the upper and lower North Island. These connections are a key economic lifeline, enabling the movement of people and goods between key centres of production, consumer markets and freight distribution hubs.

Palmerston North is emerging as the primary distribution centre in the lower North Island. Resulting increases in the number of heavy vehicle movements have created safety and efficiency issues on the local road network which need addressing.

The region's safety record is relatively poor in terms of total deaths and serious injuries, with a need to focus on the Palmerston North, Whanganui and Levin urban areas, the state highways that connect them, and high-risk rural roads.

Manawatu-Whanganui – Regional Summary

New Zealand Transport Agency – Waka Kotahi 's focus in Manawatū-Whanganui is on supporting urban growth and regional development initiatives. They will work with partners to encourage increased use of public transport, walking and cycling, particularly in Palmerston North, manage the impacts of climate change, deliver safe and reliable inter-regional journeys, and provide appropriate levels of service across all transport networks.

Lower North Island – Pan Regional Summary

Palmerston North has emerged as the key distribution and logistics hub for the region, reflecting its strategic location and access to both road and rail networks connecting to Wellington, the Wairarapa, Hawke's Bay and Taranaki. It is the key staging point for freight moving from the Upper North Island and offers good access to rural locations that produce export commodities.

Palmerston North also provides a collection and distribution hub for products exported through the ports of Napier, New Plymouth, Wellington, Tauranga, and Auckland. As a result, Palmerston North has become the centre for many of the inter-regional journeys occurring in the Lower North Island.

2.2.4 Regional Land Transport Plan

The Horizons Regional Land Transport Plan (RLTP) are the primary documents guiding integrated land transport planning and investment in the region. It sets the strategic direction for the region's transport network over the next 10 years.

The strategic framework for the RLTP was approved on 1 September 2020. This includes the problem statements, 30-year vision, objectives and strategic priorities.

The Vision for the regions transport network is *'A region that connects central New Zealand and supports safe, accessible and sustainable transport options.'*

There are five strategic priorities:

- Connectivity and Access: Provide better transport connections and options to enable efficient and safe movement of people and freight, improved access to health, social and economic opportunities;
- Safety: Improve the transport network to create a safe transport system for all users;
- Better travel options: Make active and public transport and alternative freight modes safe, attractive, and viable options for more trips throughout the region;
- Environment: Reduce environmental impacts and carbon emissions from the transport system;
- Resilience: Build resilience into the region's transport network by strengthening priority transport lifelines.

2.3 Regulatory Context

The key legislation relating to the management of transport activities are listed in Appendix A. The statutory requirements provide Council with a minimum level of service standard and have been reflected in the levels of services shown in Section 4. Council is currently complying with all legislative requirements.

The Transport Activity

People want to be able to move easily and safely around Palmerston North for work, school, or leisure. Business depends on transport links to ensure the efficient movement of goods and for easy, convenient access for customers. The Council's transport network supports these activities. This section provides an overview of the following:

- Place and movement functions of transport and public transport networks in Palmerston North
- One Network Framework
- What the future looks like for this network
- How is are the services on the network delivered

2.4 Strategic Case

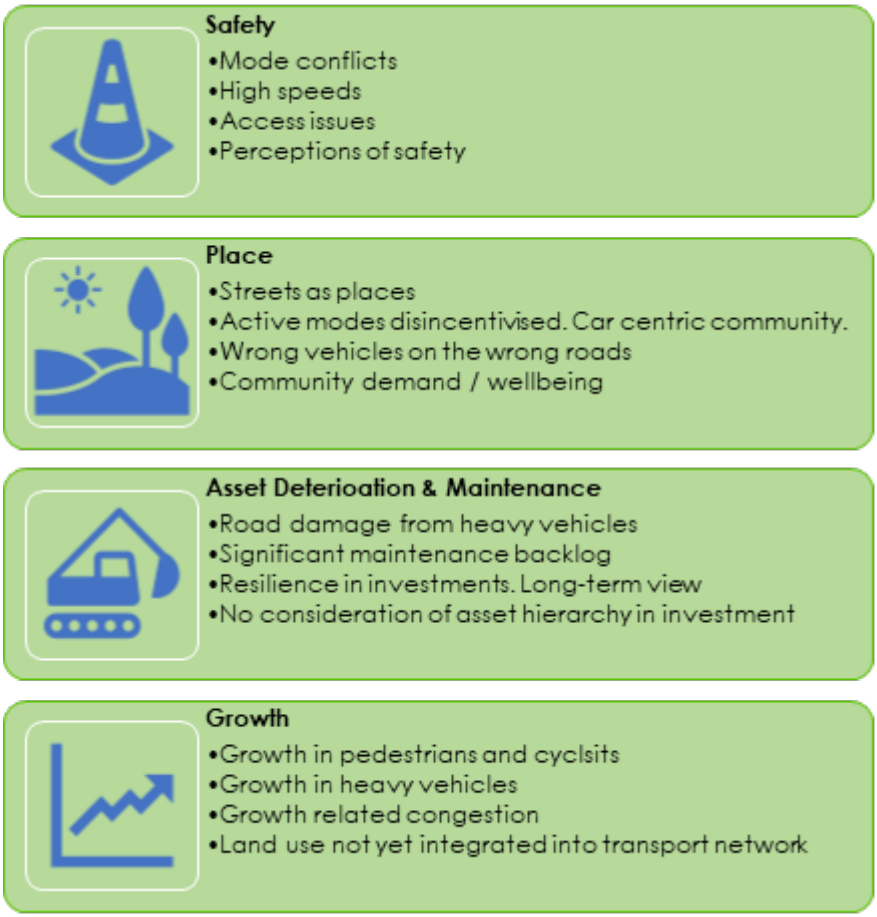
2.4.1 Investment Logic Map

The last investment logic map (ILM) session was held in 2020 to discuss the problems and benefits associated with investment by PNCC on the transport network. This was attended by representatives from Horizons Regional Council, PNCC, New Zealand Transport Agency – Waka Kotahi , Higgins (as Council's current road maintenance contractor) and NZ Police. The ILM was facilitated by AECOM. The current problem statements still stand. An ILM session will be held prior to the next AMP and will include Fulton Hogan as one of our key stakeholders

The ILM was headed by the statement:

Efficiently managing the transport network

Key issues were discussed with the session being informed by the transport evidence gathered and presented in earlier sections of the AMP. These issues were distilled by the group into four main themes.



On further discussion by the group, it was agreed that growth was a common cause across the other three themes but did not warrant an individual problem statement. The three main themes of Safety, Place and Asset Deterioration formed the basis for the problem statements developed for the Strategic Case.

The Investment Logic Map and Benefits Map can be found in the Appendices. The problem statements, benefits, KPIs and measures, along with Council's levels of service, seek to inform how we will invest in the transport network in Palmerston North. A summary of these is also provided in the following section.

2.4.2 Problems Statements

Three problem statements were developed by the group at the ILM and later confirmed via correspondence. It was agreed that these reflect the issues faced by Council on its transport network and are supported by the evidence base.

Problem 1 - Increasing conflicts for all modes is causing Deaths and Serious Injuries (20%)

This problem statement reflects the increasing number of high severity crashes that are occurring on the local road network in Palmerston North. Increasing conflict was used to capture several elements including:

- Traffic growth including heavy vehicles;
- High speeds;
- Modal conflict as increased investment occurs in active and public transport networks;
- More 'rat-running' that occurs due to increasing congestion.

The effect of this is an increasing number of deaths and serious injuries. It is also expected to have a secondary impact on suppressing those willing to use active or public transport modes due to perceptions of them being unsafe.

Problem 2 - Under-investment has resulted in declining asset condition and the network is increasingly unable to meet levels of service (50%)

The cause associated with this problem statement was complex. While the wording chosen was under-investment, this has been used to capture several aspects:

- Insufficient historical funding to adequately maintain levels of service on the transport network;
- Investment has not always been targeted at the greatest areas of need;
- Treatment selection has been based on available funding, not asset need which has led to under scoped work and premature failure;
- Funding levels have not kept up with increases in size and number of heavy vehicles of various parts of the transport network;
- Renewal and maintenance work have not always been considerate of poor underlying ground conditions in parts of the city.

This under-investment has resulted in a decline in overall asset condition. This is supported by condition data but was emphasised by several stakeholders at the ILM. The effect of this is a transport network that under existing levels of investment and strategies, will continue to fail and increasingly be unable to meet levels of service.

Problem 3 - A car-centric network and poor travel choices are causing decreasing liveability and accessibility (30%)

Palmerston North being a city which has historically, and continues to be, developed around roads and private vehicles, not people.

Travel choice is inequitable, with it being much easier to choose to take a private vehicle rather than active or public transport modes. Investment continues to support this inequality.

City centre locations which should be people places are dominated by vehicles and car parks. Local residential streets which should be the heart of a community are wide, high-speed thoroughfares.

The effect of this was decreased liveability, accessibility and amenity. Liveability and amenity in the sense that roads and streets are not being utilised as they could as places.

Accessibility referred predominantly to active and public transport modes not being as accessible to transport users.

While not directly associated with the problem statement, it was also recognised that solving this problem would also support Council's strategies in reducing carbon emissions in response to climate change. Getting more people to use active and public transport modes will get higher carbon private vehicles off the road.

2.4.3 Benefits, KPIs and Measures

The ILM Benefits, KPIs and Measures were developed by AECOM and Council post the workshop. They were shared and later agreed with the stakeholders via correspondence.

New Zealand Transport Agency – Waka Kotahi 's investment performance measures were used when developing the ILM KPIs and Measures. Consideration was given to Council's existing customer levels of service and measures as alignment between these would be helpful.

Table 5: ILM Benefits, KPIs and Measures

Benefit	KPI	Measure
Safe People (25%)	Safety: Improve (reduce deaths and serious injuries. (25%)	Deaths and serious injuries (No. of DSIs)
		Personal risk (F&S crashes / 100M VKT)
Whole of life value for money (40%)	Comfort and customer experience – access: improve (20%)	Network condition – road (% smooth LoS)
	Pricing: more efficient (20%)	Whole of life cost ($NPV)
Inclusive access (35%)	Access – people increase (35%)	Mode shift from single-occupancy private vehicle (%)
		Access – perception (cycling safety and ease)
		Access to key destinations (all modes) (% of the population)

The KPIs and Measures are used to inform the type and level of investment required. The baseline and targets for each of these has been set with either a desired target or trend (see Appendices).

2.4.4 Significant Negative effects

The Transport activity creates a few negative effects. They are:

- Transport related deaths and injuries have a large negative impact on those involved in any crash, including their family and friends, communities, and workplaces. Accidents involving pedestrians or cyclists have a negative impact on Council's goal of getting more people using active transport
- Transport emissions and their long-term negative impact of climate change
- Travel disruption and congestion mean longer travel times, which can be frustrating and inefficient especially for businesses
- Impact of vehicles on communities. This includes community severance due to high traffic volumes on strategic and arterial roads. It also includes traffic noise and vibration. High volumes of traffic, and especially heavy vehicles, can cause increased noise, vibration, and other disturbance to adjacent land use.

These negative effects are mitigated through a range of projects and improvements to the transport network, including:

- Encouraging means of transport such as cycling, walking and public transport
- Safety improvements, education and enforcement programmes and speed management, especially around high-risk areas such as schools
- Designing the network for traffic to flow more smoothly and to make it clearer which sorts of vehicles should be using which roads. This means:
    - getting heavy vehicles out of suburban areas and travelling on roads built to carry them
    - introducing pedestrian and cycle friendly features and making it clearer where they have more priority
- Designing the road environment to include traffic calming facilities
- Planting street trees
- Good local urban design, and city planning to reduce urban sprawl.

2.5 Strategic Responses

Strategic responses are the actions needed to address the problems identified and realise the benefits sought from investment.

These problem statements will be addressed through a range of operational and capital investment activities. Some non-financial levers can be pulled to better deliver on the problems identified. Further details including proposed budgets are provided throughout the AMP document.

The strategic responses have a key link through to Council's Transport Plan. This plan has many actions outlined that will support Council in achieving its goals and vision.

2.5.1 Safety

Reducing deaths and serious injuries on the transport network will be achieved through:

- Speed management. Lower speeds can mitigate the severity of crashes when they do occur. Target high-risk locations such as around schools;
- Deliver the Safe Network Programme in Palmerston North in conjunction with New Zealand Transport Agency – Waka Kotahi ;
- Continuously target safety improvements be it through maintenance interventions or minor safety upgrades to the transport network;
- Supporting community initiatives relating to education and enforcement with our road safety partners and through roads safety coordination arrangements

2.5.2 Asset Condition and Performance

Ensuring the transport network condition continues to meet the desired levels of service will be achieved through:

- Timely maintenance and renewal investment that considers the whole of life implications for the transport assets;
- Optimising road maintenance and renewal activities across the network to achieve the right balance of investment when assessed against the adopted levels of service, asset risk, and asset criticality. This may mean increases to existing funding levels;
- Reviewing levels of service where under or over-delivery may be occurring;
- Ensure that heavy vehicles are travelling on roads built to carry them;

2.5.3 Liveability and Accessibility

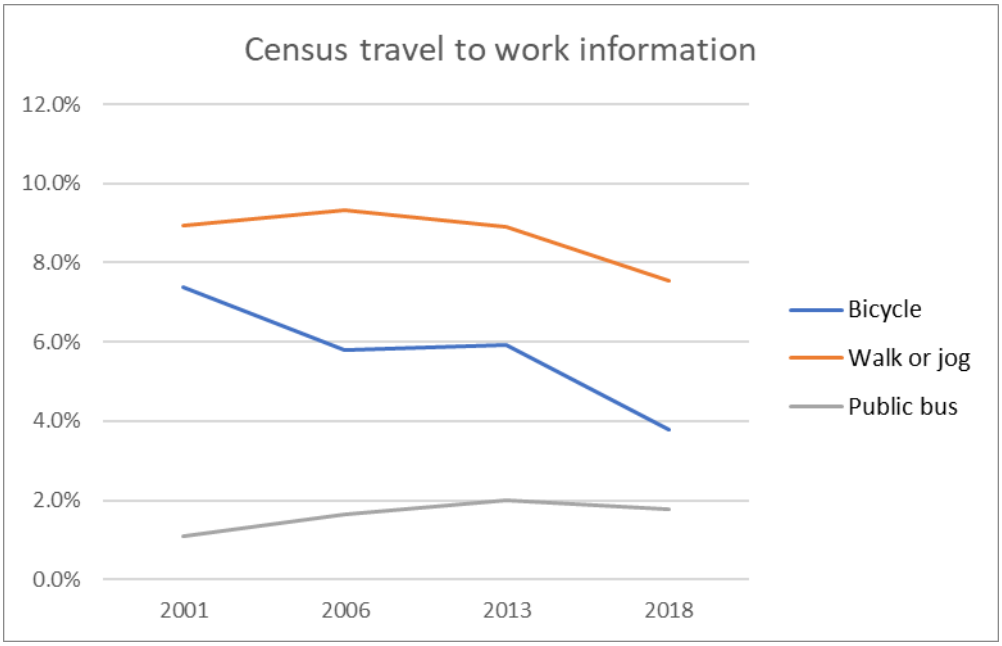
Improving liveability and accessibility through changes to the transport network will be achieved through:

- Delivering the Roads and Streets Framework. Use this and the ONF to inform the management of the transport network;
- Recognise the importance of Place on the Transport network. Ensure that investment supports this;
- Multi-modal network optimisation to identify and make improvements to walking, cycling and public transport networks;
- Disincentivise private vehicle use by prioritising active and public transport modes over vehicles and car parking;
- Make it more difficult for certain vehicles to travel certain routes through the city. Encourage the right vehicles onto the right roads;

2.6 Place and movement

Palmerston North's transport network has been built around wide roads that are highly connected. This has contributed to most people choosing to move around the city by private motor vehicle. At the 2018 census, approximately 15 percent of respondents listed walking, cycling, or taking the bus as their usual way of travelling to work as shown in figure 5 below. This percentage is higher for those travelling to education, with 40 percent of respondents walking, cycling, or taking the bus.

Figure 4: Census travel to work information



Source: 2018 Census

Current approaches to managing transport corridors and asset do not adequately consider the wider social, economic, and environmental outcomes sought by residents and communities. Roads and streets make up a sizeable portion of public land in Palmerston North yet do little to support these other outcomes.

Place is the extent to which a transport corridor (and its adjacent land use) is a destination in its own right. The place function also incorporates lateral movement, where on-street activity increases the demand for people wanting to cross carriageways. While the movement function of a corridor is focused on saving time, the place function of a road or street is focused on attracting people to spend time.

Place is becoming a key consideration in how Council manages the transport network. Recent upgrades to streets around the CBD have placed a greater emphasis on people and how time will be spent in these locations, rather than just passed through. This has not yet translated to significant changes outside of the CBD.

2.6.1 Motor Vehicles

The Palmerston North local road network is intricately linked with the State Highway network which runs through the city. The 2018 Census identified that of those that usually travel to work, personal car is the main mode of transport for 85 per cent. The Census data show significant variation in modes of travel by areas in the city, with residents on the fringe of the city more likely to travel to work by car.

With little historical congestion, a connected network and ample on-street carparking, Palmerston North has long been known as an easy place to get around by car. However, parts of the network are beginning to experience peak time congestion, especially in the northern and eastern parts of the city.

Palmerston North's overall car ownership rate is lower than average for New Zealand [2], with higher shares of no car, one car and two-car households. This is partly due to the number of students that live in the city and attend university, a higher share of people on long-term disability benefits and a compact city. However, car ownership has increased in Palmerston North since the previous Census. With a greater percentage of households owning more cars than previous. Meaning there are more cars in Palmerston North households than there were previously.

2.6.2 Walking

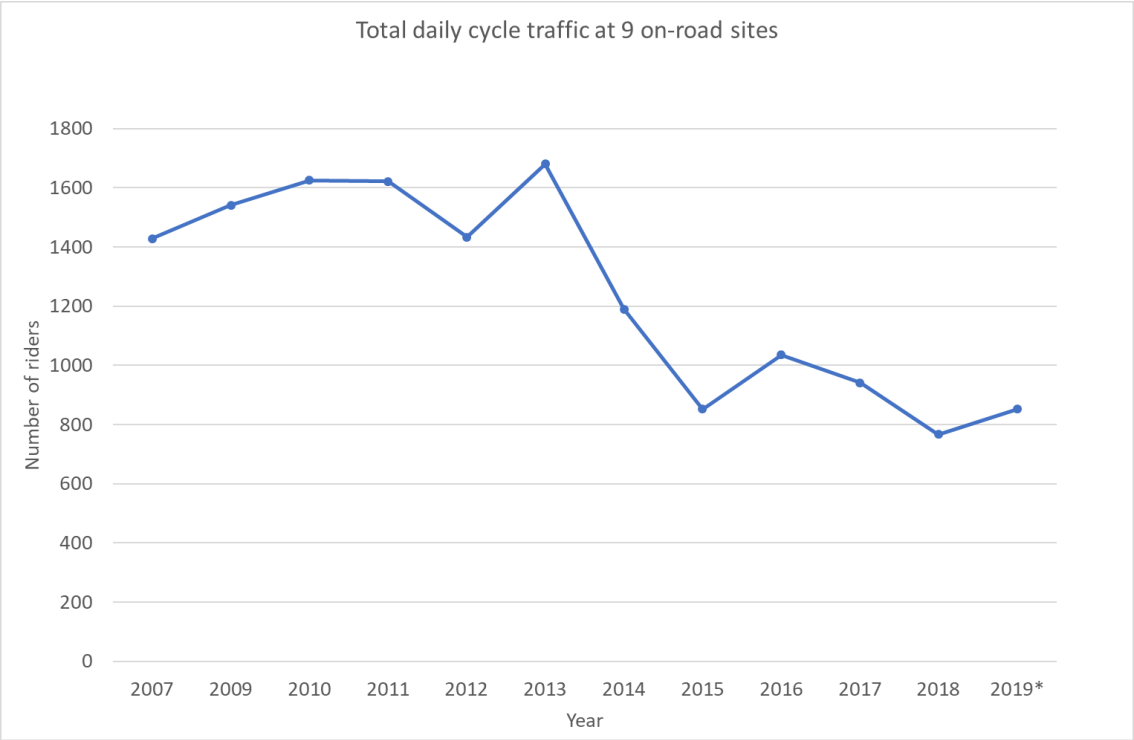
Of the 'Active transport' modes, walking or jogging was the most popular. Palmerston North's compact form and the diverse range of major employers contributed to this. The Census identified that the highest rates of walking were in areas where people lived close to their work (Linton Military Camp, Palmerston North Central, Massey University).

Pedestrians and other active modes have historically been secondary when it comes to the investment in and management of the transport network. While cars have been provided with a connected network, pedestrians have a network which regularly puts them in conflict with vehicles. They are rarely provided priority at these points of conflict.

2.6.3 Cycling

Palmerston North has long been recognised as an easy place to cycle due to its flat roads and temperate climate. With 3.8 percent of those working away from home cycling to work, Palmerston North is above the national average of 2.3 percent. However, there has been a significant decline in the percentage and overall number of people cycling to work as shown in the figure below. While there are more people cycling on pathways in Palmerston North, the number of people cycling on-road and cycling to school declined between 2013 and 2015, before stabilising in recent years.

Figure 5: City cycle counts

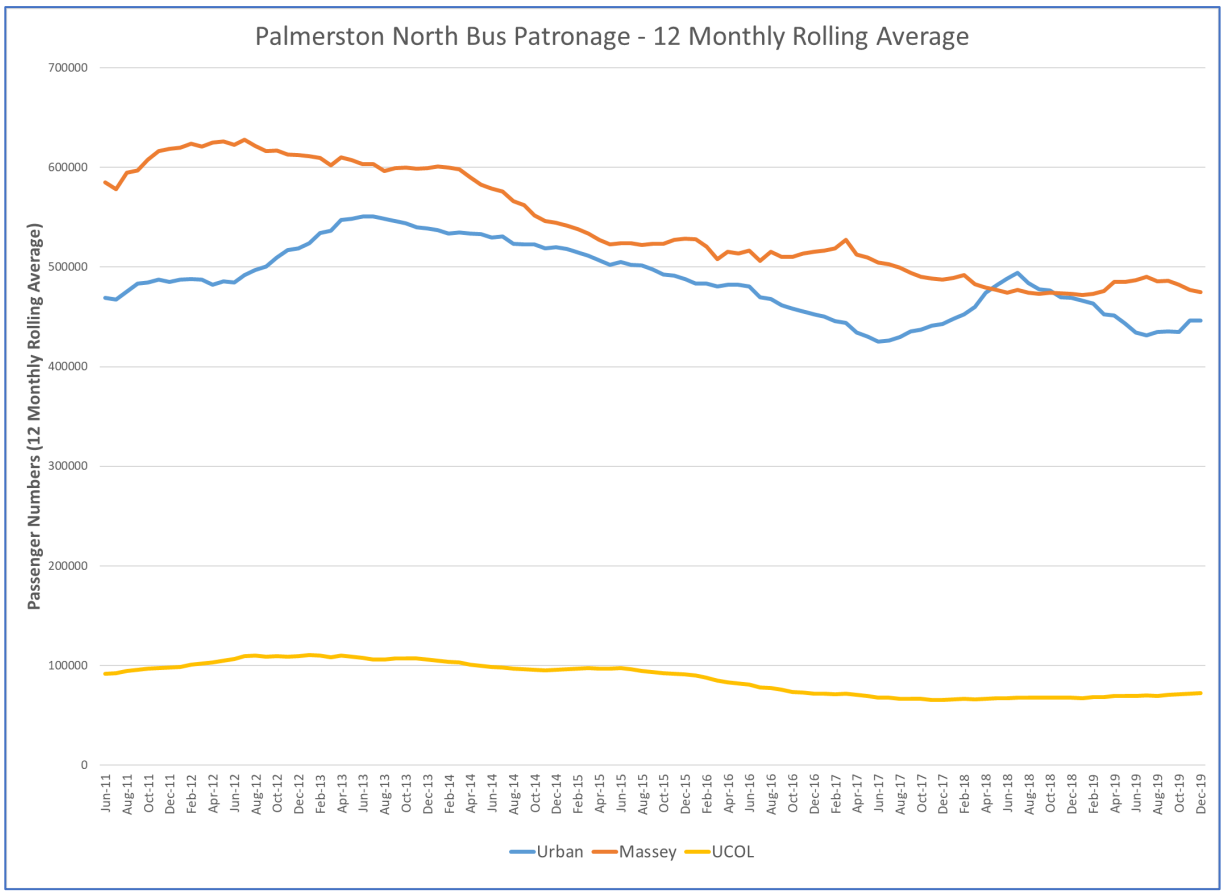


2.6.4 Public Transport

Public transport in Palmerston North includes inter-regional bus services which are commercially operated, and subsidised metropolitan services provided under contract to Horizons. KiwiRail provide a weekday commuter train service connecting Palmerston North to Wellington and passenger links to Auckland and Wellington and destinations in between via the Northern Explorer. Connections from the railway station to the bus service are limited.

Thirteen metropolitan bus routes and services to Massey University begin and end in the central Main Street Terminal (MST) adjoining the Square. Other services that operate daily to and from Palmerston North include, Ashhurst, Feilding and Levin with other regional centres linked on a more infrequent basis. Bus patronage on the urban routes steadily declined between 2012 and 2018 though has levelled off since as shown below.

Figure 6: Bus patronage



2.6.5 Heavy Vehicles

Palmerston North is an important freight and distribution hub serving the central and lower North Island. Heavy vehicle movements typically follow a similar demand pattern to the general vehicular demand, with most of the freight movement seeking routes through the city to go to freight centres located around the periphery and distributing to locations in and around the region.

Overall, the total number of heavy vehicles travelling to and from Palmerston North increased by 10 per cent between 2012 and 2017[3]. This growth is expected to increase at about one per cent per year through to 2031[4]

2.6.6 Rail

About 2.55 million tonnes of freight passes through Palmerston North by rail each year. However, this is only a small portion of the 11.5-13.5 tonnes of freight coming into and out of the Manawatu-Whanganui region each year.[5]

2.6.7 Micro mobility

The use of very light vehicles such as electric scooters, electric skateboards and shared bicycles is a growing trend in movement around the country. There are currently three (?) providers offering shared use of these light vehicles operating in Palmerston North.

Personal use of light micro mobility vehicles is occurring in Palmerston North, though the numbers of these are not currently recorded.

2.6.8 Parking

The availability of parking helps meet the social and economic needs in the city. Demand is managed through parking restrictions and pricing, depending on location. Paid parking is limited to within the inner-city ring-road, and free parking is readily available elsewhere in the city. Time restrictions are less prevalent outside the central city, and people tend to be able to park unencumbered on most roads within the network.

There is an ample supply of on-street parking supplemented by several off-street Council-provided facilities in addition to private parking supply. Unlike most parts of the Transport activity, the private sector also provides off-street parking capacity. The National Policy Statement for Urban Planning released in July 2020 removed minimum car parking requirements for developments. The amount of off-street parking in the for private developments is determined by rules within the District Plan, which specify the requirements for parking provision associated with the land use.

Council's strategic Plans talk about car parking not as a priority but as enough to support other city activities. Car parking management should also support strategic transport, land-use planning, and urban design objectives.

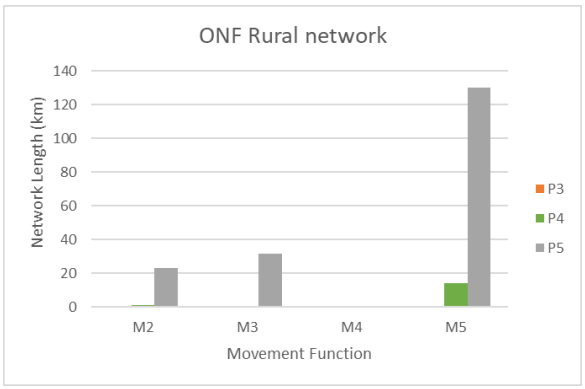
2.7 One Network Framework

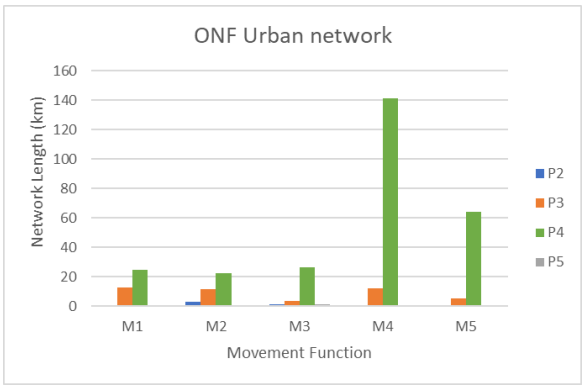
The One Network Framework (ONF) replaces the One Network Road Classification (ONRC) to acknowledge the significance of integrated land and transport planning in enhancing liveability and prosperity. The ONF adopts a movement and place strategy, recognising the dual functions of streets and roads. It assists in determining the intended function of roads and streets, plans for investment and service levels, and considers future aspirations for the transport network within the context of broader spatial and growth planning strategies. Both the ONF and the Roads and Streets Framework (RASF), which is being developed for the Council's transportation network, emphasize the Place function. The figure below provides examples of the types of streets and roads by movement and place function.

Figure 7: ONF Street Categories

The figures below summarise the pavement network by length into the place and movement function.

Figure 8: ONF Rural and Urban Networks





Movement function ranges from M1 (highest movement) to M5 (lowest movement), and the place function ranges from P1 (highest place value) to P5 (lowest place value). As can be seen, our urban network has a good spread of street and road categories with a large volume of local streets, whereas the rural network consists of movement focused streetscape.

Although the ONF did not directly impact investment decisions in the current Transport AMP, the ONF's future effects on movement and location were considered throughout the document.

The One Network Framework will emphasize supporting the movement of people rather than just vehicles. It will allow for the identification and prioritisation of Palmerston North's most important pedestrian connections.

Implementing ONF for each asset class will allow for the following benefits to be realised.

Table 7: ONF Asset Classes

Asset Class	Considerations	Benefits
Vehicle crossings	Will not affect maintenance or renewal, it will influence where VC are abundant high-movement or high-place streets should have fewer VC	Allow roads and streets to better serve their purpose of moving people and goods or being people places.
Pedestrian Facilities	The level of service for pedestrians on most streets will remain unchanged, (existing footpaths on residential streets) areas like schools, community shopping areas, the CBD, and shared path networks may require higher maintenance standards due to increased pedestrian use. extra investment required in various features like raised platforms, traffic calming measures, etc.	Providing better service for pedestrians and active modes and establish pedestrian priority areas
Cycling Facilities	Portions of the network with the greatest cycling function should be maintained at a higher level of service. This could mean more frequent debris removal or shorter response times. For quiet streets maintenance of greenways will increase, for busier roads education of the public necessary as cars, trucks and buses coexist in the network.	Determining where a higher level of service for cyclists is necessary and where an alternate route may be preferable., Prioritise cycle network maintenance. Local investments in traffic management will reduce vehicle speeds.

Asset Class	Considerations	Benefits
Streetlights	It is not anticipated that the ONF will have a significant impact on how the Council illuminates its roads and streets, Areas like the central business district, which will have a higher Place function under the ONF and be expected to provide a higher level of illumination	Pedestrian and bicycle priority network level of service could be improved, also may encourage investment to support the safe use of these networks at night.
Traffic services	Local residential roads, community areas and the CBD will all have a high Place value it also seeks to prioritise movement on corridors where it is most appropriate. This could mean changes to the way traffic signals sequence or phasing that provides benefits to some transport users while dis-benefitting others	Drive investment into the CBD area and local residentials roads, reduce speeds and improve road safety

2.8 Future of the network

This section discusses transport growth, demand and usage trends, technology, economic trends, sustainable transportation, and demand management.

Future demand for transport services in the city will be driven by:

- The need to service population growth and demographic changes, including subdivision development and urban redevelopment;
- Climate change;
- Community expectations relating to transport choices, passenger transport, cycling, walking, and emerging modes such as e-scooters and mobility scooters;
- Travel patterns;
- The increasing age of the population and expectations for improved facilities for such transport needs as mobility scooters;
- Increased recognition of the city as a major distribution, education, and employment hub;
- The understanding of, and reaction to, alternative energy sources that will arise in the future; and
- Other technological advancements including in vehicles, transport infrastructure and transport services.

2.8.1 Strategic transport investment

Palmerston North Integrated Transport Initiative (PNITI)

Palmerston North's population is already growing at twice the rate of the early 2010's and employment growth (plus more affordable house prices) means that the city is expected to steadily grow by more than 23,000 people to over 110,000 in the next 25 years.

To help manage this growth, whilst maintaining efficient freight movements to and from Te Utanganui and the Northeast Industrial Zone and other industrial areas within the city, there is a need to plan for the whole transport system. Having this plan will help maintain access and improve the liveability of residential areas and the city centre.

Working with industry, local government, and local communities, New Zealand Transport Agency – Waka Kotahi and its partners are progressing the Palmerston North Integrated Transport Improvement (PNITI) project. PNITI is a package of interventions to manage planned economic growth, support the freight and distribution potential of the region, address identified safety issues and improve the liveability of the residential areas and city centre.

The recommended programme, designed with stakeholders, consists of a comprehensive package of improvements including online corridor and intersection upgrades for safety and access, as well as safer speeds, placemaking, and land use changes across the network. The package also includes longer term interventions to support the KiwiRail freight hub, such as improvements between Ashhurst and Bunnythorpe, and a future downstream bridge over the Manawatu River to reduce trips through the City and enable placemaking and amenity improvements.

Status: Final

Overall, the programme will:

- Reduce freight movements on residential and place-based streets by up to 50%
- Support and enable Urban Cycling Masterplan initiatives and investment by flow reductions through the city centre, rural villages/townships and key places/routes increasing the attractiveness of active modes across the study area.
- Reduce the number of congested intersections by 50% and improve journey times on key freight routes by up to 10 minutes
- Reduce deaths and serious injuries by 35-40% across the rural freight network
- Support economic development such as Te Utanganui and in the Northeast Industrial Zone which enables positive land use changes within the city
- Improves safety and access for new housing developments at Whakarongo, Aokautere and City West

The programme presents a blueprint for how the city's transport network can improve accessibility, safety, and support growth over the long term. It is estimated to cost between $335 and $370M with a BCR of between 1.3 and 1.6. This programme is to be implemented through a stages approach: Short, Medium and Long Term.

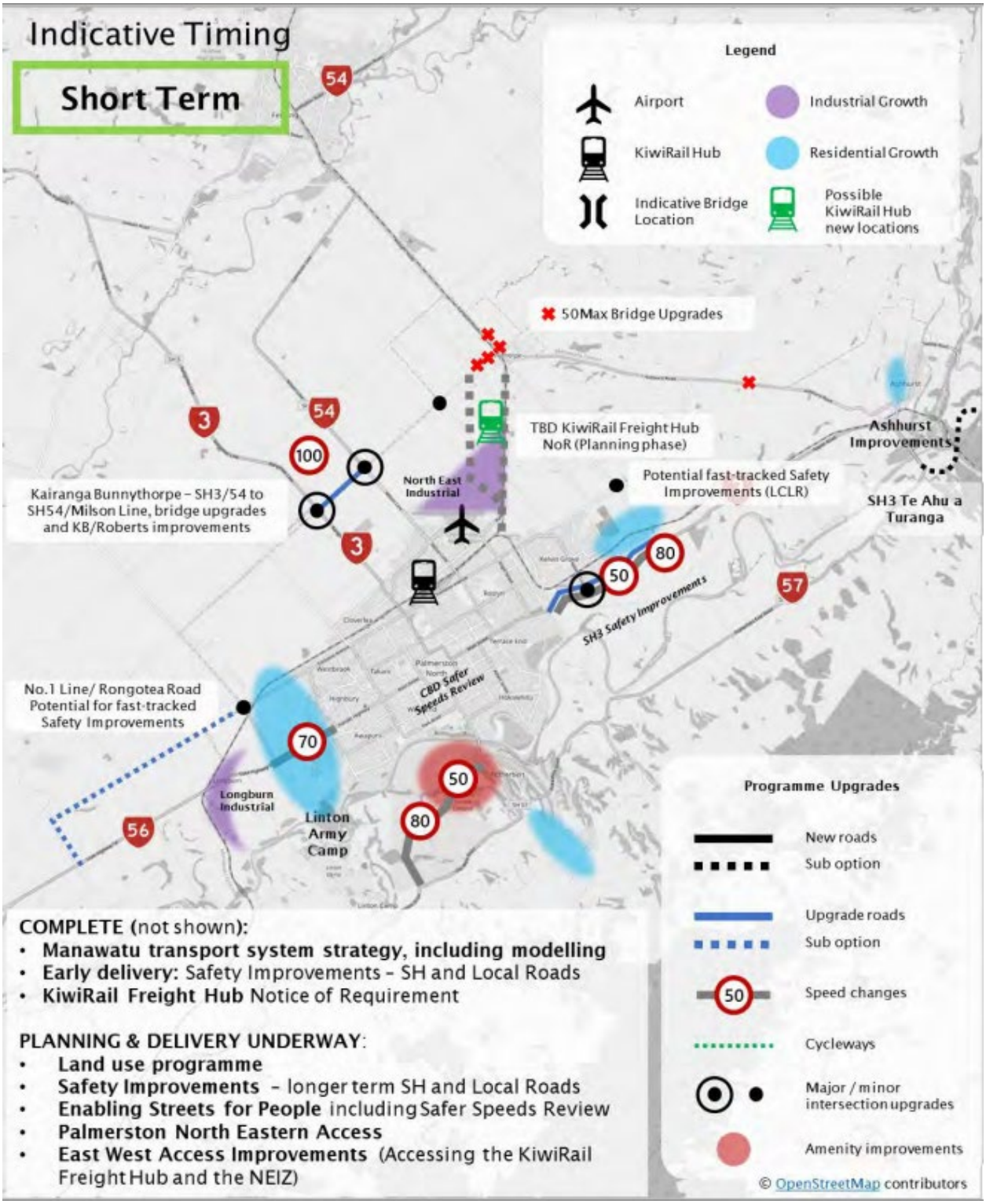
Short Term

The following activities are proposed in the short term. These have been chosen due to the high safety risk, the need to co-ordinate with the Te Utanganui Freight Hub development and the long lead time of some activities whilst still enabling the city to realise the opportunities.

- Development of a Manawatū Transport System Plan to identify the core functions of key routes and significant places within Manawatū. By identifying the key strategic routes by mode and places of note, the existing Network Operating Plan can be refined with the key routes and interventions to support the routes and balance access, place, and transport amenity.
- Implementation of safety projects to address substantial risk sites (Safety Boost Programme, Safer Network Programme, Safer Speed Limits, Napier Road, and SH 3/54 projects)
- Development of new land use strategy to better separate residential and industrial areas and reduce further amenity, safety, and access issues
- Development of a programme of amenity, safety, and access interventions within the central city to prioritise people over vehicles
- Further work around the Te Utanganui freight hub to ensure an integrated solution that works for both road and rail freight networks and the city

Status: Final

Figure 9: PNITI Programme (Short Term)



Medium Term and Long Term

The key longer-term activities that will provide significant benefit and therefore need to be developed in the medium term are:

- Medium term ring road including interventions along Ashhurst Road, Kelvin Grove Road, Kairanga - Bunnythorpe Road, Rongotea Road/No 1 Line, SH56 and SH57 to prioritise a ring route away from the city for freight movements. This should be considered for progression after the short-term works have been completed and there is more certainty in the timing of the Te Utanganui Freight Hub and residential developments.
- Long term ring road interventions including a new downstream crossing of the Manawatu River (between Longburn and Linton) to improve freight movement efficiency and remove freight traffic from the central city. The timing of these elements should be determined by a Detailed Business Case considering the long-term maintenance and operational requirements of SH56 and SH57 and the success of other measures to remove traffic from the city centre (e.g. speed limits, de-tuning measures). A ring road would also help to shape the land use development over the long-term – i.e. encouraging industry to develop closer to arterial roads, and away from higher amenity local corridors.

Status: Final

Figure 10: PNITI Programme (Medium Term)

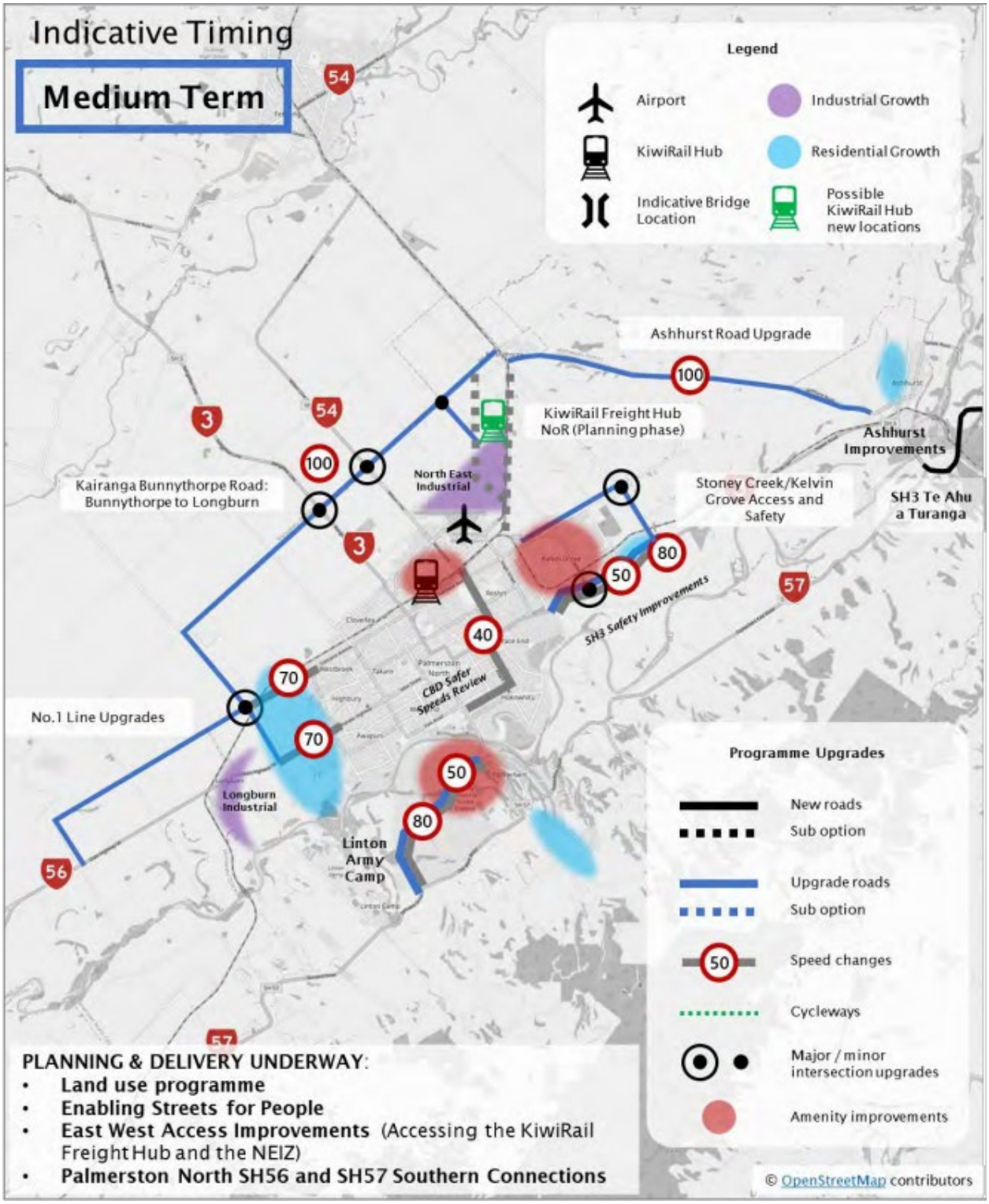
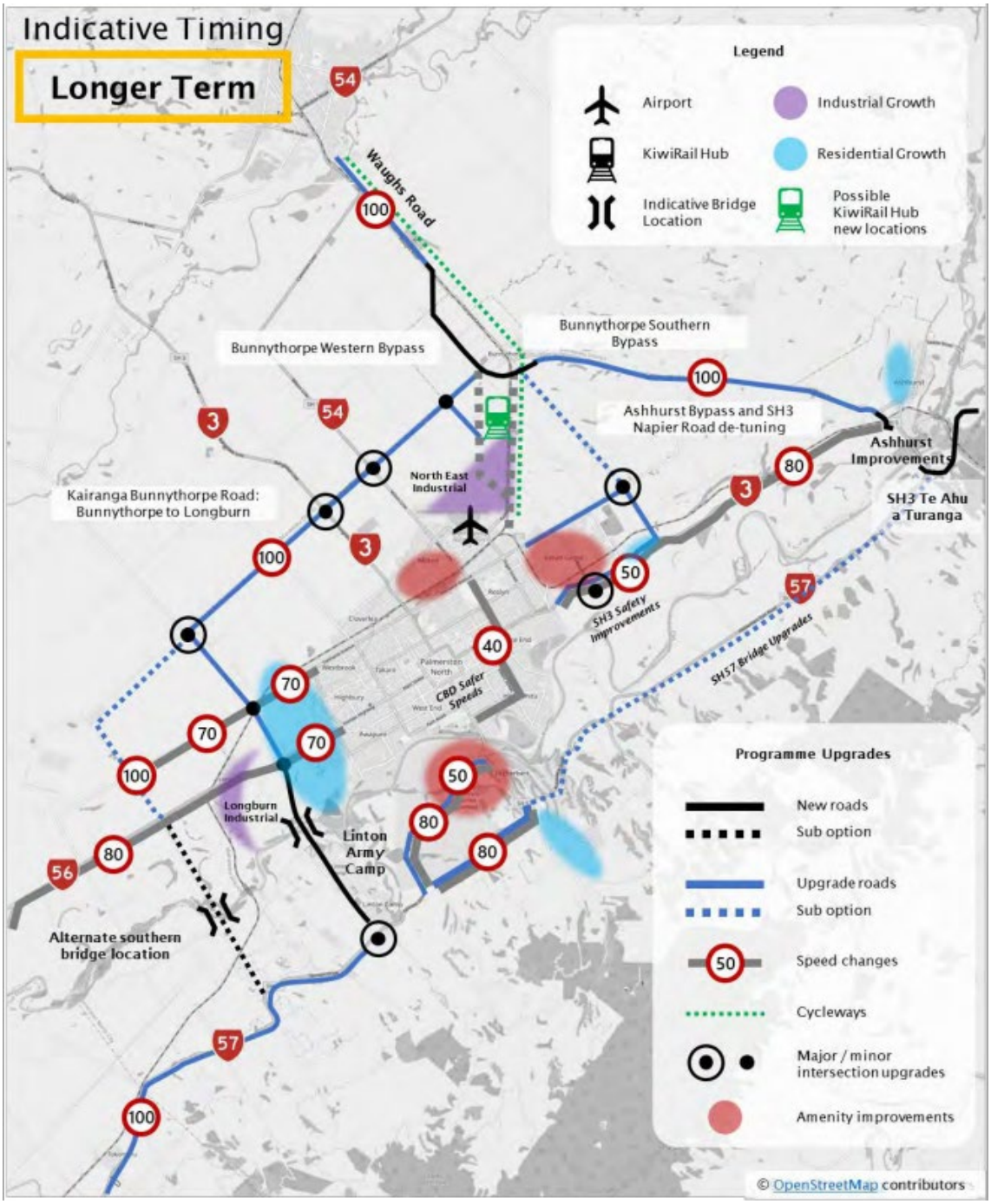


Figure 11: PNITI Programme (Long Term)



Te Utanganui Freight Hub

KiwiRail has identified Palmerston North as a *key, strategic freight location for the North Island*[6]. They have developed a Master Plan for an intermodal freight hub to be located within and adjacent to the NEIZ. The purpose of the freight hub is to create a high-capacity, technologically advanced facility that efficiently connects the rail network with road freight and meets the needs of future freight volumes across the lower North Island.

The future development of the freight hub in the NEIZ will have significant impacts on the transport network. At a local level, it will mean the long-term closure of Railway Road north of Roberts Line along with other nearby roads. It will also mean that a greater number of heavy vehicle movements will take place both within the NEIZ or with the NEIZ as an origin or destination. It may have some positive effects on existing urban roads like Tremaine Ave which, depending on future land-use changes, may see a decrease in heavy vehicle movements.

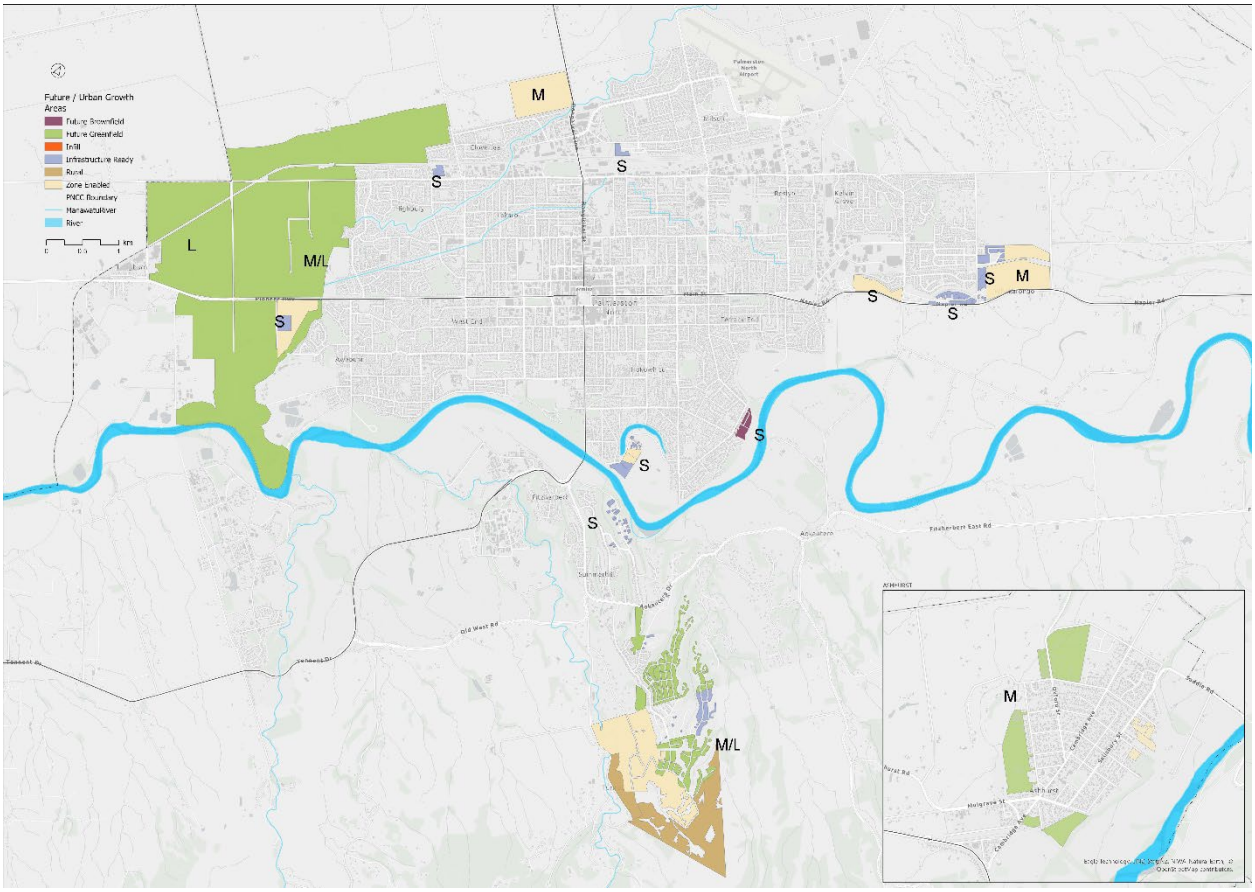
2.8.2 City growth

Residential growth

The SAMP outlined the anticipated population growth for Palmerston North over the next 30 years. By 2054 Palmerston North will have more than 25,000 more people living here and a total population will be more than 117,280. This population growth is expected to necessitate the construction of nearly 15,000 households.

Short, medium- and long-term green-field growth areas have been identified in Palmerston North. These are to the east, west and south of existing residential boundaries as shown in the figures below. It is also assumed that a third of household growth will occur through increased density and infill within the existing urban area.

Figure 12: Green Field Growth Areas

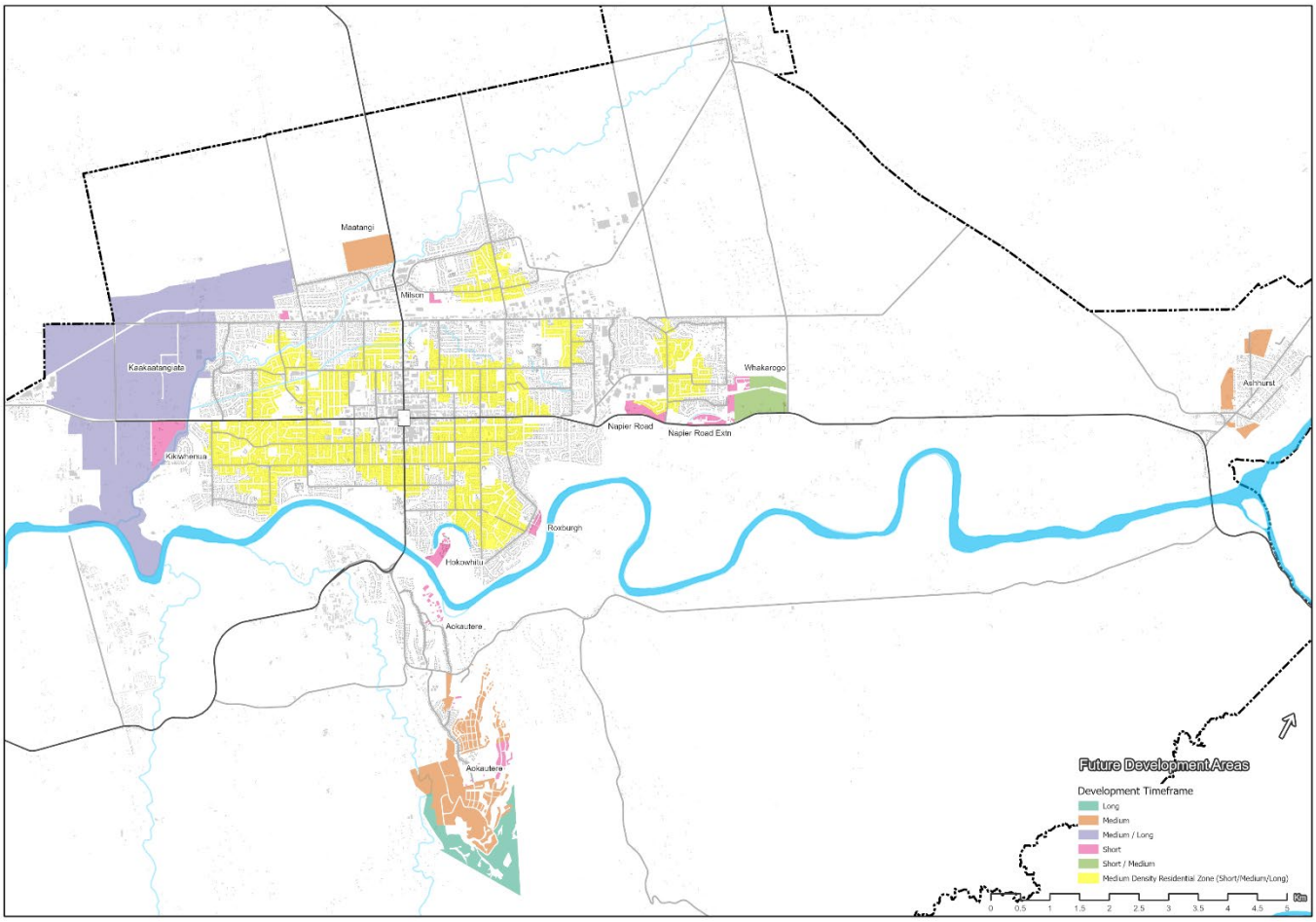


Transport infrastructure will need to respond to the additional demands placed on it from these new growth areas and infill development. With capacity remaining on the City's four-lane arterial network, the investment will be primarily required on adjacent 2-lane arterial and collector roads. This will be at both the intersections and mid-blocks.

All new development as shown below will need to provide for all transport modes. This requires both investment in existing transport routes, and control of how development occurs. This is managed via the District Plan and to a lesser extent Council's Engineering Standards. The removal of minimum car parking requirements could help to drive an increasing number of people walking, cycling, and catching the bus. Council needs to work with private developers to unlock these opportunities.

Status: Final

Figure 13: Future development areas



2.8.3 Transport Growth, Demand and Usage Trends

The way people and goods move has been slowly changing over time. Over the last few decades, increased trips have been made via personal vehicle. This has corresponded with a decrease in the number of people walking, cycling, and catching the bus.

The way goods and freight move around the city and country continues to change also. Heavy vehicles are increasing in size and number. Where they are moving to and from continues to change also, as distribution development occurs in the city.

These trends, along with the major decrease in public transport usage due to COVID-19, suggest that unless further incentives for public transport are implemented, taking a personal or work vehicle to work will increase in popularity over the next three years.

Traffic Growth

Overall traffic growth on key parts of the transport network has been increasing over the past five years at between 3 and 5 per cent per annum. This followed a 5-year period where traffic growth was static. Traffic growth has also been seen on the local road network.

The Palmerston North Area Traffic Model (PNATM) was developed in 2013/14 to test the impact of future growth on the transport network. The effects of this future growth were tested by New Zealand Transport Agency – Waka Kotahi [7]. Modelling showed significant deterioration in levels of service at many intersections on all routes entering and leaving the city if no further investment is undertaken in response to this growth. Several key routes that are particularly impacted, given anticipated growth, are:

- Access to the Northeast Industrial Zone;
- Feilding to Palmerston North Corridor; and
- Eastern access and city centre access (including Tremaine Ave and Kelvin Grove Rd).

Freight

Palmerston North is continuing to grow as the distribution hub for import, export, and domestic commodity movements in the lower North Island. It is at the centre of both the road and rail transport network, and results in two commodity flows of importance for the central region:

- It is a key staging point for high-value import and domestic freight between Auckland and Wellington, or between Auckland and the South Island.
- It has good access to hinterlands, which produce key New Zealand export commodities, which can easily be exported out of ports in Napier, New Plymouth, and Wellington, or even Auckland and Tauranga. It is the staging point between Fonterra output from the Whareroa and Pahiatua plants and export locations in Napier, Auckland, and Tauranga.

Freight modelling was undertaken by New Zealand Transport Agency – Waka Kotahi as part of the PNITI business case[8] on the assumption of no changes to the existing strategic rural road transport network. This modelling demonstrated strong HCV growth on several already constrained routes such as Tremaine Ave and Railway Road. HCV growth is anticipated to be more modest in other parts of the city such as Fitzherbert Ave.

This modelling did not consider the further impacts of the Te Utanganui Freight hub and any additional HCV trips that this may generate.

Status: Final

Table 8: Anticipated Freight Growth

Transport route	HCV flows in		Growth 2021-2031	
	2021	2031	Per cent	Number
Tremaine Ave (west of SH3)	1479	1834	24%	355
Tremaine Ave (east of SH3)	1554	2082	34%	528
Kelvin Grove Road (west of Roberts Line)	1448	1605	11%	158
Railway Road Overbridge	1374	2086	52%	712
Fitzherbert Ave Bridge	1924	2012	5%	88
Napier Road	714	797	12%	84
Ashhurst-Bunnythorpe Road	341	369	8%	29
SH3 (south of KB Road)	679	885	30%	206
SH54 (east of KB Road)	842	826	-2%	-16
Waughs Road	835	1164	39%	329
SH56 (south)	1036	1155	12%	120
SH57 (south)	668	678	1%	10

With the increase in HCV on the road, there will be a higher number of interactions between HCV's and pedestrians, cyclists, and vulnerable road users. There will also be increased road noise from these vehicles and a general lowering of amenity values.

Transport infrastructure on the network can also be restrictive for HPMV (overweight overwidth) routes and easing this restriction requires strengthening of load bearing infrastructure such as specific bridge structures or large culverts. This will allow transit through the city more efficiently without the need to deconstruct loads or traversing residential or rural routes. The current list of HPMV routes is presented in Appendix B.

Public Transport

Horizons are currently reviewing the Palmerston North urban bus services ahead of the renewal of the service contract in 2022. It is not anticipated that this review will result in increased investment in the PT service but may see some improvements made. The type and scale of these changes are uncertain and is captured further in the Risk Section.

Changes to the PT service will influence how Council invests in PT infrastructure throughout the city. It will impact the number of bus bays required to be provided at the urban bus terminal on Main Street. Wider network infrastructural changes could be required should bus routes be adjusted.

Cycling

The Urban Cycle Network Masterplan was developed in 2019 to guide investment in cycle infrastructure in the city. This is expected to be delivered incrementally over several years with the overall aim of creating an environment and culture change that enables more people in Palmerston North to choose cycling more often.

On several roads, the transport network will need to transform to accommodate the level of cycle infrastructure anticipated. This will mean a reduction in the number of on-street car parks, dedicated cycle infrastructure at intersections and greater consideration of cyclists needs across the network.

Palmerston North Airport

Palmerston North Airport is a significant regional facility, acting as a hub servicing the wider region encompassing the districts of Ruapehu, Rangitikei, Whanganui, Manawatū, Tararua, and Horowhenua. The Airport is the gateway entrance into Palmerston North city and the region and is an important economic enabler for the region.

Annual passenger numbers were 687,142 in the year ending June 2019, increasing by 4.5 per cent from the 657,515 passengers in the year ending June 2018. Passenger volumes for 2020 were forecast to decrease due to the withdrawal of Jetstar from Palmerston North. However, the impact of COVID-19 has been more significant. Total passenger throughput for the year ending June 2020 was 498,422. Covid-19 is expected to continue to result in a significant reduction in air travel. However, it is unknown what the long-term effects of this will be in the city and on Palmerston North airport.

Airfreight volumes data is not published by the airport company but growth in volumes was expected following the introduction of Boeing 737 freighter services into the airport in 2016.

New Zealand Defence Force

Linton Army Camp and RNZAF Base Ohakea are both located in the wider Manawatu area. In 2019, the New Zealand Government announced a $2.1 billion investment into Defence infrastructure. This included significant investment at both Linton and Ohakea bases.

The Defence Force has previously indicated that due to operational changes there may be an increase in traffic between Linton and Waiouru, particularly for heavy vehicles. It was also indicated that given the existing Defence Force housing policy, more service personnel and their families would be living in the community. This would result in increased civilian commuter traffic from Linton and Ohakea to Palmerston North.

Future demand from heavy army vehicles and civilian commuter traffic is anticipated to be easily absorbed into the existing grid network. However, key freight routes through and around the city will need to remain structurally sound to cater for heavy army vehicles, along with safe and efficient road corridors within the city being required for all users.

The construction of He Ara Kotahi and associated off-road pathway to Linton provided a safe route for active modes between the city and Army Camp.

Tertiary Education

Palmerston North has 6 centres for tertiary education within the city, these being:

- Massey University;
- Universal College of Learning;
- Te Wananga O Aotearoa;
- International Pacific University New Zealand;
- English Teaching College; and
- The Design School.

Student numbers have been declining since 2012. The overall impact of COVID-19 on long-term student numbers is uncertain. While it may result in a short-term decrease in international students. There may also be a longer-term increase as other retrain or upskill in a new industry.

Most tertiary education providers in the city provide free public transport to students and employees. This means that a sizeable portion (nearly 60 per cent) of public transport trips in the city are made under these schemes. It was shown in Figure 8 that the number of trips made on Massey services is comparable to that on all other urban services. If student populations do decline, it would place a greater financial burden on Horizons and New Zealand Transport Agency – Waka Kotahi to fund the existing public transport level of service.

The construction of He Ara Kotahi and associated off-road pathway to Massey University provided an alternative safe route for active modes between the city and university.

2.8.4 Climate Change

Climate change will impact how we build and upgrade our transport infrastructure. The Climate Change Projections for New Zealand (MfE 2018) indicate that by 2050 the Manawatū-Whanganui region will see higher temperatures[2] and changes in rainfall patterns[3]. There are no current predictions for the likelihood of storms or extreme weather events although these are likely to be more severe in a higher temperature environment[4].

In response to climate change, Council has committed to a 30% reduction in carbon emissions by 2030 and net zero by 2050. This is reflected in the strategic direction of the 2024-2034- Long Term Plan (LTP).The understanding of how best to achieve this is continuing to evolve, especially as costs of many technologies fall, and new opportunities become available.

We have resolved to take account of the predicted impacts of changes in weather patterns when planning and maintaining infrastructure, reduce its own emissions, help reduce the emissions of the city, and reduce our wider environmental impact wherever possible.

[2] c.+0.9°C increase in summer temperatures and an increase from 18.6 'hot days' to 28.8 by 2050 under RCP6.0

[3] A +6% increase in winter rainfall and a -1% decrease in summer rainfall by 2050 under RCP6.0

[4] Research is ongoing via the EWERAM storm analysis project. Also from academic research e.g. Stone et al (2022)

Table 9: Climate Change Impact on Transport Infrastructure

Driver	How does this affect demand on our infrastructure	Activity Response
Climate Change – The city is likely to face: - higher temperatures - changes in rainfall patterns - more frequent and/or more intense weather events (e.g. flooding, heatwaves, high winds). Impacts such as sea level rise may affect long term demographic changes depending on the effect on international and local migration.	**Periodic Closures** Storm weather events have a direct impact on the services we provide through the transport network. In severe weather (high wind, rain etc) there is either restricted access or closure of routes and flooding.	Regular assessments of all critical infrastructure such as (but not limited to) roads, footpaths, kerb and channel, drainage, structures, bridges, etc. Provision of post-event inspection budgets to look for damage
	Increasingly wet winters and hot dry summers may result in changes to loading of assets and structural strength.	Post event remedial works budget Investment level changes based on frequency of events

Decarbonisation

Council intends to lower its carbon footprint over time with the aim of being carbon neutral by 2050 in line with national and international targets. An audit is proposed to assess the energy use and other carbon emissions generated by our Transport infrastructure at various stages of its life cycle.

The data we currently have and will generate from the proposed audit will be analysed and related to asset class with appropriate mitigation measures.

Table 10: Decarbonisation Impact on Transport Infrastructure

Driver	How does this affect demand on our infrastructure	Activity Response
Decarbonisation – Our overall aims by 2050 is for our infrastructure to: - be as energy efficient as possible - be de-coupled from fossil fuel use - provide carbon sink locations in the transport corridor where possible - adapt to service low carbon technologies and assess impact on transport network (e.g., electric transport usage) - reuse and recycle building materials where possible	This may impact demand of our infrastructure through loading changes based on increased electric vehicle usage & carbon sink environment. It will also change how we construct, renew, and maintain our assets	We will use potential climate adaptation funds to deliver various works across our portfolio including carbon sink environment improvements, carbon footprint monitoring and understanding the demand changes. Continue to install LED lighting across portfolio. Where appropriate solar energy systems will be installed for associated bus shelters, lighting assets, parking assets, etc. Car parking will aim to include facilities for electric car charging.

2.9 How we deliver the Transport Activity

2.9.1 How the Activity is delivered

All physical works for the transport network including maintenance, renewal, and new works are undertaken through competitively tendered contracts, with management and professional services being mostly undertaken using in-house resources.

Delivery of the transport activity in the city is complex. There are several organisations that deliver various parts of the transport activity. There are also various teams within Council that contribute to delivering transport activity.

Maintenance, operation & renewal contracts

All physical works for the transport activity including maintenance, renewal and improvement works are undertaken through competitively tendered contracts, and management is undertaken via Council's in-house resources with external support sourced when required and when it would add the most value.

Maintenance contracts cover the following:

- Outcomes sought from the contract;
- Compliance with legislation such as Health and Safety;
- Emergency and routine response times;
- Inspection programme and reporting requirements;
- Schedule of quantities;

2.9.2 Procurement Strategy

There is an intent to move from a low-risk transfer, transactional contracting environment, to a more highly incentivised and mature contracting regime that will better harness skills within the industry.

Smart buyer practices

The Road Efficiency Group (REG) is providing guidelines to assist local authorities in developing 'smart buyer' practices for the delivery of transport contracts. The aim of which is to provide better value for money over the whole of life of the asset. Our self-assessment score based on the smart buyer self-assessment puts us in the Developing category. This means that we still have opportunities to create further impact value through our procurement process.

Road Maintenance Contract

The current road maintenance contract commenced in July 2021. Most maintenance, renewal and minor improvement works are undertaken by the contractor or under their supervision.

The road maintenance contract includes physical works relating to:

- Sealed and unsealed pavement (including parking areas);
- Drainage;
- Bridges and structures;
- Environmental;
- Streetlights;
- Traffic signals;
- Footpath and pedestrian facilities;
- Sealed shared paths;

2.9.3 Collaboration and Shared Services

A Memorandum of Understanding (MoU) was established in late 2019 between Palmerston North City Council, Horowhenua District Council, Manawatu District Council, and Rangitikei District Council, with New Zealand Transport Agency – Waka Kotahi recognised as a key stakeholder. The intention is to collaborate and work together to develop an agreed model for shared services on the client and/or contract delivery sides of road maintenance delivery. While no specific outcomes are sought from the agreement, the Council's will continue to work together where value can be added.

2.9.4 Local Government Act Section 17A

Section 17A of the Local Government Act requires the Council to review the cost effectiveness of arrangements for meeting the needs of communities within its district or region for good quality local infrastructure, local public services, and performance of regulatory functions. This includes considering options for governance, funding, and delivery of infrastructure and services.

A high-level Section 17A review for transport was conducted in 2017. Council decided that a more resource intensive review was not warranted and that transport services should be governed and funded by the Council (with New Zealand Transport Agency – Waka Kotahi funding contribution), and that service delivery should be a mix of private sector contracts and Council's own work force. This was due to transport's strong contribution to Council's strategic goals, its high degree of integration with other Council services, and its high public good.

2.9.5 Data and Information Systems for the Activity

Several asset management software systems are used to assist in the long-term management of the network, these being:

- Roading Assessment and Maintenance Management (RAMM) is used to hold asset data on most of the physical assets that support the transport activity. This includes data on age, maintenance history, technical specifications, inspection records, survey data and visual inspection records. The pavement treatment selection algorithm is used to support the development of short-term renewal profiles and indicative short-term maintenance programmes for pavements and surfacing using this asset data. Timely entry of faults on the network and as-built information from programmed works are entered into RAMM by contractors. Programmes developed in RAMM are optimised by using a predictive modelling tool. Council have used JunoViewer to determine the forward works programme outlined in this Long Term Plan (LTP)
- ONRC Performance Measure Reporting Tool (PMRT) is a national tool that uses information uploaded from RAMM and manually entered auditing information to monitor individual Councils against specified customer and technical levels of service. It can also report on Council's performance compared to similar transport networks around the country. The PMRT is under continual improvement, with dashboard reporting being developed from high level customer outcomes performance to detailed data confidence performance.
- New Zealand Transport Agency – Waka Kotahi 's Crash Analysis System (CAS) is used to record crash data which in turn is used to compare and monitor crash trends over time. This data is used to predict and prioritise safety improvements for roading maintenance and project works. Cash data is uploaded into RAMM and subsequently into the ONRC PMRT tool.
- Network modelling software is used to evaluate the effect of wider changes to the road network on traffic efficiency. A CUBE traffic model was developed by Council in 2015 and has been adopted for use by the Transport Agency in the development of regional business cases. A new contract has recently be let for updating and calibration of the CUBE model. Other recent work has included the Network Operating Framework and associated Network Operating Plan (NOP) developed in association with the Manawatu District Council, Horizons Regional Council, and the Transport Agency
- Intersection modelling software (SIDRA) is used assess the performance of intersections or groups of intersections. Council also uses it to identify intersection treatments and optimise operation.
- SCATS is used to monitor and coordinate traffic signals throughout the city, and is controlled from the Waka Kotani Wellington Transport Operations Centre. The monitoring facilities allow for centralised fault reporting, traffic counting, and strategic monitoring. The algorithms distribute delays between the approaches and give priority to the main road and can coordinate flows between intersections.

3. Levels of Service

3.1 Key Stakeholders

The table below highlights key external stakeholders and the outcome areas actively sought. A description of the key outcomes is also presented below. These outcome areas are central to define and categorise the Levels of Service we demonstrated.

Table 11: Stakeholders

Key Stakeholder	Key Outcome Areas					
	Safety	Active modes	Travel time reliability	Quality of network w.r.t cost	Functionality	Sustainability
Ministry of Transport	✓	✓	✓	✓	✓	✓
New Zealand Police	✓	⊖	✓	⊖	✓	⊖
Horizons Regional Council	✓	✓	✓	✓	✓	✓
Ratepayers	✓	✓	✓	✓	✓	⊖
Community groups	✓	✓	✓	⊖	✓	✓
Businesses and NGOs	✓	✓	✓	⊖	✓	⊖
Visitors	✓	✓	✓	⊖	⊖	⊖
Road Transport Association and heavy haulage operators	✓	✓	✓	⊖	✓	⊖
Automobile Association	✓	✓	✓	⊖	✓	⊖
Schools and education providers	✓	✓	✓	⊖	✓	⊖
Other Councils	✓	✓	✓	⊖	✓	✓
Contractors	✓	⊖	✓	✓	✓	✓
Rangitāne o Manawatū	✓	✓	✓	✓	✓	✓
Te Ringa Maimoa (formerly known as REG)	✓	✓	✓	✓	✓	✓

Table 12: Key Outcome Areas Description

✓ Outcome is sought by stakeholder	⊖ Outcome is not applicable to stakeholder

Safety	Safe journeys on the transport network
Active modes	A transport network that provides an easy and safe route for active modes across the region
Travel time reliability	A transport network that enables the reliable movement of people and goods throughout the region
Quality of network w.r.t cost	Network maintained in good order while optimising whole of life cost
Functionality	A transport network that supports the regions functional requirements
Sustainability	A transport network that supports the reduction in CO2 emissions

The Council's Levels of service measures are based on the target outcomes sought by the stakeholders, identified problems on the transport network, statutory requirements and ONRC performance measures. Levels of service and performance measures are grouped into two categories:

- Customer Measures: These cover aspects of the transport service that are of most interest to the community. Measures include those derived from the elected member workshops, and community satisfaction indicators.
- Technical Measure: These support customer measures. They are of more interest to those managing the transport network as indicators of success. They include the DIA mandated non-financial performance measures. They are used as a management tool, measured, and reported internally.

Customer Levels of Service and Technical Levels of Service are discussed in greater detail below.

3.2 Customer Levels of Service

The Council the following approaches to understanding the needs and expectations of its customer groups:

- Annual Residents Survey;
- The customer request system (KBase);
- Internal workshops – both Councillors and staff;
- Liaison with user groups and stakeholders.

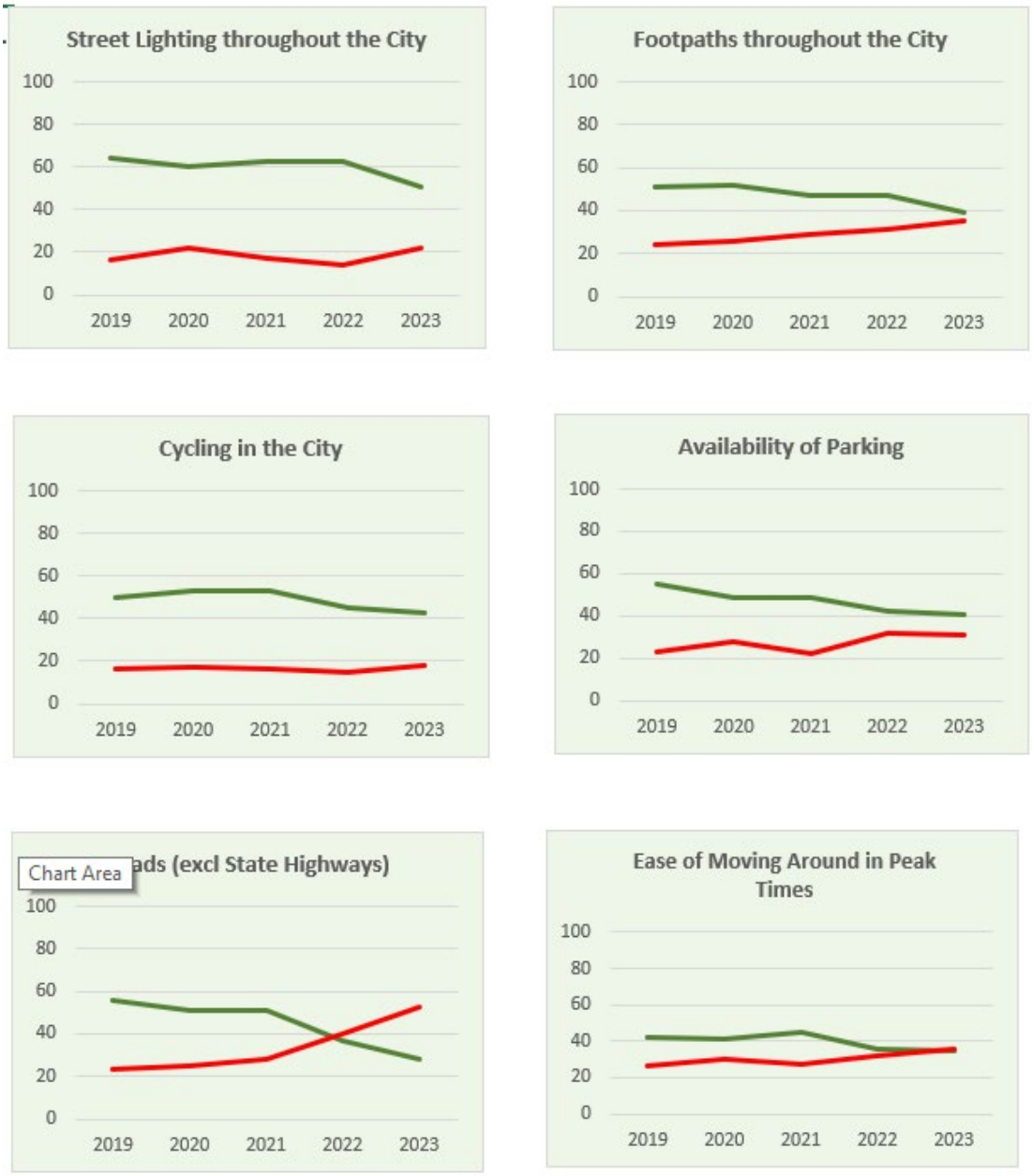
3.2.1 How is this measured

Annual Residents Survey

The Residents' Survey is an independent survey that Council carries out every year. The overall performance of the City Council has remained consistent, with a 1%-point decrease in satisfaction since 2022. Some of the key trends pertaining to transport network are presented below. The green lines indicate the percentage satisfaction whereas the red lines indicate the percentage dissatisfaction trend.

Status: Final

Figure 14: Transport Network Key Trends



Areas of key concern highlighted by the survey are as follows with dissatisfaction percentages:

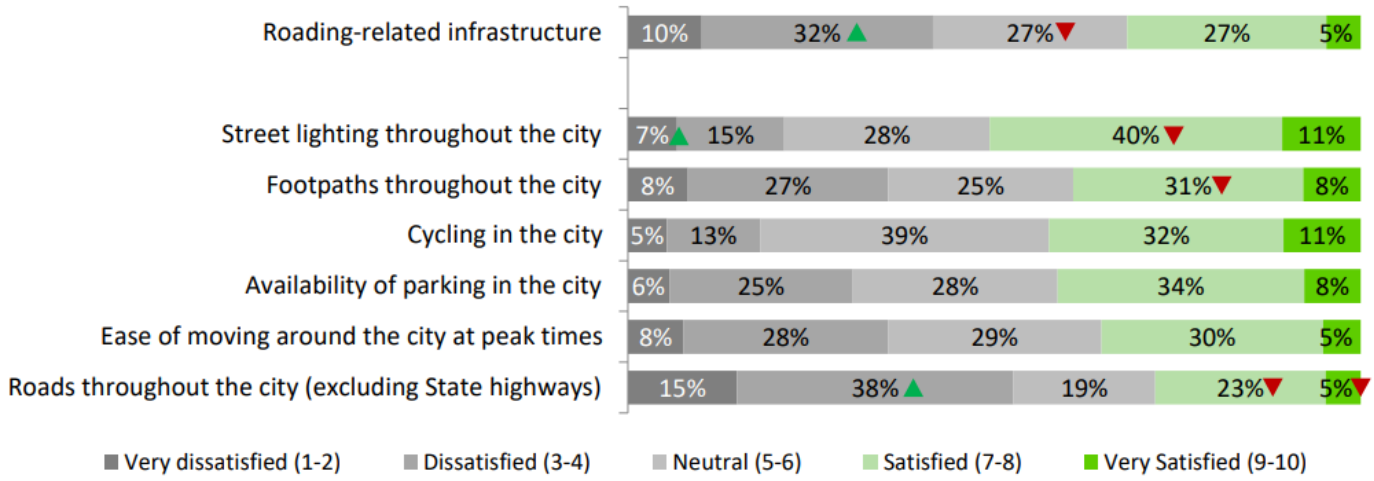
Table 13: Annual Residents Survey Areas of Concern

Areas of concern	Dissatisfaction Percentage
Roads throughout the city (excluding state highways)	53%
Overall satisfaction with roading-related infrastructure	42%
Ease of moving around the city at peak times	36%
Footpaths throughout the city	36%
Availability of parking in the city	31%

Road maintenance has received the highest number of comments from respondents with the key issues being the need for improved maintenance and ensuring that roads are safe to use.

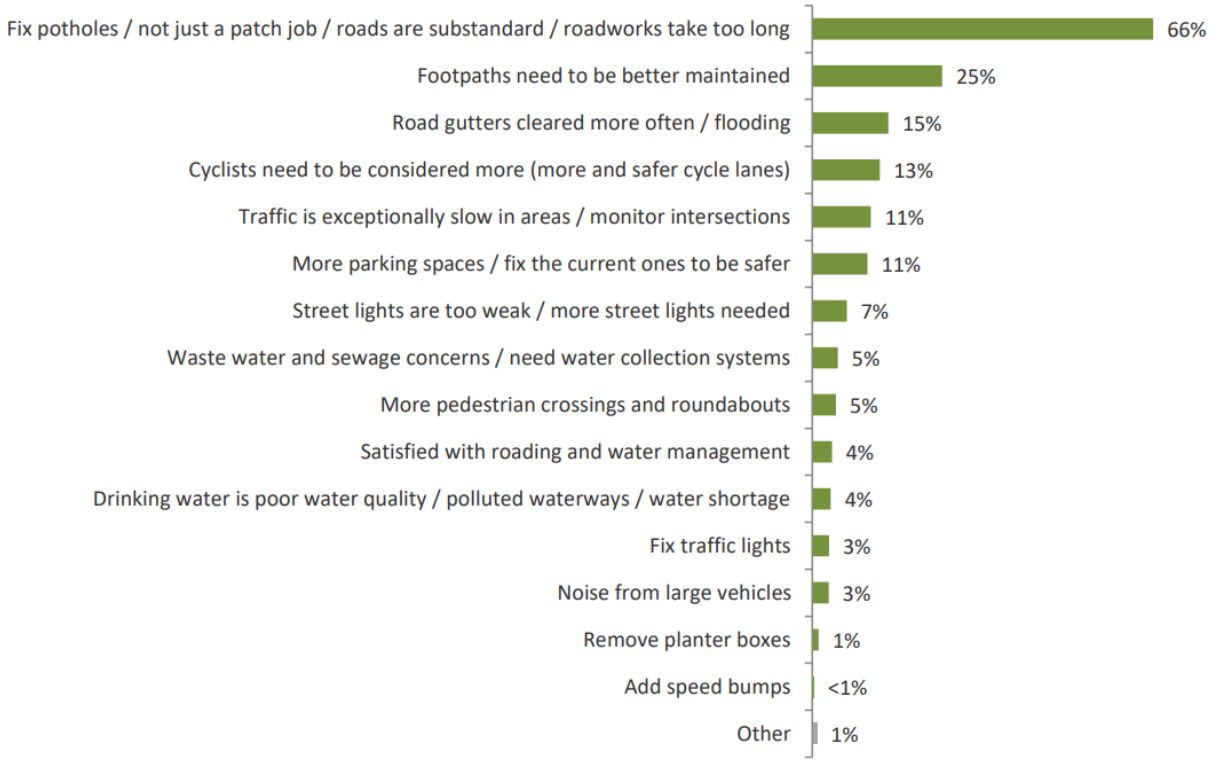
The most recent data on public satisfaction with transportation assets reveals an interesting trend, particularly in terms of road-related infrastructure. The findings show a concerning 3% drop in public satisfaction compared to the previous year, indicating a persistent downward trend in this area. The summary of the resident's survey is presented below.

Figure 15: Annual Residents Survey Summary



The graph below shows the distribution of the types of roading-related and water-related infrastructure concerns highlighted in the survey.

Figure 16: Annual Residents Survey Summary of Concerns



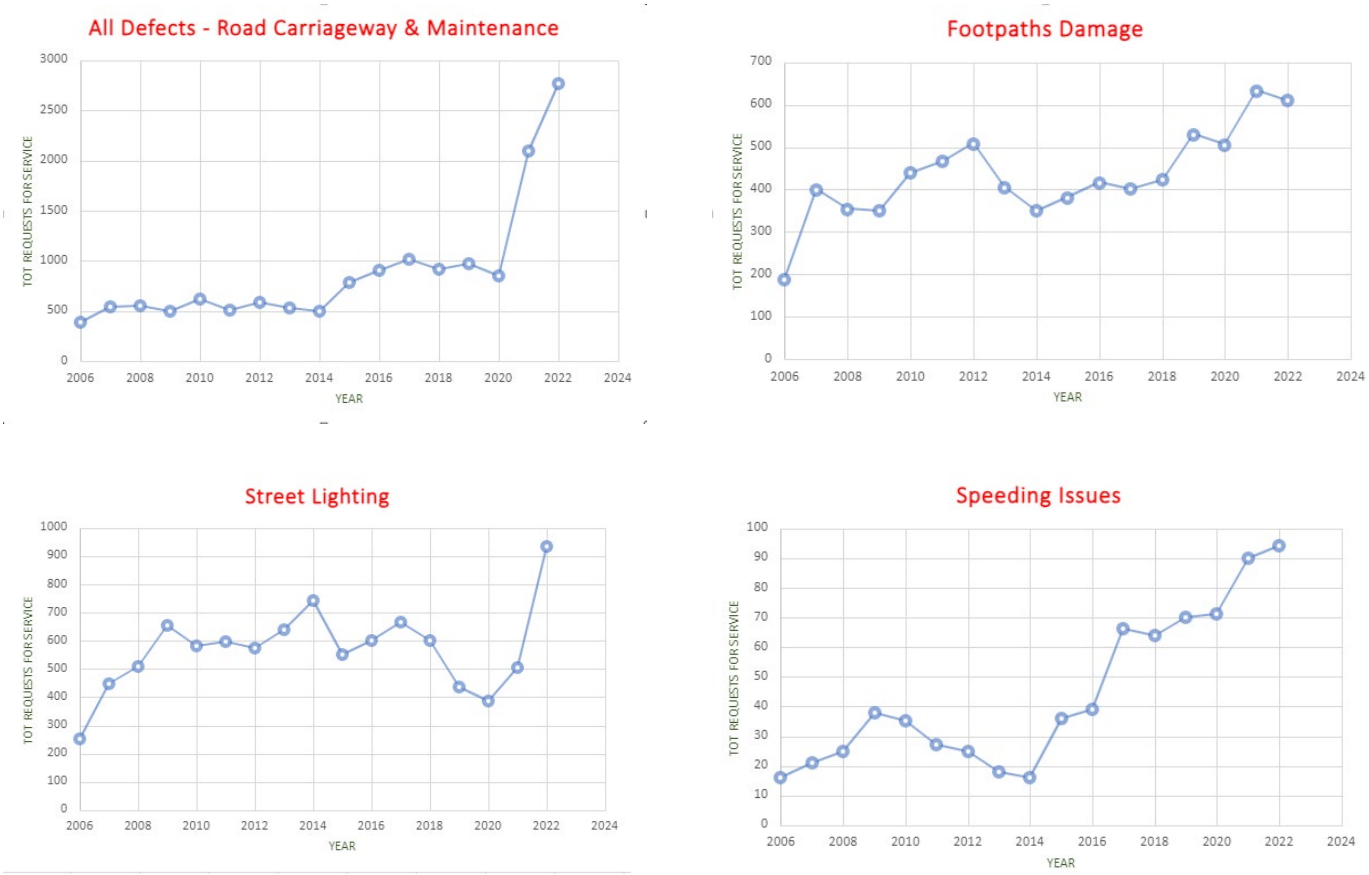
The customer request system (KBase)

Knowledge Base (K-Base) is our customer request for service (RFS) database. Most RFS relate to a complaint, a request for work to be completed or highlighting a deficiency in the transport network.

KBase categories and typical trends in RFS numbers are summarised in the following table. Of note are:

- The increase in Road Carriageway & Maintenance Defects (see figure 17) is partly related to changes in reporting and recording of faults. The roading maintenance contract was awarded to another private company in 2022, triggering big changes in processes and reporting.
- Although for the past few years there has been Increasing trends in carriageway defects, potholes, and footpath damage, due to network age there has been a small reduction of RFS for footpath damage.
- Speeding issues is a growing concern for the community.
- Street lighting complaints have been trending down, which are in line with the LED replacement programme

Figure 17: Transport Assets Requests for Service



Internal workshops and liaisons with stakeholders

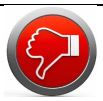
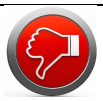
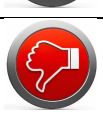
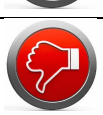
The key concerns highlighted through these interactions are:

- Focus required on arterial network to improve travel efficiency
- Deterioration of the road network – especially potholes
- Safety of vulnerable road users
- Alternative river crossing required
- Prioritise heavy vehicles away from local communities and schools
- Public transport is not easy to use or efficient
- Footpaths not accessible for all users
- Parking inadequacies
- Adequate levels of on streetlight

3.2.2 Performance

The table below describes the Customer Levels of Service performance measures. These measures are linked to the appropriate key outcome areas. The performance target and tracking over time is not at a mature state currently and is identified as an improvement action, however it is important to note that based on the latest survey, we are performing worse than expected. This will be addressed in the future iterations of this AMP.

Table 14: Customer Levels of Service

Key outcome areas	Performance Measure	Performance Target (2022-2023)	How are we doing?
Quality of network w.r.t cost	The percentage of residents rating roads throughout the city (excl. State highways) as satisfied or very satisfied.	No defined target	
Active modes	The percentage of residents rating cycling in the city as satisfied or very satisfied.	No defined target	
	The percentage of residents rating footpaths throughout the city as satisfied or very satisfied.	No defined target	
Safe	A reduction from the previous year in the number of fatalities and severe injury crashes on the city transport network (DIA Measure).	Reducing	
	A reduction from the previous year in the number of fatal and severely injured crashes involving pedestrians and cyclists in Palmerston North.	Reducing	
	The percentage of residents rating street lighting throughout the city as satisfied or very satisfied.	No defined target	
Travel time reliability	The percentage of residents rating ease of moving around the city at peak times as satisfied or very satisfied.	No defined target	
Quality	The percentage of residents rating the availability of parking in the city as satisfied or very satisfied.	No defined target	
	The percentage of requests for service receiving an initial response within three working days (DIA Measure).	> 95%	

3.2.3 Performance

The table below describes the Technical Levels of Service performance measures. These measures are linked to the appropriate key outcome areas. The performance target and tracking over time is not at a mature state currently and is identified as an improvement action. This will be addressed in the future iterations of this AMP.

Table 15: Technical Levels of Service

Key outcome areas	Performance Measure	Performance Target (2022-2023)	How are we doing?
Quality of network w.r.t cost	Council maintains the overall transport network five-year average costs ($/km) at or below our peer group average.	At or below peer group	
	Smooth Travel. Percentage of travel on transport network classified as smooth as per the defined level of service (DIA Measure).	80%	
	The Council maintains the Pavement Integrity Index for the transport network within the specified range.	<5	
	The percentage of sealed roads that are resurfaced each year (DIA Measure).	> 3.5%	
Active modes	The percentage of footpaths receiving a grade 4 or 5 condition rating on a 1(best) to 5 (worst) scale (DIA Measure).	<3%	
	The percentage of trips for work and education made by pedestrians, cyclists and on public transport.	Increase (new Census measure)	
Travel time reliability	The number of people that move along key arterial transport corridors during peak hours (Ped, cycle, PT, private vehicle);	No defined target	
Functionality	Reduction in heavy vehicles through the CBD and along local streets	Reducing	
	Increase in the number of heavy vehicles on selected freight routes	Increasing	
	Reduction in recorded vehicle speeds through the CBD and along local streets	Reducing	
Sustainability	Tonnes of CO2 equivalent emitted from vehicles on roads in Palmerston North.	Reducing	
	The percentage of trips for work and education made by pedestrians, cyclists and on public transport.	Increase (new Census measure)	

3.3 Addressing Levels of Service Gaps

The table below identifies levels of service gaps and strategies to address the gaps. These are a combination of customer and technical performance gaps. Once the performance targets and trends have been finalised, a gap analysis will be undertaken to improve the identification of performance gaps. This is an improvement task. Currently this section is populated with historic issues and emerging trends based on customer, stakeholder and staff feedback.

Table 16: Level of Service Gaps

Key outcome areas	Level of Service Performance Gap	Strategy to Address
Quality of network w.r.t cost	Dissatisfaction with general transport activity by residents.	Various capital programmes in place that will improve transport infrastructure Condition of assets to be improved via ongoing maintenance and renewal activities.
	Road maintenance and resurfacing – not meeting DIA target and increasing trend of complaints.	Increase resurfacing budget to meet mandatory DIA measure. Undertake optimal whole of life renewal and maintenance work
	Heavy vehicles travelling on local streets.	Deliver Roads and Streets Framework Regional Freight Ring Road
	Dissatisfaction with the availability of car parks within the city.	Provide parking management that allows for better utilisation of existing car parks. Encourage the use of active and public transport to minimise the overall car park demand.
Active modes	Cycling and footpath networks are not to the standard anticipated.	Provide improved infrastructure, service, and priority for active and public transport modes.
	There is a decreasing number of trips being made on the transport network by pedestrians, cyclists and on public transport	
Safety	An increasing number of deaths and serious injuries. Especially at intersections or involving vulnerable road users.	Speed Management. Increased emphasis on safety programmes and initiatives (LCLR, SNP). Maintenance and renewal work consider road safety implications.
Travel time reliability	The movement of people around the city at peak times.	Improvements for active and public transport modes to utilise capacity within these networks.
Sustainability	Transport carbon emissions are continuing to increase in the city.	Provide improved infrastructure, service, and priority for active and public transport modes.

3.4 Differential Levels of Service

Te Ringa Maimoa has developed a differential levels of service (dLOS) framework to assist local authorities to assess the impact of under investment in programmes by linking the required funding to the agreed levels of service (LOS) and risk. This tool is still in development; however, an initial attempt has been made with this iteration of the Transport AMP to estimate the risk and consequence of delivering less than the recommended programme.

We have utilised the dLOS decision support tool developed by Te Ringa Maimoa as part of this project to assess eight levels of services categories while linking these to the existing work category budget requirements. The table below provides a summary of the levels of services assessed and associated work categories.

Table 17: Levels of Service Categories Assessed Using dLOS Decision Support Tool

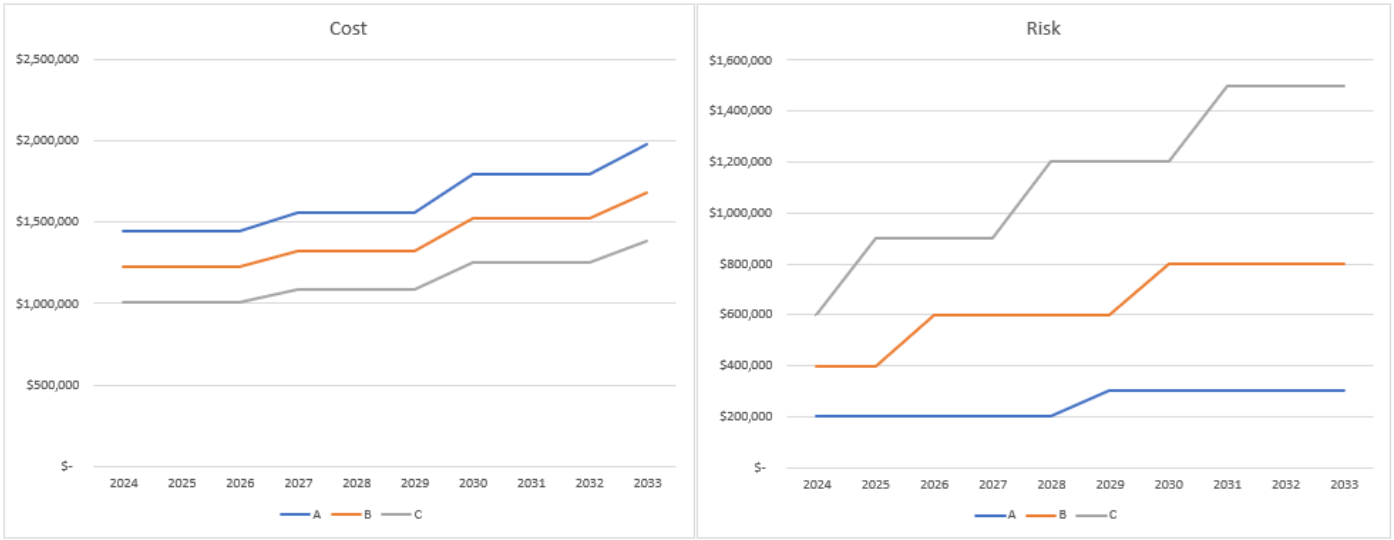
LoS ref	Level of Service	Service Outcome	Risk	Work Category
Op01	Sealed Pavement Maintenance	Safety	Vehicle damage	WC 111
Op03	Footpath Maintenance	Health	Trip Hazards	WC 125
Op07	Network Services Maintenance	Risk	Safety impacted	WC 122
Op08	Cycle Path Maintenance	Health	Active travel discouraged	WC 124
T01	Road Surface Condition	Safety	Contribution to DSIs from road condition	WC 212
T02	Pavement Condition	Service Sustainability	Life cycle costs increase	WC 214
T03	Footpath Condition	Health	Trip Hazards	WC 225
T07	Traffic Services Condition	Risk	Safety impacted	WC 222

This tool allows multiple options to be assigned to each LOS category with varying investment levels and associated risk profile. The tool also allows for the estimation of the emissions for each option; however, these will be assessed in the next iteration of this AMP using the Project Emissions Estimation Tool (PEET), which is in development by New Zealand Transport Agency – Waka Kotahi.

The graphs below provide an example of how the risk profile might increase as the programme (cost) is reduced. Option “A” indicates a 100% investment of the recommended budget presented in the AMP for WC 225 to provide for footpath condition, whereas option “C” indicates only 75% investment in the same programme. As can be expected, the risk costs increase over time due to under investment in the work category.

Status: Final

Figure 18: Investment Options and Associated Risk Profiles



Overall investment scenarios have been developed to understand the investment and risk relationship. Five scenarios were developed using a combination of service levels A (as per recommended budget) through to C (reduced budget) as shown below.

Table 18: Investment Scenarios linked with LOS service levels

Scenario Map		LoS Scenarios				
LoS ref	**Level of Service**	**ONE**	**TWO**	**THREE**	**FOUR**	**FIVE**
T01	Road Surface Condition	A	A	A	B	C
T02	Pavement Condition	A	A	A	B	C
T03	Footpath Condition	A	B	B	B	C
T07	Traffic Services Condition	A	B	B	C	C
Op01	Sealed Pavement Maintenance	A	A	B	B	C
Op03	Footpath Maintenance	A	A	B	B	C
Op07	Network Services Maintenance	A	B	B	B	C
Op08	Cycle Path Maintenance	A	B	B	C	C

Status: Final

The graphs below show the relation of programme cost with the associated risk costs, as the programme costs reduce, the risks costs rise and as can be noted, scenarios three, four and five become unsustainable in terms of manging network risk costs.

Figure 19: Investment Compared to Risk Costs for Five Scenarios

Note: Risk costs are broad estimates and need to be refined in future iterations of the AMP

4. Risk Management

4.1 Risk

The Risk Management Framework outlines how the council integrates, implements, evaluates, and improves its risk management process. However, some key elements related to the transport activity have been highlighted in this chapter.

The risk management policy statement and objectives are presented below:

Our policy Statement states that the council is proactively and consistently managing risk to:

- Support the achievement of the Visions and Goals of the Long Term Plan (LTP)
- Control Organisational Threats and opportunities as aligned with the organisation's risk attitude and tolerance
- Provide a safe and secure environment for staff, contractors, and users

Risk management objectives below, support the implementation of the policy statement:

- Develop risk management to be an integral part of all the Organisation activities to safeguard assets, people, finances, the environment, and the reputation of the city and organisation
- Involve all the organisation's officers in embedding a risk-based approach to achieving their work, ensuring that human and social factors are forefront during decision-making and continually improve risk management through learning, experience, and review
- Be agile and responsive along with a structured, comprehensive, and effective approach to emerging and changing risks within our organisation
- Provide assurance that risks are being managed and, where necessary, mitigated adequately, and there are timely responses to escalating risks and risk events

Risk management is a critical step for the organisation to achieve its four goals:

1. Innovative and growing city
2. A creative and exciting city
3. Connected and safe communities
4. A sustainable and resilient city

In practice, this requires divisions processes to have a clear definition of the process, service, activity, or asset for which the division is responsible. This allows the process owner (risk owner/division manager) to determine the activity risks and create risk registers. A summary of this risk register is summarised in this section.

4.1.1 Risk Assessment

The risk assessment process includes the risk identification, risk analysis and risk evaluation. The divisional managers are responsible for identification of risks under advice and guidance from the organisation's Risk and Resilience team. The analysis of risk involves detailed consideration of uncertainties, risk sources, consequences, likelihood, events, scenarios, controls, and their effectiveness. Lastly, risk evaluation involves comparing the results of the analysis with the established risk criteria to determine where additional action is required.

The council considers the following factors when undertaking risk identification, analysis, and evaluation.

Table 19: Risk Assessment

Risk Identification	Risk Analysis	Risk Evaluation
• Tangible and intangible sources of risk • Causes and events • Vulnerabilities and capabilities • Changes in the external and internal context • Indicators of emerging risks • The nature and value of assets and resources • Consequences and their impact on objectives • Limitations of knowledge and reliability of information • Time-related factors • Biases, assumptions, and beliefs of those involved.	• The likelihood of events and consequences • The nature and magnitude of consequences • Complexity and connectivity • Time-related factors and volatility • The effectiveness of existing controls • Sensitivity and confidence levels	• Do nothing further • Consider risk treatment options • Undertake further analysis to better understand the risk • Maintain existing controls • Reconsider objectives

The council utilises eight categories of risks for processes identified for the Transport activity:

- Financial
- Legal/Compliance
- Environmental
- Health, safety, wellbeing
- Reputational
- Service delivery
- Performance and capability:
- Cultural (including spiritual matters):

4.1.2 Risk Criteria and Risk Appetite

Risk Criteria

The organisation defines the overall risk of a process or subprocess as a product of likelihood and consequence. The likelihood scales how likely or often an event is expected to occur. The descriptors provide several diverse ways of evaluating the probability in line with the nature of each risk. The consequence values reflect the organisations values, objectives and resources and is consistent with its policies and seeks to meet the views, obligations and expectations of internal stakeholders and the public.

The risk matrix presented below provides an overall risk rating of an event or process.

Figure 20: Risk Matrix

		CONSEQUENCE				
		Minor (1)	Moderate (2)	Serious (3)	Major (4)	Severe (5)
LIKELIHOOD	Almost Certain (5)	Medium 5	High 10	Very High 15	Extreme 20	Extreme 25
	Likely (4)	Medium 4	High 8	Very High 12	Very High 16	Extreme 20
	Possible (3)	Low 3	Medium 6	High 9	Very High 12	Very High 15
	Unlikely (2)	Low 2	Medium 4	Medium 6	High 8	High 10
	Rare (1)	Low 1	Low 2	Low 3	Medium 4	Medium 5

Risk Appetite

The risk appetite is expressed in terms of three broad categories:

- **Averse**: Avoidance of risk must be the priority, with minimal risk exposure and maximum treatment effort required. Any uncertainty or risk that remains after treatment efforts (controls and/or mitigation) should only be allowable where necessary achieve goals
- **Neutral**: Risk exposure is not preferred but is recognised as part of achieving objectives. Treatments to minimise risks and uncertainties are expected to be in place were considered necessary
- **Seeking**: The Organisation is actively seeking to take on more of this risk/uncertainty as it relates to and enhances the achievement of goals

The amount of risk the organisation is willing to accept or retain is summarised in the figure below:

Figure 21: Risk Appetite

Risk Type	Risk Appetite								
	Averse			Neutral			Seeking		
	1	2	3	4	5	6	7	8	9
Financial			■	■	■				
Legal/Compliance		■	■	■					
Environmental		■	■	■					
Health, Safety & Wellbeing	■	■							
Reputational		■	■	■					
Service Delivery			■	■	■				
Performance and Capability			■	■	■				
Cultural		■	■	■					

The council's risk tolerance by risk rating and risk type is as follows:

Figure 22: Risk Tolerance

Risk Type	Risk Tolerance
Financial	Medium
Legal/Compliance	Medium
Environmental	Medium
Health, Safety & Wellbeing	Low
Reputational	Medium
Service Delivery	Medium
Performance and Capability	Medium
Cultural	Medium

4.1.3 Risk Register

The risk register summarised below highlights the division/unit risks associated with Transport. The table below provides a linkage of the process identified as a risk to the risk category identified above. The residual risk identifies the risk level after factoring in the controls and mitigation strategies. With the Target risk rating indicating which process need additional work required to reach the organisational risk appetite.

The full risk register is presented in appendix C.

Table 20: Transport Risk Register (Summary)

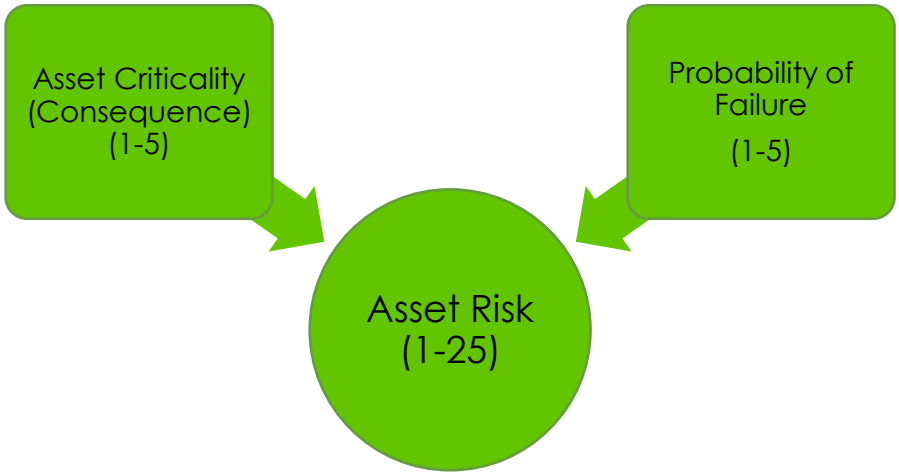
Process Name	Process Description	Associated Risk Categories	Residual Risk Rating	Target Risk Rating
Transport Activity Management	Create an understanding of the asset landscape • Describe all assets • Determine asset condition and design life expectancies • Determine performance/capacity/capability of assets and any remediation/replacement needs • Determine needs for upgrades under Capital New	Service Delivery Financial Reputational	**High**	**Medium**
Design	• Creation of design for construction from Long Term Plan (LTP) • Quality and quantity specifications drawn up • Pre-design testing to determine specification requirements • Hand off to contact environment for tender &/or costing &/or build	Service Delivery Financial Reputational	**Medium**	**Medium**
Contract Management	• Accountable for management of engineering requirements under contract post contract closing • Agree engineering changes required during contract term, including cost and time implications • Ensure compliance with contract technical specifications, including test and quality requirements • Issue payment certificates and issue Practical Completion Certificate and Retention Release Certificate • Obtain and review H&S plans from contractors/PCBU	Financial Service Delivery Health & Safety	**Medium**	**Low**

4.2 Critical Assets

The criticality framework defines critical assets as having a high consequence of failure (but not necessarily a high probability of failure) and therefore the criticality rating is intended to be used to prioritise limited resources to the most important (critical) assets.

It can subsequently be used as the basis for asset risk analysis (discussed in the previous section), which considers the probability of failure of assets under various risk events (e.g. earthquake, age-deterioration failure), as illustrated in Figure 8.

Figure 23: Asset Consequence x Probability = Asset Risk



The asset criticality rating ranges from a score of 1 (Minor) through to 5 (Severe) and the following four risk criteria are used to derive criticality. Details of how criticality ratings are developed is covered under the criticality framework, which is presented in Appendix D.

Table 21: Risk Category Criticality Ratings

Risk Category	Minor	Moderate	Serious	Major	Severe
Financial	Financial loss <$50,000 and/or Asset Value < $200,000.	Financial loss $50,000 - $200,000 and/or Asset Value $200,000 - $1M.	Financial loss $200,000 - $500,000 and/or Asset Value $1-5million.	Financial loss $500,000 -$1 million and/or Asset Value $5-10million.	Financial loss >$1 million and/or Asset Value > $10 million.
Environment	Small localized and reversibleenvironmental impact resulting in slight short-term damage to land and/or water ecosystems, unlikely to result in regulatory action.	Contained and reversible (minimal) environmental impact resulting in localized minor reversible damage to land and/or water ecosystems, unlikely to result in regulatory action.	Measurable damage to the environment requiring significantcorrective action resulting in localized medium-term reversible damage to landand/or water ecosystems. Possible regulatory action.	Widespread long-term (but reversible) damage to land and/or water ecosystems or Localized long-term, irreversible damage Probable regulatory action.	Extensive widespread irreversible damage to land and/or water ecosystems. Likely to result in significant regulatory action (large fine, prosecution).
Health, Safety & Wellbeing	Minor injury or near miss, first aid not required.	Minor injury requiring first aid (minor cuts, bruises).	Injury and/or sickness requiring medical treatment. Up to 3 months incapacitation.	Severe injury and/or sickness requiring specialist medical treatment or hospitalization. 3+ months incapacitation or long- term disability.	Permanent severe disability or loss of life, or multiple serious injuries. H&S issue likely to result in fine or imprisonment. Widespread sickness in the community.
Service Delivery	No loss of operational capability and/or minimal disruption to service levels.	Loss of operational capability in some areas and/or some disruption to service levels. Localized impact/outage to essential service delivery.	Serious loss of operational capability and disruption to service levels. Isolated, or suburb-wide impact to essential service delivery/facility.	Major loss of operational capability and disruption to service levels. Suburbs, multi-suburbs, or critical facilities impact essential service delivery.	Severe loss of operational capability and disruption to service levels. Suburbs, multi-suburbs, or critical facility /service impact essential service delivery.

4.2.1 Criticality in Decision-Making for Transport Assets

One network Framework is key to developing and assessing the criticality rating for transport assets. The Place and movement function as highlight in the tables below are used to determine the rating. Another key factor is the user derived rating which is based on specific reasons such as limited redundancy, isolation of communities, critical customer sites etc.

Table 22: Transport Assets Criticality Ratings

	Criticality Rating				
ONF ratings	**1**	**2**	**3**	**4**	**5**
Inter-Regional Connectors				4	
Rural Connectors			3		
City Hubs			3		
Main Streets			3		
Urban Connectors			3		
Transit Corridors			3		
Peri-urban roads		2			
Activity Streets		2			
Civic Spaces		2			
Rural Roads	1				
Stopping Places	1				
Local Streets	1				

Movement Rating	M5	M4	M3	M2	M1
Criticality Rating	**1**	**2**	**3**	**4**	**5**

The critical transport assets are highlighted in the table below.

Table 23: Critical Transport Assets

Apply specific ratings to the following roads/bridges	Criticality Rating					Reason
Fitzherbert Bridge					5	Limited redundancy
Saddle Road Bridge				4		Limited redundancy
Turitea Road Bridges				4		Access to Turitea water site
Gillespie Line			3			Railway overbridge
Milson Line			3			Railway overbridge
Rangitikei Line			3			Railway overbridge
Railway Road			3			Railway overbridge

4.3 Resilience

Infrastructure resilience supports resilient economies and communities. Resilient infrastructure is that which can deal with significant disruption and changing circumstances while continuing to deliver the service to customers. For Transport, that means that people and goods can continue to move around Palmerston North.

4.3.1 Transport Infrastructure Vulnerability

The following section provides a brief overview of the significant hazards within Palmerston North, along with their potential impact on the movement of people of goods on the transport network.

Table 24: Hazards

Hazard Type	Overview
Natural Hazards	**River flooding** can occur because of sustained or high intensity rainfall. It is the most widespread hazard throughout the Region. Several moderate **earthquakes** have occurred in the wider region over the last 150 years. A significant seismic event, while low probability, would have a significant impact on the movement of people and goods in Palmerston North and around the region. The most likely **volcanic** event to impact Palmerston North would be from ash fall from one of the central North Island volcanoes. Water supplies, traffic, sewage systems, electricity aerial transmission and distribution networks and substations may all be affected by ash fall. Other events such as **landslides and severe winds** could all impact the transport activity in Palmerston North.
Biological hazards	**A pandemic** can have a significant impact on the way people live and how they move on the transport network. One of the most significant outcomes of Covid-19 on the transport network is the ability for Council and New Zealand Transport Agency – Waka Kotahi to fund investment in the transport activity.
Climate Change	Climate change could impact our transport system in several ways, including: • More intense storm events – greater risk natural hazard events; • Greater rainfall intensity – more frequent flooding of roads, overloading of road drainage and natural watercourses and more flooding; • Extreme heat – increased risk of wild-fires and asset degradation

4.3.2 Transport Infrastructure Resilience

Given its urban 'grid,' Palmerston North enjoys an important level of diversity in the event some roads become unusable and so, in this sense, it has an important level of resilience.

Six bridges are identified as critical assets in the section above. The Fitzherbert Bridge is a critical regional asset and one of the most important infrastructure assets for Palmerston North. It is the only nearby bridge across the Manawatu River, is a key transportation route and it carries several critical lifelines including a Chorus trunk fibre cable, Powerco sub-transmission cable, water mains, trunk wastewater rising main, and a gas pipeline. It has been assessed as being able to withstand at least an 800-year return period earthquake.

4.3.3 Risk Mitigation – Insurance

The Council takes a managed approach to risk mitigation through various insurance options for assets in the Council. This approach assesses several attributes to the risk profiles of asset classes, which includes economic and community value, future needs, and intention of use of the asset as well as the affordability of insurance cover. Some of the key aspect of the council's insurance strategy include:

- Insurance strategies include self-insurance (i.e. no insurance) premised based on cost of insurance premiums exceed enterprise value, ability/capacity to borrow/funds available to meet replacement, and potential central Government provider of last resort.
- The level of cover is categorised by limited indemnity value as well as full replacement value along with differing amounts for deductibles.
- Insurance markets capacity dictates the degree of cover available/taken.
- The cover is also taken with the Local Authority Protection Programme Disaster Fund.
- The Disclosure Statement of the annual report details the attributes of insurance contracts and values along with insurance premiums.

5. Lifecycle management

5.1 Lifecycle Overview

This section outlines how we plan for, manage, and operate the assets at the agreed level of service while optimising lifecycle costs. Several investments need to be made to fund renewals, capital projects, operation, and maintenance for transport. This section will conclude with gaps in our current management and programmes of work to provide options to address these gaps. It is required to deliver an appropriate balance between initial asset cost, expect level of service and accepted risk.

Maintenance costs from deferred renewals can be significant if an asset deteriorates into poor condition which then represents an increased risk of failure within the transport network. Conversely, timely maintenance can preserve the transport asset condition and delay the need for asset renewal. Renewal investment is used to maintenance levels of service while managing the cost of maintenance and risk.

5.2 Road Pavement and Surface

5.2.1 Network overview

Network Summary and Condition

Roads are the primary transport network asset and aim to provide a safe and reliable network for all users.

The table below summarises the network by ONRC. It can be noted that the network has a slightly larger portion of urban roads than its rural roads. This network also has a proportionally higher levels of arterial roads than collectors. There is a slight variance in network length between previously reported. The unclassified network also has been identified as an improvement task.

Table 25: Network Summary by ONRC

ONF	Urban km	Rural km	Total Length km	Lane km	% of Length
Peri-urban Roads		39	39	76	7%
Rural Connectors		31	31	63	6%
Rural Roads		100	100	187	18%
Stopping Places		0	0	1	0%
Activity Streets	22		22	44	4%
Local Streets	217		217	430	39%
Urban Connectors	74		74	153	13%
Unclassified	39	38	77	142	14%
TOTAL NETWORK	**352**	**208**	**560**	**1096**	

The road network can be classified into three major components; road surface, pavement, and formation. The network quantities of each of these and their replacement value is summarised below.

Table 26: Network Summary by Road Component

Road Component	Material Type	Quantity	Useful Life	Valuation
Road surface	Chipseal; Asphaltic Concrete; Slurry	4,360,000 m2	6 – 40 years	$44.7M
Pavement	Constructed metal layers. Various materials, aggregates, and thicknesses	1,200,000 m2	100 years	$114.4M
Formation	Road subgrade	1,200,000 m2	100 years	$19.9M

Majority of the operations, maintenance and renewal activities focus on the road surface component of the network. The table below summarises the network with respect to the major surface types. It should be noted that a surface exceeding its design life does not immediately mean that it has failed. It is an indication of the proportion of the network that is at risk to suffer age related deterioration.

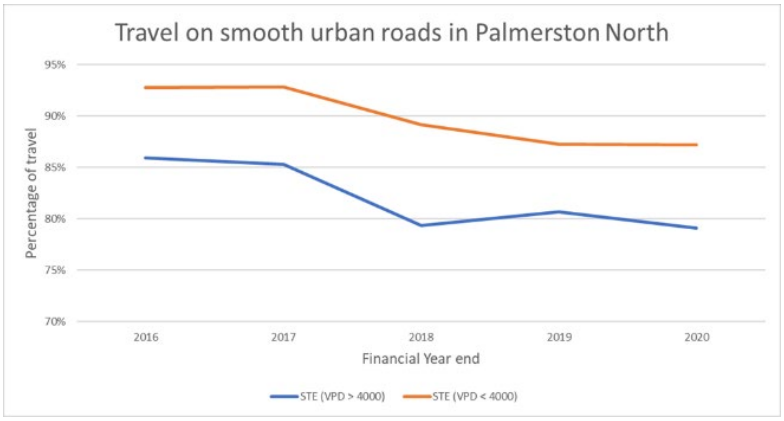
Table 27: Surface Design Life

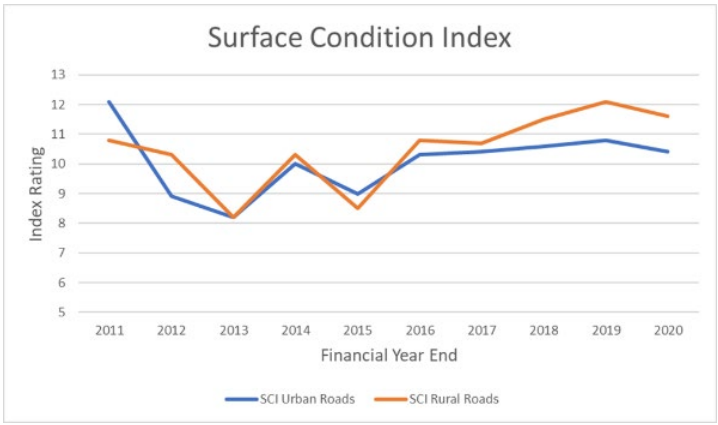
Surface Type	Total network (km)	Design life(years)	Percentage of surfaces exceeding design life
Chipseal	436	14	57%
AC	94	25	35%

Roughness is used as a key indicator for road user comfort. It is measured by Smooth Travel Exposure (STE). STE has been declining on urban roads across the past 5 years. This has especially been the case on the collector and arterial network where traffic volumes are greater than 4,000 vehicles per day.

The purpose of the surface condition index (SCI) is to summarise and report the overall health of the road surface. Figure 25 shows the SCI for urban and rural roads. Both urban and rural road networks have seen an increase in their index score which indicates a greater level of deterioration over that period.

Figure 24: Travel on Smooth Urban Roads and SCI





Status: Final

Evidence of Backlog

An independent analysis and modelling were conducted by ASC Consultants Ltd in March 2023. This report utilises the JunoViewer deterioration modelling framework to provide a forecast of the pavement renewal and rehabilitation annual lengths based on the funding availability. The findings of this report are further summarised in the Forward Works Programme chapter in this AMP.

However, this report also calculated the remaining surface life (RSL) using the current surface age and the design life of the surface. The distributions presented below show the chipseal and asphalt surface RSLs.

Surfaces with zero or negative remaining life indicate the surface life has expired and may currently require renewal (red shaded columns in the Figures). The sum of the length of surfaces with expired life is known as the age-based backlog. It may not necessarily mean that all surfaces in the backlog need renewal as some surfaces can last beyond their design life.

The total network weighted average RSL is 1.5 years. The average RSL for chipseal is 0.7 years. The average RSL for TAC (Total Asphaltic Concrete) is 6.4 years.

The quantity of backlog is important, and 10% to 20% backlog is considered an acceptable quantity to allow for well performing surfaces. There is currently 206 km of total backlog length which is more than 40% of the modelled network length. Both chipseal and asphalt surfaces have greater than 20% backlog.

Figure 25: Chipseal RSL Distribution

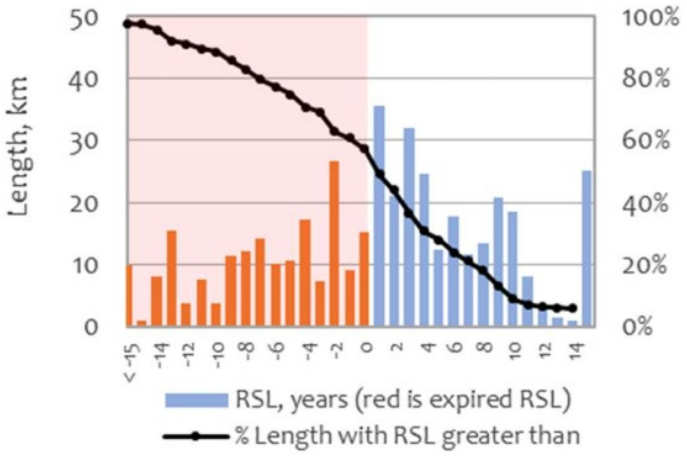
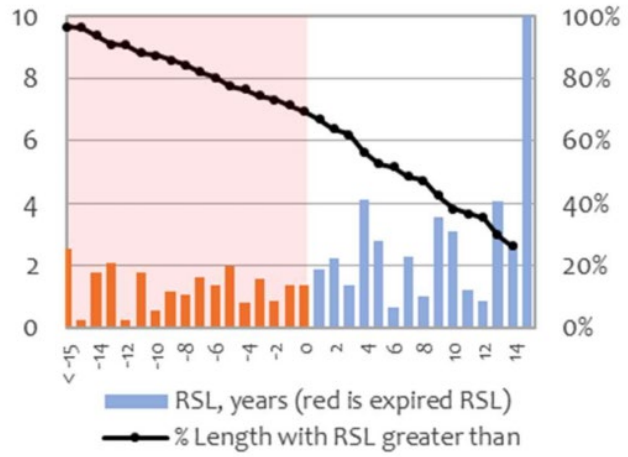


Figure 26: AC RSL Distribution



Network Growth

Key growth factors that affect the road network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated housing increase of 15,000. This will have an associated roading network growth
- **The Northeast Industrial Zone** (NEIZ) growth and development of the Te Utanganui distribution hub will result in a change in the network distribution and surface types
- **Multiple upgrade and capital projects** identified as part of the Palmerston North Integrated Transport Initiative (PNITI)
- **Strong HCV growth** projected as per PNITI modelling, indicates major upcoming demand changes

5.2.2 Key issues and challenges

The key issues and challenges related to pavements are listed below:

- Historic 'sweating' of assets by deferral of renewals in favour of aggressive maintenance and operations activities has led to an asset base requiring substantial amounts of renewals in the near future. Operational and maintenance budgets are under severe strain to compensate for reduced investment in renewals. This will lead to levels of service gaps, higher risk, and potential network failures.
- Renewal forward works programming is currently not being developed for a 10-year or more outlook. A short-term programme will lead to an overall poor value for money and all efforts could be focused on failing or failed infrastructure in a given financial year. This approach can also impact the operations and maintenance workload unexpectedly.

5.2.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities that we carry out for pavements and response times for the same.

Table 28: Pavement Assets Operations and Maintenance

Sealed Pavement Maintenance & Operations	
Operational	Monthly network inspections
	Monthly maintenance contract report and forward works programme update
	Management of pavement and surfacing maintenance activities by internal and external resources
Cyclical Maintenance	Routine work as highlighted by monthly network inspections
Reactive Maintenance	Surface defect repairs
	Repair of localised pavement failures
	Shoulder maintenance
	Pre-seal repair work. Undertaken prior to resurfacing to maximise surface life
Emergency Response	Repairs due to storm damage or network incidents
Unsealed Pavement Maintenance & Operations	
Reactive Maintenance	Maintenance activities to preserve the wearing course
	Shoulder maintenance
Emergency Response	Repairs due to slips, storm damage or other network incidents
Environmental Maintenance & Operations	
Reactive Maintenance	Vegetation clearing and maintenance
	Clearing litter and other detritus from footpaths
	Graffiti removal
Emergency Response	Clearing of crash debris
Response timeframes	
Unsafe roading situation	Will be investigated within 1 hour and actioned appropriately
Pothole & general surface failures	Will be investigated within 5 – 20 days and programmed as appropriate
Litter and rubbish	To be cleared within 4 hours for urban area
Spills etc	To be cleared within 3 working days; if there is a public safety risk, to be cleared within 8 hours
Graffiti	To be cleared within 6 days

Status: Final

Forecasted expenditure for operations and maintenance are outlined in the table below.

Table 29: Pavement Assets Forecasted Expenditure

Pavement assets maintenance and operations	Sealed Pavement Maintenance WC 111	Unsealed Pavement Maintenance WC 112	Environmental Maintenance WC 121 (part only. Remainder used for Street Trees)
Existing Delivery	$1,333,375	$37,167	$407,240
2024/25	$2,500,000	$100,000	$400,000
2025/26	2,500,000	$100,000	400,000
2026/27	2,500,000	$100,000	400,000
2027/28	2,500,000	$100,000	400,000
2028/29	2,500,000	$100,000	400,000
2029/30	2,500,000	$100,000	400,000
2030/31	2,500,000	$100,000	400,000
2031/32	2,500,000	$100,000	400,000
2032/33	2,500,000	$100,000	400,000
2033/ 34	2,500,000	$100,000	400,000

Table 30 notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group

Table 30 - Road Pavement and Surface - Operational Programmes

Road Pavement and Surface - Operational Programmes	2024/25	2025/26	2026/27	2027/28	2028/29
2477 - Regional Freight Ring Road Indicative Business Case	$1,000,000	$400,000	$-	$-	$-
2478 -Palmerston North Integrated Transport Initiative Immediate Improvements Business Case	$-	$200,000	$250,000	$-	$-
2479 - Regional Freight Ring Road Detailed Business Case - Section 1	$-	$650,000	$950,000	$-	$-
2480 - Regional Freight Ring Road Detailed Business Case - Section 2	$-	$-	$-	$950,000	$650,000
2481 - Regional Freight Ring Road Detailed Business Case - Section 3	$-	$-	$-	$-	$1,000,000
2483 - Stoney Creek Road Business Case	$-	$-	$650,000	$350,000	$-
2484 - Te Utunganui Transport Improvements Business Case	$-	$-	$900,000	$-	$-
2485 - Aokautere Urban Growth Business Case	$-	$900,000	$-	$-	$-
	2029/30	**2030/31**	**2031/32**	**2032/33**	**2033/34**
2483 - Stoney Creek Road Business Case	$1,500,000	$-	$-	$-	$-

5.2.4 Renewals and forward works programme

The table below summarises renewal activities we carry out for pavements.

Table 31: Pavement Assets Renewal Activities

Sealed Pavement asset renewal	
Description	**Activity**
Sealed Road Resurfacing	Confirmation of the annual resurfacing programme including drive-overs of all proposed sites.
	Pre-seal investigations and design work undertaken
	Single or two-coat chipseal
	AC surfacing to replace existing failed surfaces
Sealed Pavement rehabilitation	Investigating proposed rehabilitation sites, large areas include test pits and FWD (Failed Weight Deflectometer) testing
	AC rehabs and rural flexible pavement overlays
Unsealed road metalling	Re-metalling where grading or other maintenance is no longer economically viable

Forecasted asset renewals are outlined in the table below.

Table 32: Pavement Assets Forecasted Renewals

Pavement and Surfacing asset renewals	Unsealed road metalling WC 211 (Prog 2375)	Sealed road resurfacing WC 212 (Prog 139)	Sealed road pavement rehabilitation WC 214 (Prog 115 plus Prog 2126)	Bunnythorpe–Pavement and Footpath Renewals (Prog 2357)
Existing Delivery	$175,000	$5,000,000	$3,254,000	
2024/25	$100,000	$3,400,000	$3,300,000	$250,000
2025/26	$100,000	$3,400,000	$3,400,000	$250,000
2026/27	$100,000	$3,800,000	$3,500,000	$250,000
2027/28	$100,000	$4,500,000	$3,500,000	$2,500,000
2028/29	$100,000	$3,500,000	$3,500,000	$250,000
2029/30	$100,000	$9,200,000	$3,500,000	$2,500,000
2030/31	$100,000	$3,500,000	$3,500,000	$250,000
2031/32	$100,000	$4,300,000	$3,500,000	$250,000
2032/33	$100,000	$4,300,000	$3,500,000	$250,000
2033/ 34	$100,000	$4,300,000	$3,500,000	$250,000

5.2.5 Capital works

The table below summarises the key capital works planned that will impact the pavement asset base. Some of these projects can have indirect impacts.

Table 33: Pavement Assets Key Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
Unsub	Prog 201 – Urban Growth – Transport – Development Contributions	Capital Growth	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000
323	Prog 2058 - Urban Growth - NEIZ - Transport	Capital Growth	$0	$0	$4,500,000	$5,600,000	$5,600,000	$5,600,000	$0	$0	$0	$0
323	Prog 2065 - Urban Growth - Whakarongo - Transport	Capital Growth	$500,000	$2,500,000	$2,500,000	$2,500,000	$0	$0	$0	$0	$0	$0
323	Prog 2123 - Urban Growth - Kakatangiata - Transport	Capital Growth	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000
324	Prog 2389 - Urban Growth - Aokautere - Transport	Capital Growth	$2,800,000	$2,000,000	$14,500,000	$1,000,000	$7,000,000	$7,000,000	$10,000,000	$8,000,000	$8,000,000	$0
324	Prog 1695 - PNITI – Intersection & bridge improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$8,000,000	$8,000,000	$8,000,000
324	Prog 1944 - Villages - Transport - Road Upgrades to Urban Standard	Capital LOS	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,600,000	$300,000	$1,600,000	$300,000	$1,600,000
324	Prog 2013 - PNITI – Strategic Transport Corridor Improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000	$20,000,000
324	Prog 2456 - Cliff Road Upgrade - Te Motu O Potua	Capital LOS	$500,000	$0	$3,650,000	$0	$0	$0	$0	$0	$0	$0
324	Prog 2124 – Urban Growth – Ashhurst – New Roads	Capital Growth	$350,000	$1,800,000	$35,000	$1,600,000	$350,000	$1,600,000	$350,000	$1,800,000	$350,000	$2,000,000

5.2.6 Safety Improvements

We are responsible for delivering safe, sustainable and integrated traffic operations and systems in line with traffic standards and bylaws, to achieve a safer and optimised transport network. We are aiming to deliver the Safe Network Programme in Palmerston North in conjunction with New Zealand Transport Agency – Waka Kotahi . We are continuously targeting safety improvements be it through maintenance interventions or minor safety upgrades to the transport network. Our safety improvements will be integrated with improvements to other transport assets. An example we might install a roundabout as a traffic service – safety improvement, however, will also be a catalyst for other safety improvements -such as the operating speed of adjoining roads or pedestrian safety improvements of adjoining footpath.

The table below summarises all the key safety improvements proposed for the next 10 years. The 30-year view for improvements can be found in the appendices.

Proposed Capital Works

Table 34: Safety Improvements - Key Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
341	Prog 2061 – Rural Road Safety and Accessibility Improvements	Capital LOS	$65,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
341	Prog 2119 – Road to Zero – Transport Safety Improvements	Capital LOS	$4,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000
341	Prog 2142 – Physical Deterrent (speed humps) at various locations	Capital LOS	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
341	Prog 2204 – City wide – Street Racer Prevention	Capital LOS	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000
Unsub	Prog 2378 - VMS Board	Capital LOS	$85,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
341	Prog 2390 – City wide Transport – Low Cost/Low Risk	Capital LOS	$10,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000
324	Prog 1003 - Whakarongo - Intersection Upgrades	Capital Growth	$1,200,000	$500,000	$5,500,000	$0	$0	$0	$0	$0	$0	$0
324	Prog 2335 - Stoney Creek Road - Safety Improvements	Capital Growth	$500,000	$2,600,000	$4,600,000	$2,600,000	$0	$0	$0	$0	$0	$0
324	Prog 159 - Kelvin Grove Road - Safety Improvements	Capital LOS	$0	$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0

Status: Final

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
324	Prog 839 - Rangitikei St / Featherston St - Intersection Improvements	Capital LOS	$0	$1,084,639	-$542,320	$379,623	$4,338,557	$4,338,557	$0	$0	$0	$0
324	Prog 1121 - Tennent Drive Improvements - Food HQ & Massey	Capital LOS	$146,300	$946,100	$0	$0	$292,600	$1,286,756	$4,941,792	$3,510,068	$0	$0
324	Prog 2111 - Kelvin Grove Road - Safety Improvements	Capital LOS	$3,000,000	$3,000,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0
324	Prog 2354 - PNITI - Bunnythorpe – Safety Intersection Improvements	Capital LOS	$350,000	$750,000	$0	$1,000,000	$8,000,000	$0	$0	$0	$0	$0

5.2.7 Seal extensions

Several isolated carriageway sections exist in the network that are unsealed but are situated adjacent to the sealed network. These sections totalling to approximately 6km of the network would benefit from seal extensions. This can be addressed over the next 5 years with an expected programme of around $100K annually. Some of the key sections under consideration and estimated

Table 35: New Seal Extensions Considerations and estimated budget

New Capital Works	Section length	Comments
Blacker Rd	400 m	
Henderson Line	50 m	
Hewitts Rd	50 m	
Turitea Rd Extn	100 m	Intersection safety concerns for this site
Bowen St	175 m	
Kahuterwa Rd	1 km	Dust coat seal suppression on this site
Scotts Rd	3.5 km	Logging impact on site – also a hill section
Greens Rd	1 km	Dust coat seal suppression on this site

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29
None	Prog 2353 – City wide – Transport - Unsubsidised Seal Extensions	Capital LOS	$95,000	$100,700	$106,750	$113,150	$120,000

5.3 Bridges and Structures

5.3.1 Network overview

Network Summary and Condition

The key purpose of bridges and retaining walls is to allow the safe, reliable, and efficient movement of people and goods across waterways or through challenging topography.

Bridge and structure assets tend to be high risk, high value and are crucial to the continuity of the transport network. A network summary is presented in the table below. There are known gaps in geotechnical structures data, such as retaining walls.

Table 36: Bridges and Structures Network Summary

Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Road Bridges	Open structures that provide a road over or around an obstacle – for example, rivers, waterways, railway lines or other roads.	86	110-120 years*	tbc
Major Culverts	Fully enclosed pipes of any cross-sectional shape, with a cross-sectional area larger than 3.4m2.	34	55 years*	tbc
Footbridges	As for Road Bridges, but for pedestrian use only	6	tbc	tbc
Underpasses	For pedestrian and cyclist use only.	2	tbc	tbc
Geotechnical Structures	A range of structures such as retaining walls, slope stability works etc., that support roads or prevent slips or slumps occurring from above roads	64 sites	tbc	tbc
Guard Rails	Safety barriers which are designed to deflect vehicles from obstacles – including at bridges, culverts etc.	Approx. 1500m	tbc	Not valued

Note: Major culverts are defined as culverts with a combined cross-sectional area of more than 3.4 m^2. Any culverts that do not fall into this category are minor culverts and are managed as drainage asset.

The graphs below summarise the age and condition distribution for bridges and major culverts. A substantial proportion of the age and condition profile is unknown. Individual bridge inspections are undertaken, with specific faults identified along with a suitable maintenance and component renewal response. Overall condition information has not been well recorded in RAMM for our bridge assets. We have identified this is an issue within our network and will address this through ongoing improvement programmes.

Figure 27: Age distribution of assets (by count)

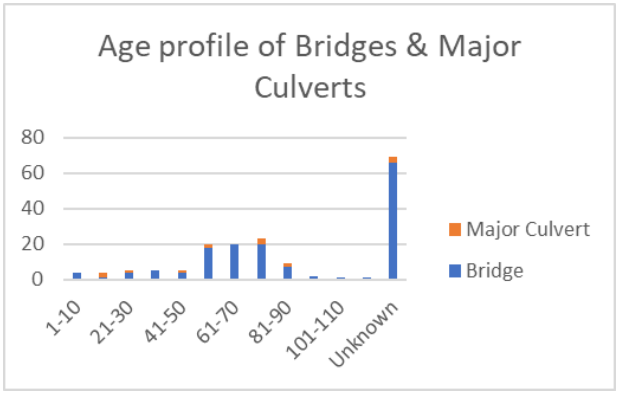
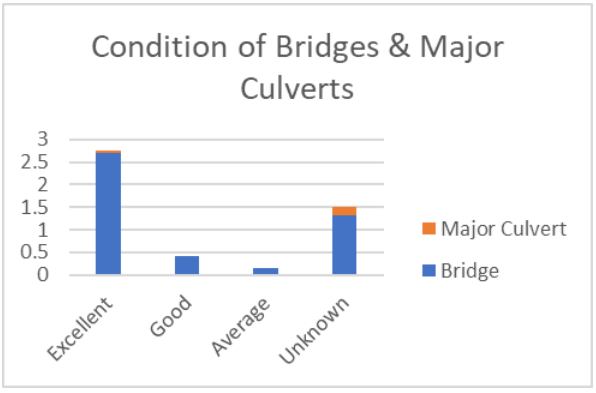


Figure 28: Condition distribution of assets by length (km)



Within its asset valuation, Council assumed a total useful life of 110-120 years for bridges and 55 years for large culverts.

All bridges in RAMM have a constructed year recorded against them from which the age can be assumed. Most of the construction years listed are nominal only, based on an assessment made when the asset was later added. Approximately 75% of road bridge assets are greater than 50 years old. Several bridges are greater than 90 years old.

Critical Assets

Critical bridge assets were identified below. Collapse of these bridges during an earthquake event would have impacts in terms of emergency and critical service access, consequential damages to services attached, and a high economic cost to the community for asset replacement. The Fitzherbert Bridge was assessed as being able to withstand at least an 800-year return period earthquake.

An additional crossing over the Manawatu River is being considered as part of the PNITI business case. This bridge would provide redundancy for not only the transport network, but also for other services and utilities.

The criticality of these bridges has resulted in them being part of the first group to get recent Principal Bridge Inspections. Necessary maintenance and component renewal will occur on these bridges with priority over others on the network.

Table 37: Critical Transport assets

Critical Asset	Rationale	Dependent Customers & Services	Assessed Overall Criticality
Fitzherbert Bridge	Only river crossing connecting north and south of the city. Major services and utilities attached, including the city's water supply.	Community, Utilities, Businesses	High
Saddle Road Bridge	Major east-west connector with the now closed Manawatū Gorge.	Businesses, Community	High
Turitea Road Bridges (3x)	Access to the city's water supply dam and Water Treatment Plant.	Businesses, Utilities, Community	High
Gillespies Line Railway Over Bridge	Failure could block the NI Main Trunk railway line	Businesses, Utilities, Community	Medium
Milson Line Railway Over Bridge	Failure could block the NI Main Trunk railway line	Businesses, Utilities, Community	Medium
Rangitikei Line Railway Over Bridge (SH3 – New Zealand Transport Agency – Waka Kotahi asset)	Failure could block the NI Main Trunk railway line	Businesses, Utilities, Community	Medium
Railway Road Railway Over Bridge	Failure could block the NI Main Trunk railway line	Businesses, Utilities	Medium

Network Growth

Key growth factors that affect the Bridges and Structures network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated increase of 15,000 homes. This will have an associated roading structures growth
- **The Northeast Industrial Zone** (NEIZ) growth and development of the Te Utanganui distribution hub will result in changing loading or clearance requirements for the roading structures across the network
- **Multiple upgrade and capital projects** identified as part of the Palmerston North Integrated Transport Initiative (PNITI)
- **Strong HCV growth** projected as per PNITI modelling, indicates major upcoming demand changes for structures supporting roading infrastructure

5.3.2 Key issues and challenges

The key issues and challenges related to structures are listed below:

- Historic 'sweating' of assets by deferral of renewals in favour of aggressive maintenance and operations activities has led to an asset base requiring substantial amounts of renewals in the near future. Operational and maintenance budgets are under severe strain to compensate for reduced investment in renewals. This will lead to levels of service gaps, higher risk, and potential network failures.
- Renewal forward works programming is currently not being developed for a 10-year outlook. A short-term programme will lead to an overall poor value for money and all efforts could be focused on failing or failed infrastructure in a given financial year. This approach can also impact the operations and maintenance workload unexpectedly.
- Failure of critical bridges have can have a high impact on the community, business and utilities infrastructure and therefore needs to be regularly monitored, inspected, and maintained
- Urban bridges do not provide a suitable level of service to pedestrians and cyclists. Several rural bridges also require vulnerable users to move into the live traffic lane which is a safety hazard
- Bridges on strategic rural ring route are weight restricted impacting heavy vehicle movements

5.3.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carried out for bridges and structures and response times for the same.

Table 38: Bridges and Structure Assets Operations and Maintenance

Bridges and structures Maintenance & Operations	
Operational	Deliver a programme of Principal Bridge Inspections as per New Zealand Transport Agency – Waka Kotahi S6:2019 specifications with priority on bridges that carry the greatest volume of heavy vehicles. These inspections are planned to be undertaken every 6 years for each bridge.
	Capture all other structural assets not currently recorded in RAMM.
	Assess and provide overweight permits to heavy haulage organisations where appropriate for travel over bridges. This process has been delegated to New Zealand Transport Agency – Waka Kotahi .
Cyclical Maintenance	Bridges are inspected monthly by the road maintenance contractor with minor bridge maintenance activities undertaken and more significant faults identified.
Reactive Maintenance	Required bridge and structures maintenance identified through inspections. Basic maintenance activities are delivered through the road maintenance contract. More complex activities may be procured separately.
	Repairs / replacement of traffic approach signage and bridge end marker posts. Associated with Traffic Services.
	Removal of vegetation in the immediate vicinity of the bridge where this could impact water passage or undermine the structure. The removal of aggraded material and importing of fill for degraded areas.
	Guardrail and bridge railing repairs to ensure suitable functionality of safety elements.
Planned Maintenance	Restoration of protective coatings on bridges at required intervals to prevent irreversible deterioration and extend the life of the asset.
	Other maintenance activities identified through Principal Bridge Inspections that will extend the life of the asset and provide a reduced whole of life cost.
Emergency Response	Make safe damage associated with vehicle crashes. Generally requiring work on bridge safety barriers.
Response timeframes	
Fault type	**Response time**
Structural integrity & public safety	The fault will be investigated within one working day and the area made safe as required. Work will be programmed based on the severity of the issue.

Recent Principal Bridge Inspections have highlighted significant maintenance needs on only a small portion of the bridge stock. It is anticipated that given the similar age of the bridge stock, similar maintenance needs will be found on those not yet inspected.

Principal Bridge Inspections need to be undertaken for all bridges expected to carry more than a minimum number of heavy vehicles. These will be spread out over the next 6 years with the highest priority being given to those carrying the highest number of heavy vehicles.

Forecasted expenditure for operations and maintenance are outlined in the table below. It is important to note that the change in budget requirements is primarily being driven by historic underfunding of structures maintenance programme.

This was primarily due to selecting bridges for inspection that upon failure would have significant impact on the community. However, by doing so, the broader requirements of the network were not addressed. Now that the WSP inspection has been performed on all bridge a reset of the budgets is required to rectify the impact of the underinvestment.

Table 39: Bridges and Structure Assets Forecasted Expenditure

Bridge and structure assets maintenance and operations	Structures Maintenance WC 114
Existing Delivery	$50,000
2024/25	$300,000
2025/26	$300,000
2026/27	$300,000
2027/28	$300,000
2028/29	$300,000
2029/30	$300,000
2030/31	$300,000
2031/32	$300,000
2032/33	$300,000
2033/ 34	$300,000

Table 40 notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group.

Table 40: Bridges and Structures - Operational Programmes

Bridges and Structures - Operational Programmes	2024/25	2025/26	2026/27	2027/28	2028/29
2482 - Milson Line Rail Overbridge Business Case	$-	$-	$650,000	$650,000	$-

5.3.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for Bridges and Structures.

Table 41: Bridge and Structure Assets Renewal Activities

Bridges and structures component replacement	
Renewal	Detailed design work associated with the renewal of bridge and structural components. Undertaken by a Chartered Professional Engineer with structural engineering expertise.
	Required bridge and structures component renewal identified through inspections. Most component renewal works will be more complex than basic bridge maintenance and will therefore be procured separately.
Bridges and structures renewal	
Renewal	No full bridge or structure renewals are planned for the next 3-year period, however in the 3 – 6-year horizon there is at least one full renewal required and several major strength / capacity upgrades needed.

The long-term component renewal expenditure need is not yet known. An increase in maintenance expenditure would mitigate future component renewal needs. No full bridge and structural renewals are planned for the next 3-year period. Any complete replacement would be considered by Council to be an asset improvement. Forecasted asset renewals are outlined in the table below.

Table 42: Bridges and Structure Asset Forecasted Renewals

Bridges and Structures renewals	Structures component replacements WC 215 (Prog 2379)	Replacement of bridges and structures WC 322 (Prog 2453)
Existing Delivery	$1,310,000	$0
2024/25	$800,000	$0
2025/26	$1,400,000	$0
2026/27	$1,500,000	$0
2027/28	$1,500,000	$0
2028/29	$1,500,000	$0
2029/30	$1,500,000	$0
2030/31	$1,500,000	$0
2031/32	$1,500,000	$8,000,000
2032/33	$1,500,000	$8,000,000
2033/ 34	$1,500,000	$8,000,000

5.3.5 Capital works

The table below summarises the key capital works planned that will impact the Bridges and Structures. Some of these projects can have indirect impacts.

Table 43: Bridges and Structure Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
322	Prog 1094 - Milson Line Overbridge Improvement	Capital LOS	$0	$0	$220,000	$325,000	$0	$3,800,000	$0	$0	$0	$0
322	Prog 2356 - Turitea Bridge No.1 replacement	Capital LOS	$0	$0	$350,000	$750,000	$8,500,000	$0	$0	$0	$0	$0
323	Kakatangiata Te Wanaka / Grand Oaks new bridge crossing Bridge	Capital Growth	$0	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000
323	Manawatu River - Road Bridge	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$0	$32,500,000	$32,500,000
341	Prog 2362 – City wide – Transport – Bridge Improvements	Capital LOS	$200,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000
341	Prog 2359 – PNITI – Bunnythorpe Bridge Replacements	Capital LOS	$0	$350,000	$1,000,000	$7,500,000	$8,000,000	$0	$0	$0	$0	$0

5.3.6 Seismic assessment

Several moderate earthquakes have occurred in the wider region over the last 150 years. A significant seismic event, while low probability, would have a significant impact movement of people and goods in Palmerston North and around the region. Secure transport connections would be vital to ensure goods can continue to move around the city and country in support of people and the economy. A seismic assessment of all structural assets is identified as an improvement action.

5.4 Drainage

5.4.1 Network overview

Network Summary and Condition

The key purpose of drainage assets is to protect the road structure from water damage, provide a safe road surface and reduce the risk of water damaging private property.

The urban drainage network is comprised of kerb and channel, with several culverts on the city fringe. The rural drainage network includes culverts, swales, and roadside drains. A summary of the network is provided below.

Table 44: Drainage Network Summary

Asset Type	Material Type	Quantity	Useful Life	Valuation
Kerbs and channel	Mostly concrete, some stone	845 km	80 years	$82.6M
Surface water channels (SWC)	Grassed or shaped, constructed in natural ground	265 km	100 years	Not valued individually
Sumps	Concrete of many sizes	6121	80 years	$26.6M (valued together)
Culverts	Various materials and sizes. Waterway area less than 3.4m2.	887	80 years	
Other drainage assets	Range of assets including soak pits, subsoil drains, debris screens	530	various	Not valued

Note: Major culverts are defined as culverts with a combined cross-sectional area of more than 3.4 m^2. Any culverts that do not fall into this category are minor culverts and are managed as drainage asset. Stormwater manholes are covered under the Stormwater AMP.

The graphs below summarise the age and condition distribution for drainage assets. Some of the key observations are:

- Age data is recorded in RAMM for around 75% of kerbs and channels. There is a significant length of aging kerb and channel, that will drive an increasing renewal need in years to come. A smaller proportion, around 65% for culverts and 20% for other types of drainage asset have age data recorded
- Crucial information is held for kerb and channel condition. Most assets (>97%) which have a recorded condition have been rated as excellent. 16% of kerb and channel assets do not have a condition recorded against them in RAMM
- Condition information is held for approximately 59% of rural surface water channels. Most assets (>95%) which have a recorded condition have been rated as excellent
- Condition information is held for approximately 97% of sumps. Most assets (~80%) which have a recorded condition have been rated as good
- Most of the culverts are located within the rural network with the greatest number of these being under rural vehicle crossings. More than half of culvert assets do not have recorded condition data in RAMM

Figure 29: Kerb and Channel Age Distribution

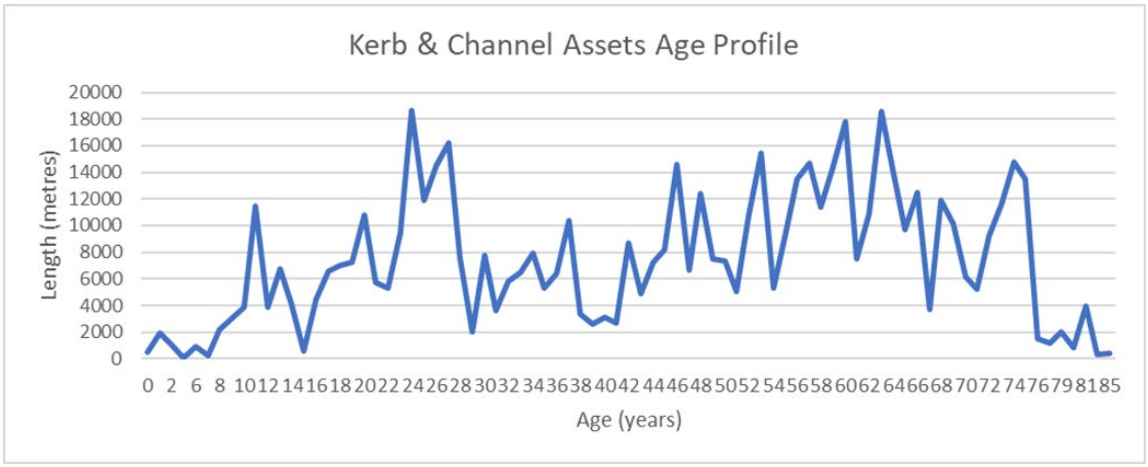


Figure 30: Kerb and Channel Condition Distribution

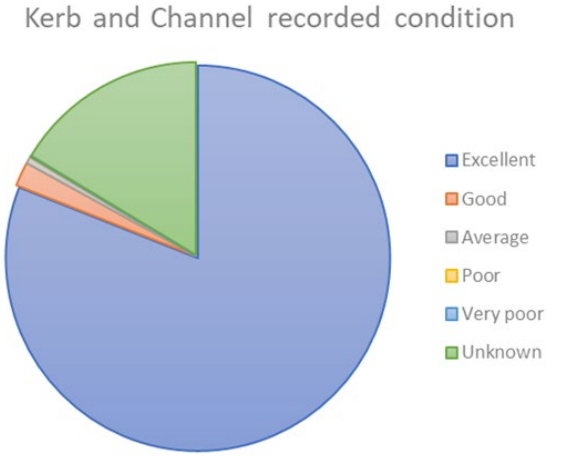


Figure 31: Rural Surface Water Condition Distribution

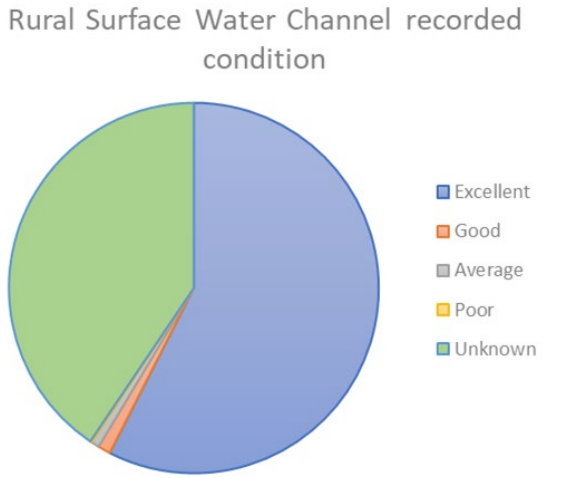


Figure 32: Sump Condition Distribution

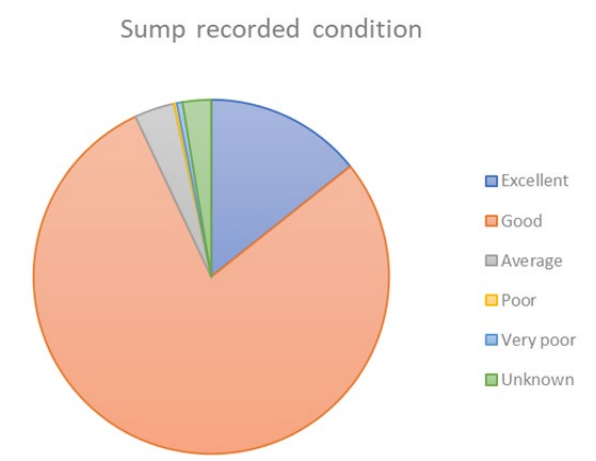
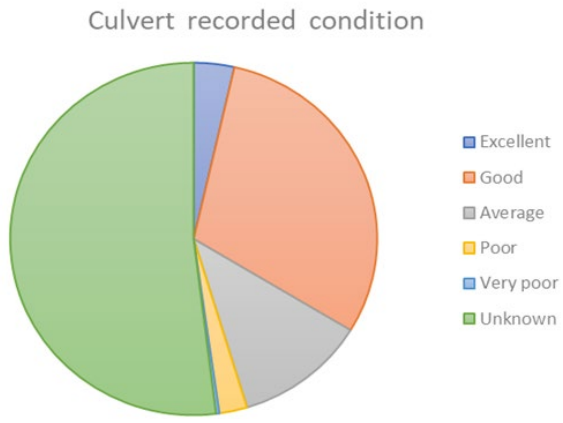


Figure 33: Culvert Condition Distribution



Condition information for drainage assets is recorded in RAMM based on visual condition surveys undertaken every 2 years. Condition defects are categorised from 1 to 5 (excellent to very poor), category 3 is monitored with any required reactive maintenance completed to avoid further deterioration. Category 4 & 5 defects are placed on a list for renewal programming.

Network Growth

Key growth factors that affect the drainage network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated increase of 15,000 homes. This will have an associated roading assets growth.
- **The Northeast Industrial Zone** (NEIZ) growth and development of the Te Utanganui distribution hub will result in capital projects and drainage assets being created
- **Multiple upgrade and capital projects** identified as part of the Palmerston North Integrated Transport Initiative (PNITI)
- **Strong HCV growth** projected as per PNITI modelling, indicates major upcoming demand changes

5.4.2 Key issues and challenges

The key issues and challenges related to drainage assets are listed below:

- There is a greater expectation from the public and Horizons that the impacts of stormwater on the receiving environment will be minimised. This could be either SW quality or quantity. Stormwater devices such as rain gardens will become more prevalent in the road corridor to respond to this issue.
- The amount of street sweeping undertaken has increased in the past 3-year period. This has been customer driven. Beyond cleaning of cycleways, there has not been a significant effort to target street sweeping where and when it is needed most. It is anticipated that there will be an increase in the number of high value drainage assets in the CBD area, such as stone kerbs and higher amenity sumps. These assets require a higher level of maintenance, operations, and cleaning.
- It is clear based on the aging kerb and channel assets, that a greater level of investment in renewal activities will be required in the future. It is not clear when this investment will be required, however it is unlikely in the next 5 years
- Based on depreciation and an age-based renewal profile, significantly more investment is needed in drainage assets long-term

5.4.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for drainage assets and response times for the same.

Table 45: Drainage Assets Operations and Maintenance

Drainage Assets Maintenance & Operations	
Description	**Activity**
Operational	Monthly inspections of all sumps, rural culverts and other drainage assets are undertaken by the Road Maintenance Contractor. This includes defect reporting, blockage and fault clearing and notification of damaged and missing culvert markers.
	Internal and consultant support and management of drainage assets.
Cyclical Maintenance	Routing clearing of detritus from sumps and ends of culverts as part of monthly drainage inspection.
	Street sweeping to remove leaves and detritus from kerbed water channels and tops of sumps in urban areas to reduce the risk of flooding of the road and private property. A targeted street sweeping regime will be developed which will prioritise sweeping based on need. Considerations include: • High leaf fall areas (streets with mature trees); • High leaf fall times of year (Autumn); Known flooding locations where reduced drainage capacity would have a greater impact.
	CBD street cleaning by internal Council staff to maintain the anticipated level of amenity on CBD streets. Includes: • Street sweeping to remove leaves and detritus from channels (more frequent than normal street sweeping); • Water blasting; Other cleaning activities associated with CBD footpaths (Section 9.7).
Reactive Maintenance	Maintenance activities to extend the life of urban drainage assets and maintain their level of performance. Targeted at grade 4 & 5 faults for physical assets. Includes: • Breaking out and replacing kerb and channel; • Excavating and replacing culverts;
	Maintenance activities to maintain drainage on rural roads. Includes: • Stripping of high shoulders to allow water off the road; • Reprofile / clean surface water channels to ensure they operate at full capacity; • Stream clearing and debris removal where this impedes the flow of water through culverts;
	Clearing of debris from under plated vehicle crossings to ensure they operate at full capacity; Replace plated vehicle crossings with slotted crossings to minimise future maintenance requirements.
Emergency Response	Respond to faults relating to nuisance flooding.
Response timeframes	
Fault type	**Response time**
General maintenance	Fault is programmed for maintenance or renewal as required. No specific response time though it will be made safe if required.

Channel clearing	Will be actioned within 5 working days if it would pose a risk to safety during a rainfall event. Otherwise, it will be picked up as part of the cyclic sweeping programme.
Nuisance flooding	Priority during the rainfall event is to maintain public safety and prevent flooding of habitable buildings. In these situations, response is as soon as possible.

Historically, majority of the maintenance expenditure (80%) has been attracted by the following activities:

- Monthly drainage inspections, minor maintenance, and cleaning of assets;
- Jetting of plated vehicle crossings;
- Reprofiling of existing rural SWC and removal of high shoulder.

A concerted effort was undertaken in the first year of the Road Maintenance Contract to reprofile rural surface water channels to deliver long term benefits to all road assets. There has also been significant investment over the past 2-years in keeping plated vehicle crossing free of detritus. An alternative response to this issue (replacing plated crossings with slot crossings) is also being delivered under a vehicle crossing category to minimise future maintenance costs.

Forecasted expenditure for operations and maintenance are outlined in the table below.

Table 46: Drainage Assets Forecasted Expenditure

Drainage assets maintenance and operations	Routine Drainage Maintenance WC 113
Existing Delivery	$491,129
2024/25	$1,200,000
2025/26	$1,200,000
2026/27	$1,200,000
2027/28	$1,200,000
2028/29	$1,200,000
2029/30	$1,200,000
2030/31	$1,200,000
2031/32	$1,200,000
2032/33	$1,200,000
2033/ 34	$1,200,000

5.4.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for drainage assets.

Table 47: Drainage Assets Renewal Activities

Drainage asset renewal	
Renewal	Renewal of a length of kerb & channel with several faults where it is more cost effective than maintaining an individual section.
	Drainage renewals are often delivered in association with other transport assets including pavement, footpath and vehicle crossing renewals.

Renewal of drainage assets has been variable over the past 5-year period. Delivery over the past two years has been significantly lower than previously. This decreased level of investment was primarily due to non-delivery rather than a targeted reduction. From July 2021, the road maintenance contractor will deliver drainage renewals.

The previous replacement cost valuation for drainage assets was $95million. The level of renewals carried out in 2018/19 was around 0.25% of this value, equivalent to a 400-year replacement cycle – this is financially unsustainable in the long term and renewal costs are expected to rise in future years.

Forecasted asset renewals are outlined in the table below.

Table 48: Drainage Assets Forecasted Activities

Drainage asset renewals	Drainage Renewal WC 213 (Prog 122)
Existing Delivery	$800,000
2024/25	$500,000
2025/26	$500,000
2026/27	$500,000
2027/28	$500,000
2028/29	$500,000
2029/30	$500,000
2030/31	$500,000
2031/32	$500,000
2032/33	$500,000
2033/ 34	$500,000

5.4.5 Capital works and Improvements

The table below summarises the key capital works planned that will impact drainage assets. Some of these projects can have indirect impacts.

Table 49: Drainage Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
324	Prog 1804 - Road Drainage Capital Improvements	Capital LOS	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000

This programme addresses the concern of flooding during heavy rainfall events affecting on-street areas where there are currently insufficient drainage assets (typically sumps) to adequately drain the road. This decreases the level of service for transport users.

Depending on where the ponding occurs it can impact pedestrians, cyclists, vehicles, or a combination of them. On-road ponding can also cause a loss of surface friction for vehicles, decreasing road safety.

Improvements to the stormwater network to reduce flooding of private properties are resulting in asset improvement programmes. These are stormwater led, with Transport inheriting drainage assets where they are best placed to manage them

5.5 Vehicle Crossings

5.5.1 Network overview

Network Summary and Condition

The key purpose of vehicle crossings is to *provide access from roads to properties for vehicles while mitigating the impact on berm & footpath assets and underground utilities & services.*

Vehicle crossings are an extension of the road carriageway from the edge of seal or kerb line to the property boundary to allow vehicle access.

A summary of the network is provided below.

Table 50: Vehicle Crossings Network Summary

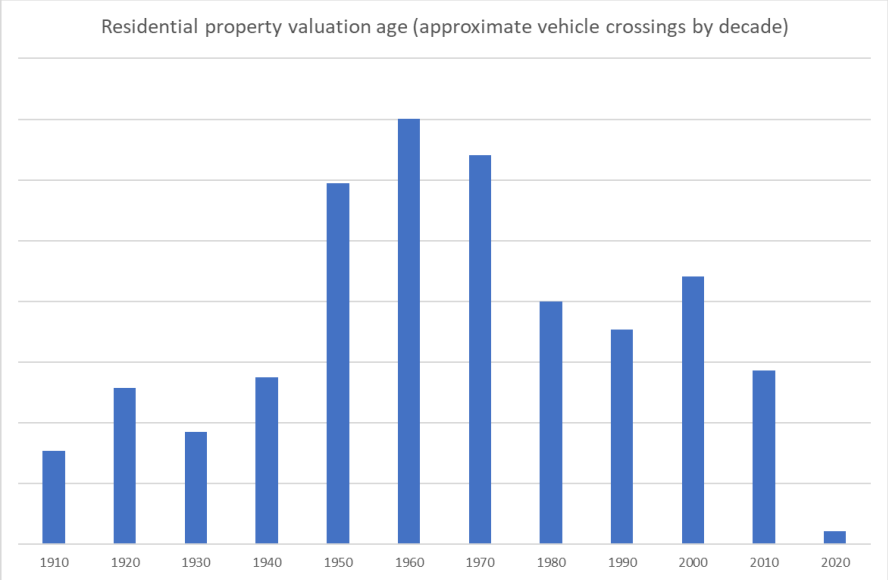
Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Crossings	Concrete or asphaltic concrete – several types including kerb, kerb ramp, bridge, rural, steel, slot crossing	26,925	80 years	$103.7M

Note: There is a diverse range of vehicle crossing types and sizes. Small single residential crossings can cost only $3,000 to renew while large industrial vehicle crossings could cost greater than $20,000 depending on the size and design. Design of the adjacent road can also impact vehicle crossing design.

The graphs below summarise age for vehicle crossing assets. Some of the key observations are:

- Council does not currently have age data recorded for vehicle crossings in RAMM. It is anticipated though that most vehicle crossings would be as old as the land use they are associated with.
- The age of the house that the vehicle crossing serves would be a proxy for the age of the vehicle crossing, however this method does not account for any land ownership changes or shared vehicle crossings
- Less than six percent of vehicle crossings have condition data recorded in RAMM.

Figure 34: Vehicle Crossing Assets Age Distribution



5.5.2 Key issues and challenges

The key issues and challenges related to vehicle crossing assets are listed below:

- Fault information is captured for vehicle crossings during the full footpath network inspection. The number of faults is not significant compared to those for pedestrian facilities.
- Age or vehicle loading related deterioration result. cracking, broken, subsidence, holes, etc
- Vehicle crossings are points of conflict between vehicles and pedestrians & cyclists.

5.5.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for Vehicle crossing assets and response times for the same.

Table 51: Vehicle Crossing Assets Operations and Maintenance

Vehicle crossing maintenance and operations	
Description	**Activity**
Operational	Undertaken as part of the routine full footpath network inspections to identify any faults which are then used to plan the maintenance and renewal programme. Planned to be undertaken during the 2024/25 period to set a baseline and every three years after this point.
	Management of the installation of new vehicle crossings. A vehicle crossing consent is required for a private property to construct a new vehicle crossing from the boundary to road edge. This work must be undertaken by an approved concrete contractor and is inspected by Council Infrastructure prior to being poured.
Reactive Maintenance	Where the fault is impacting the safe and efficiency movement of pedestrians, suitable maintenance activities will be undertaken.
Response timeframes	
Fault type	**Response time**
Emergency vehicle crossing fault (injury)	The fault is programmed for construction works as appropriate. Emergency footpath faults are prioritized and will take place within 3 months (including if undertaken as a renewal).
Footpath fault identified	Three weeks to assess, prioritise and programme maintenance as appropriate.
	Maintenance will occur when included in a package of work (timeframe varies).

Note: Vehicle crossings have historically not had any maintenance activities undertaken. Therefore, there are no historical maintenance costs recorded. There is no vehicle crossing maintenance proposed as part of this AMP.

5.5.4 Renewals and forward works programme

The table below summarises renewal activities we carry out for Vehicle crossing assets.

Table 52: Vehicle Crossing Assets Renewal Activities

Vehicle crossing renewal	
Description	**Activity**
Renewal	Full or partial replacement of a vehicle crossing that has failed and no longer providing a suitable level of service to the property accessed by it.

Expenditure has been on ad hoc vehicle crossings identified on the network in need of renewal. This general trend will change under the new investment strategy.

The asset valuation for all crossings in the city (including kerb crossings for pedestrians) is $103M with annual depreciation of $1.3M.

Forecasted asset renewals are outlined in the table below.

Table 53: Vehicle Crossing Assets Forecasted Renewals

Vehicle crossing renewal	162-City-wide - Vehicle Crossing Renewals (Prog 162)
Existing Delivery	$127,428
2024/25	$180,000
2025/26	$180,000
2026/27	$180,000
2027/28	$180,000
2028/29	$180,000
2029/30	$180,000
2030/31	$180,000
2031/32	$180,000
2032/33	$180,000
2033/ 34	$180,000

5.5.5 Capital works and Improvements

New vehicle crossing assets are acquired from private properties through in-fill development, new subdivisions or when properties are developed, and a new vehicle crossing is constructed. Council do not construct new vehicle crossings unless they are part of a wider strategic transport upgrade.

The number and width of new vehicle crossings that can serve a private property are controlled by the District Plan. This is enforced through the need to get a vehicle crossing consent for any new construction.

5.6 Pedestrian Facilities

5.6.1 Network overview

Network Summary and Condition

A safe, accessible, and well-maintained footpath network is the main goal of pedestrian facilities. This network should serve pedestrians and encourage walking.

Pedestrians include people who walk, jog, use wheelchairs, scooters, or prams. Skateboarders, skaters, and their electric counterparts are also using shared facilities more.

The network of pedestrian assets is primarily made up of footpaths and a few handrails. Section 5.7 discusses shared pathways with cycleways.

The following asset types are included in pedestrian assets:

Table 54: Pedestrian Facilities Network Summary

Asset Type	Material Type	Quantity	Useful Life	Valuation
Footpath	Mainly asphalt or concrete	1,076,600 m2	80 – 100 years	$98.5M
Crossing	Kerb crossing, Zebra crossing, kea crossing, etc	Unknown	Varies	Not valued

Note: Currently, footpaths and kerb crossings are inspected every two years. Footpath defects are identified and documented, including settlement, bumps, depressions, cracks, scabbing, potholes, and environmental concerns such as leaf fall. The most recent assessment of footpath condition occurred in 2022.

The charts below summarise the age and condition distribution for pedestrian assets.

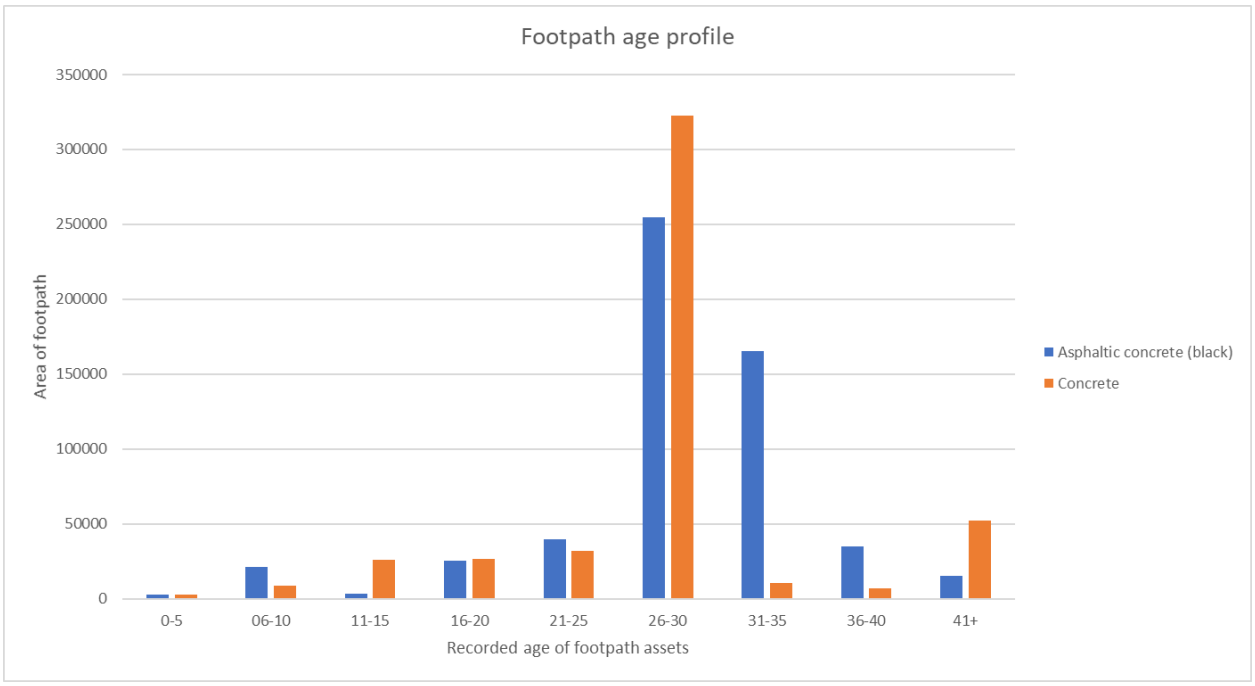
Some of the key observations are:

- The information provided is derived from the recorded date of asset construction in the RAMM system.
- incomplete records, several footpaths have been assigned arbitrary construction dates.
- over 50% of the asset records currently indicate an age of 27 years.
- It is expected that a sizeable portion of the footpaths in practise will exceed their documented age.

Table 55: Pedestrian Facilities Assets Condition Distribution

Condition		
Grade	Length (km)	% Of footpath network surveyed
1 (excellent)	7.5	1.4%
2 (good)	279.7	50.3%
3 (fair)	248.6	44.7%
4 (poor)	17.5	3.1%
5 (very poor)	2.5	2.5

Figure 35: Pedestrian Facilities Assets Age Distribution



5.6.2 Key issues and challenges

The key issues and challenges related to pedestrian facilities assets are listed below:

- Defects resulting from the displacement of footpaths due to the presence of street tree are widespread and increasing.
- There has been a noticeable increase in the number of concrete joins due to numerous short lengths being patched for both maintenance and renewal. This results in an increased probability of additional failures.
- The footpaths near the Central Business District (CBD) are becoming slippery due to leaf fall and other environmental issues, such as bird droppings.

Pedestrian Crossings

- On informal crossing locations like centre islands or pedestrian facilities at traffic signals, no specific condition or performance information is kept. Where these assets are linked to other transport asset types, like drainage or street facilities, information will be kept on them.
- Inconsistently applied throughout the city is the use of tactile ground surface indicators. They are not installed at many crossings

5.6.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for pedestrian facilities assets and response times for the same.

Table 56: Pedestrian Facilities Assets Operations and Maintenance

Pedestrian Facility Maintenance & Operations	
Operational	Routine, ongoing, full footpath network inspections to identify any faults which are then used to plan the maintenance and renewal programme.
	Management of corridor access requests. Ensuring that any reinstatement meets the required standard. Service trenches are a prevalent location failure of the footpath given the number of services that cross it to each property.
	Internal and consultant support and management of pedestrian facilities.
Reactive Maintenance	Maintenance activities to extend the life of a footpath asset. Generally targeted at Grade 4 & 5 faults. Includes: Footpath patching (not full width); Surface levelling or smoothing, through concrete grinding;
	Footpath cleaning in CBD area (further information detailed in Section 9.13 Place infrastructure and street furniture)
	Other minor activities relating to footpaths and pathways including: Clearing glass from footpaths. Repairing / maintaining fences on walkways linking roads.
Response timeframes	
Emergency footpath fault (injury)	The fault is programmed for construction works as appropriate. Emergency footpath faults are prioritized and will take place within 3 months (including if undertaken as a renewal).
Footpath fault identified	Three weeks to assess, prioritise and programme maintenance as appropriate.
	Maintenance will occur when included in a package of work (timeframe varies).

There has been a steady increase in footpath maintenance and street cleaning spend across the last 5 years. This increase in maintenance spend is attributed to an increase in footpath work undertaken after full network inspection identified the network condition was worse than previously thought.

The internal depot staff of the Council and a panel of contractor suppliers oversee maintaining the pedestrian facilities. Activities for renewal and maintenance are managed and carried out in parallel.

Forecasted expenditure for operations and maintenance are outlined in the table below.

Table 57: Pedestrian Facilities Assets Forecasted Expenditure

Pedestrian facilities maintenance and operations	Footpath Maintenance WC 125
Existing Delivery	$220,000
2024/25	$800,000
2025/26	$800,000
2026/27	$800,000
2027/28	$800,000
2028/29	$800,000
2029/30	$800,000
2030/31	$800,000
2031/32	$800,000
2032/33	$800,000
2033/ 34	$800,000

The footpath maintenance activity will be used to fix isolated, discrete faults where a short section of renewal is not the best response.

Without a series of regular and consistent full footpath network inspections, the quantum of emerging footpath failures is not known. Therefore, at this stage Council cannot determine what an adequate medium to long term maintenance investment level based on condition is for footpaths.

Costs will increase as the footpath network expands via asset improvement programmes and as the city grows.

5.6.4 Renewals and forward works programme

The table below summarises renewal activities we carry out for pedestrian facilities assets.

Table 58: Pedestrian Facilities Assets Renewal Activities

Pedestrian facilities renewal	
Description	**Activity**
Renewal	Renewal of a length of footpath or associated footpath assets (kerb crossings) where there are several faults or associated with other improvements. A renewal is considered when the treatment length is between two vehicle crossings or greater than 10 metres.
	Internal support and management of pedestrian facilities. Includes: • Prioritisation and programming of footpath work. • Management of footpath construction panel. • MSQA for footpath construction. • Capture construction tasks as dispatches within RAMM, including updating the asset in RAMM.

Historically Council had a programme for the renewal of footpaths. A change occurred during the 2018/19 year to focus on shorter lengths of footpath renewals rather than long whole street renewals.

Considerations for when to undertake a footpath renewal include:

- Maintenance activities such as grinding would not provide the best whole of life value for money.
- Situations where renewal of a longer length would be more cost-effective than targeting individual faults. For instance, when there are many defects.
- When associated with vehicle crossing renewal, drainage renewal, or street tree replacement as part of a wider street improvement / renewal project.

Forecasted asset renewals are outlined in the table below:

Table 59: Pedestrian Facilities Assets Forecasted Renewals

Pedestrian facilities renewals*	Footpath Renewal WC 225 (Prog 64)	Pedestrian Network Supporting Assets – Renewals (Prog 2430)
Existing Delivery	$1,442,100	$66,000
2024/25	$1,340,000	$66,000
2025/26	$1,340,000	$66,000
2026/27	$1,340,000	$66,000
2027/28	$1,340,000	$66,000
2028/29	$1,340,000	$66,000
2029/30	$1,340,000	$66,000
2030/31	$1,340,000	$66,000
2031/32	$1,340,000	$66,000
2032/33	$1,340,000	$66,000
2033/ 34	$1,340,000	$66,000

*See also Table 31 “Bunnythorpe – Pavement and Footpath Renewals (Prog 2357)”

5.6.5 Capital works and Improvements

The table below summarises the key capital works planned that will impact pedestrian facilities assets. Some of these projects can have indirect impacts.

Table 60: Pedestrian Facilities Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
452	Prog 2368 – City wide – Footpaths - New	Capital LOS	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000

There are several gaps across the transport network between the existing level of service and that sought from the preferred alternative for pedestrian facilities that can only be delivered by investment in asset improvement.

All minor pedestrian improvement projects are proposed to be delivered via one Council programme. This will allow for investment to be prioritised year-to-year should the needs of the pedestrian network change. There are two main parts to the programme, footpath extensions and minor safety / crossing improvements.

Footpath extensions provide the expected level of service for all urban areas. A list of minor pedestrian facility safety improvements has been identified. This are midblock and intersection crossing facilities. Investment for both these parts of the programme is ranked using the following criteria (in order of importance):

- Pedestrian safety;
- Pedestrian generators – schools, shops, etc;
- Road hierarchy; and
- Operating speed of adjoining road, as indicated by speed limit.

5.7 Cycling Facilities

5.7.1 Network Overview

Network Summary and Condition

The purpose of this asset is to create a comprehensive, efficient, and safe cycling infrastructure in Palmerston North to promote cycling as a transportation option.

On-road cycle lanes, off-road shared paths, and cycle stands make up the cycling facilities network. Road and pavement characteristics impact on-road cycle lanes. Off-road shared paths may be unsealed and resemble recreational paths. Cycle infrastructure should be treated like other road furniture.

Cycleways can also be used by mobility scooters and electric scooters when footpaths are unsuitable. A summary of the network is provided below.

Table 61: Cycling Facilities Network Summary

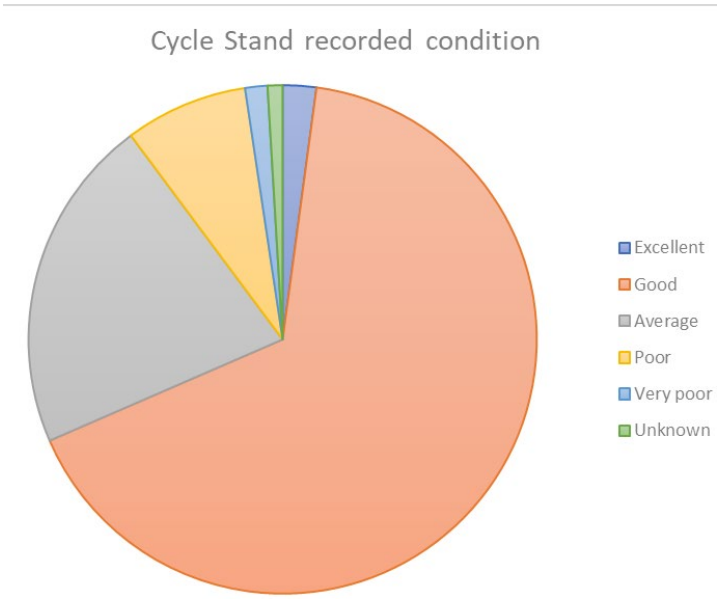
Asset Type	Material Type	Quantity	Useful Life	Valuation
On-road cycle lanes	Same as the road on which the cycle lane lies.	50 km	6 – 40 years	Not valued
Off-road shared paths	Asphalt, concrete, limestone.	42 km	10 – 80 years	$5.8M
Cycle Stands	Galvanised, stainless, Corten, powder coated.	345	20 – 40 years	$0.4M

Note: Limited asset age information is maintained for cycling facilities. Some of the key observations are:

- 40% of cycle stands have asset ages. Many of these have construction dates of January 1 of various years, indicating estimated ages.
- For on-road cycle lanes, the only assets are road markings, which given their short life do not have age related data captured
- Off-road shared paths are a mix of surfaces with varying useful lives, shared paths outside the road corridor are included in footpath condition surveys. A consistent lime surfacing condition rating process has yet to be developed from surfacing defects.
- The condition of the asphaltic concrete off-road shared paths inside and outside the road corridor is currently not assessed, however they are to be included within the next footpath condition survey.

Status: Final

Further information on Cycle stands and supporting infrastructure condition.

Cycle Stands and supporting infrastructure More than half of cycle stands recorded in RAMM are Sheffield U type stands. All cycle stands were rated during 2019. This rating showed that most cycle stands are in average condition or better. Specific faults are not recorded in RAMM for cycle stands. General faults are highlighted below.	Figure 36: Cycle Stand Condition Distribution 
Insufficient or inadequate end of trip facilities in place for cyclists.	Programme to deliver additional cycle stands and other supporting infrastructure is in place.
Age related deterioration such as paint chips, dents, rust, and corrosion.	Minor maintenance, such as repainting, may be undertaken if simple and effective. However, for many low-cost cycles stands, renewal is more cost effective.
Cycle stands are damaged by vehicles if placed too close to a car park or kerb.	Cycle stand is renewed at a different location to avoid vehicle damage;

5.7.2 Key issues and challenges

The key issues and challenges related to cycling facilities are listed below:

- Glass, leaves, and other detritus as well as potholes or other pavement failures impact the network.
- Road markings fading. Poor visibility of lane markings causing incorrect lane usage by cyclists and motorists.
- Condition information is held for less than 10% of the off-road shared path network.
- Limestone paths deteriorate rapidly. Especially during winter or periods of high rainfall.

5.7.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for cycle facilities assets and response times for the same.

Table 62: Cycling Facilities Assets Operations and Maintenance

On-road cycle lane Operations and Maintenance	
Planned Maintenance	Cyclic road sweeping of cycle lanes to keep them free of glass, leaves, and other harmful detritus. This is at a higher frequency than another street.
Reactive Maintenance	Clearing cycle lanes and streets frequented by cyclists of glass, leaves and other harmful detritus when identified and planned sweeping will not occur quickly.
	Other maintenance activities associated with the road pavement & surface, drainage, street trees, streetlights, and other transport assets. These are detailed in other sections.
Off-road shared path Operations and Maintenance	
Operational	Full shared path network inspections to identify where maintenance activities are required. Undertaken three monthly or following weather events.
Planned maintenance	Seasonal maintenance, edge trimming and spraying for the entire shared path network.
Reactive maintenance	Responding to faults, complaints and safety issue identified. Maintenance of shared path to achieve service levels including: • Lime surface patching; • Removal of silt deposits from high river levels; • Vegetation trimming or removal; • Removal of offensive litter.
Cycling facilities Operations and Maintenance	
Reactive Maintenance	Repair of cycle stands and other end of trip facilities where and the damage is impacting the functionality of the asset.
Response timeframes	
Description	**Response Time**
Offensive litter in cycle lane	Includes glass in the cycle lane. Will be cleared within 4 hours.
Faults relating to ‘other’ assets	Response time as per other assets.

Cycling facilities are administered through a range of management approaches. Various resources, including in-house personnel, the road maintenance contractor, and specialised contractors, are utilised based on the specific tasks that need to be carried out. Numerous maintenance activities pertaining to various transportation assets are executed within their own respective groups.

Forecasted expenditure for maintenance and operations, as it relates to cycling facilities, is outlined in the table below.

Table 63: Cycling Facilities Assets Forecasted Expenditure

Cycling facilities operations and maintenance	Cycle Path maintenance WC 124
Existing Delivery	$271,400
2024/25	$825,000
2025/26	$825,000
2026/27	$825,000
2027/28	$825,000
2028/29	$825,000
2029/30	$825,000
2030/31	$825,000
2031/32	$25,000
2032/33	$825,000
2033/ 34	$825,000

5.7.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for cycling facilities assets.

Table 64: Cycling Facilities Assets Renewal Activities

Supporting cycle infrastructure Renewals	
Renewal	Renewal of deteriorated cycle stands and other end of trip facilities where maintenance is no longer economical.

The low expenditure in the past 5 years indicates a limited amount of investment in the renewal of cycling facilities, with a greater emphasis placed on maintenance activities in previous years.

Based on the assessment of the issues and trends, it is determined that the focus of cycling facilities renewals will be limited to the replacement or improvement of cycle stands and other essential supporting cycle infrastructure.

Only off-road paths and cycle stands are renewed. The transport network renews on-road cycle lanes. Cycle stands will be renewed over the next three years. Staff prioritise these after ad hoc inspections or customer requests

Off-road cycle paths are renewed when they reach the end of their economic life. Age, condition, maintenance, and material life determine resurfacing, or reconstruction needs. All work is maintenance for the next three years.

Forecasted cycling facility renewal expenditure is outlined in the table below

Table 65: Cycling Facilities Assets Forecasted Renewals

Cycling infrastructure renewals	Cycle path Renewal WC 224 (Prog 2371)	Shared pathways Renewal (Prog 2373)	Off Road Shared Pathway Link Renewals (Prog 2374)	Supporting Cycle Infrastructure Renewals (Prog 648)	Active Transport Supporting Infrastructure – Renewals (Prog 2383)
Existing Delivery	$12,000				
2024/25	$900,000	$750,000		$15,000	$40,000
2025/26	$1,900,000	$750,000		$18,000	$41,000
2026/27	$700,000	$750,000		$18,000	$42,000
2027/28	$1,000,000	$750,000		$18,000	$42,000
2028/29	$1,000,000	$750,000		$18,000	$43,000
2029/30	$1,000,000	$750,000		$18,000	$44,000
2030/31	$1,000,000	$750,000		$21,000	$46,000
2031/32	$1,000,000	$750,000		$21,000	$47,000
2032/33	$1,000,000	$750,000		$21,000	$48,000
2033/ 34	$1,000,000	$750,000		$22,000	$51,000

5.7.5 Capital works (New and Improvements)

The table below summarises the key capital works planned that will impact cycling facilities assets. Some of these projects can have indirect impacts.

Table 66: Cycling Facilities Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
452	Prog 1559 - Cycling Network improvements	Capital LOS	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000
452	Prog 1925 – Urban Growth – Active Transport Land purchases	Capital Growth	$141,000	$141,000	$141,000	$141,000	$141,000	$141,000	$141,000	$141,000	$141,000	$141,000
452	Prog 2026 – Active Transport Monitoring and Evaluation Improvements	Capital LOS	$110,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$110,000	$110,000	$110,000
452	Prog 2056 - Cycling Network Supporting Assets - Improvements	Capital LOS	$29,809	$30,674	$44,798	$46,100	$61,450	$63,231	$79,907	$81,903	$83,949	$86,050
452	Prog 2057 - Shared Pathways – New and Link Improvements	Capital LOS	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
452	Prog 2120 - Off Road Shared Path Network Improvements	Capital LOS	$297,000	$297,000	$297,000	$297,000	$297,000	$297,000	$297,000	$297,000	$297,000	$297,000
452	Prog 2505 – City wide – Shared Pathways – Slip Prevention	Capital LOS	$500,000	$500,000	$500,000	$500,000	$0	$0	$0	$0	$0	$0

The council has undertaken the construction of new cycling facilities in areas where none previously existed. The proposed improvement involves extending the current shared path network. Additionally, the construction of cycling facilities will be carried out at a higher level of service compared to the previous infrastructure. For instance, the conversion of an on-road cycle lane into a segregated facility.

5.8 Public Transport

5.8.1 Network overview

Network Summary and Condition

The key purpose of Public Transport (PT) assets is to provide comfortable on-street facilities that help facilitate a viable, attractive, and convenient transport mode. Public transport infrastructure has a considerable influence over the usability and desirability of the public transport network.

Public transport infrastructure is the bus stops, shelters and other on-road infrastructure that supports the use of the urban and regional bus services in Palmerston North.

Table 67: Public Transport Network Summary

Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Bus stops	Grass, concrete pad, paved verge, shelters	556	NA	NA
Facilities	Bus Shelters	87 *	15-20 yr.	$1.9M
	Bus Terminal	1	50	$0.4M

* Includes 20 Adshel shelters provided and maintain externally.

There are also several interactions between PT infrastructure and other assets which support public transport throughout the city.

- **Pedestrian facilities**: Link public transport users with their start and end destination;
- **Traffic Services**: Signage and markings at bus stops. Bus phases at signalised intersections.

Asset Age Profile

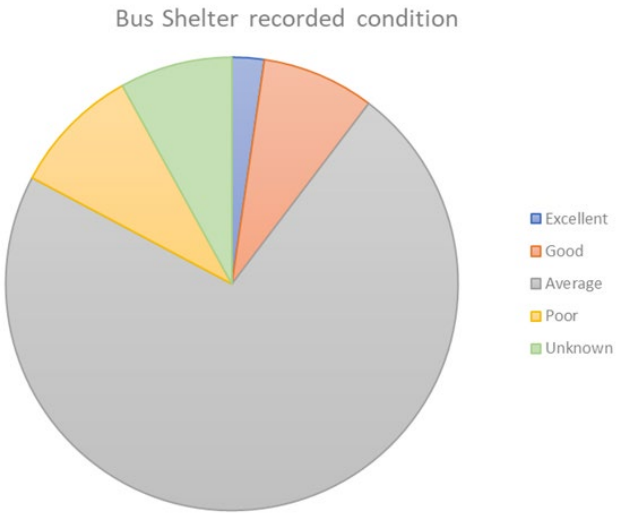
Construction dates and corresponding age information is held in RAMM for only a few bus shelters and other public transport infrastructure assets.

Asset Condition and Performance

The graphs below summarise the condition distribution for PT assets. It is important to note, there is currently no planned inspection regime for PT infrastructure assets. Most faults and damage are reported via customer requests. These are then reviewed, prioritised and work programmed as required.

Condition assessments for most bus shelters, including the Adshel shelters, was undertaken in 2019. This assessed the shelters cleanliness and state of repair and provided a good condition baseline for these assets. The majority (72%) of shelters were rated average which indicates that they had some level of deterioration.

Figure 37: Bus Shelter Condition Distribution



Network Growth

Key growth factors that are likely to affect the PT network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated increase of 15,000 homes. This will have an associated asset growth.
- **Multiple upgrade and capital projects** identified as part of the Palmerston North Integrated Transport Initiative (PNITI)

5.8.2 Key issues and challenges

The key issues and challenges related to PT assets are listed below:

- There is an ongoing challenge to make PT a safe, economical, and reliable option. Currently the preferred mode of travel remains private transport. Most bus stops around the city do not have shelters or other suitable infrastructure to support PT viability.
- Since the maintenance of bus shelters is undertaken by a third party, the maintenance and renewals budgets have remained low historically. As the asset base increases in the future through improvement initiatives or capital projects, there will be an impact on the maintenance and renewal requirements.
- Key bus routes such as Ruahine Street are congested during peak periods, impacting the bus services also. Buses are also often caught in CBD congestion.

5.8.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for PT assets and response times for the same.

Table 68: PT Infrastructure Assets Operations & Maintenance

Public Transport Infrastructure Maintenance & Operations	
Operational	Liaison with oOh!media where maintenance is required on the bus shelters they operate. Invoice for revenue generated from this arrangement.
	Electricity charges associated with the urban bus terminal.
Proactive Maintenance	Seasonal cleaning, gum removal, graffiti removal.
Reactive Maintenance	Bus shelter glass replacement and minor maintenance activities undertaken by Council contractor when identified (usually via customer request)
	Bus stop signs and posts maintained as per Section 6.10 Traffic Services.
	Cleaning of Main Street Bus Terminal is undertaken alongside other CBD cleaning activities and is to a higher level of service than other suburban bus shelters.
Glass or other damage that is a safety hazard	Less than one working day. Actioned by Road Maintenance Contractor.
Bus stop sign	Actioned by Road Maintenance Contractor. Programmed for delivery within a month.
General bus stop maintenance	A Council staff member will investigate within three working weeks. Appropriate maintenance planned after that. Current response times are less than two days.

Maintenance and operational costs have held steady over the past 5-year period. Approximately 60 percent of the budget has been utilised on shelter cleaning, including the Urban and Regional bus terminals.

Council generates advertising from bus shelters via a contract with oOh!media. The bus shelters are maintained by oOh!media who can generate advertising revenue. 20% of that revenue is paid to Council. Bus shelter advertising revenue has been steadily falling over the past 5-year period and was down especially during the 2019/20 year.

Horizons deliver the PT infrastructure maintenance, operations, and renewals (excluding bus stops and bus shelters). The Forecasted expenditure for operations and maintenance are outlined in the table below.

Table 69: PT Infrastructure Assets Forecasted Expenditure

Public T infrastructure maintenance and operations	PT infrastructure WC 514
Existing Delivery	$130,000
2024/25	$250,000
2025/26	$250,000
2026/27	$250,000
2027/28	$250,000
2028/29	$250,000
2029/30	$250,000
2030/31	$250,000
2031/32	$250,000
2032/33	$250,000
2033/ 34	$250,000

Table 70 notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group.

Table 70: Public Transport - Operational Programmes

Public Transport - Operational Programmes	2024/25	2025/26	2026/27	2027/28	2028/29
2464 - City Centre Transport Indicative Business Case	$75,000	$	$-	$	$

5.8.4 Renewal and forward works programme

Renewal of public transport infrastructure is primarily associated with bus shelters. While other assets such as concrete hardstands, grass verges and bus laybys are also public transport infrastructure these have a much longer life or are managed differently.

The table below summarises renewal activities we carry out for PT assets.

Table 71: PT Infrastructure Assets Renewal Activities

Public Transport Infrastructure renewal	
Renewal	Renewal of bus shelters where maintenance activities are no longer effective and / or economic.

Public transport infrastructure renewals are limited and were only reinstated at the last Long Term Plan (LTP) (2021). Before that, no shelter or other infrastructure renewals had occurred. Over the last 2-years, approximately 12-14 shelters have been renewed. The forecasted asset renewals are outlined in the table below.

Status: Final

Table 72: PT Infrastructure Assets Forecasted Renewals

Public Transport Renewals	Public transport facilities and infrastructure - renewals WC 534 (Prog 181)
Existing Delivery	$35,000
2024/25	$115,500
2025/26	$115,500
2026/27	$115,500
2027/28	$115,500
2028/29	$115,500
2029/30	$115,500
2030/31	$115,500
2031/32	$115,500
2032/33	$115,500
2033/ 34	$115,500

5.8.5 Capital works and Improvements

The table below summarises the key capital work planned that will impact PT assets. There are limited region-wide improvements currently planned for public transport. It is recommended to slowly increase the PT infrastructure through third party agreements to minimise long term costs.

Table 73: PT Infrastructure Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
532	Prog 1680 - Public Transport Network Improvements	Capital LOS	$844,650	$1,064,650	$1,064,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650
	Prog 243 – City Centre – Transit Hub Redevelopment	Capital LOS	$337,000	$400,000	$2,533,000	$4,916,000	$10,215,000	$10,613,000	$550,000	$550,000	$400,000	$400,000

5.9 Street Lighting

5.9.1 Network Overview

Network Summary and Condition

Street lighting plays a crucial role in ensuring night-time safety for all individuals utilising the roadways. It serves to instil a heightened sense of security among pedestrians and residents, while also enhancing visibility for motorists. The implementation of flag lighting in rural areas serves as a valuable tool for identifying intersections and provides a significant safety benefit for motorists.

Streetlights assets include road, accessway and "non-subsidised" roading lights, Council-owned carpark lights, festive lighting, and a few ground-mounted lights. Some poles support multiple lanterns, some lanterns are directly attached to power poles that Council does not own, and CBD veranda lighting is attached to retail frontage canopies. The electricity lines company controls the street lighting circuits, which start at the fuse at each pole.

A summary of the network is provided below.

Table 74: Street Lighting Network Summary

Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Pole	Powder-coated or galvanised steel, cast iron, concrete, timber, or unknown. Useful life depends on material type, as well as the nature of the ground.	8,033	45-80 years	$23.2M
Outreach / Bracket	Various shapes and sizes, some one-piece inclusive with the pole. Typically powder coated or galvanised steel.	7,789	50 years	$4.3M
Luminaire	Various lamp types, including LED, sodium.	8,857	25 years	$10.7M

Some of the key observations are:

- Although age data is collected for utility poles, there is a lack of comprehensive historical records, resulting in estimated or unknown ages for older assets.
- Age assumptions are considered during the process of asset valuation; however, it is important to note that age does not hold significant weight in the decision-making process of asset management.
- The inspection of street light assets is conducted in accordance with the road maintenance contract.
- The inspection assesses the condition of individual components, including areas below ground that are susceptible to issues such as wet conditions or acidic soils. Trees that obstruct the lighting splay are also observed, this information is recorded in RAMM
- Poles are evaluated comprehensively to identify any signs of rust, dents, or leaning. , Luminaires are evaluated for any signs of damaged or fractured diffusers, overall cleanliness, and proper tilt angles. The assessment is also conducted on the outreach arms and luminaires that are attached to the power poles where the streetlights are mounted on the overhead lines.

5.9.2 Key issues and challenges

The top issue is the number of outages to streetlights. They are caused by a combination of LED unit failures and supply problems. Other challenges related to street light assets are listed below:

- Steel pole base corrosion in acidic soil environments.
- Age-related deterioration to bracket material. Usually, corrosion of steel brackets or bracket fixings.
- Broken or cracked diffusers, failed lamps, electrical component corrosion.
- Cleanliness of lamp covers.
- Lighting levels that do not meet current standards.
- Power outage.

5.9.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for Street Light assets and response times for the same.

Table 75: Street Lighting Assets Operations and Maintenance

Street Light Maintenance & Operations	
Operational	Carry out bi-annual condition inspection including specific checks of: • Full check of poles from top to bottom for rust, dents, leaning poles; • Steel pole base corrosion; • Luminaries assessed for broken or cracked diffusers, cleanliness, and tilt angles; • Electricity testing; For streetlights attached to power poles, outreach arms and luminaires are assessed.
	Electricity charges associated with running the streetlights. Liaison with Powerco when multiple streetlights fail.
	Internal and consultant support and management of street light assets.
	Cost recovery where possible when street light assets are damaged in a crash. This is via the at fault party or their insurance company.
Proactive Maintenance	Annual retorque shear base pole per manufacturers requirements to ensure poles will perform as expected in the event of a crash.
Reactive Maintenance	Carry out routine maintenance, repair and / or replacement of all missing, damaged, defective, and faulty equipment and component parts.
	The lower 1-2 sections of steel poles are programmed for replacement as required where enough corrosion is found.
	Luminaire failures in non-LED areas have the lamps and / or internal gear trays replaced as required.
	LED luminaires which fail are replaced by the supplier under a 10-year warranty.
	Make safe any dangerous assets identified through inspections, crash damage or customer requests.
Normal street light fault	5 working days.
Car vs pole or exposed wires	30 minutes to make safe.
	After making the site safe, depending on availability of materials, the replacement of poles could be up to 2 weeks.

Most of the maintenance work carried out can be classified as reactive maintenance. This type of maintenance primarily focuses on addressing defects that have been identified through inspections or customer requests.

The expenditure on street light maintenance experienced a notable decline in 2018/19 and 2019/20, following a period of consistent growth prior to that. The LED conversion that took place during this period led to a reduction in maintenance and decrease in electricity costs for the street light network. However the assumption that maintenance costs would continue to decline was unfortunately incorrect as per the comment in the renewals section.

it is anticipated that the maintenance of poles and brackets will remain at comparable levels to the current situation.

Forecasted expenditure for maintenance and operations, as it relates to street lighting, is outlined in the table below:

Table 76: Street Lighting Assets Forecasted Expenditure

Streetlights	Streetlight Operations and Maintenance (part of WC 122, refer also Signs Maintenance)
Existing Delivery	$21,238
2024/25	$400,000
2025/26	$400,000
2026/27	$400,000
2027/28	$400,000
2028/29	$400,000
2029/30	$400,000
2030/31	$400,000
2031/32	$400,000
2032/33	$400,000
2033/ 34	$400,000

5.9.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for street light assets.

Table 77: Street Lighting Assets Renewal Activities

Streetlight asset Renewal	
Renewal	Renewal of street light pole or bracket where deterioration such, that it would be uneconomic to maintain. This considers the maintenance expenditure history of the asset.
	LED luminaires which fail are replaced by the supplier under a 10-year warranty.
	LED luminaire renewal is planned for when the existing luminaires are approximately 25 years old.
Reactive Renewal	Renewal of street light pole and / or other components when an event (vehicle crash, weather event) results in damage that is uneconomic to repair.

Some key issues and trends suggest that:

- Street light assets are in good condition and renewal rates will remain low.
- Previously renewal costs had been declining but during the past couple of years we have been experiencing a lot of premature failure of the LED light units. A combination of warranty issues and installation problems have meant more of an investment than expected and future budgets will require raising to offset this issue.
- Pole and bracket asset renewal costs will remain stable, majority asset renewals are the result of crash damage.
- New maintenance contract prices will certainly result in an increase in maintenance costs.

The asset valuation for all street light assets in the city is $46.8 with annual depreciation of $990,000. The annual depreciation for street light brackets and poles is $508,000.

Forecasted street lighting renewal expenditure is outlined in the table below:

Table 78: Street Lighting Assets Forecasted Renewals

Street light renewals	Street light renewals (part of WC 222) (Prog 74)
Existing Delivery	$116,809
2024/25	$500,000
2025/26	$500,000
2026/27	$500,000
2027/28	$500,000
2028/29	$500,000
2029/30	$500,000
2030/31	$500,000
2031/32	$500,000
2032/33	$500,000
2033/ 34	$500,000

5.9.5 Capital works and Improvements

Around 15% of street light luminaires are older non-LED models. New Zealand Transport Agency – Waka Kotahi funding is no longer available for upgrading Local Government street lighting networks to be fully LED. Future upgrades will be carried out under the general, New Zealand Transport Agency – Waka Kotahi jointly funded, Street Light Renewals programme. .

5.10 Traffic Services

5.10.1 Network Overview

Network Summary and Condition

The key purpose of traffic services is to contribute to the safe and effective movement of transport users

This collection of assets encompasses a diverse range of resources that serve the dual purpose of guiding and regulating the movement of all transportation users, while also ensuring their safety and protection. A summary of the network is provided below.

Table 79: Traffic Services Network Summary

Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Road markings	Linear painted markings – including centrelines, edge-lines, lane lines, flush medians, cycle lanes, etc	Approx. 550km	1-2 yrs.	Not valued
	Feature painted markings – including stop, give way, arrows, turns, cycle, parking, edge marker posts, etc.	Approx. 12,500	1-2 yrs.	Not valued
Signs	Includes Regulatory, Guide, permanent warning, Information, hazard markers, pedestrians, Street Name Plates, etc.	Approx. 11,000	20 yrs.	$1.6M
Traffic signals	Includes poles, detectors, target boards, lanterns, controllers, comms devices, SCATS system (21 intersections), etc. Lanterns are now all LED fittings.	38 sets	10-15 yrs. 35 yrs. (poles)	$2.1M
Electronic signs	Electronic variable speed signs at schools	13 schools	tbc	Not valued
Railings	Includes painted sight rails, handrails, timber rails, concrete post, and steel tube, etc.	Approx. 210 locations	tbc	Not valued
Traffic facilities	Includes central medians, splitter islands, roundabouts, speed humps, local area traffic management	Not known	Varies.	Not valued

Status: Final

The graphs below summarise the age and condition distribution for traffic services. Some of the key observations are:

- Age data is recorded in RAMM based on the sign install date and post install date. Approximately 45% of road signs have a default install date of 2006 entered.
- Over the past 5-year period, there has been approximately 350 signs and 250 new poles installed per year. While this will mostly be replacement of existing signs and poles, it also includes new assets based on expansion of the network.
- Asset age information is not held for traffic signal assets and electronic signs. Asset age is not captured for road markings due to their short life.
- Condition information is held for approximately 99% of road signs and 94% of signposts. The condition information indicates that these assets are in good or excellent condition.
- There is not up to date condition data recorded in RAMM for traffic signal assets and electronic signs. This is an improvement item for the upcoming period.

Figure 38: Road Sign Age Distribution

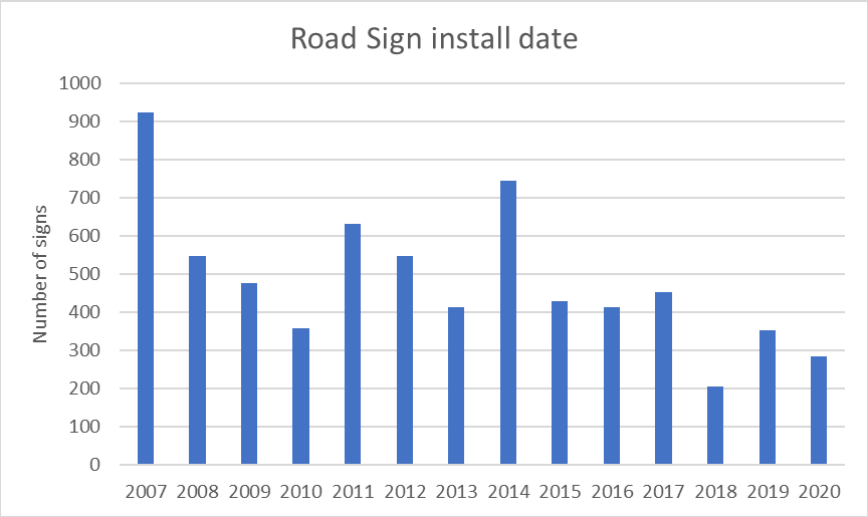
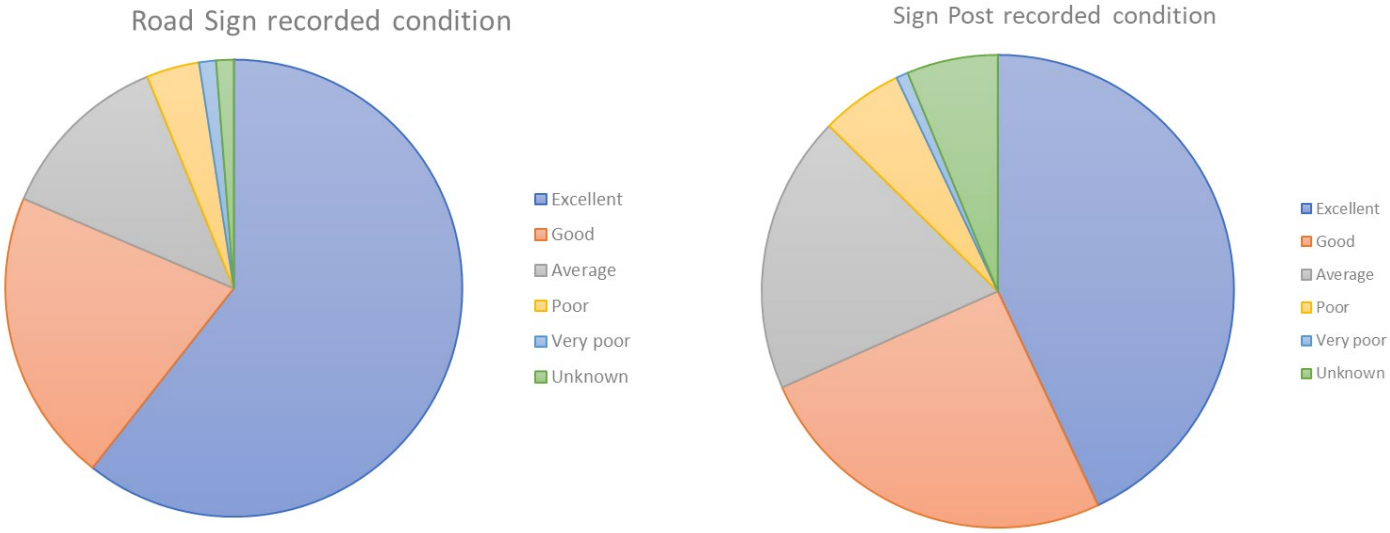


Figure 39: Traffic Services Condition Distribution



Through nocturnal inspections, the condition of road markings and signage is evaluated. These evaluations pinpoint flaws, safety risks, and the essential tasks that must be scheduled. The classification of the roads determines how frequently night-time inspections occur, with higher classification roads receiving more inspections.

During the contractor's quarterly patrols, the assets of traffic signal systems are inspected. These examinations may be able to spot problems that the public might miss.

5.10.2 Key issues and challenges

- As roading markings are so short-lived, no condition information is held for them.
- Road markings fade, impacting visibility, and readability, also can be slippery for other users like pedestrians or cyclist
- Road marking failures resulting from a failed road surface.
- Damage from road accident, vandalism, or another source.
- Faults associated with the performance of the traffic signals.
- Some road signs are subject to frequent vehicle damage, such as those on median islands.

5.10.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for traffic services and response times for the same.

Table 80: Traffic Services Assets Operations and Maintenance

Road Signs & Delineation Devices Maintenance & Operations	
Description	Activity
Operational	Night-time audits of road signs and other delineation devices. Undertaken annually for the entire transport network to identify assets which do not meet the required reflectivity standard.
Reactive Maintenance	Carry out routine cleaning, maintenance, repair and / or replacement of all missing, damaged, defective, and faulty signs and posts. The methodology for this will be determined with the road maintenance contractor with a focus on whole of life costs. It may be more economic to replace a component of a sign rather than continuing to clean or maintain it.
	Repair or replace other delineation devices as required. This includes raised pavement markers (cats-eyes), edge marker posts and sight rails.
Traffic Signal & Electronic Signs Maintenance & Operations	
Description	Activity
Operational	3-monthly patrols by Council's contractor to assess the performance of traffic signals and identify any maintenance issues.
	Observation and monitoring of signals performance; monitoring of the fault logs generated by SCATS. Testing of SCATS to ensure optimisation. Temporary adjustments to signal phasing to clear queues or other incidents. Managing and assisting with traffic management for special events.
	Electricity charges associated with running the traffic signals and electronic signs. Liaison with power provider when multiple assets fail. An uninterruptible power supply and / or generator is in place to mitigate any loss of service. Planned power outages avoid peak times when they will impact traffic signals.
	Ensure compliance with corridor access procedures where work may impact traffic signal loops, ducts, or cabling. These assets are not currently captured in GIS.
	Cost recovery where possible when traffic signal assets are damaged in a crash. This is via the at fault party or their insurance company.
Preventative Maintenance	Cleaning of lamps; condition and operation checks on all vehicle detectors, loops, pedestrian detectors, buzzers, audio tactile facilities, signal hardware, wiring, controllers, and cabinets; carrying out adjustments and repairs where necessary.
Reactive Maintenance	Carry out routine maintenance, repair and / or replacement of all missing, damaged, defective, and faulty equipment and component parts.
	Make safe any dangerous assets identified through inspections, crash damage or customer requests.
Response timeframes	
Fault type	**Response time**

General maintenance	Road signs, road markings and other delineation devices are maintained via the road maintenance contract. . Most maintenance work is identified by the public when damage occurs, or via night-time inspections.
Traffic signals and other electronic signs.	Faults with traffic signals and other electronic signs will usually impact their performance and effectiveness. These are responded to in a short time to ensure the safety and efficiency of the transport network is maintained. Even a short outage of these assets can have a significant impact.

General cleaning, straightening, and repairing signs and posts consumed over 50% of the sign's maintenance budget over the past three years. Some parts of the network are covered annually on a per-kilometre basis and by priority, council is currently working on upping the budgets to be able to do more sections.

Signals maintenance has been consistent for five years. This expense is mostly for traffic signal inspections and minor maintenance.

Traffic signal detectors usually fail due to surface failure, resurfacing, or service trenching. All traffic signals use LED lanterns

Forecasted expenditure for maintenance and operations, as it relates to traffic services, is outlined in the table below:

Table 81: Traffic Services Assets Forecasted Expenditure

Traffic services assets maintenance and operations	Signs Maintenance (part of WC 122, refer also Street Light Operations and Maintenance)	Traffic signals maintenance WC 123
Existing Delivery	$276,221	$181,000
2024/25	$100,000	$150,000
2025/26	$100,000	$150,000
2026/27	$100,000	$150,000
2027/28	$100,000	$150,000
2028/29	$100,000	$150,000
2029/30	$100,000	$150,000
2030/31	$100,000	$150,000
2031/32	$100,000	$150,000
2032/33	$100,000	$150,000
2033/ 34	$100,000	$150,000

5.10.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for traffic services.

Table 82: Traffic Services Assets Renewal Activities

Traffic Services asset Renewal	
Renewal	Renewal of road markings. Strategy developed in conjunction with road maintenance contractor to minimise costs over the life of the asset.

Some key insights on the renewal plan:

- Road marking in the road maintenance contract allows for optimisation with other maintenance and renewal activities.
- Recent investments in traffic signal assets have been substantial. No asset renewals are planned. Traffic signals maintenance funds asset replacement after vehicle damage.
- Road marking expenditure has been consistent for four years. This shows that the delivered work matches the renewal strategy.

Forecasted asset renewals are outlined in the table below.

Table 83: Traffic Services Assets Forecasted Renewals

Traffic services renewals	City-wide - Parking and Traffic Signs and Marking (Prog 1615)	Active Transport Wayfinding Renewals (Prog 2386)	Traffic Services Renewals (Prog 2376)
Existing Delivery			
2024/25	$65,079	$57,500	$1,000,000
2025/26	$81,348	$57,500	$1,000,000
2026/27	$73,000	$57,500	$1,000,000
2027/28	$73,000	$69,000	$1,000,000
2028/29	$73,000	$75,900	$1,000,000
2029/30	$73,000	$83,490	$1,000,000
2030/31	$73,000	$91,839	$1,000,000
2031/32	$73,000	$101,023	$1,000,000
2032/33	$73,000	$111,125	$1,000,000
2033/ 34	$73,000	$122,238	$1,000,000

Trends observed:

- Traffic signals and electronic signs will need long-term renewal budgets, according to trends. These renewals will follow street light renewal cycles.
- High-cost traffic service assets like variable speed signs have been installed without renewal consideration. As they age and need renewal, this cost must be accommodated.

Status: Final

5.10.5 Capital works and Improvements

The table below summarises the key capital works planned that will impact traffic services assets. Some of these projects can have indirect impacts.

Table 84: Traffic Services Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
?	Prog 2385 – Active Transport Wayfinding Improvements	Capital LOS	$38,000	$142,000	$142,000	$326,000	$276,000	$276,000	$276,000	$276,000	$276,000	$276,000

WC	Programme Number - WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
324	1003 - Whakarongo - Intersection - Safety Improvements	Capital Growth	$1,200,000	$500,000	$5,500,000	$0	$0	$0	$0	$0	$0	$0
324	2335 - Stoney Creek Road - Safety Improvements	Capital Growth	$500,000	$2,600,000	$4,600,000	$2,600,000	$0	$0	$0	$0	$0	$0
324	2389 - Urban Growth - Aokautere - Transport Improvements	Capital Growth	$2,800,000	$2,000,000	$14,500,000	$1,000,000	$7,000,000	$7,000,000	$10,000,000	$8,000,000	$8,000,000	$0
324	159 - Kelvin Grove Road - Safety Improvements	Capital LOS	$400,000	$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0
324	839 - Rangitikei St / Featherston St - Intersection Improvements	Capital LOS	$0	$1,084,639		$379,623	$4,338,557	$4,338,557	$0	$0	$0	$0
324	1121 - Tennent Drive - Safety Improvements - Food HQ & Massey	Capital LOS	$146,300	$946,100	$0	$0	$292,600	$1,286,756	$4,941,792	$3,510,068	$0	$0
324	PNITI – Intersection & bridge improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$4,000,000	$4,000,000	$4,000,000
324	2453 - City-wide - Transport - Bridge Replacements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$8,000,000	$8,000,000	$8,000,000
324	1804 - City-wide - Road Drainage - Additional Drainage Upgrades	Capital LOS	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
324	1804 - City-wide - Road Drainage - Additional Drainage Upgrades	Capital LOS	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,600,000	$300,000	$1,600,000	$300,000	$1,600,000
324	2013 - PNITI – Strategic Transport Corridor Improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000	$20,000,000
324	Kelvin Grove Road - Safety Improvements	Capital LOS	$3,000,000	$3,000,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0

Status: Final

WC	Programme Number - WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
324	2359 - PNITI - Bunnythorpe - Bridge Replacements	Capital LOS	$350,000	$750,000	$0	$1,000,000	$8,000,000	$0	$0	$0	$0	$0
324	2456 - Cliff Road Upgrade - Te Motu O Poutoa	Capital LOS	$500,000	$0	$3,650,000	$0	$0	$0	$0	$0	$0	$0

5.11 Car Parking

5.11.1 Network overview

Network Summary and Condition

The key purpose of car parking assets is to provide an adequate supply of controlled car parking for those visiting the commercial, recreational, and business areas of the city. Since provision of car parking contributes towards land use, transport, economic, environmental and community outcomes sought by the city, the demand management through parking restrictions is critical for us.

Council manages and maintains on and off-street parking assets. A summary of these assets is provided below:

Table 85: Car Parking Network Summary

Car Park location	Types / Materials	Quantity
Within and including the Ring Road	Metered (On-street)	1231
	Metered (Off-street	295
	Non-metered (On-street)	590
	Non-metered (Off-street). Includes lease and time restricted.	596
Outside the Ring Road	Metered (On-street)	99
	Metered (Off-street	0
	Non-metered (On-street) time-restricted	1792
	Non-metered (Off-street). Includes lease and time restricted.	378
Special Parking Spaces (inclusive to car park numbers above)		
Accessible / disabled		80
Loading Zone		59
Motorcycle		31
Taxi		14
Bus		59

Other Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Parking Machines	Metro parking meters	190	15 years	Not valued
Bay Sensors	Frog parking	2,241	10 years	
Bay Markers	Either discs mounted on adjacent kerb or painted on car park.	2,027	Varies	

Status: Final

Asset Age Profile

Transport assets associated with off-street car parks are old. More than 97% of sealed surfaces in off-street car parks are 15 years old or older. With more than half of surfaces 25 years old or older.

In 2008, all existing parking meters were replaced with new parking meters. The expected asset life of the new machines is 10-15 years. It is anticipated that, with developing technologies, some internal firmware may require replacement or upgrading before the outer casings of the parking meter completely deteriorate.

Data on the asset age of our car parking technology is not held in RAMM.

Asset Condition and Performance

Car parking assets such as surfaces, lights and road marking are part of the condition assessments for the individual asset groups

It is anticipated that a full replacement for parking meters will not be required, as many of the components within the meters are being progressively upgraded in response to sensing technology and bank requirements. Upgrades to both the parking meters and bay sensing technology can occur frequently and are often necessary to ensure the system is maintained and operates efficiently. These upgrades may incur additional capital or maintenance costs to the assets which cannot necessarily be forecast but give added value to the asset.

The Comprehensive Parking Management Plan

A Comprehensive Parking Management Plan has been developed to assist in delivering local, regional, and national transport and planning goals. Programmes incorporated into this AMP that meet the outcomes of this plan include the City Centre Streetscape improvements including bus terminal development, various cycle and shared path development programmes, and bus shelter and stop improvements.

Network Growth

Key growth factors that affect the car parking network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated increase of 15,000 homes. This will have an associated assets growth
- **The Northeast Industrial Zone** (NEIZ) growth and development of the Te Utanganui distribution hub will result in capital projects and associated growth in car parking assets
- **Changes in parking technology:** Mandatory technology upgrades can also drive asset replacement and growth
- **Behavioural change:** behaviour change to other modes of transport being a key driver of change

5.11.2 Key issues and challenges

The key issues and challenges related to car parking assets are listed below:

- No condition data is recorded in RAMM or the providers system for these assets. This information is critical to provide evidence for budget forecasts and practice prudent asset management
- Technology advancements are requiring upgrade to the parking meters prior to them reaching their end of life
- Several off street car parking areas have extremely aged surfaces which are not meeting the anticipated level of service from the public
- There has been a historical underinvestment in the renewal of car parking assets based on the area of car parks and quantum of other car park assets

5.11.3 Operations and maintenance

The table below summarises all associated maintenance and operational activities we carry out for car parking assets and response times for the same.

Table 86: Car Parking Assets Operations and Maintenance

Car Parking Operations and Maintenance	
Description	**Activity**
Operational	Parking enforcement undertaken by Council parking wardens. This includes city-wide enforcement, not just in the CBD.
	Management of lease car parking undertaken by the Customer Unit of Council on behalf of Transport.
	Cash collection from parking meters.
Reactive Maintenance	Minor maintenance of other transport assets which have had faults identified through inspections or customer requests. This is undertaken by the relevant maintenance contractor.
	Our Parking Meter maintenance contractor is responsible for the preventative maintenance, reactive maintenance, servicing, repair, and provisioning of the meters to ensure they meet the required level of service. Maintenance of the meters also includes: • Supply of consumables such as paper and batteries for the meters; • Monthly cleaning; • Software maintenance and upgrades to the meters; • Time programming. This contract is managed based on a cost per meter maintained per month.
	Our Parking Sensor provider provides maintenance and support for all system hardware, with any damaged or faulty space markers, sensors, and wireless links. Maintenance also includes the provision of a fully functional web-based parking management system. This contract is managed based on an agreed annual service fee invoiced monthly by the supplier.
Faulty parking meter	During business hours, the response time to commence attendance at the fault is **2 hours**.
Faulty parking sensor	Faulty space markers, sensors or wireless links are to be replaced within **10 business days** of notification.

Operating costs had been steady over the period from 2015/16 to 2018/19. Covid 19 had an impact on the parking revenue generated and operational costs during the 2019/20 financial year.

For the time being, the costs associated with the maintenance and operations of the car parking technology (meters and sensors) is known and consistent. This makes up approximately two thirds of the total maintenance and operations spend for car parking. It is uncertain how the maintenance and operations costs will change should a new car park technology provider be engaged. For the time-being, budgets are based on the existing levels of investment

Forecasted expenditure for operations and maintenance are outlined in the table below.

Table 87: Car Parking Assets Forecasted Expenditure

Carparks (unsubsidised)	City-wide - Car park infrastructure improvements
Existing Delivery	$1,157,633
2024/25	$800,000
2025/26	$800,000
2026/27	$800,000
2027/28	$800,000
2028/29	$800,000
2029/30	$800,000
2030/31	$800,000
2031/32	$800,000
2032/33	$800,000
2033/ 34	$800,000

notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group.

Table 88notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group.

Table 88: Public Transport - Operational Programmes

Car Parking - Operational Programmes	2024/25	2025/26	2026/27	2027/28	2028/29
2487 - Parking Management Plans	$50,000	$50,000	$50,000	$	$

5.11.4 Renewal and forward works programme

The table below summarises renewal activities we carry out for our car parking assets.

Table 89: Car Parking Assets Renewal Activities

Parking Renewal	
Description	**Activity**
Renewal	Renewal work associated with off-street car park assets including: • Car park surface (chipseal and AC); • Lighting; • Pathways; • Drainage; • Signage. See the individual Section 9 sub-sections for further information on the renewal work undertaken for these assets;

Status: Final

Status: Final

Renewal work associated with on-street car parks such as road resurfacing and line marking are delivered as part of the main transport asset type, they are associated with. Individual renewal budgets are only held for off-street car park areas. These budgets are used for resurfacing.

Parking technology is not expected to be renewed as when these assets are replaced, they will be done so with assets that provide a greater level of service and are there considered an asset improvement.

Status: Final

Forecasted asset renewals are outlined in the table below:

Table 90: Car Parking Assets Forecasted Renewals

Parking renewals	City-wide - Off Street Parking Resurfacing, Remarking and Signage Replacement (part of WC 222) (Prog 82)
Existing Delivery	$79,643
2024/25	$35,000
2025/26	$40,000
2026/27	$40,000
2027/28	$40,000
2028/29	$40,000
2029/30	$40,000
2030/31	$40,000
2031/32	$38,000
2032/33	$38,000
2033/ 34	$38,000

5.11.5 Capital works and Improvements

There are currently no capital improvements in consideration for car parking assets.

5.12 Place Infrastructure

5.12.1 Network overview

Network Summary and Condition

The City's roads and streets are being used for more than just driving, they are places for community, for art, and for spending time. Place infrastructure and street furniture help make our public spaces more inviting and vibrant places. The types of assets that fall under this category include:

- Street seats, benches, and bollards;
- High quality surfacing such as stone pavers;
- Street trees;
- Grass berms & gardens

The table below summarises the major Place Infrastructure assets held by the council.

Table 91: Place Infrastructure Network Summary

Asset Type	Types / Materials	Quantity	Useful Life	Valuation
Benches and seats	Wooden slat bench seats with a back.	99	15 years	Not valued
Stone paving	Granite or other natural stone	4.3km	25 years	Not valued
Bollards	Fixed or removable posts which prevent or control access into areas. Various materials.	87	10 years	Not valued
Street trees		13,600	100 years	$9.2M

Art works within streets are provided by the artists and vested to Council for ongoing maintenance. Council Community team are developing maintenance programmes and budgets for these assets. An Art Asset Management Plan has been prepared for the first time this year.

Asset Age Profile

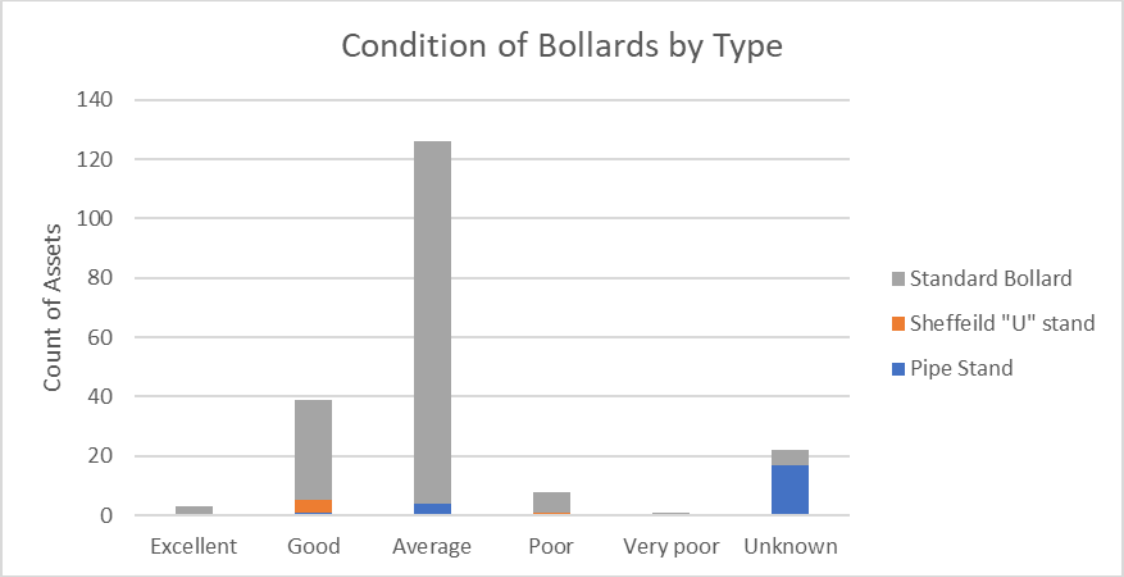
Limited age data is currently available in RAMM for these assets. There is uncertainty on the reliability of the age data that is captured.

Asset Condition and Performance

For place infrastructure, condition is important, because of the role these assets play within the streetscape. Assets in high profile and usage areas such as the Central Business District are of a higher quality and are maintained to higher standards than local neighbourhood street furniture.

There is not currently an inspection regime for any of the place infrastructure or street furniture assets. A full condition assessment was undertaken for bollards when they were added in RAMM between 2016 and 2017, which is presented below. All benches have a condition recorded, however for most assets, this was captured more than 10 years ago and is not reliable.

Figure 40: Place Infrastructure Condition Distribution



Network Growth

Key growth factors that can affect the place infrastructure network are:

- **Residential growth**: the SAMP projects a population growth of 25,000 in the next 30 years with an associated increase of 15,000 homes. This will have an associated demand and growth of place infrastructure in locations of high place value.
- **Multiple upgrade and capital projects** identified as part of the Palmerston North Integrated Transport Initiative (PNITI), Urban Intensification and the City Centre Revitalisation.

5.12.2 Key issues and challenges

The key issues and challenges related to place infrastructure assets are listed below:

- Inconsistent historic investment decision for place infrastructure assets and missing or outdated asset information leading to low confidence in required investment for these assets
- Maintenance activities are the primary source of upkeep of these assets and are mostly reactive. Better value for money can be achieved if short-, medium- and long-term programmes are developed

5.12.3 Operations and maintenance

Operations and maintenance activities are driven by faults that are identified during regular the results of routine inspections, monitoring, scheduled work requirements, and complaints by the public. These are summarised below.

Table 92: Place Infrastructure Assets Operations and Maintenance

Asset	O&M Processes and Responses
Bollards	Routine inspections, reactive maintenance, painting, replace if broken
Fencing	Routine inspections, reactive maintenance, painting, replace if broken
Benches and seats	Routine inspections, reactive maintenance, painting, replace if broken

$220,000 per year unsubsidised

Status: Final

The current maintenance strategy addresses any street furniture defects resulting from damage due to age, vandalism, graffiti, vehicle damage, and public complaints. This can either be reactive or planned maintenance.

Reactive maintenance is in response to a customer enquiry, referral, or complaint, and is recorded through the RFS system, which documents and tracks response times to the action identified. Much of the reactive maintenance undertaken is in response to individual customer complaints.

Planned maintenance and operations is by the Road Maintenance Contractor. This work is compiled through routine network inspections and any other work identified through reactive maintenance that is deemed non urgent.

There is currently no forecasted expenditure for operations and maintenance relating to place infrastructure assets. The graph below shows the historical expenditure for place infrastructure assets. However, low cost and minimal risk budgets have been summarised below. There is a clear downwards trend which needs to be reviewed alongside information captured through condition inspect programmes to develop the maintenance and operations forecast.

Figure 41: Street Furniture Maintenance

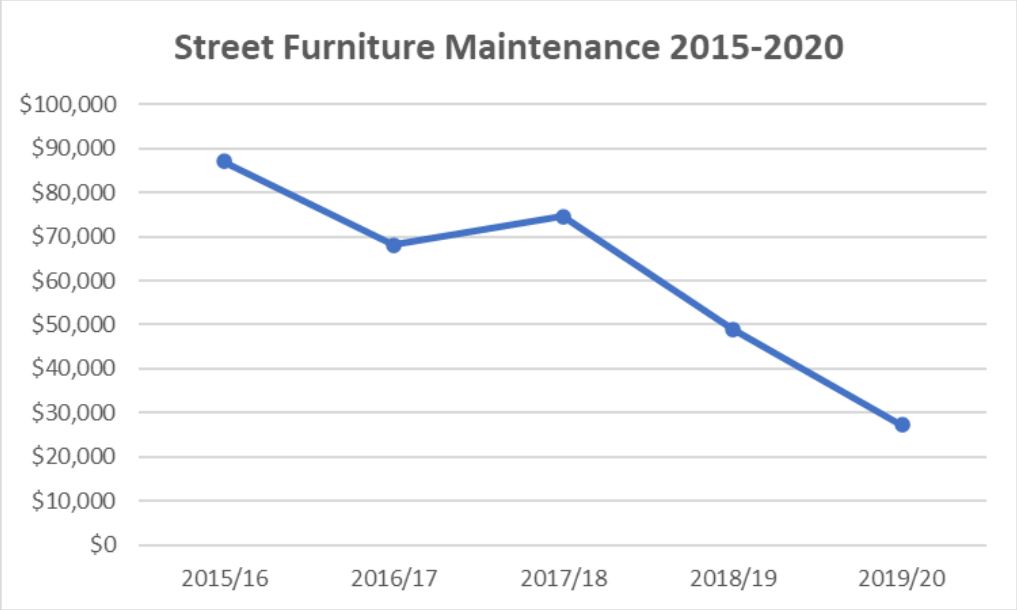


Table 93: Forecasted Operations and Maintenance

Place Infrastructure	Low-cost, low-risk improvements WC 341 (Prog 2390)
Existing Delivery	
2024/25	$8,000,000
2025/26	$8,000,000
2026/27	$8,000,000
2027/28	$8,000,000
2028/29	$8,000,000
2029/30	$8,000,000
2030/31	$8,000,000
2031/32	$8,000,000
2032/33	$8,000,000
2033/ 34	$8,000,000

Table 94 notes the operational programmes that address our strategic actions (noted in Section 2.2) associated with this asset group.

Table 94: Place Infrastructure - Operational Programmes

Place Infrastructure - Operational Programmes	2024/25	2025/26	2026/27	2027/28	2028/29
2473 - Roads and Streets Framework	$	$	$60,000	$	$
2476 - Bus Hub Detailed Business Case	$225,000	$225,000	$	$	$

5.12.4 Renewal and forward works programme

As the assets are typically replaced on an individual basis under maintenance, there is no specific renewals plan. This needs to be developed once new asset becomes available. The summary below identified the emergency works required on the network, environmental renewals and streetscape renewals.

Table 95: Assets Forecasted Renewals

Place Infrastructure renewals	Emergency works WC 141 (Prog 2380)	Environmental Renewals WC 221 (Prog 2377)	Streetscape renewals (Prog 2372)
2024/25	$250,000	$30,000	$88,000
2025/26	$250,000	$30,000	$44,000
2026/27	$250,000	$30,000	$44,000
2027/28	$250,000	$30,000	$44,000
2028/29	$250,000	$30,000	$44,000
2029/30	$250,000	$30,000	$55,000
2030/31	$250,000	$30,000	$66,000
2031/32	$250,000	$30,000	$77,000
2032/33	$250,000	$30,000	$88,000
2033/ 34	$250,000	$30,000	$99,000

5.12.5 Capital works and Improvements

The table below summarises the key capital works planned that will impact place infrastructure assets. Some of these projects can have indirect impacts.

Table 96: Place Infrastructure Assets Capital Works

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
341	Prog 279 - City-wide - Minor transport improvements	Capital LOS	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000
341	Prog 1803 - City Wide - Streetscape Improvements	Capital LOS	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000
451	Prog 1330 - Placemaking Co-created Project (capital)	Capital LOS	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595
451	Prog 2021 - Healthy Streets Implementation Trials	Capital LOS	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
	Prog 1808 – City wide – Street Amenity Improvements	Capital LOS	$201,000	$201,000	$201,000	$201,000	$201,000	$201,000	$201,000	$201,000	$201,000	$201,000
	Prog 2077 – City Centre – Cuba Street Upgrade	Capital LOS	$0	$0	$0	$0	$0	$2,500,000	$2,500,000	$0	$0	$0
451	Prog 2122 - City Centre Streets for People Upgrade	Capital LOS	$174,000	$4,840,000	$3,311,211	$10,586,469	$10,061,984	$7,901,310	$4,102,025	$7,757,671	$10,414,167	$1,903,364

5.13 Street Vegetation

5.13.1 Network overview

Street vegetation includes both trees (known as Street Trees) and other plants growing, either intentionally or otherwise, within the road corridor.

Maintenance and management of these assets is carried out separately for Street Trees as qualified arborists are required to maintain trees correctly and safely. Low growing vegetation such as grasses, shrubs and bushes are maintained under the Road Maintenance contract.

Additionally, the Council Parks team maintain some garden areas adjacent to our streets.

Street Trees

Palmerston North City has around 14,000 street trees, which require regular and timely maintenance to keep them healthy, to keep the road corridor safe and to optimise the street amenity value. This work needs to be undertaken by qualified arborists.

The strategy for street tree maintenance uses tree condition data to prioritise maintenance work, with the aim of ensuring timely and regular maintenance is undertaken across the whole tree stock.

The scope of tree maintenance includes the inspection of street trees both urban and rural within the Palmerston North city boundary, as well as planting and maintenance of new street trees. All street trees are identified in the RAMM Database. There are other trees in the network which do not appear in RAMM.

Street vegetation does not include trees within private properties, trees within parks and walkways or rural trees situated within the road corridor.

Dangerous trees, at risk of fall, in rural road reserve have been identified for future felling.

Other Vegetation within the Road Corridor

The vegetation envelope refers to vegetation that creates the boundaries of the roadway or the footpath. The size of the roadway and footpath that must be kept clear of vegetation. Vegetation shall be controlled to ensure that it does not interfere with the safe passage of traffic, cause visibility problems for road or path users, affect the integrity of the road structure including drainage, or otherwise interfere with the safe use of the road.

Mowing of rural berms is part of the Road Maintenance contract.

5.13.2 Key issues and challenges

- Seasonal challenges - Streets with heavy leaf drop in autumn, require more frequent maintenance.
- Traffic management for large trees.
- Aging tree population
- Footpath damage
-

5.13.3 Operations and maintenance

Operations and maintenance activities are driven by faults that are identified during routine inspections, by scheduled work requirements, and from complaints by the public. These are summarised below.

Table 97: Street Vegetation Assets Operations and Maintenance

Asset	O&M Processes and Responses
Trees	Routine inspections, regular pruning, reactive maintenance, replace if requiring removal due to age or condition
Other Vegetation	Routine inspections, reactive maintenance including trimming or removal

The operating budget for the Street Vegetation New Zealand Transport Agency – Waka Kotahi $600K per year

5.13.4 Renewal and forward works programme

The required level of street tree renewal depends on the age, condition, and subsequent damage to other assets caused by the existing assets. Any trees removed because of other assets being damaged; the possible replacement tree would be appropriately selected and future damage to other assets will be carefully balanced against the need.

We have a combined budget for capital new and renewals for street trees, work programme 2428 - Street Trees - New and Renewal.

Table 91 shows the renewal and capital new budget for Street Trees. The Vegetation Framework provides an appendix of suitable trees for planting throughout road reserve areas.

New street trees are planted because of:

- Requests from residents
- Completion of undergrounding of overhead power cables
- 90% completion of dwellings throughout new sub-divisions
- Staff assessment

Planting of street trees throughout new developments are set out in PNCC's Engineering Standards for Land Development

Table 98 - Street Trees New and Renewal Programme

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
121	Prog 2428 - Street Trees - New and Renewal	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000

5.13.5 Capital works and improvements

New street trees are planted because of:

- Requests from residents
- Completion of undergrounding of overhead power cables
- 90% completion of dwellings throughout new sub-divisions
- Staff assessment

6. Forward Works Programme

6.1 WC 215 Structures Component replacement

The table presented below displays the projected budget allocation for the Work category over the course of the next decade.

Table 99: WC 215 Projected Budget Allocation

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
215	Structures Component Replacement	$800,000	$1,400,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000

6.1.1 WSP Structures forward works programme report

Introduction

A report was developed by WSP on behalf of the council to provide support for the structure's component replacement budget requirements. This section provides a summary of this report and identifies the key projects in the indicative programme list.

The report provides a comprehensive overview of the maintenance and replacement projects that have been prioritised by the Palmerston North City Council.

These projects play a vital role in ensuring the city's infrastructure remains secure, effective, and environmentally friendly, while also ensuring that essential services are maintained for the good of the community.

According to the New Zealand Transport Agency – Waka Kotahi NZ Transport Agency Planning & Investment Knowledge Base (2011), maintenance items discovered during inspections have been categorised against work categories (WC). This method is standardised to ensure consistency across the sector.

Table 100: Work Element Codes

Item	Work Element Code
1	111 Pavement Maintenance
2	113 Drainage Maintenance
3	114A Routine Maintenance
4	114B Structural Maintenance
5	114C Other Structure Maintenance
6	114D Guardrail Maintenance
7	122 Traffic Services Maintenance
8	215B Structural Component Replacement
9	215C Other Structure Component Replacement
10	215D Guardrail Component Replacement
11	215E Component Replacement Professional Services

Status: Final

Key Priorities

Priority will be given to the maintenance and replacement of essential city assets and structures that are vital to the city's operation and public safety. The following asset classes have been identified as being of highest priority:

- Bridges
- Culverts
- Retaining Walls
- Footbridges

Financial Overview

Note: As the financial figures in the WSP report are presented as a lump sum, the figures for the next three years have been divided by three and assigned to each financial year.

Figures allocated as follows including Urgent, High, Medium & Low priorities:

Table 101: WSP Maintenance and Replacement Expenditure

Work Element Code	Activity	2023/24	2024/25	2025/26	Sub Total
111	Pavement Maintenance	$9,833	$9,833	$9,833	$29,500
113	Drainage Maintenance	$2,167	$2,167	$2,167	$6,500
114A	Routine Maintenance	$35,200	$35,200	$35,200	$105,600
114B	Structural Maintenance	$74,833	$74,833	$74,833	$224,500
114C	Other Structure Maintenance	$12,833	$6,417	-	$19,250
114D	Guardrail Maintenance	$9,200	$9,200	$9,200	$27,600
122	Traffic Services Maintenance	$2,067	$2,067	$2,067	$6,200
215B	Structural Component Replacement	$174,000	$174,000	$174,000	$522,000
215C	Other Structure Component Replacement	$916.67	$917	$917	$2,750
215D	Guardrail Component Replacement	$61,667	$420,556	-	$82,222
215E	Component Replacement Professional Services	$6,283	$6,283	$6,283	$18,850
				Total	$1,044,972.22

Key planned projects

A list of Urgent / High Priority projects identified below:

Note: As the financial figures in the WSP report are presented as a lump sum, the figures for the next three years have been divided by three and assigned to each financial year.

Table 102: WSP Planned Projects

Structure Name	Asset Type	Work Element Code	Priority	2023/24	2024/25	2025/26	Total
GILLESPIES BRIDGE (RAILWAY)	Bridge	114C & 114A	Urgent & High	$10,167	$5,083	-	$15,250
MOONSHINE VALLEY BRIDGE	Bridge	215D	Urgent & High	$26,667	$13,333	-	$40,000
MIHAERE BRIDGE	Bridge	114A, 114A, 215B	High	$84,333	$84,333	$84,333	$253,000
AMBERLEY NO 1	Culvert	215B	High	$33,333	$33,333	$33,333	$100,000
TURITEA NO 2	Bridge	111,114A,114D,215B, 215D	High	$10,083	$10,083	$10,083	$30,250
LINTON STATION BRIDGE	Bridge	113, 114A, 114A, 215E	High	$5,450	$5,450	$5,450	$16,350
FORREST HILL CULVERT	Culvert	215B,215E	High	$5,083	$5,083	$5,083	$15,250
TENNENT #1 BRIDGE	Bridge	114A,114A,114A,114D,114D,215D	High	$4,500	$4,500	$4,500	$13,500

Structure Name	Asset Type	Work Element Code	Priority	2023/24	2024/25	2025/26	Total
NORTH GROVE CULVERT	Culvert	114A,215D	High	$3,417	$3,417	$3,417	$10,250
TURITEA NO 3	Bridge	114A,114A,114D,114D,122	High	$2,800	$2,800	$2,800	$8,400
S20C BRIDGE	Bridge	114A,215D	High	$2,583	$2,583	$2,583	$7,750
						Total	$510,000

Future Forward Works Plan

The subsequent financial years' plans will be formulated based on updated priorities, emerging needs, and the remaining allocated budget. The allocation of funds to each priority category will be adjusted accordingly to ensure effective resource management and timely completion of projects.

As latest information and challenges arise, the plan will be updated to ensure that the city remains resilient, sustainable, and safe for residents and visitors alike.

6.2 WC 212 & WC 214 Pavements

The table presented below displays the projected budget allocation for the Work category over the course of the next decade.

Table 103: WC 212 & WC 214 Projected Budget Allocation

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
212	Sealed Road Resurfacing	$3,400,000	$3,400,000	$3,800,000	$4,500,000	$3,500,000	$9,200,000	$3,500,000	$4,300,000	$4,300,000	$4,300,000
214	Sealed Road Pavement Rehabilitation	$3,300,000	$3,400,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000

6.2.1 3 Year Forward Work Programme

A three-year forward works programme was developed with candidate site selection. This programme was developed utilising pavement condition ratings of July 2023. The outputs of this programme are summarised below. The two tables indicate the programme costs and length for chipseal renewals (CHIP), asphalt renewals (TAC) and pavement rehabs (RHAB).

The three-year average budget and quantities are vital to consider the renewal and rehab budget. These are the estimated amount of funding or physical works required to maintain the condition of the network. The current budget recommendations above are lower than those suggested by this analysis, which will lead to worsening pavement conditions over time. However, this analysis supports the need for further investment in renewals and rehabs for the pavement network.

Table 104: Draft Programme Costs

Treatment	2023/24	2024/25	2025/26	3 Yr. Ave
CHIP	$2,953,427	$929,897	$1,822,641	$1,901,988
TAC	$12,088,273	$1,810,452	$6,813,239	$6,903,988
RHAB	$13,644,534	$0	$279,136	$4,641,223
Total	**$28,686,233.75**	**$2,740,348.45**	**$8,915,016.13**	**$13,447,199.44**

Table 105: Draft Programme Length (m)

Treatment	2023/24	2024/25	2025/26	3 Yr. Ave
CHIP	46,502	14,378	31,612	30,831
TAC	16,981	2,493	8,566	9,347
RHAB	5,895	0	244	2,046
Total	**69,378**	**16,871**	**40,422**	**42,224**

6.2.2 2022/23 Pavement Performance Analysis

An independent report was developed by ASC Consultants Ltd. on behalf of the council which modelled the renewal and rehab requirements of the pavement network utilising Juno Viewer deterioration modelling framework. Based on the model forecast and predictions, the following average annual quantities were suggested to maintain the overall network condition.

Predicted conditions by the model suggest the network is at risk of deterioration (increased routine maintenance cost and reduced service level) when the low-end funding level and low-end surface renewal strategies are employed.

A suggested programme is based on the analysis of model outcomes to assess the long-term renewal needs of the network. It is suggested that expenditure should be in the order of $6.7 to $6.9 million per year (excluding inflation) based on the following:

Table 106: Suggested Programme Quantities

Treatment	Average Annual Length	Average Annual Budget (millions)	Average Annual % of the Network	Average Asset Lifecycle
Chipseal Reseal	31 to 35km	$1.9 to $2.1	7.2% to 8.1%	13.9 to 12.3 years
Asphalt Resurfacing	Target 4km	$3.0	5.4%	18.5 years
Pavement Rehabilitation	Minimum allowance for 1.5km	Minimum $1.8	0.3%	336 years

Note: this modelling was conducted in March 2023

This modelling further supports the funding requirements presented above and are mostly aligned with the model outcomes.

6.3 WC 225 Footpaths – 10 years

The table presented below displays the projected budget allocation for the Work category over the course of the next decade.

Table 107: WC 225 Projected Budget Allocation

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
225	Footpath Renewals	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000

6.3.1 3 Year Forward Work Programme

A three-year forward works programme was developed based on the 2022 condition rating of footpaths. The draft programme is summarised below that supports the funding requirements. The eligibility criteria to develop this programme included:

- To be eligible for renewal in the financial year 2023/24: Footpaths rated with a poor or worse condition with total defect areas greater than 20% or adjacent to road sections requiring resurfacing in the next three years.
- To be eligible for renewal in the financial year 2024/25: Footpaths rated with a poor or worse condition with total defect areas greater than 10%
- To be eligible for renewal in the financial year 2025/26: Footpaths rated with a fair condition with total defect areas greater than 10%

Table 108: Draft Programme Length (m)

Treatment	2023/24	2024/25	2025/26	3 Yr. Ave
Asphaltic Concrete (black)	10,821	2,490	863	14,174
Concrete	2,651	280	374	3,305
Lime Chip		162		162
Total	**13,472**	**2,932**	**1,237**	**17,641**

6.4 Remaining Work Categories

The table presented below displays the projected budget allocation for the Work Category over the course of the next decade for programmes not previously detailed in the Life Cycle Section.

Table 109: Operations/Maintenance Budget Requirements

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
140	Minor Events	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
131	Rail Level Crossing Warning Devices Maintenance	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
151	Network and Asset Management	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000

Table 110: Renewal Budget Requirements

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
221	Environmental Renewals	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
222	Traffic Services Renewals	$1,310,000	$1,310,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000

7. Financial Summary

This section outlines the long-term financial requirements for the operations, maintenance, capital renewal and capital new investments to meet the agreed levels of service for the Transport Activity.

7.1 Financial Forecast

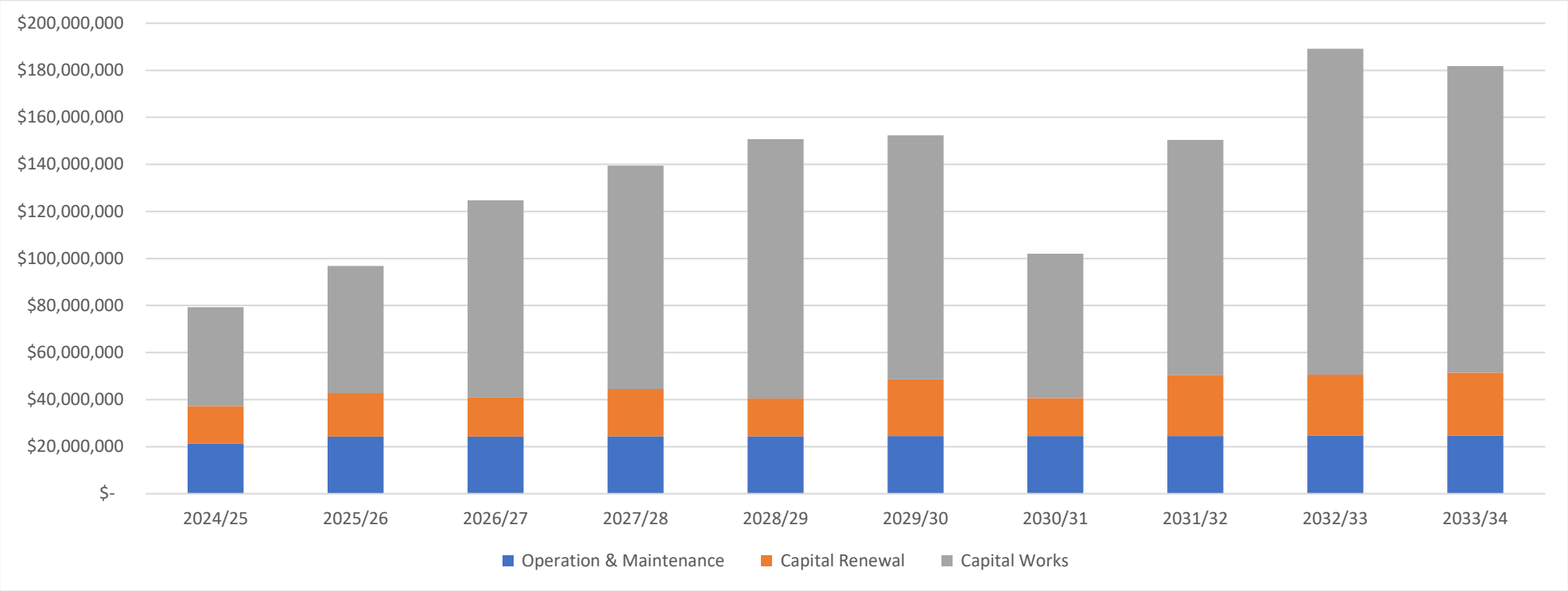
7.1.1 Proposed Operational Expenditure

The figure below shows the breakdown of the proposed operations, maintenance, renewals, and capital budgets for the next 10 years. Majority of these programmes have an associated Work category. Detailed budget forecast by work category is presented in section 8.5.

The distinct colours in the figure show budgets for different expenditure categories:

- OPEX & Capital Renewals (blue and orange): budget for the operation, maintenance, and renewal of the existing assets (to keep existing assets functioning);
- Capital works including Capital Growth and Levels of Service Improvements (grey): budget allowance for projects that will bring about major improvements for the network user and usually involve creation of new assets.

Figure 42: Proposed Budget 10 Year Breakdown



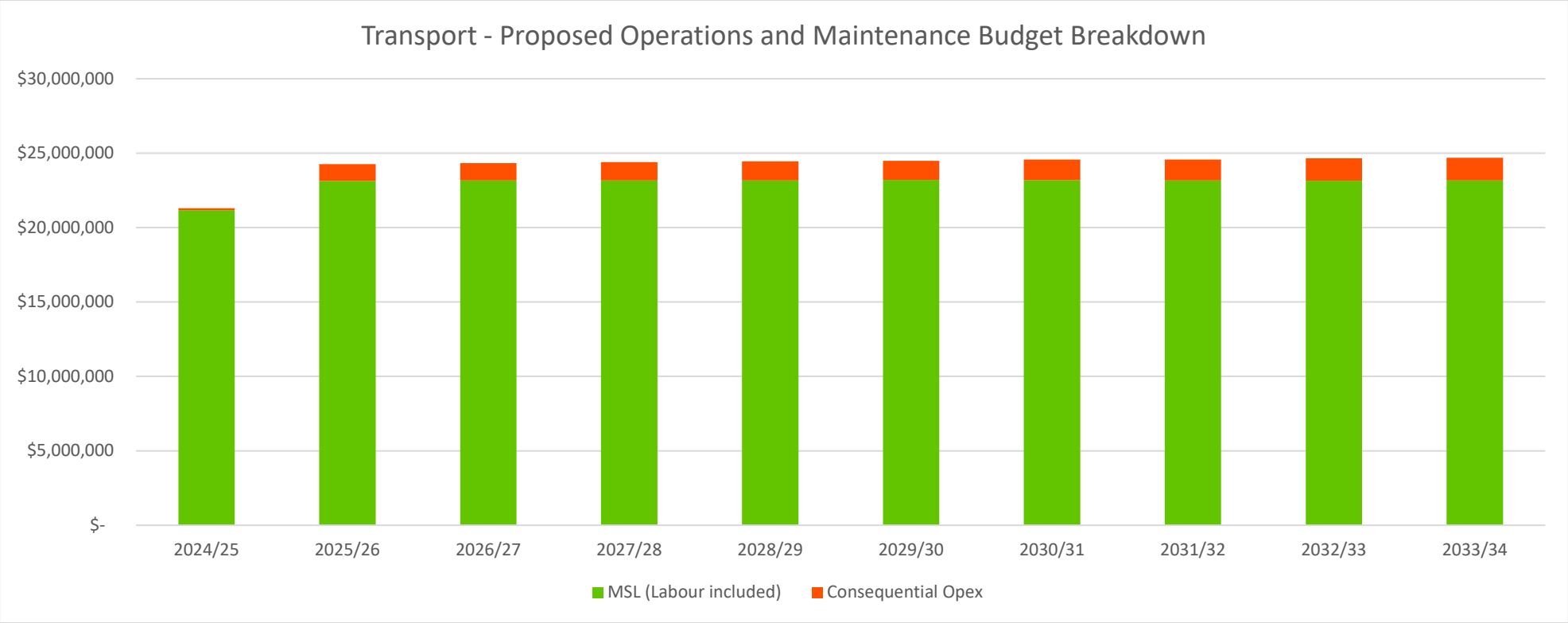
STATUS: Final

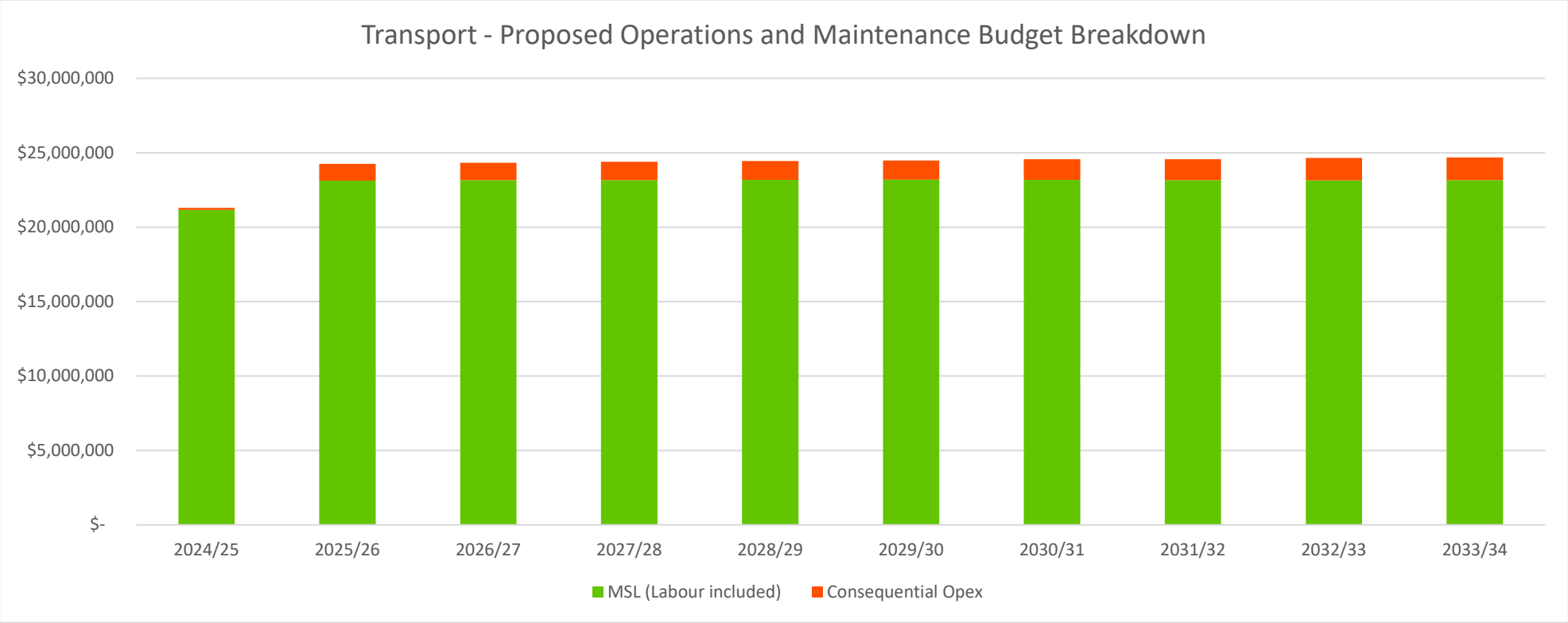
Table 111: 10 Year Budget

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
Operations and Maintenance	$ 21,296,465	$ 24,256,474	$ 24,331,589	$ 24,403,797	$ 24,447,859	$ 24,488,052	$ 24,565,462	$ 24,566,487	$ 24,658,843	$ 24,681,461
Renewals	$ 15,545,579	$ 18,516,408	$ 17,232,544	$ 27,257,424	$ 23,698,069	$ 23,832,375	$ 15,709,133	$ 25,600,601	$ 25,581,916	$ 26,434,674
Capital works	$ 42,104,039	$ 53,746,819	$ 82,881,310	$ 87,515,702	$ 102,278,496	$ 103,721,293	$ 61,370,912	$ 99,909,209	$ 138,609,038	$ 130,324,995

Existing operations and maintenance budgets were reviewed against historic expenditure and levels of service requirements. This was used to forecast future budget needs for existing assets, and to estimate the budget required for new assets programmed to be created, these budget also were split by Work category. Below is a financial summary for OPEX:

STATUS: Final
Figure 43: 10 Year Operating Expenditure Financial Summary





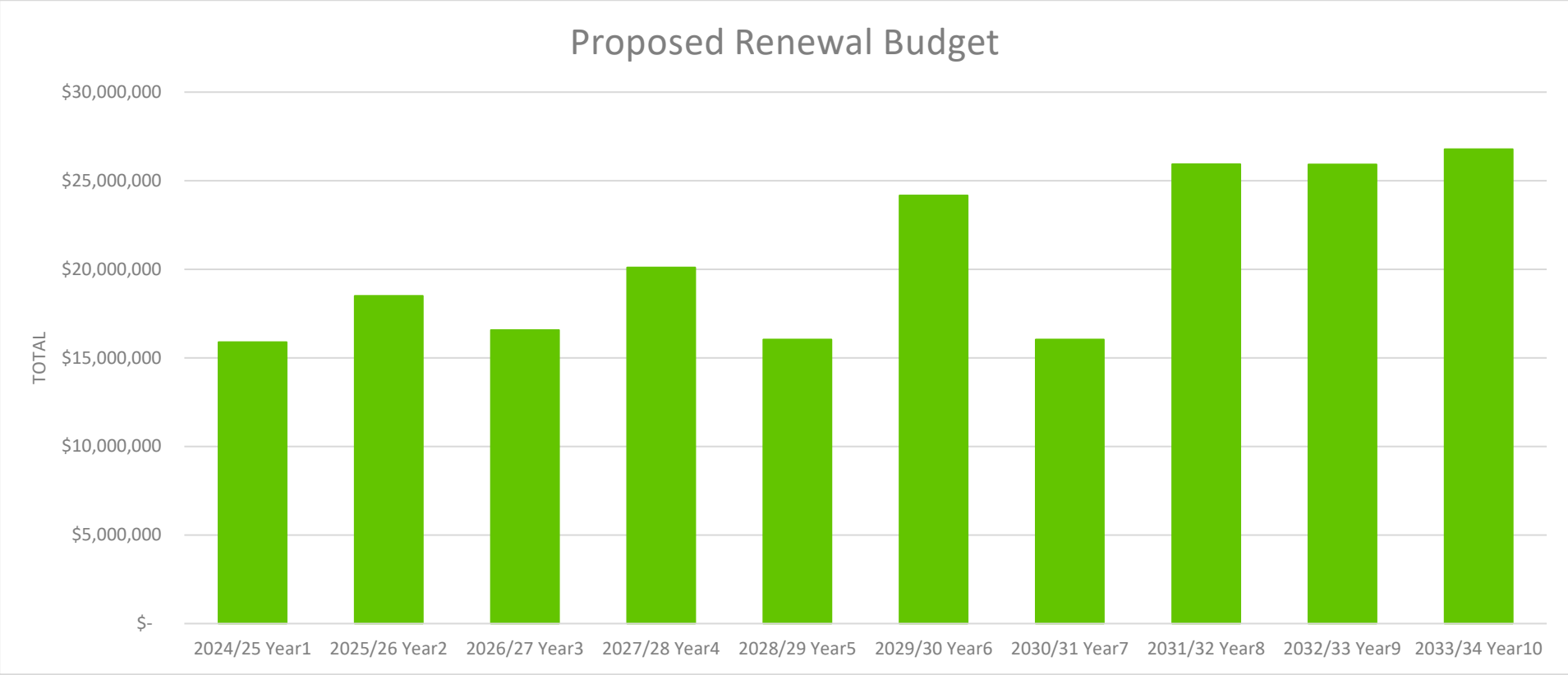
Note: For Work category breakdown refer to Figure 112 in Financial Summary below.

7.1.2 Proposed Renewal Expenditure

Proposed budgets for transport asset renewals are based on assets being renewed as they near the effective useful lives. Renewals relating to road surfacing and pavements are informed by pavement deterioration modelling. Other assets such as footpath and drainage are informed by long term depreciation along with existing renewal pressures.

The figure below shows the total proposed transport renewals budget for the next ten years.

Figure 44: 10 Year Proposed Transport Renewals Budget



STATUS: Final

Renewal forecast reliability

The renewals expenditure forecast is mostly based on the asset information in RAMM. Asset quantities, age and condition were all used to inform the required level of renewal expenditure. Good asset and condition information is held for road pavements which provides a satisfactory level of confidence on the required level of renewal investment.

7.1.3 Proposed New Capital Expenditure

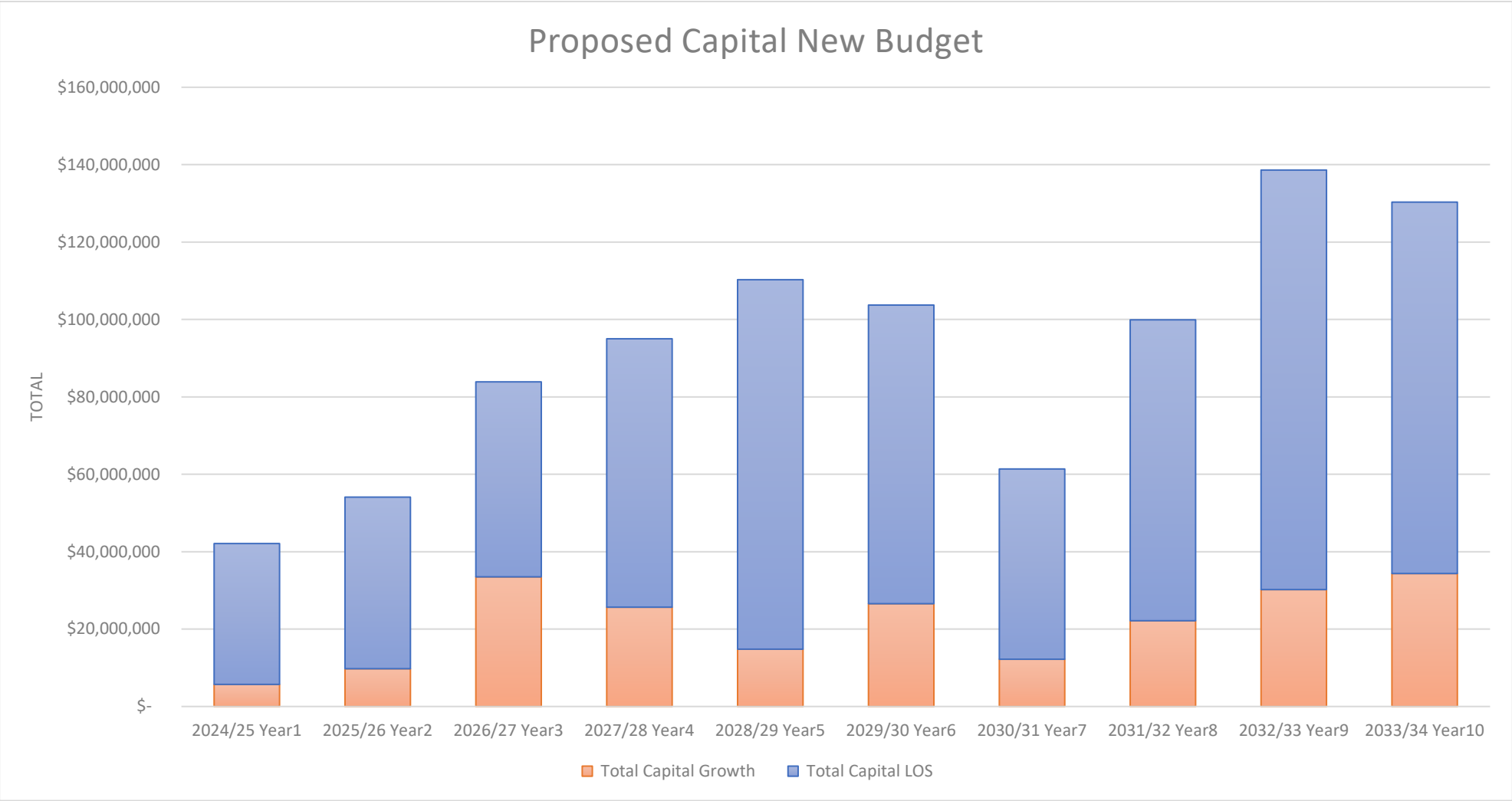
The Capital New programme forecast over the next 10 years is dominated by a few significant high-cost programmes. These are associated with PNITI, road safety and Streets for People. The overall level of expenditure proposed is split by growth and level of service improvement projects. The total budget for the capital new programmes is presented below.

Table 112: 10 Year Capital New Programme

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
Total Budget - Growth	$ 5,711,003	$ 9,761,003	$ 33,496,003	$ 25,661,003	$ 14,811,003	$ 26,561,003	$ 12,211,003	$ 22,161,003	$ 30,211,003	$ 34,361,003
Total Budget - LoS Improvement	$ 36,393,036	$ 43,985,816	$49,385,307	$ 61,854,699	$ 87,467,493	$ 77,160,290	$ 49,159,909	$ 77,748,206	$ 108,398,035	$ 95,963,992
Capital Total	**$ 42,104,039**	**$ 53,746,819**	**$ 82,881,310**	**$ 87,515,702**	**$ 102,278,496**	**$ 103,721,293**	**$ 61,370,912**	**$ 99,909,209**	**$ 138,609,038**	**$ 130,324,995**

STATUS: Final

Figure 45: 10 Year Capital New Programme



7.2 Asset Valuation

Stantec New Zealand Ltd was commissioned by Palmerston North City Council (PNCC) to value its roading infrastructure asset register as of 31 March 2023, and the results of this valuation are summarised in the table below;

Asset Description	Replacement Cost	Total Accumulated Depreciation	Depreciated Replacement Cost	Annual Depreciation
Formation	$19,881,182	$0	$19,881,182	$0
Pavement	$114,368,951	$53,176,505	$61,192,445	$1,133,620
Surfacing	$44,732,621	$29,306,460	$15,426,161	$1,592,063
Carpark - Land	$14,620,000	$0	$14,620,000	$0
Carpark - Pavement	$425,682	$267,573	$158,109	$4,257
Carpark - Surfacing	$416,038	$328,879	$87,160	$9,048
Berm	$47,184,478	$0	$47,184,478	$0
Bridges and Bridge Culverts	$118,336,978	$50,178,862	$68,158,116	$1,099,044
Bus Shelters and Stops	$2,298,476	$1,289,105	$1,009,371	$48,836
Cycle Stands	$516,189	$312,836	$203,353	$16,545
Drainage	$33,052,733	$22,446,277	$10,606,456	$413,159
Driveways	$124,005,659	$67,050,924	$56,954,734	$1,550,071
Footpaths	$119,387,457	$42,123,463	$77,263,994	$1,350,353
Pathways	$6,910,374	$4,415,471	$2,494,903	$192,863
Railings	$332,568	$264,773	$67,795	$4,964
Shoulders	$25,186,508	$2,640,350	$22,546,158	$45,263
Signs and Posts	$1,967,018	$1,318,725	$648,293	$60,774
Streetlights	$46,882,222	$24,442,476	$22,439,746	$991,002
Surface Water Channels	$104,029,751	$55,534,410	$48,495,341	$1,168,317
Traffic Signals	$2,117,447	$1,099,200	$1,018,246	$86,576

Asset Description	Replacement Cost	Total Accumulated Depreciation	Depreciated Replacement Cost	Annual Depreciation
Trees	$9,236,181	$5,864,557	$3,371,624	$92,362
Total	**$835,888,513**	**$362,060,847**	**$473,827,667**	**$9,859,118**

7.3 How We Will Pay for It

Most, but not all, investment made in support of the Transport Activity generates co-investment from New Zealand Transport Agency – Waka Kotahi . For us, that means that New Zealand Transport Agency – Waka Kotahi makes a 51% funding contribution to our complying operations & maintenance, renewal, and capital new investment.

Another noteworthy source of revenue for the Transport activity is derived from car parking. This is produced through the utilisation of leased and short-term car parking facilities. The generated revenue is allocated specifically towards mitigating the rating implications associated with the Transport activity.

Council's portion of funding for the several types of expenditure are as follows:

- **Operation and Maintenance**. Funded by fees & charges (car parking) and rates. For some operational activities such as Bikes in Schools, funding grants may be available. Though these are not typical for the Transport activity.
- **Capital renewal**. Funded by rates revenue based on a three-year rolling average and if necessary, from borrowing;
- **Capital New (Level of Service Improvement)**. Funded through borrowing.
- **Capital New (Growth)**. Council seeks to obtain funding for infrastructure that is required for growth through the application of the Development Contribution policy. Programmes with the percentage attributable to growth. Further information can be found in our Financial Strategy.

7.4 Financial Forecast Uncertainty

7.4.1 Potential effects of uncertainty

Expenditure forecasts are based on the best available information. The longer-term budgets will be refined both in scope and costing as these programmes get closer to implementation. Periodic revision and adjustment to the schedule of works every three years enables the adverse effect of uncertainty in the financial forecasts to be mitigated.

The ideal cost accuracy for any programme (operational, renewal and new) is based on when the programme first appears in the Long Term Plan (LTP). These ideal accuracies are as follows:

Table 113: Ideal Cost Accuracies

Forecast Year	Expected Accuracy
Years 1 to 3	The scope and pricing of work should be reliable, based on good market information for unit rates, etc.
Years 4 to 6	Estimates should be reliable, with detailed design work has not been carried out.
Years 7 to 10	Estimates based on a high-level idea of what the programme will involve.
Years 11 to 30	Rough order costing based on the estimated quantum of work; forecasts could change significantly with further investigation.

7.5 Financial Summary – All budgets

Please see the 10 year view below, The 30 year financial view can be found in the appendices.

Table 114: Operations and maintenance expenditure by work category

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
111	Sealed Pavement Maintenance	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000
112	Unsealed Pavement Maintenance	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
113	Routine Drainage Maintenance	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000
114	Structures Maintenance	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000
121	Environmental Maintenance	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
122	Network Service Maintenance	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
123	Network Operations	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
124	Cycle Path Maintenance	$825,000	$825,000	$825,000	$825,000	$825,000	$825,000	$825,000	$825,000	$825,000	$825,000
125	Footpath Maintenance	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000
131	Rail Level Crossing Warning Devices Maintenance	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
140	Minor Events	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000

STATUS: Final

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
151	Network and Asset Management	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000	$1,450,000
	City-wide - Car park infrastructure improvements	$0	$112,440	$112,440	$112,440	$112,440	$112,440	$112,440	$112,440	$112,440	$112,440
	Total	**$9,095,000**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**	**$9,207,440**

STATUS: Final

Table 115: Renewal Expenditure by Work category

WC	WC Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
211	Unsealed Road Metalling	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
212	Sealed Road Resurfacing	$3,400,000	$3,400,000	$3,800,000	$4,500,000	$3,500,000	$9,200,000	$3,500,000	$4,300,000	$4,300,000	$4,300,000
213	Drainage Renewals	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000
214	Sealed Road Pavement Rehabilitation	$3,300,000	$3,400,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
215	Structures Component Replacement	$800,000	$1,400,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,500,000
221	Environmental Renewals	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
222	Traffic Services Renewals	$1,310,000	$1,310,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000	$1,410,000
224	Cycle path renewal	$900,000	$1,900,000	$700,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
225	Footpath Renewals	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000	$1,340,000
	Unsubsidised Renewals	$ 3,708,307	$ 4,623,712	$ 3,139,848	$ 5,664,728	$ 2,599,950	$ 5,034,256	$ 2,611,014	$ 3,707,601	$ 3,688,916	$ 4,541,674
	Total	**$ 15,888,307**	**$ 18,503,712**	**$ 16,569,848**	**$ 20,094,728**	**$ 16,029,950**	**$ 24,164,256**	**$ 16,041,014**	**$ 25,937,601**	**$ 25,918,916**	**$ 26,771,674**

STATUS: Final

Table 116: All Capital Growth Projects

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
323	Prog 2058 - Urban Growth - NEIZ - Transport	Capital Growth	$0	$0	$4,500,000	$5,600,000	$5,600,000	$5,600,000	$0	$0	$0	$0
323	Prog 2065 - Urban Growth - Whakarongo - Transport	Capital Growth	$500,000	$2,500,000	$2,500,000	$2,500,000	$0	$0	$0	$0	$0	$0
323	Prog 2123 - Urban Growth - Kakatangiata - Transport	Capital Growth	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000
323	Prog 2489 - Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	Capital Growth	$0	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000
324	Prog 1003 - Whakarongo - Intersection Upgrades	Capital Growth	$1,200,000	$500,000	$5,500,000	$0	$0	$0	$0	$0	$0	$0
324	Prog 2335 - Stoney Creek Road Upgrade	Capital Growth	$500,000	$2,600,000	$4,600,000	$2,600,000	$0	$0	$0	$0	$0	$0
324	Prog 2389 - Urban Growth - Aokautere - Transport	Capital Growth	$2,800,000	$2,000,000	$14,500,000	$1,000,000	$7,000,000	$7,000,000	$10,000,000	$8,000,000	$8,000,000	$0
341	Prog 2124 - Urban Growth - Ashhurst - Transport	Capital Growth	$350,000	$1,800,000	$35,000	$1,600,000	$350,000	$1,600,000	$350,000	$1,800,000	$350,000	$2,000,000
451	Prog 1925 - Urban Growth Development Contributions - Active Transport	Capital Growth	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003
None	Prog 201 - Urban Growth - Development Contributions - Transport	Capital Growth	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000

STATUS: Final

Table 117: All Capital Levels of Service Improvement Projects

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
214	Prog 2126 - Pioneer Highway - Improvements	Capital LOS	$0	$0	$350,000	$3,500,000	$3,500,000	$3,500,000	$0	$0	$0	$0
322	Prog 1094 - Milson Line Overbridge Improvement	Capital LOS	$0	$0	$220,000	$325,000	$0	$3,800,000	$0	$0	$0	$0
322	Prog 1695 - PNITI – Intersection & bridge improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$4,000,000	$4,000,000	$4,000,000
322	Prog 2356 - Turitea Bridge No.1 replacement	Capital LOS	$0	$0	$350,000	$750,000	$8,500,000	$0	$0	$0	$0	$0
322	Prog 2359 - Enabling PNITI, Bunnythorpe bridge replacements	Capital LOS	$ 0	$ 0350,000	$ 1,000,000	$ 7,500,000	$ 8,000,000	$0	$0	$0	$0	$0
323	Prog 187 - Manawatu River - Road Bridge	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$0	$32,500,000	$32,500,000
324	Prog 159 - Kelvin Grove Road - Safety Improvements	Capital LOS	$400,000	$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0
324	Prog 839 - Rangitikei St / Featherston St - Intersection Improvements	Capital LOS	$0	$1,084,639	-$542,320	$379,623	$4,338,557	$4,338,557	$0	$0	$0	$0
324	Prog 1121 - Tennent Drive Improvements - Food HQ & Massey	Capital LOS	$146,300	$946,100	$0	$0	$292,600	$1,286,756	$4,941,792	$3,510,068	$0	$0
324	Prog 1804 - Road Drainage Capital Improvements	Capital LOS	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000	$120,000
324	Prog 1944 - Network Village - road upgrades to urban standard	Capital LOS	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,600,000	$300,000	$1,600,000	$300,000	$1,600,000
324	Prog 2013 - PNITI – Strategic Transport Corridor Improvements	Capital LOS	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000	$20,000,000
324	Prog 2111 - Kelvin Grove Road - Safety Improvements	Capital LOS	$3,000,000	$3,000,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0
324	Prog 2354 - Enabling PNITI, Roberts Line / Kairanga Bunnythorpe intersection improvements	Capital LOS	$350,000	$750,000	$0	$1,000,000	$8,000,000	$0	$0	$0	$0	$0

STATUS: Final

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
324	Prog 2456 - Cliff Road Upgrade - Te Motu O Poutoa	Capital LOS	$500,000	$0	$3,650,000	$0	$0	$0	$0	$0	$0	$0
341	Prog 279 - City-wide - Minor transport improvements	Capital LOS	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000	$1,520,000
341	Prog 1803 - Neighbourhood Centres Streetscape Improvements	Capital LOS	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931
341	Prog 2061 - Rural Road Safety & Accessibility Improvements	Capital LOS	$65,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
341	Prog 2119 - Road to Zero - Transport Safety Improvements	Capital LOS	$4,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000
341	Prog 2142 - Physical deterrent (installation of speed humps) at additional locations	Capital LOS	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
341	Prog 2362 - HMPV Improved Network Access / Culvert & Bridge Structures	Capital LOS	$200,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000	$800,000
341	Prog 2385 - Active Transport Wayfinding Improvements	Capital LOS	$38,000	$142,000	$142,000	$326,000	$276,000	$276,000	$276,000	$276,000	$276,000	$276,000
341	Prog 2390 - Network - Low-Cost Low Risk joint funded New Zealand Transport Agency – Waka Kotahi projects	Capital LOS	$10,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000
451	Prog 1330 - Placemaking Co-created Project (capital)	Capital LOS	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595
451	Prog 1808 - Pedestrian Network Supporting Assets - Improvements	Capital LOS	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743
451	Prog 2021 - Healthy Streets Improvements	Capital LOS	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669
451	Prog 2077 - Cuba Street urban streetscape improvements - Pitt to Arena (Stage 3)	Capital LOS	$0	$0	$0	$0	$0	$2,500,000	$2,500,000	$0	$0	$0

STATUS: Final

WC	WC Description	Programme Type	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/ 34
451	Prog 2122 - City Centre Streets for People Improvements	Capital LOS	$174,000	$4,840,000	$3,311,211	$10,586,469	$10,061,984	$7,901,310	$4,102,025	$7,757,671	$10,414,167	$1,903,364
451	Prog 2368 - Pedestrian Network Improvements	Capital LOS	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000
452	Prog 1559 - Cycling Network improvements	Capital LOS	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174
452	Prog 2056 - Cycling Network Supporting Assets - Improvements	Capital LOS	$29,809	$30,674	$44,798	$46,100	$61,450	$63,231	$79,907	$81,903	$83,949	$86,050
452	Prog 2057 - Shared Pathway Network Improvements	Capital LOS	$6,986,380	$6,730,235	$10,137,959	$9,489,377	$12,556,995	$12,013,695	$7,119,857	$8,770,236	$9,196,841	$3,944,000
452	Prog 2120 - Off Road Shared Pathway Link Improvements	Capital LOS	$1,696,416	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368
532	Prog 1680 - Public Transport Network Improvements	Capital LOS	$844,650	$1,064,650	$1,064,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650
561	Prog 243 - Transit Hub Redevelopment	Capital LOS	$337,000	$400,000	$2,532,904	$4,915,807	$10,215,000	$10,613,470	$550,000	$550,000	$400,000	$400,000
None	Prog 2353 - Seal Extension	Capital LOS	$95,000	$100,700	$106,750	$113,150	$120,000	$0	$0	$0	$0	$0
None	Prog 2428 - Street Trees - New and Renewal	Capital LOS	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000
341	Prog 2357 - Bunnythorpe village upgrade	Capital LOS	$250,000	$250,000	$250,000	$2,500,000	$250,000	$2,500,000	$250,000	$250,000	$250,000	$250,000

8. Plan Monitoring and Improvements

8.1 2021 AMP improvement plan - achievements

Over the past three years a number of identified Asset Management improvement items have been completed by the Transport team. The most significant of these is the adoption by PNCC of the Palmerston North Integrated Transport Initiative. The PNITI provides a strategic transport investment hierarchy, which is intended to unlock the potential for Palmerston North to be a significant freight distribution hub, while maintaining safety and amenity in the residential network.

The second of the two major AM improvements is the improved alignment of our Long Term Plan (LTP) programmes with New Zealand Transport Agency – Waka Kotahi funding categories, to ensure that external funding can be fully utilised and to improve transparency and auditability.

Pan-Infrastructure work has also been carried out to develop asset condition and performance policies for all activity groups. Whilst the Council Risk Management Framework has also been developed and rolled out across the organisation.

8.2 Next Steps

The Transport team have identified three Improvement Items to focus on over the next three years, as presented below. These programmes and associated improvement activities align with pan-Infrastructure Asset Management improvement items, as well as meeting transport specific needs. They have previously been identified in the Infrastructure Asset Management Improvement Plan.

Table 118: Transport Improvement Items for the next 3 years

Item	Proposed Improvement Action	Status	Comment
1.	**Reset Road Maintenance Contract to improve data capture, management and reporting.**	**In progress**	**The current Road Maintenance Contract is under review, with the focus on improvement data quality and more collaborative working practices.**
3.	Cost to Serve	Not started	Development of “zero base” budgets. Determine inputs required to deliver promised Levels of Service. This will be an Infrastructure wide programme of work, and once complete will enable options analysis for LTP programmes.
4.	Promapp of processes	Not started	Documentation of AM and operating and maintenance processes. This will occur in parallel with and help to inform Item 3.

8.3 Maturity Assessment

External reviews of Council’s asset management practice have been undertaken in July 2019 and May 2022. Both reviews were carried out by Infrastructure Associates Ltd. using the New Zealand Treasury framework. The broader discussion on the results of these are outlined in the SAMP. One of the outputs of the reviews was a list of activity specific improvement items, which is presented below.

Many of the more generic improvement items continue to be addressed by the Asset Planning Division, alongside the development of the Asset Management Policy and Strategic Asset Management Plan.

The 2022 Maturity Assessment improvement items relating to the Transport activity are listed in the table below.

Table 119: Transport Specific Improvement items from Maturity Assessment

AM Function	Recommended Improvements	Priority	Progress	AMP/SAMP
Strategic Direction (AM Policy and Objectives)	Develop specific policy guidance for the management of Transport assets, including clear asset ownership guidelines.	Medium		SAMP
Levels of Service Framework	Review transport levels of service performance measures	High	Complete	This AMP, refer to Sections 4.2 and 4.3
	Cost and evaluate the level of service options	High	Not started, first requires identification of level of service gaps	This AMP, refer to Section 4.4
Demand Forecasting and Management	Secure approval for the Palmerston North Integrated Transport Initiative	Medium	Complete	This AMP, refer to Section 3.3
Asset Condition and Performance	Develop programme and implement bridge condition assessments	High	In progress Programme entered LTP	This AMP, refer to Section 6.3
Managing Risk and Resilience	Need to fully develop and embed risk capture and escalation process across the Infrastructure Unit.	Medium		SAMP
Operational Planning	Develop process to centrally develop and track proactive maintenance schedules.	Medium	Not started	
AM Plans	Develop asset management plans that are more focused on the transport corridor and reallocating space and align the Network Operating Plans to the AMP.	Medium	In progress	This AMP, refer to Section 3.4
Asset Data and Information	Consider whether use of dTIMS modelling is beneficial and whether current asset data would be sufficient to support it.	Medium	Complete JunoViewer used to determine FWP for this AMP	This AMP, refer to Section 3.6.5
Outsourcing and Procurement	Develop inhouse contract management capability	Medium	In progress	

Appendices

Appendix A – Key Legislation relating to the management of transport activities

Local Government Act 2002 Amendment Act 2014

Defines the purpose of local government as enabling local decision-making and action by and on behalf of communities and to meet the current and future needs of communities for good-quality local infrastructure, local public services and performance of regulatory functions in a way that is most cost effective for households and business. The Amendment Act introduces several new measures. Of relevance, the Act:

- changes what development contributions can be used for;
- introduces new requirements for infrastructure strategies and AM planning (including planning effectively for future management of assets, and collaboration and cooperation with other local authorities to improve efficiency and effectiveness around priorities and outcomes);
- requires disclosure of risk management arrangements for physical assets in annual reports; and
- requires a significance and engagement policy to ensure that in making decisions that Council is clear about why it is addressing a matter, has considered and evaluated the options and alternatives, and has information on the community view about the matter and the options for addressing it, and particularly it has an understanding of the views and preferences of those persons likely to be affected by or have an interest in the matter.

Resource Management Act 1991

Requires Council to:

- sustain the potential of natural and physical resources to meet the reasonably foreseeable needs of future generation;
- comply with the District and Regional Plan;
- to avoid, remedy or mitigate any adverse effect on the environment; and
- consider the principles of the Treaty of Waitangi in exercising functions and powers under the Act relating to the use, development, and protection of natural and physical resources.

Health and Safety at Work Act 2015

Requires the provision of safe work places for all activities by local authority staff and contractors, and the maintenance of an audit trail to demonstrate compliance.

The **Transit NZ Guidelines "Code of Practice for Temporary Traffic Management" and the "Local Road Supplement"** are the recognised standards for maintenance and construction works on legal road.

Building Act 2004

Sets minimum standards for buildings and facilities and requires Councils to produce Project Information Memoranda (PIM's) and building Warrants of Fitness.

Public Works Act 1981.

Public Bodies Contracts Act 1959

Confers on a local authority similar powers to enter contracts as enjoyed by corporate bodies or natural persons.

The Land Transport Management Act 2003

The purpose of this Act is to contribute to the aim of achieving an affordable, integrated, safe, responsive and sustainable land transport system:

- provides an integrated approach to land transport funding and management;
- improves social and environmental responsibility a land transport funding, planning and management; and 176
- improves long term planning and investment in land transport.

Land Transport Act 1998

Controls aspects of road and traffic operations including Traffic Regulations, bylaws and enforcement.

CDEM Act 2002

The hazards and risks to be managed under the Civil Defence Emergency Management Act 2002 (CDEM Act) and the National CDEM Plan include any hazard that may result in a civil defence emergency.

STATUS: Final

Utilities Access Act 2010

The Act requires corridor mangers to coordinate the work of the various utilities within their districts, including their own, in a way which ensures the best outcomes for all New Zealanders in terms of the performance and longevity of the utility services and the transport corridor.

Vehicle Mass and Dimensions Amendment 2010

Amends Land Transport Rule: Vehicle Dimensions and Mass 2002, which specifies requirements for dimension and mass limits for vehicles operating on New Zealand roads.

- Heavy Motor Vehicle Regulations 1974 allows road controlling authorities to restrict the movement of heavy vehicles to prevent damage to roads and bridges of limited strength.

STATUS: Final

Appendix B – List of HPMV Routes

Approved Full HPMV Route Description

SH	RS/Displ	Start	RS/Displ	End	Full length	Comments
54	0/0	SH1, Hunterville	38/17.836	SH3, Palmerston North	Yes	
56	0/0	SH57, Shannon	23/0	Maxwells Line intersection, Palmerston North	No	
57	0/0	SH1, Levin	50/3.529	Pahiatua Aokautere Road intersection, Aokautere	No	

North Island Heavy Vehicle Bypass Routes & Local Authority & Port Authority link roads

SH	Approving Road Controlling Local Authority	Description	Approved HPMV Route
2/57	Palmerston North City Council and Tararua District Council	Pahiatua Track Route (Pahiatua to Aokautere) Mangahao Rd from SH2 - Pahiatua Mangahao Rd - Makomako Rd - Pahiatua Aokautere Rd to SH57	Yes
3	Palmerston North City Council	Tremaine Ave – Kelvin Grove Rd – McLeavey Dr – Roberts Line	Yes
3	Palmerston North City Council, Manawatu District Council and Tararua District Council	Saddle Road Route (Ashurst to Woodville) Cambridge Ave – Mulgrave St – Salisbury St - Saddle Rd - Oxford Rd - Woodlands Rd to SH3, Woodville	Yes
3/56	Palmerston North City Council and Manawatu District Council	Tremaine Ave from SH3 - No. 1 Line – Tiakitahuna Rd to SH56	Yes

STATUS: Final

Appendix C – Risk Register Transport Risks

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI01	Transport Activity Management	Process Owner	Group Manager - Transport & Development
Sub Process	Creation of understanding of asset landscape	• Describe all assets • Determine asset condition and design life expectancies • Determine performance/capacity/capability of assets and any remediation/replacement needs • Determine needs for upgrades under Capital New	
Potential Failure	1. Receipt of incomplete data on assets (Location, age, replacement requirements, life expectancy, current condition, fit for purpose attributes, material content) 2. Conditions inspections not initiated in timely manner 3. Budget allocation insufficient to engage inspection/survey companies 4. Condition inspections not identifying condition issues 5. Output from inspections not captured and documented against asset in IPS and RAMM 6. Co-funding does not materialise 7. Significant trees disrupt ability to undertake corrective roading activity 8. Misalignment between roading and waters works 9. Data collection requirements not actioned 10. Data simulation driving inspection and maintenance requirements produces inaccurate outputs 11. Council funding not aligned with NZTA funding requirements (Audit risk) 12. Missed opportunities to better source funding from NZTA *(Failures are at pinch points, not network wide)*		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Financial	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Reputational	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Major
Raw Risk Rating	Very High		
Raw Risk Rating Overall	Extreme		
Causes	1. Ambiguity on asset data ownership and custodianship 2. Poor quality data held on assets 3. Inability to identify records 4. Inspections not undertaken to adequate standard 5. No documented or adequate standard processes for timeline management of asset condition understanding 6. Engagement with inspections not properly termed on scope or works 7. Lack of understanding by officers of lifecycle terms and against asset categories 8. Silo approach to activity management 9. Lack of understanding of NZTA inspection requirements 10. Lack of understanding of NZTA funding rules and opportunities 11. Inadequate inspection schedule workflow processes 12. Inspection algorithms not correct in conjunction field validation 13. Inadequate methodology in determining needs-based renewals and maintenance 14. Central urban focus at expense of outer/rural roading requirements 15. Inspection reports not actioned		
Controls & Owners	Control Type	Control Effectiveness	Control Reliance
	Choose an item.	Partially Effective	Choose an item.

STATUS: Final

(Include control description, % population checked, Material items checked, source of any check, how is check performed)	1. Fully resourced fit for purpose Asset and Planning Department Partially Effective 2. Programme renewal out for 30 years in place for network renewal requirements Ineffective 3. Experienced and qualified inspection companies used Effective 4. SOPs in place for determining workflow on assessments Ineffective 5. Repository of life expectancy of assets Partially Effective

Residual Risk Likelihood	Possible		Residual Risk Consequence	Serious
Residual Risk Rating	Service Delivery	High	Within Risk Tolerance	No - Seek Approval or Improve Mitigation
Residual Risk Likelihood	Possible		Residual Risk Consequence	Serious
Residual Risk Rating	Financial	High	Within Risk Tolerance	No - Seek Approval or Improve Mitigation
Residual Risk Likelihood	Possible		Residual Risk Consequence	Serious
Residual Risk Rating	Reputational	High	Within Risk Tolerance	No - Seek Approval or Improve Mitigation
Residual Risk Rating Overall	High			

Control Sample Testing *(To be undertaken in later phase)*	CST Description	Control	Frequency	Sample Size

Process Control Design Improvement / Risk Treatment Options	1. Creation of design panel with subject matter experts and suitably qualified engineering persons to review renewals, engineering designs and material specifications 2. Improved functional direction of data use 3. Review of fit for purpose algorithms

Target Risk Rating	Service Delivery	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating	Financial	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating	Reputational	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development (To 3W as well)
Process Name TRI02	Design	Process Owner	Group Manager - Transport & Development
Sub Process		• Creation of design for construction from LTP • Quality and quantity specifications drawn up • Pre-design testing to determine specification requirements • Hand off to contact environment for tender &/or costing &/or build	
Potential Failure	1. Inadequate scoping and testing 2. Incorrect quantity assessments 3. Quality requirements inadequate to meet needs 4. Quality assurance processes not complied 5. Technical sign off not in line with regulatory requirements 6. Design doesn't meet scoping requirements 7. Not delivering projects in LTP within required timeframe 8. Supply chain disruption		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Serious
Raw Risk Rating	Very High		
Risk Category	Financial	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Major
Raw Risk Rating	Extreme		
Risk Category	Reputational	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Possible	Raw Risk Consequence	Serious
Raw Risk Rating	High		
Raw Risk Rating Overall	Extreme		
Causes	1. Resource capacity and capability 2. Inadequate workflow management processes 3. Challenges to work remotely 4. Incorrect technical sign off of designs and at hold points 5. Inadequate scoped and phasing of multi-year projects in LTP, i.e. undeliverable 6. Third party dependencies not delivered upon creating "at risk" programmes 7. Excess demand in the market driving supply chain challenges 8. Cost escalations		
Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type: Choose an item.	Control Effectiveness: Partially Effective	Control Reliance: Choose an item.
	1. Adequately resourced functions Partially Effective 2. Adequate technical hold sign off points Effective 3. Discipline in process and workflow management Partially Effective 4. Robust SOP Partially Effective 5. Data base of recent costs in projects Partially Effective 6. Assess/insight and management of market data base Partially Effective 7. Trained and experienced staff Partially Effective 8. Effective planning in LTP process through an effective Asset Planning process Partially Effective		
Residual Risk Likelihood	Possible	Residual Risk Consequence	Moderate
Residual Risk Rating	Service Delivery: Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Possible	Residual Risk Consequence	Moderate
Residual Risk Rating	Financial: Medium	Within Risk Tolerance	Yes - No Further Action

STATUS: Final

Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Moderate		
Residual Risk Rating	Reputational	Medium	Within Risk Tolerance	Yes - No Further Action		
Residual Risk Rating Overall	Medium					
Control Sample Testing *(To be undertaken in later phase)*	CST Description		Control	Frequency	Sample Size	
Process Control Design Improvement / Risk Treatment Options	1.					
Target Risk Rating	Service Delivery	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Financial	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Reputational	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI03	Contract Management	Process Owner	Group Manager - Transport & Development
Sub Process	• Accountable for management of engineering requirements under contract post contract closing • Agree engineering changes required during contract term, including cost and time implications • Ensure compliance with contract technical specifications, including test and quality requirements • Issue payment certificates and issue Practical Completion Certificate and Retention Release Certificate • Obtain and review H&S plans from contractors/PCBU		
Potential Failure	1. Delays in works completion 2. Cost overruns above budget 3. Inadequate compliance with technical requirements 4. Certification and/or testing not checked 5. Payments certificates issued in error (works not completed) 6. Checks and evidence on progress works not in line with contract specifications 7. Technical expertise not involved in more complex requirements 8. H&S plan inadequately addresses risks		
Risk Category	Financial	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Health & Safety	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Raw Risk Rating Overall	Extreme		
Causes	1. Poor planning 2. Inadequate staff competency for undertaking inspections 3. Lack of checklists on requirements included in contract 4. Poorly constructed specifications from design team 5. Lack of technical understanding on testing requirements 6. Inadequate resources for full and proper checks		
Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type: Choose an item. Control Effectiveness: Partially Effective Control Reliance: Choose an item. 1. Ability to outsource advanced technical check programmes Effective 2. Contract Manual for provision on planning Partially Effective 3. 3910 standard contract in place to reduce poor contract construct Effective 4. 3910 procedural guide Non-existent 5. NZTA "gold standard" for testing requirements Partially Effective 6. Contract construct places significant construction risk on contractor Partially Effective 7. Code of practice for utilities Partially Effective 8. Guidance on engineering standards for council Partially Effective 9. Defects inspection undertaken prior to defects period expiry Partially Effective 10. Finance have expiry checks of retention payments dates Effective 11. Experienced staff Partially Effective 12. Well resource Infrastructure Unit Ineffective 13. Attendance of H&S training Effective		
Residual Risk Likelihood	Unlikely	Residual Risk Consequence	Serious

STATUS: Final

Residual Risk Rating	Financial	Medium	Within Risk Tolerance	Yes - No Further Action		
Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Moderate		
Residual Risk Rating	Service Delivery	Medium	Within Risk Tolerance	Yes - No Further Action		
Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Serious		
Residual Risk Rating	Health & Safety	Medium	Within Risk Tolerance	No - Seek Approval or Improve Mitigation		
Residual Risk Rating Overall	Medium					
Control Sample Testing *(To be undertaken in later phase)*	CST Description		Control	Frequency	Sample Size	
Process Control Design Improvement / Risk Treatment Options	1. Improved process controls and procedures to ensure the "run over by bus" scenario is dealt with and there remains a corporate knowledge repository. 2. End to end check lists for various check points in contract creation and end to end management.					
Target Risk Rating	Financial	Low	Likelihood	Rare	Consequence	Serious
Target Risk Rating	Service Delivery	Low	Likelihood	Rare	Consequence	Moderate
Target Risk Rating	Health & Safety	Low	Likelihood	Rare	Consequence	Serious
Target Risk Rating Overall	Low					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI06	Development Consents	Process Owner	Group Manager - Transport & Development
Sub Process	Vetting	• Checking applications before processing • Send requests for further information if application incomplete	
Potential Failure	1. Inadequate vetting resulting in un-necessary processing 2. Unable to complete processing within regulatory timeframe 3. Accepting poor quality applications 4. Applications overlooked		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Serious
Raw Risk Rating	Very High		
Raw Risk Rating Overall	Very High		
Causes	1. Failure to follow check lists 2. Inadequately trained staff or lack of mentoring 3. Lack of personnel capacity or capability		

Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type	Control Effectiveness	Control Reliance
	Choose an item.	Effective	Choose an item.
	1. Checklists completed in all cases in electronic form Effective 2. All applications submitted electronically and recorded on AlphaOne Effective 3. Adequate capacity and capability Partially Effective 4. AlphaOne maintains dashboard of all applications Effective		

Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Serious
Residual Risk Rating	Service Delivery	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Rating Overall	Medium			

Control Sample Testing *(To be undertaken in later phase)*	CST Description	Control	Frequency	Sample Size

Process Control Design Improvement / Risk Treatment Options	1. More training of vetting staff

Target Risk Rating	Service Delivery	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI05	Development Consents	Process Owner	Group Manager - Transport & Development
Sub Process	Processing	• Processing consent applications • Ensuring code standards complied with • Issue RFIs where information incomplete or not up to standard	
Potential Failure	1. Issue consent outside compliance requirements (legislative and regulatory requirements not met) 2. Missed timeframes in line with 20-day statutory requirements 3. Missed identification of Planning Services approval requirements 4. Missed identification or application, or imposition of of Development Applications approval requirements		

Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Serious
Raw Risk Rating	Very High		
Risk Category	Legal/Compliance	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Reputational	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Possible	Raw Risk Consequence	Serious
Raw Risk Rating	High		
Raw Risk Rating Overall	Extreme		

Causes	1. Failure to follow check lists 2. Inadequately trained or experienced staff 3. Over-reliance of external contractors 4. Check lists inadequate or not followed 5. Overly complex code or planning specifications		
Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type	Control Effectiveness	Control Reliance
	Choose an item.	Effective	Choose an item.
	1. All staff competency for level of job requirements Partially Effective 2. Typically, tertiary qualified engineers Effective 3. Training and supervision based on competency Partially Effective 4. Checklist updated when legislative/regulatory changes Effective 5. All applications check reviewed Effective 6. Checklists in place for all scenarios Effective 7. Promapp used to document processes Effective 8. Microsoft Planner for monitoring all workflow Effective 9. Adequate capacity and capability Partially Effective 10. Professional indemnity insurance Effective		

Residual Risk Likelihood	Possible		Residual Risk Consequence	Serious
Residual Risk Rating	Service Delivery	High	Within Risk Tolerance	No - Seek Approval or Improve Mitigation
Residual Risk Likelihood	Possible		Residual Risk Consequence	Moderate
Residual Risk Rating	Legal/Compliance	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Possible		Residual Risk Consequence	Moderate
Residual Risk Rating	Reputational	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Rating Overall	High			

STATUS: Final

Control Sample Testing *(To be undertaken in later phase)*	CST Description	Control	Frequency	Sample Size

Process Control Design Improvement / Risk Treatment Options	1. Increased internal capacity and capability

Target Risk Rating	Service Delivery	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating	Legal/Compliance	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Reputational	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI06	Development Consents	Process Owner	Group Manager - Transport & Development
Sub Process	Inspections	• Create and agree inspection schedule with owners/developers • Undertake progress inspections • Process check list • For failed inspections, reschedule	
Potential Failure	1. Incorrect decisions by Development Engineers 2. Failure to identify individual items requiring inspections 3. Unscrupulous builders/construction firms seeking to hide substandard works 4. Attempted/successful bribery of Development Engineers 5. Initial processing inadequate resulting in inspection not identifying matters during inspection 6. Inspections not completed at designated time		
Risk Category	Legal/Compliance	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Reputational	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Major
Raw Risk Rating	Extreme		
Risk Category	Financial	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Almost Certain	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Serious
Raw Risk Rating	Very High		
Raw Risk Rating Overall	Extreme		
Causes	1. Checklists not followed correctly 2. Checklists not tailored to meet complexity of job 3. Under resourced officer capacity 4. Poorly trained officers or mis-matched skills 5. Dishonest tradesmen/developers 6. Poor scheduling		
Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type: Choose an item. Control Effectiveness: Effective Control Reliance: Choose an item. 1. NZS4404:2010 in place and followed. Checklists created based on these standards Effective 2. Engineering standards for land development Effective 3. Learning logs for Development Engineers to keep abreast of changes in standards Effective 4. Professional indemnity insurance Effective 5. Scheduling undertaken in Outlook and Microsoft Planner Effective 6. Legislative authority to have works recompleted Effective 7. Adequate capacity and capability Partially Effective		
Residual Risk Likelihood	Possible	Residual Risk Consequence	Moderate
Residual Risk Rating	Legal/Compliance: Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Possible	Residual Risk Consequence	Moderate
Residual Risk Rating	Reputational: Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Possible	Residual Risk Consequence	Moderate

STATUS: Final

Residual Risk Rating	Financial	Medium	Within Risk Tolerance	Yes - No Further Action		
Residual Risk Likelihood	Possible		Residual Risk Consequence	Serious		
Residual Risk Rating	Service Delivery	High	Within Risk Tolerance	No - Seek Approval or Improve Mitigation		
Residual Risk Rating Overall	High					
Control Sample Testing *(To be undertaken in later phase)*	CST Description		Control	Frequency	Sample Size	
Process Control Design Improvement / Risk Treatment Options	1. Training and capacity					
Target Risk Rating	Legal/Compliance	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Reputational	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Financial	Medium	Likelihood	Possible	Consequence	Moderate
Target Risk Rating	Service Delivery	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Risk Management Framework: Risk Register Working Paper		Division/Unit:	Transport & Development
Process Name TRI07	Development Consents	Process Owner	Group Manager - Transport & Development
Sub Process	Certification	• Receipt of Inspection completion documentation • Confirm receipt of all required documents • Issue of Certificates 223 and 224 • Archive all documentation and certificates	
Potential Failure	1. Inadvertently exempting required documentation 2. Inspection pass incorrected recorded 3. Paper documentation lost or misplaced 4. Documentation not in order and passed as if it is		

Risk Category	Legal/Compliance	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Severe
Raw Risk Rating	Extreme		
Risk Category	Reputational	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Major
Raw Risk Rating	Very High		
Risk Category	Service Delivery	Link to Strat. Goal	Choose an item.
Raw Risk Likelihood	Likely	Raw Risk Consequence	Serious
Raw Risk Rating	Very High		
Raw Risk Rating Overall	Extreme		

Causes	1. Exempted through inadequate personnel 2. Poor filing process of paper-based documents 3. Processes not completed in line with acceptance and approval of works		
Controls & Owners (Include control description, % population checked, Material items checked, source of any check, how is check performed)	Control Type	Control Effectiveness	Control Reliance
	Choose an item.	Effective	Choose an item.
	1. Experienced and trained personnel Partially Effective 2. Document storage in back end into Oasis Partially Effective 3. Engineering standards for land development checklists used in cases Effective 4. Adequately resourced division Partially Effective 5. Professional indemnity insurance Effective		

Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Moderate
Residual Risk Rating	Legal/Compliance	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Moderate
Residual Risk Rating	Reputational	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Likelihood	Unlikely		Residual Risk Consequence	Serious
Residual Risk Rating	Service Delivery	Medium	Within Risk Tolerance	Yes - No Further Action
Residual Risk Rating Overall	Medium			

Control Sample Testing *(To be undertaken in later phase)*	CST Description	Control	Frequency	Sample Size

STATUS: Final

Process Control Design Improvement / Risk Treatment Options	1. Increased resourcing					
Target Risk Rating	Legal/Compliance	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating	Reputational	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating	Service Delivery	Medium	Likelihood	Unlikely	Consequence	Moderate
Target Risk Rating Overall	Medium					

STATUS: Final

Appendix D - Key Assumptions

The following assumptions have been adopted for this AMP.

Inflation

Financial projections are based on July 20xx estimated costs. No inflation factors have been applied.

BERL inflation factors will be applied to the programmes and budgets in the Long Term Plan (LTP) . Budgets for successive years of the Annual Budget are based on the corresponding year of the LTP.

Depreciation

Average asset lives at a project level for new works have been used to calculate depreciation.

New works are a small percentage of total depreciation. Differences from actual due to averaging of lives are minor.

Vested Assets

On average the same level of assets is gifted to the Council because of subdivision as has occurred over the last 5 years.

Note that the rate of change of development will be taken account of in future revisions of the AMP and subsequent O&M and depreciation considered.

Service Potential

Service potential of the asset is maintained by the renewal and maintenance programme.

There is minimal risk that the service potential of the asset will not be maintained by implementation of the renewal programme since this is based on reliable asset and condition information from the asset management system.

Asset lives

Asset lives are accurately stated.

The risk that lives are inaccurate is low. Lives are based on accepted industry values modified by local knowledge. The asset database gives a good knowledge of asset condition, and an extensive field assessment has recently been undertaken.

Natural Disasters

That there are no major natural disasters during the planning period requiring additional funds.

There is medium risk of a natural disaster occurring during this period requiring additional funds to repair or reinstate assets. Some further provision for increasing the resilience of the assets has been built into this plan but there is still further work to be undertaken to determine the desired level of resilience and the further asset improvements to achieve this.

Council Policy

No meaningful change to Council policy that impacts on assets and services.

Any meaningful change will require a full review of the AMP and implications identified at the time.

Interest Rate

An interest rate as of the 2023 year is used for debt on new work

Appendix E – 30 Year Financial View

RENEWAL PROGRAMMES – Years 1 to 10

Programme ID	Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
64	Pedestrian Network Renewals	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000
74	City-wide - Street Light Renewals	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
82	Off-street Parking Renewals	35,000	40,000	40,000	40,000	40,000	40,000	40,000	38,000	38,000	38,000
115	City-wide - Sealed Pavement Renewals (New Zealand Transport Agency – Waka Kotahi Subsidies)	3,300,000	3,400,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
122	City-wide - Road Drainage Renewals	500,000	500,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000	550,000
139	City-wide - Sealed Road Resurfacing	3,400,000	3,400,000	3,800,000	4,500,000	3,500,000	9,200,000	3,500,000	4,300,000	4,300,000	4,300,000
162	City-wide - Vehicle Crossing Renewals	178,966	178,966	178,966	178,966	178,966	162,696	162,696	162,696	180,000	180,000
181	Public Transport Network Renewals	115,500	115,500	115,500	115,500	115,500	115,500	115,500	115,500	115,500	115,500
648	Cycling Network Supporting Assets - Renewals	14,914	17,897	17,897	17,897	17,897	17,897	20,880	20,880	20,880	22,000
1615	City-wide - Parking and Traffic Signs and Marking	65,079	81,348	73,000	73,000	73,000	73,000	73,000	73,000	73,000	73,000
1805	City-wide - Transport structure component renewal	460,000	365,000	285,000	450,000	350,000	250,000	450,000	307,000	307,000	307,000
2126	Pioneer Highway - Improvements	250,000	250,000	250,000	2,500,000	250,000	2,500,000	250,000	250,000	250,000	250,000
2357	Bunnythorpe village upgrade	-	350,000	1,000,000	7,500,000	8,000,000	-	-	-	-	-
2371	Cycling Network Renewals	900,000	1,900,000	700,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
2372	Neighbourhood Centres Streetscape Renewals	88,000	44,000	44,000	44,000	44,000	55,000	66,000	77,000	88,000	99,000
2373	Shared Pathway Network Renewals	2,178,550	2,957,570	1,492,260	1,511,070	773,300	1,038,730	620,730	1,815,000	1,732,500	2,534,400
2374	Off Road Shared Pathway Link Renewals	26,950	26,950	26,950	33,000	33,000	33,000	37,500	49,500	59,400	69,300
2375	Unsealed Roads Aggregate Re-Sheeting	1,310,000	1,310,000	1,410,000	1,410,000	1,410,000	1,410,000	1,410,000	1,410,000	1,410,000	1,410,000
2376	Traffic Services Renewal	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
2377	Environmental Renewals	800,000	1,400,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
2379	Structural Renewal	39,848	40,685	41,545	42,431	43,343	44,279	46,101	46,978	47,879	50,600
2383	Active Transport Monitoring and Evaluation Renewals	57,500	57,500	57,500	69,000	75,900	83,490	91,839	101,023	111,125	122,238
2386	Active Transport Wayfinding Renewals	132,000	382,296	451,230	523,864	539,044	554,664	570,768	585,024	599,632	614,636
2430	Pedestrian Network Supporting Assets - Renewals	66,000	66,000	66,000	66,000	66,000	66,000	66,000	66,000	66,000	66,000
2453	Network Bridge Replacements	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000

RENEWAL PROGRAMMES – Years 11 to 20

Programme ID	Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
64	Pedestrian Network Renewals	1400000	1690000	1690000	1690000	1690000	1690000	1690000	1690000	1690000	1690000
74	City-wide - Street Light Renewals	163000	163000	163000	163000	163000	163000	163000	163000	163000	163000
82	Off-street Parking Renewals	38000	38000	38000	38000	38000	38000	38000	38000	38000	38000
115	City-wide - Sealed Pavement Renewals (New Zealand Transport Agency – Waka Kotahi Subsidies)	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000
122	City-wide - Road Drainage Renewals	680000	680000	680000	680000	680000	680000	680000	680000	680000	680000
139	City-wide - Sealed Road Resurfacing	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000
162	City-wide - Vehicle Crossing Renewals	180000	173000	173000	173000	173000	173000	173000	173000	173000	173000
181	Public Transport Network Renewals	115500	115500	115500	115500	115500	115500	115500	115500	115500	115500
648	Cycling Network Supporting Assets - Renewals	22000	19000	19000	19000	19000	19000	19000	19000	19000	19000

1615	City-wide - Parking and Traffic Signs and Marking	73000	73000	73000	73000	73000	73000	73000	73000	73000	73000
1805	City-wide - Transport structure component renewal	307000	307000	307000	307000	307000	307000	307000	307000	307000	307000
2126	Pioneer Highway - Improvements	0	0	0	0	0	0	0	0	0	0
2357	Bunnythorpe village upgrade	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000
2371	Cycling Network Renewals	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
2372	Neighbourhood Centres Streetscape Renewals	110000	67000	67000	67000	67000	67000	67000	67000	67000	67000
2373	Shared Pathway Network Renewals	750000	750000	750000	750000	750000	750000	750000	750000	750000	750000
2374	Off Road Shared Pathway Link Renewals	82500	0	0	0	0	0	0	0	0	0
2375	Unsealed Roads Aggregate Re-Sheeting	143295	110000	110000	110000	110000	110000	110000	110000	110000	110000
2376	Traffic Services Renewal	1000000	2100000	2100000	2100000	2100000	2100000	2100000	2100000	2100000	2100000
2377	Environmental Renewals	50000	41000	41000	41000	41000	41000	41000	41000	41000	41000
2379	Structural Renewal	160000	160000	160000	160000	160000	160000	160000	160000	160000	160000
2383	Active Transport Monitoring and Evaluation Renewals	53900	46000	46000	46000	46000	46000	46000	46000	46000	46000
2386	Active Transport Wayfinding Renewals	134462	73000	73000	73000	73000	73000	73000	73000	73000	73000
2430	Pedestrian Network Supporting Assets - Renewals	66000	66000	66000	66000	66000	66000	66000	66000	66000	66000
2453	Network Bridge Replacements	8000000	0	0	0	0	0	0	0	0	0

RENEWAL PROGRAMMES – Years 21 to 30

Programme ID	Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
64	Pedestrian Network Renewals	1690000	1690000	1690000	1690000	1690000	1690000	1690000	1690000	1690000	1690000
74	City-wide - Street Light Renewals	163000	163000	163000	163000	163000	163000	163000	163000	163000	163000
82	Off-street Parking Renewals	38000	38000	38000	38000	38000	38000	38000	38000	38000	38000
115	City-wide - Sealed Pavement Renewals (New Zealand Transport Agency – Waka Kotahi Subsidies)	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000	3245000
122	City-wide - Road Drainage Renewals	680000	680000	680000	680000	680000	680000	680000	680000	680000	680000
139	City-wide - Sealed Road Resurfacing	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000	4300000
162	City-wide - Vehicle Crossing Renewals	173000	173000	173000	173000	173000	173000	173000	173000	173000	173000
181	Public Transport Network Renewals	115500	115500	115500	115500	115500	115500	115500	115500	115500	115500
648	Cycling Network Supporting Assets - Renewals	19000	19000	19000	19000	19000	19000	19000	19000	19000	19000
1615	City-wide - Parking and Traffic Signs and Marking	73000	73000	73000	73000	73000	73000	73000	73000	73000	73000
1805	City-wide - Transport structure component renewal	307000	307000	307000	307000	307000	307000	307000	307000	307000	307000
2126	Pioneer Highway - Improvements	0	0	0	0	0	0	0	0	0	0
2357	Bunnythorpe village upgrade	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000
2371	Cycling Network Renewals	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000	1000000
2372	Neighbourhood Centres Streetscape Renewals	67000	67000	67000	67000	67000	67000	67000	67000	67000	67000
2373	Shared Pathway Network Renewals	750000	750000	750000	750000	750000	750000	750000	750000	750000	750000
2374	Off Road Shared Pathway Link Renewals	0	0	0	0	0	0	0	0	0	0
2375	Unsealed Roads Aggregate Re-Sheeting	110000	110000	110000	110000	110000	110000	110000	110000	110000	110000
2376	Traffic Services Renewal	2100000	2100000	2100000	2100000	2100000	2100000	2100000	2100000	2100000	2100000
2377	Environmental Renewals	41000	41000	41000	41000	41000	41000	41000	41000	41000	41000
2379	Structural Renewal	160000	160000	160000	160000	160000	160000	160000	160000	160000	160000
2383	Active Transport Monitoring and Evaluation Renewals	46000	46000	46000	46000	46000	46000	46000	46000	46000	46000

STATUS: Final

Programme ID	Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
2386	Active Transport Wayfinding Renewals	73000	73000	73000	73000	73000	73000	73000	73000	73000	73000
2430	Pedestrian Network Supporting Assets - Renewals	66000	66000	66000	66000	66000	66000	66000	66000	66000	66000
2453	Network Bridge Replacements	0	0	0	0	0	0	0	0	0	0

GROWTH PROGRAMMES – Years 1 to 10

Programme ID	Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
201	Urban Growth - Development Contributions - Transport	220000	220000	220000	220000	220000	220000	220000	220000	220000	220000
1003	Whakarongo - Intersection Upgrades	1200000	500000	5500000	0	0	0	0	0	0	0
1925	Urban Growth Development Contributions - Active Transport	141003	141003	141003	141003	141003	141003	141003	141003	141003	141003
2058	Urban Growth - NEIZ - Transport	0	0	4500000	5600000	5600000	5600000	0	0	0	0
2065	Urban Growth - Whakarongo - Transport	500000	2500000	2500000	2500000	0	0	0	0	0	0
2123	Urban Growth - Kakatangiata - Transport	0	0	1500000	12000000	1500000	12000000	1500000	12000000	1500000	12000000
2124	Urban Growth - Ashhurst - Transport	350000	1800000	35000	1600000	350000	1600000	350000	1800000	350000	2000000
2335	Stoney Creek Road Upgrade	500000	2600000	4600000	2600000	0	0	0	0	0	0
2389	Urban Growth - Aokautere - Transport	2800000	2000000	14500000	1000000	7000000	7000000	10000000	8000000	8000000	0
2489	Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	0	0	0	0	0	0	0	0	20000000	20000000

GROWTH PROGRAMMES – Years 11 to 20

Programme ID	Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
201	Urban Growth - Development Contributions - Transport	220000	220000	220000	220000	220000	220000	220000	220000	220000	220000
1003	Whakarongo - Intersection Upgrades	0	0	0	0	0	0	0	0	0	0
1925	Urban Growth Development Contributions - Active Transport	141003	141003	141003	141003	141003	141003	141003	141003	141003	141003
2058	Urban Growth - NEIZ - Transport	0	0	0	0	0	0	0	0	0	0
2065	Urban Growth - Whakarongo - Transport	0	0	0	0	0	0	0	0	0	0
2123	Urban Growth - Kakatangiata - Transport	1500000	12000000	0	0	0	0	0	0	0	0
2124	Urban Growth - Ashhurst - Transport	2000000	0	0	0	0	0	0	0	0	0
2335	Stoney Creek Road Upgrade	0	0	0	0	0	0	0	0	0	0
2389	Urban Growth - Aokautere - Transport	0	0	0	0	0	0	0	0	0	0
2489	Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	0	0	0	0	0	0	0	0	0	0

STATUS: Final

GROWTH PROGRAMMES – Years 21 to 30

Programme ID	Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
201	Urban Growth - Development Contributions - Transport	220000	220000	220000	220000	220000	220000	220000	220000	220000	220000
1003	Whakarongo - Intersection Upgrades	0	0	0	0	0	0	0	0	0	0
1925	Urban Growth Development Contributions - Active Transport	141003	141003	141003	141003	141003	141003	141003	141003	141003	141003
2058	Urban Growth - NEIZ - Transport	0	0	0	0	0	0	0	0	0	0
2065	Urban Growth - Whakarongo - Transport	0	0	0	0	0	0	0	0	0	0
2123	Urban Growth - Kakatangiata - Transport	0	0	0	0	0	0	0	0	0	0
2124	Urban Growth - Ashhurst - Transport	0	0	0	0	0	0	0	0	0	0
2335	Stoney Creek Road Upgrade	0	0	0	0	0	0	0	0	0	0
2389	Urban Growth - Aokautere - Transport	0	0	0	0	0	0	0	0	0	0
2489	Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	0	0	0	0	0	0	0	0	0	0

NEW CAPITAL PROGRAMMES – Years 1 to 10

Programme ID	Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
159	Kelvin Grove Road - Safety Improvements	400000	1000000	1000000	2000000	2000000	2000000	2000000	0	0	0
187	Manawatu River - Road Bridge	0	0	0	0	0	0	0	0	32500000	32500000
243	Transit Hub Redevelopment	337000	400000	2532904	4915807	10215000	10613470	550000	550000	400000	400000
279	City-wide - Minor transport improvements	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000
839	Rangitikei St / Featherston St - Intersection Improvements	0	1084639	-542320	379623	4338557	4338557	0	0	0	0
1094	Milson Line Overbridge Improvement	0	0	220000	325000	0	3800000	0	0	0	0
1121	Tennent Drive Improvements - Food HQ & Massey	146300	946100	0	0	292600	1286756	4941792	3510068	0	0
1330	Placemaking Co-created Project (capital)	16595	16595	16595	16595	16595	16595	16595	16595	16595	16595
1559	Cycling Network improvements	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000
1680	Public Transport Network Improvements	844650	1064650	1064650	3484650	3484650	3484650	3484650	3484650	3484650	3484650
1695	PNITI – Intersection & bridge improvements	0	0	0	0	0	0	0	8000000	8000000	8000000
1803	Neighbourhood Centres Streetscape Improvements	450000	450000	450000	450000	450000	450000	450000	450000	450000	450000
1804	Road Drainage Capital Improvements	120000	120000	120000	120000	120000	120000	120000	120000	120000	120000
1808	Pedestrian Network Supporting Assets - Improvements	200743	200743	200743	200743	200743	200743	200743	200743	200743	200743
1944	Network Village - road upgrades to urban standard	300000	1200000	300000	1200000	300000	1600000	300000	1600000	300000	1600000
2013	PNITI – Strategic Transport Corridor Improvements	0	0	0	0	0	0	0	20000000	20000000	20000000
2021	Healthy Streets Improvements	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000
2026	Active Transport Monitoring and Evaluation Improvements	110000	220000	220000	220000	220000	220000	220000	110000	110000	110000
2056	Cycling Network Supporting Assets - Improvements	29809	30674	44798	46100	61450	63231	79907	81903	83949	86050
2057	Shared Pathway Network Improvements	7000000	7000000	7000000	7000000	7000000	7000000	7000000	7000000	7000000	7000000
2061	Rural Road Safety & Accessibility Improvements	65000	80000	80000	80000	80000	80000	80000	80000	80000	80000
2077	Cuba Street urban streetscape improvements - Pitt to Arena (Stage 3)	0	0	0	0	0	2500000	2500000	0	0	0
2111	Kelvin Grove Road - Safety Improvements	3000000	3000000	3000000	0	0	0	0	0	0	0
2119	Road to Zero - Transport Safety Improvements	4000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000
2120	Off Road Shared Pathway Link Improvements	297000	297000	297000	297000	297000	297000	297000	297000	297000	297000
2122	City Centre Streets for People Improvements	174000	4840000	3311211	10586469	10061984	7901310	4102025	7757671	10414167	1903364
2142	Physical deterrent (installation of speed humps) at additional locations	50000	50000	50000	50000	50000	50000	50000	50000	50000	50000

STATUS: Final

Programme ID	Programme Name	Year1 (2024/25)	Year2 (2025/26)	Year3 (2026/27)	Year4 (2027/28)	Year5 (2028/29)	Year6 (2029/30)	Year7 (2030/31)	Year8 (2031/32)	Year9 (2032/33)	Year10 (2033/34)
2204	Address Street Racer Issues	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000
2353	Seal Extension	95000	100700	106750	113150	120000	0	0	0	0	0
2354	Enabling PNITI, Roberts Line / Kairanga Bunnythorpe intersection improvements	350000	750000	0	1000000	8000000	0	0	0	0	0
2356	Turitea Bridge No.1 replacement	0	0	350000	750000	8500000	0	0	0	0	0
2359	Enabling PNITI, Bunnythorpe bridge replacements	0	350000	1000000	7500000	8000000	0	0	0	0	0
2362	HMPV Improved Network Access / Culvert & Bridge Structures	200000	800000	800000	800000	800000	800000	800000	800000	800000	800000
2368	Pedestrian Network Improvements	690000	690000	690000	690000	690000	690000	690000	690000	690000	690000
2378	VMS Board	85000	0	0	0	0	0	0	0	0	0
2380	Emergency Reinstatement	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000
2385	Active Transport Wayfinding Improvements	38000	142000	142000	326000	276000	276000	276000	276000	276000	276000
2390	Network - Low Cost Low Risk joint funded New Zealand Transport Agency – Waka Kotahi projects	10000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000
2428	Street Trees - New and Renewal	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000
2456	Cliff Road Upgrade - Te MoTu O Poutoa	500000	0	3650000	0	0	0	0	0	0	0
2505	Linton Pathway Slip Prevention	500000	500000	500000	500000	0	0	0	0	0	0

NEW CAPITAL PROGRAMMES – Years 11 to 20

Programme ID	Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
159	Kelvin Grove Road - Safety Improvements	0	0	0	0	0	0	0	0	0	0
187	Manawatu River - Road Bridge	0	0	0	0	0	0	0	0	0	0
243	Transit Hub Redevelopment	475000	0	0	0	0	0	0	0	0	0
279	City-wide - Minor transport improvements	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000
839	Rangitikei St / Featherston St - Intersection Improvements	0	0	0	0	0	0	0	0	0	0
1094	Milson Line Overbridge Improvement	30000000	0	0	0	0	0	0	0	0	0
1121	Tennent Drive Improvements - Food HQ & Massey	0	0	0	0	0	0	0	0	0	0
1330	Placemaking Co-created Project (capital)	16595	16595	16595	16595	16595	16595	16595	16595	16595	16595
1559	Cycling Network improvements	3000000	2500000	2500000	2500000	2500000	2500000	2500000	2500000	2500000	2500000
1680	Public Transport Network Improvements	3484650	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000
1695	PNITI – Intersection & bridge improvements	8000000	0	0	0	0	0	0	0	0	0
1803	Neighbourhood Centres Streetscape Improvements	450000	450000	450000	450000	450000	450000	450000	450000	450000	450000
1804	Road Drainage Capital Improvements	120000	120000	120000	120000	120000	120000	120000	120000	120000	120000
1808	Pedestrian Network Supporting Assets - Improvements	200743	200743	200743	200743	200743	200743	200743	200743	200743	200743
1944	Network Village - road upgrades to urban standard	300000	1600000	300000	1600000	300000	1600000	300000	1600000	300000	1600000
2013	PNITI – Strategic Transport Corridor Improvements	0	0	0	0	0	0	0	0	0	0
2021	Healthy Streets Improvements	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000
2026	Active Transport Monitoring and Evaluation Improvements	100000	100000	100000	100000	100000	100000	100000	100000	100000	100000
2056	Cycling Network Supporting Assets - Improvements	88000	66000	66000	66000	66000	66000	66000	66000	66000	66000
2057	Shared Pathway Network Improvements	5000000	5000000	0	0	0	0	0	0	0	0
2061	Rural Road Safety & Accessibility Improvements	80000	80000	80000	80000	80000	80000	80000	80000	80000	80000
2077	Cuba Street urban streetscape improvements - Pitt to Arena (Stage 3)	0	0	0	0	0	0	0	0	0	0
2111	Kelvin Grove Road - Safety Improvements	0	0	0	0	0	0	0	0	0	0
2119	Road to Zero - Transport Safety Improvements	0	0	0	0	0	0	0	0	0	0

STATUS: Final

Programme ID	Programme Name	Year11 (2034/35)	Year12 (2035/36)	Year13 (2036/37)	Year14 (2037/38)	Year15 (2038/39)	Year16 (2039/40)	Year17 (2040/41)	Year18 (2041/42)	Year19 (2042/43)	Year20 (2043/44)
2120	Off Road Shared Pathway Link Improvements	297000	141368	141368	141368	141368	141368	141368	141368	141368	141368
2122	City Centre Streets for People Improvements	5200000	0	0	0	0	0	0	0	0	0
2142	Physical deterrent (installation of speed humps) at additional locations	0	0	0	0	0	0	0	0	0	0
2204	Address Street Racer Issues	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000
2353	Seal Extension	0	0	0	0	0	0	0	0	0	0
2354	Enabling PNITI, Roberts Line / Kairanga Bunnythorpe intersection improvements	0	0	0	0	0	0	0	0	0	0
2356	Turitea Bridge No.1 replacement	0	0	0	0	0	0	0	0	0	0
2359	Enabling PNITI, Bunnythorpe bridge replacements	0	0	0	0	0	0	0	0	0	0
2362	HMPV Improved Network Access / Culvert & Bridge Structures	800000	800000	800000	800000	800000	800000	800000	800000	800000	800000
2368	Pedestrian Network Improvements	690000	800000	800000	800000	800000	800000	800000	800000	800000	800000
2378	VMS Board	0	0	0	0	0	0	0	0	0	0
2380	Emergency Reinstatement	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000
2385	Active Transport Wayfinding Improvements	276000	276000	276000	276000	276000	276000	276000	276000	276000	276000
2390	Network - Low Cost Low Risk joint funded New Zealand Transport Agency – Waka Kotahi projects	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000
2428	Street Trees - New and Renewal	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000
2456	Cliff Road Upgrade - Te MoTu O Poutoa	0	0	0	0	0	0	0	0	0	0
2505	Linton Pathway Slip Prevention	0	0	0	0	0	0	0	0	0	0

NEW CAPITAL PROGRAMMES – Years 21 to 30

Programme ID	Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
159	Kelvin Grove Road - Safety Improvements	0	0	0	0	0	0	0	0	0	0
187	Manawatu River - Road Bridge	0	0	0	0	0	0	0	0	0	0
243	Transit Hub Redevelopment	0	0	0	0	0	0	0	0	0	0
279	City-wide - Minor transport improvements	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000	1520000
839	Rangitikei St / Featherston St - Intersection Improvements	0	0	0	0	0	0	0	0	0	0
1094	Milson Line Overbridge Improvement	0	0	0	0	0	0	0	0	0	0
1121	Tennent Drive Improvements - Food HQ & Massey	0	0	0	0	0	0	0	0	0	0
1330	Placemaking Co-created Project (capital)	16595	16595	16595	16595	16595	16595	16595	16595	16595	16595
1559	Cycling Network improvements	2500000	2500000	2500000	2500000	2500000	2500000	2500000	2500000	2500000	2500000
1680	Public Transport Network Improvements	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000	3000000
1695	PNITI – Intersection & bridge improvements	0	0	0	0	0	0	0	0	0	0
1803	Neighborhood Centres Streetscape Improvements	450000	450000	450000	450000	450000	450000	450000	450000	450000	450000
1804	Road Drainage Capital Improvements	120000	120000	120000	120000	120000	120000	120000	120000	120000	120000
1808	Pedestrian Network Supporting Assets - Improvements	200743	200743	200743	200743	200743	200743	200743	200743	200743	200743
1944	Network Village - road upgrades to urban standard	300000	1600000	300000	1600000	300000	1600000	300000	1600000	300000	1600000
2013	PNITI – Strategic Transport Corridor Improvements	0	0	0	0	0	0	0	0	0	0
2021	Healthy Streets Improvements	500000	500000	500000	500000	500000	500000	500000	500000	500000	500000
2026	Active Transport Monitoring and Evaluation Improvements	165000	165000	165000	165000	165000	165000	165000	165000	165000	165000
2056	Cycling Network Supporting Assets - Improvements	66000	66000	66000	66000	66000	66000	66000	66000	66000	66000
2057	Shared Pathway Network Improvements	0	0	0	0	0	0	0	0	0	0
2061	Rural Road Safety & Accessibility Improvements	80000	80000	80000	80000	80000	80000	80000	80000	80000	80000

STATUS: Final

Programme ID	Programme Name	Year21 (2044/45)	Year22 (2045/46)	Year23 (2046/47)	Year24 (2047/48)	Year25 (2048/49)	Year26 (2049/50)	Year27 (2050/51)	Year28 (2051/52)	Year29 (2052/53)	Year30 (2053/54)
2077	Cuba Street urban streetscape improvements - Pitt to Arena (Stage 3)	0	0	0	0	0	0	0	0	0	0
2111	Kelvin Grove Road - Safety Improvements	0	0	0	0	0	0	0	0	0	0
2119	Road to Zero - Transport Safety Improvements	0	0	0	0	0	0	0	0	0	0
2120	Off Road Shared Pathway Link Improvements	141368	141368	141368	141368	141368	141368	141368	141368	141368	141368
2122	City Centre Streets for People Improvements	0	0	0	0	0	0	0	0	0	0
2142	Physical deterrent (installation of speed humps) at additional locations	0	0	0	0	0	0	0	0	0	0
2204	Address Street Racer Issues	60000	60000	60000	60000	60000	60000	60000	60000	60000	60000
2353	Seal Extension	0	0	0	0	0	0	0	0	0	0
2354	Enabling PNITI, Roberts Line / Kairanga Bunnythorpe intersection improvements	0	0	0	0	0	0	0	0	0	0
2356	Turitea Bridge No.1 replacement	0	0	0	0	0	0	0	0	0	0
2359	Enabling PNITI, Bunnythorpe bridge replacements	0	0	0	0	0	0	0	0	0	0
2362	HMPV Improved Network Access / Culvert & Bridge Structures	800000	800000	800000	800000	800000	800000	800000	800000	800000	800000
2368	Pedestrian Network Improvements	800000	800000	800000	800000	800000	800000	800000	800000	800000	800000
2378	VMS Board	0	0	0	0	0	0	0	0	0	0
2380	Emergency Reinstatement	250000	250000	250000	250000	250000	250000	250000	250000	250000	250000
2385	Active Transport Wayfinding Improvements	276000	276000	276000	276000	276000	276000	276000	276000	276000	276000
2390	Network - Low Cost Low Risk joint funded New Zealand Transport Agency – Waka Kotahi projects	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000	12000000
2428	Street Trees - New and Renewal	600000	600000	600000	600000	600000	600000	600000	600000	600000	600000
2456	Cliff Road Upgrade - Te MoTu O	0	0	0	0	0	0	0	0	0	0
2505	Linton Pathway Slip Prevention	0	0	0	0	0	0	0	0	0	0

APPENDIX D - Transport Addendum 2024

A number of changes have been made to the AMP budget through the 10 Year -Long Term Plan process via internal and external pressures. This addendum summarises the budget changes that have been made since the original AMP budgets were set in August 2023.

Whilst all other Activity Areas have only two budget scenarios (proposed and adopted), the Transport financial budget area has three scenarios:

Proposed AMP Budget – The proposed budgets were set prior to **30 August 2023**. This AMP's operational and maintenance, renewals and capital new costs are derived from the **30 August 2023** budget scenario.

Adopted LTP Budget – The adopted budget reflects the budgets in the 10 Year 2021-31 Long Term Plan. They are a reflection of internal and external consultation as part of the 10 Year Plan process.

NZTA Funding – it should be noted that NZTA timelines for budget approval are not aligned with Local Government timelines. NZTA budget allocation will not be completed until August 2024, after adoption of the LTP. There is a risk that Council approved budgets may not attract the level of NZTA funding anticipated in the LTP. If this occurs, adjustments may have to be made to the scope of programmes to maximise the use of available NZTA funds while staying within Council budget parameters.

Changes to Government Policy Statement on Land Transport 2024 34

In June 2024 the Government released a new Government Policy on Land Transport. (GPS) This replaced the draft that the previous Government consulted on in August 2023. At the time of initial drafting the Transport Asset Management Plan, the August draft GPS was used to inform plan.

The October 2023 General Election resulted in a change of Government. The incoming Government signalled its intention to change priorities from those of the previous Government. The final GPS was adopted in June 2024.

The overarching priority for transport investment has changed from the August draft. It now is to support economic growth and productivity in the New Zealand economy. The Governments goal for Land Transport is for it to be effective, efficient, safe, secure, accessible, and resilient. However, it notes that New Zealand is facing an infrastructure deficit that is in part due to;

1. Significant cost increases resulting in the affordability of maintenance and new infrastructure projects becoming more challenging through traditional funding models.
2. The usefulness of fuel usage as a proxy for road usage is rapidly diminishing, due to growing fuel efficiency of vehicles and the shift to EV's
3. The current system of pay-as-you-go-model, where revenue is spent as it is raised, with limited access to long-term funding and financing tools.
4. Consenting and property acquisition for major infrastructure projects has become more challenging, adding significant costs and delays to projects.

The four strategic priorities therefore now are;

1. Economic Growth
2. Increased maintenance and resilience
3. Safety
4. Value for Money

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

The planning for the 2024 Transport Asset Management Plan was undertaking the goals and priorities of the August 2023 Consultation Draft. Given the release of the new GPS our planning may not fully align with its direction. This will be resolved through the Annual Plan Process.

Drivers for changes in budgets:

In 2023, we faced many challenges with finalising the asset management plan scenario for our budgets;

- Forecasting for growth in difficult and rapidly changing economic and legislative environments,
- Upgrading of our in-house financial system which led to challenges with allocating the labour component to our budgets

Changes in any of our programmes fall into the following one of categories:

- Budget decrease – Where there has been a significant* decrease in budgets over the next 10 years.
- Budget increase - Where there has been a significant* increase in budgets over the next 10 years.
- Not adopted – Where a programme has not been adopted for this LTP, or has been pushed out and retained in the 30 year budget view
- Introduced – Where a new programme has been introduced
- Programme timing change - Where there has been a programme timing change within the first 10-year period, but no significant change to the budget

Programmes that did not have any changes have been omitted from this addendum view.

*Significance has been determined based on the impact to Programme outcome

Our budgets drive the level of service. We have increased our budgets over the next 10 years more than we have in the past, which means we can provide an increased level of service.

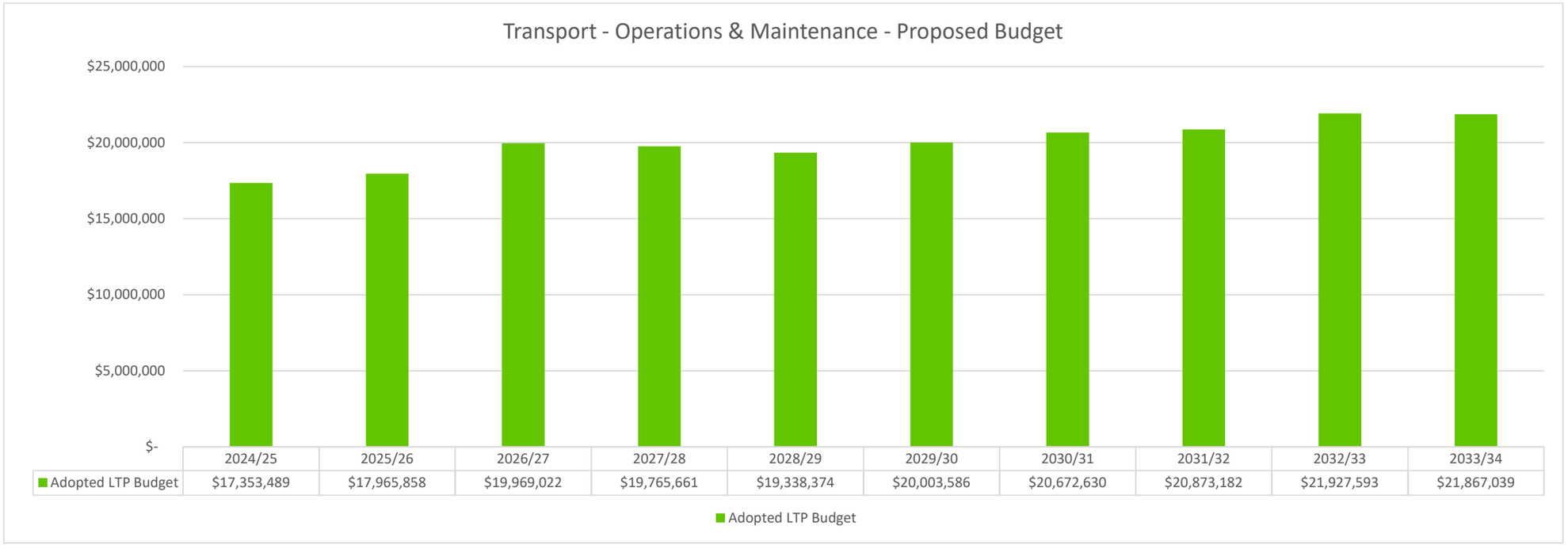
We have smoothed our budget over the next 10-30 years - which means that our journey to improvement is likely to take 40 years instead of the initial 30 years we had planned for.

STATUS: Final

Operations and Maintenance

Operations and maintenance budgets contained in the Transport Asset Management Plan were based on best available data at 30 August 2023, when the draft plan was finalised. At that time internal overheads and were under development and were not included in estimates. Subsequently these budgets have been refined to ensure that they reflect a true and fair view of estimated expenditure.

There has been no material change to budgets except those relating to allocation of labour.



Transport & Infrastructure Adopted LTP Budget	Year 1 2024 / 25	Year2 2025 /26	Year 3 2026 /27	Year 4 2027 / 28	Year 5 2028 /29	Year 6 2029 / 30	Year 7 2030 / 31	Year 8 2031 / 32	Year 9 2032 / 33	Year 10 2033 / 34
Admin and other	$5,943,419	$5,701,903	$5,766,643	$5,888,051	$6,134,970	$6,426,937	$6,677,512	$6,947,220	$7,033,140	$7,014,876
Consultancy	$1,312,500	$1,263,448	$1,408,256	$1,402,286	$1,339,015	$1,332,559	$1,325,724	$1,319,671	$1,314,460	$1,308,727
Maintenance	$8,121,000	$8,433,579	$9,924,457	$9,605,783	$8,803,012	$8,973,188	$9,162,175	$9,120,349	$9,573,686	$9,531,931
Remuneration	$1,976,570	$1,926,928	$1,929,667	$1,919,542	$1,911,377	$1,895,902	$1,882,219	$1,860,942	$1,856,307	$1,861,505
Consequential OpEx	$	$ 940,000	$1,090,000	$1,400,000	$1,600,000	$1,600,000	$1,750,000	$1,750,000	$2,250,000	$2,250,000
Transport & Infrastructure Total	$17,353,489	$17,965,858	$19,969,022	$19,765,661	$19,338,374	$20,003,586	$20,672,630	$20,873,182	$21,927,593	$21,867,039

STATUS: Final

Operational Programmes

Operational programmes provide funding for specific operational activities that fall outside of the definition of operation and maintenance of the asset. They relate to programmes which are completed within a defined period of time and have a specific purpose, as distinct from general operations and maintenance. These programmes often support other capital programmes and may be capitalised in the future, if they are required to enable the capital works to take place. Examples include, but are not limited to;

- Feasibility studies and optioning for future capital works
- Resource Consent applications
- Capacity Modelling
- Reserve Management Plans

The tables below identify changes to proposed Operational Programme budgets through the development of the LTP

Budget Decrease

There have been no budget decreases

Budget Increase

There have been no budget decreases

Programme Timing Change

There have been no timing changes to any programme

Introduced

Programmes to the value of $2,300,000 have been introduced in the Draft LTP Operational Programmes as Identified below;

Programme Type: Operational Programmes															
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
1977 - Business Case - Milson Line Rail Overbridge	LTP View	$0	$0	$650,000	$650,000	$0	$0	$0	$0	$0	$0	$1,300,000	In the AMP view this programme was called City-wide – Transport - Operation and maintenance of vested assets		
2001 - Business Case - Stoney Creek Road Upgrade	LTP View	$0	$0	$650,000	$350,000	$0	$0	$0	$0	$0	$0	$1,000,000	In the AMP view this was a programme called Transport Network & Asset Management - Operating Cost		

Not Adopted

Programmes to the value of $3,03,000 were not adopted in the Draft LTP Operational Programmes as identified below;

Programme Type: Operational Programmes															
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
2369 - Public Transport Infrastructure - Decommissioning Bus Stops	AMP View	$253,000	$250,000	$0	$0	$0	$0	$0	$0	$0	$0	$503,000		No Major effects	
2393 - Shared Pathway Network Investigations	AMP View	$1,800,000	$500,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$2,500,000			Slow upgrade of our network

STATUS: Final

Renewals

Funding across the LTP period has reduced by $31,112,823 overall from $203,162,823 to $172,050,000 through the budgeting process, as indicated in the table below.

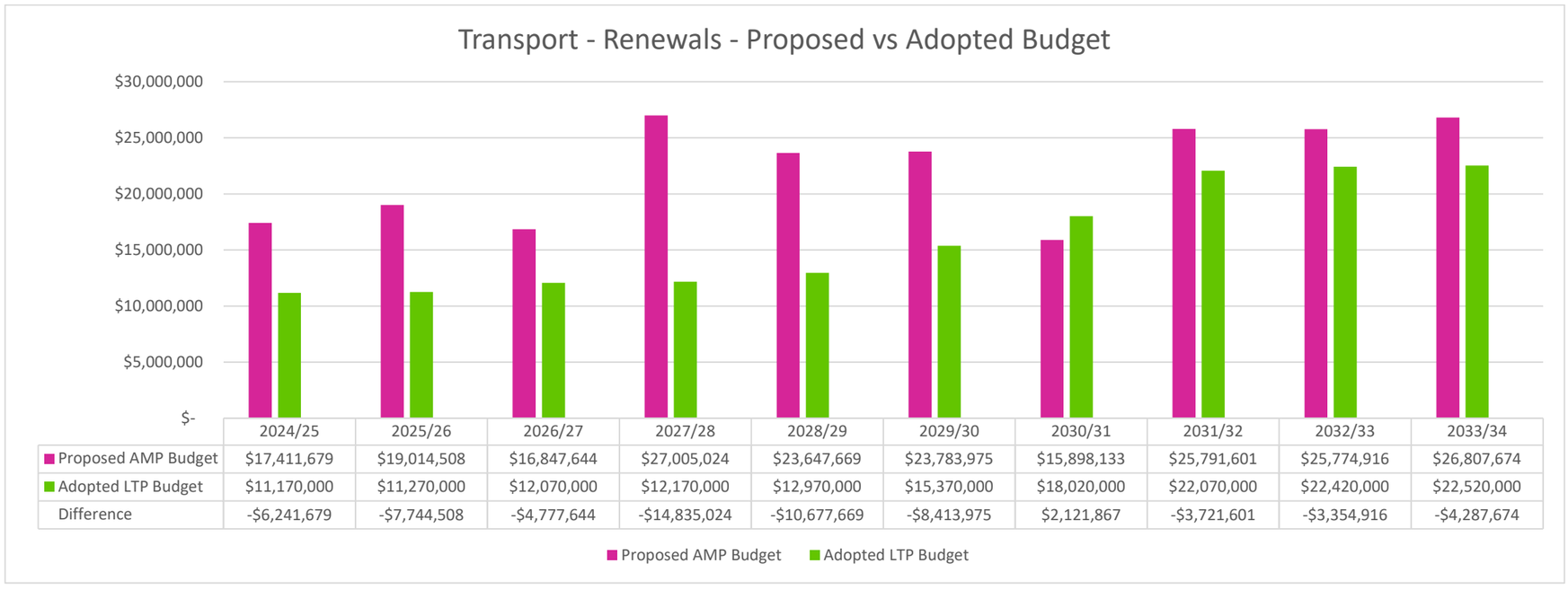
As mentioned above, part of the preparation of the draft LTP a resolution was passed to prepare draft budgets that stepped renewals from a Council wide prescribed budget value in Year 1 to a prescribed budget value in Year 10[5]. These draft budgets were prepared and subsequently accepted.

An analysis on the impacts of the resolution was also requested, which can be found here: Agenda of Council - Wednesday, 13 December 2023 (infocouncil.biz). The attachment entitled 'Impact and Risks of moderating the Capital Renewals Programme' details the impacts of the changes to the budgets, including risk implications and potential impact on levels of service. The primary impacts are:

- The overall condition of all our assets will continue to decrease resulting in increasing risk of asset failure and unplanned service disruptions
- Addressing the backlog of renewals will be deferred, so that the cost of those renewals will become an issue for future generations

In general, the decrease in Transport budgets is in response to this resolution. Reduced renewals spending has been spread across the following areas: shared pathways, traffic services, sealed road resurfacing, footpaths, road drainage and vehicle crossing replacements.

Our renewals budget has been historically underfunded resulting in a back log of renewals for bridge repairs, streetlights, road pavements and off street parking resurfacing. We have increased or maintained the budgets in these areas to ensure we can meet the minimum level of service requirements.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Proposed AMP Budget	$17,411,679	$19,014,508	$16,847,644	$27,005,024	$23,647,669	$23,783,975	$15,898,133	$25,791,601	$25,774,916	$26,807,674
Adopted LTP Budget	$11,170,000	$11,270,000	$12,070,000	$12,170,000	$12,970,000	$15,370,000	$18,020,000	$22,070,000	$22,420,000	$22,520,000
Difference	-$6,241,679	-$7,744,508	-$4,777,644	-$14,835,024	-$10,677,669	-$8,413,975	$2,121,867	-$3,721,601	-$3,354,916	-$4,287,674

The tables below contain a summary of the renewal programme changes within a 10-year period as a result of the budgeting process, implications for the changes and effects on levels of service as a result of a change.

[5] Minutes of Extraordinary Council Meeting 29 November 2023, Clause 193-23, Attachment 1a: That a version of the draft LTP Capital Renewal programme starting at $32M in Year 1 and stepping up to no more than $40M per annum by Year 5 and no more than $55M per annum by Year 10 be prepared for consideration alongside Opex programmes for Council meeting of 13 December 2023.https://palmerstonnorth.infocouncil.biz//Open/2023/11/COU_20231129_MIN_11232_EXTRA.PDF

STATUS: Final

Budget Decrease

There was a $35,694,128 decrease in the renewal budget. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Renewal Programmes															
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of Change**	**Implication/Risk/ Opportunity**	**Effect on Levels of Service (LOS)**
64 - City-wide - Footpath - Renewals	AMP View	$1,442,100	$1,442,100	$1,442,100	$1,557,600	$1,557,600	$1,557,600	$1,793,000	$1,793,000	$1,793,000	$1,980,000	$16,358,100	Slowing down of renewals due to fiscal constraints	Slowing down of renewals. Increases risk of asset failure as having to take a more reactive approach.	LoS will not be provided everywhere. Footpath assets will deteriorate and fail creating an unsafe environment, accessibility constraints, and a network that is not fit for purpose.
64 - City-wide - Footpath - Renewals	LTP View	$1,150,000	$1,150,000	$1,200,000	$1,200,000	$1,250,000	$1,250,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$12,400,000			
122 - City-wide - Road Drainage Renewals	AMP View	$680,000	$680,000	$680,000	$680,000	$680,000	$680,000	$680,000	$680,000	$680,000	$680,000	$6,800,000	Minor decrease. Smoothing of budget profile and ramp up of budget to achieve required spending rate over time	Keeping on top of drainage renewals by controlling stormwater and water proofing road pavements is a basic requirement that if not done will accelerate requirement to renew the pavement surface	LoS not currently being met everywhere
122 - City-wide - Road Drainage Renewals	LTP View	$500,000	$500,000	$550,000	$550,000	$600,000	$600,000	$900,000	$650,000	$700,000	$700,000	$6,250,000			
139 - City-wide - Sealed Road Resurfacing	AMP View	$5,000,000	$4,500,000	$3,500,000	$4,500,000	$3,500,000	$9,200,000	$3,500,000	$4,300,000	$4,300,000	$4,300,000	$46,600,000	Smoothing of budget profile and ramp up of budget to achieve required spending rate over time to meet fiscal restraint requirements has resulted in this budget decrease	This will result in increased numbers of pavement failures and pavement condition deterioration leading to exponential pothole development. Increased Operational funding will be needed to meet LoS and road safety considerations	LoS not currently being met everywhere. Poor pavement quality has a direct impact on road safety
139 - City-wide - Sealed Road Resurfacing	LTP View	$3,200,000	$3,200,000	$3,600,000	$3,600,000	$4,000,000	$4,000,000	$4,500,000	$4,500,000	$4,500,000	$4,500,000	$39,600,000			
162 - City-wide - Vehicle Crossing Renewals	AMP View	$178,966	$178,966	$178,966	$178,966	$178,966	$162,696	$162,696	$162,696	$180,000	$180,000	$1,742,918	Minor decrease. Smoothing of budget profile and ramp up of budget to achieve required spending rate over time	Other network LA's do not fund private entranceway upgrades as this is considered a cost to the adjacent landowners	There is no LoS for private Vehicle Crossings. There is an existing expectation from rate payers that private entranceways will be funded from their rates
162 - City-wide - Vehicle Crossing Renewals	LTP View	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$1,400,000			
2359 - Enabling PNITI, Bunnythorpe bridge replacements	AMP View	$0	$350,000	$1,000,000	$7,500,000	$8,000,000	$0	$0	$0	$0	$0	$16,850,000	Moved to Capital New, Programme number unchanged	No Implications	No Change
2359 - Enabling PNITI, Bunnythorpe bridge replacements	LTP View	$0	$0	$1,000,000	$7,000,000	$7,000,000	$0	$0	$0	$0	$0	$15,000,000			
2372 - City-wide - Cycling Network - Renewals	AMP View	$88,000	$44,000	$44,000	$44,000	$44,000	$55,000	$66,000	$77,000	$88,000	$99,000	$649,000	Minor decrease due to fiscal constraints, and smoothing of budget across the 10 years	Renewals will be prioritised and undertaken at a slower rate. The streetscapes throughout the city will deteriorate and potentially result in asset failure which will create an unsafe environment for users.	Reduced LoS
2372 - City-wide - Cycling Network - Renewals	LTP View	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$500,000			
2373 - Shared Pathway Network Renewals	AMP View	$2,178,550	$2,957,570	$1,492,260	$1,511,070	$773,300	$1,038,730	$620,730	$1,815,000	$1,732,500	$2,534,400	$16,654,110	Decrease in budget due to fiscal constraints	Renewals will be prioritised and undertaken at a slower rate. The streetscapes throughout the city will deteriorate and potentially result in asset failure which will create an unsafe environment for users.	Reduced LoS
2373 - Shared Pathway Network Renewals	LTP View	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$3,000,000			
2376 - City-wide - Traffic Services - Renewals	AMP View	$1,500,000	$1,500,000	$1,500,000	$1,500,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$16,200,000	Due to fiscal constraints, and partly due to increasing funding in Street Light Renewal programme	Council has underfunded this work category where budget over spends have been historically required to the detriment of underfunding other work categories	Exponential drop in LoS across the following categories, road marking, road signs, roadside barriers, guard rails, site rails
2376 - City-wide - Traffic Services - Renewals	LTP View	$600,000	$600,000	$700,000	$700,000	$800,000	$800,000	$1,000,000	$900,000	$1,000,000	$1,000,000	$8,100,000			
2377 - City-wide - Transport - Environmental Renewals	AMP View	$30,000	$32,000	$34,000	$36,000	$38,000	$40,000	$42,000	$44,000	$46,000	$48,000	$390,000	Small budget reduction to meet fiscal constraints spread across each year	Increased risk of SW and drainage complaints and issues. Council has neglected this requirement in meeting stormwater management govt regulations.	Reduced LoS in areas such as weed control, debris clearance, vegetation control
2377 - City-wide - Transport - Environmental Renewals	LTP View	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$300,000			

STATUS: Final

Budget Increase

There was a $14,267,594 increase in the renewal budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Renewal Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/ Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
74 - City-wide - Street Light Renewals	AMP View	$157,272	$162,696	$162,696	$162,696	$168,119	$168,119	$168,119	$163,000	$163,000	$163,000	$1,638,717	Budget increased to meet necessary expenditure	Council is currently overspending its programme budget to meet its very minimum LOS requirements. Budget has been historically underfunded resulting in a back log of street light maintenance and renewal requirements. Without increased spending there will be continued community back lash on the lack of network functional streetlights.	LoS not currently being met everywhere
74 - City-wide - Street Light Renewals	LTP View	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$5,000,000			
82 - City-wide - Off-Street Parking - Renewals	AMP View	$35,000	$40,000	$40,000	$40,000	$40,000	$40,000	$40,000	$38,000	$38,000	$38,000	$389,000	Budget increased to meet necessary expenditure and to include Programme 1615 - Parking and Traffic Signs and Markings	Opportunity to address bow wave of outstanding car park maintenance including surface pavement renewal, pothole repair and complete pavement failure. Also included in this programme are parking bay road marking and signage renewals	LoS not currently being met everywhere
82 - City-wide - Off-Street Parking - Renewals	LTP View	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$1,500,000			
115 - City-wide - Sealed Roads - Pavement Rehabilitation	AMP View	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,254,000	$3,245,000	$32,531,000	Minor increase. Smoothing of budget profile and ramp up of budget to achieve required spending rate over time	Road pavements will require exponential operational funding to meet rudimentary LOS and address pavement safety issues. Community back lash re rates and the lack of investment in roading / potholes / poor ride quality due to failed pavement structure.	LoS not currently being met everywhere
115 - City-wide - Sealed Roads - Pavement Rehabilitation	LTP View	$3,100,000	$3,200,000	$3,300,000	$3,400,000	$3,500,000	$3,600,000	$4,500,000	$3,800,000	$3,900,000	$4,000,000	$36,300,000			
181 - City-wide - Public Transport Infrastructure Renewal	AMP View	$115,500	$115,500	$115,500	$115,500	$115,500	$115,500	$115,500	$115,500	$115,500	$115,500	$1,155,000	Minor increase	No change	Maintain existing LoS
181 - City-wide - Public Transport Infrastructure Renewal	LTP View	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$1,500,000			
2379 - City-wide - Transport - Structural Component Renewal	AMP View	$650,000	$500,000	$165,000	$180,000	$180,000	$160,000	$160,000	$160,000	$160,000	$160,000	$2,475,000	Increased to include Programme 1805, as well as to start addressing backlog of outstanding bridge repairs	PNCC network has a back log of outstanding bridge structural renewal requirements where previous level of funding hasn't had a quantum to address individual structural renewal requirements as these tend to be in the $100 of thousands versus $10 of thousands as previously LTP funded. Only 50% of bridges have been assessed recently	Maintain existing LoS
2379 - City-wide - Transport - Structural Component Renewal	LTP View	$600,000	$600,000	$700,000	$700,000	$800,000	$800,000	$1,000,000	$900,000	$1,000,000	$1,000,000	$8,100,000			
2383 - City-wide - Active Transport Supporting Infrastructure - Renewals	AMP View	$39,848	$40,685	$41,545	$42,431	$43,343	$44,279	$46,101	$46,978	$47,879	$50,600	$443,689	Small budget increase	No change.	Maintain existing LoS
2383 - City-wide - Active Transport Supporting Infrastructure - Renewals	LTP View	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$500,000			

STATUS: Final

Programme Timing Change

Changes in the timing of a single programme is identified in the below table. An increase of $100,000 occurred as a result of a change in scope.

Programme Type: Renewal Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/ Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2357 - Bunnythorpe - Transport - Pavement Renewals	AMP View	$250,000	$250,000	$250,000	$2,500,000	$250,000	$2,500,000	$250,000	$250,000	$250,000	$250,000	$7,000,000	Minor increase. Change in project scope from village upgrade to pavement renewal combined with smoothing of budget profile and ramp up of budget to achieve required spending rate over time	Opportunity to focus on pavement renewals	Will ultimately improve asset condition to meet LoS statements
2357 - Bunnythorpe - Transport - Pavement Renewals	LTP View	$200,000	$200,000	$200,000	$200,000	$200,000	$2,500,000	$3,000,000	$200,000	$200,000	$200,000	$7,100,000			

Introduced

There was a $500,000 introduced into the renewal budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Renewal Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2256 - Bunnythorpe - Transport - Footpath Renewals	LTP View	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$500,000	Separated from Programme 64 to highlight work in Bunnythorpe	None	None

Not Adopted

There was a $11,286,289 reduction in budget due to programmes not being adopted. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Renewal Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
648 - Cycling Network Supporting Assets - Renewals	AMP View	$14,914	$17,897	$17,897	$17,897	$17,897	$17,897	$20,880	$20,880	$20,880	$22,000	$189,039			Renewals will be slowed down
1615 - City-wide - Parking and Traffic Signs and Marking	AMP View	$65,079	$81,348	$73,000	$73,000	$73,000	$73,000	$73,000	$73,000	$73,000	$73,000	$730,427	This budget has been rolled into Programme 82	No change	No change
1805 - City-wide - Transport structure component renewal	AMP View	$460,000	$365,000	$285,000	$450,000	$350,000	$250,000	$450,000	$307,000	$307,000	$307,000	$3,531,000	Budget removed	Bow wave of outstanding reported structural renewal requirements. Current funding levels too low to address multiple network deficiencies. Would become substantial high cost impact if the localised structures fail	
2374 - Off Road Shared Pathway Link Renewals	AMP View	$26,950	$26,950	$26,950	$33,000	$33,000	$33,000	$37,500	$49,500	$59,400	$69,300	$395,550	Rolled into 2373	The Shared Pathway Links throughout the city will deteriorate and potentially result in asset failure which will create an unsafe environment for users.	Reduced LoS
2386 -Active Transport Wayfinding Renewals	AMP View	$57,500	$57,500	$57,500	$69,000	$75,900	$83,490	$91,839	$101,023	$111,125	$122,238	$827,115	Budget removed	Deteriorating condition of assets	Reducing LoS
2413 - City Centre Streets for People Renewal	AMP View	$132,000	$382,296	$451,230	$523,864	$539,044	$554,664	$570,768	$585,024	$599,632	$614,636	$4,953,158	Budget removed - reallocated across existing Renewal Budgets	No change	No change
2430 - Pedestrian Network Supporting Assets - Renewals	AMP View	$66,000	$66,000	$66,000	$66,000	$66,000	$66,000	$66,000	$66,000	$66,000	$66,000	$660,000	Budget removed	Deteriorating condition of assets	Reducing LoS

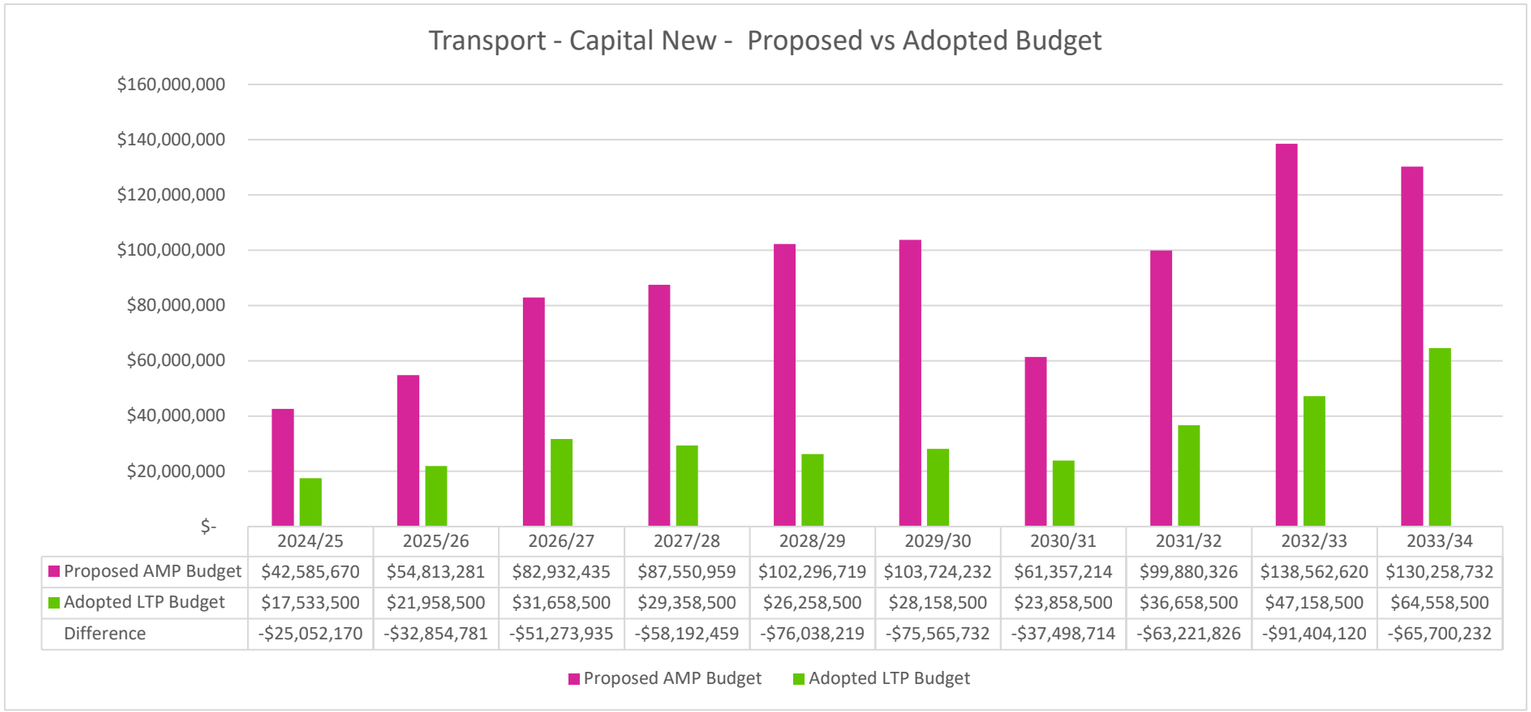
Capital New – Levels of Service

Capital investment is required to meet promised Council levels of service both now and into the future.

Funding for Capital New has been reduced by $346,057,158 overall from $689,017,158 to $342,960,000 over the 10-year period through the budgeting process. We have noted this in the budget change tables below.

With growth expected in future urban areas, we are proposing to spend at least $150 million over the next 10 years. In years 9 and 10 we are proposing a major upgrades to the Fitzherbert Rd Bridge. Most of our capital new programmes are associated with our partnership with NZ Transport Agency Waka Kotahi for strategic improvements.

A major area for New Capital investment is the Palmerston North Integrated Transport Initiative (PNITI), which will help get heavy vehicles using the most appropriate travel routes. This suite of programmes includes road safety improvements such as road widening and improved intersections, bridge replacements throughout the city, and infrastructure to support Te Utanganui, the Central New Zealand Distribution Hub.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Proposed AMP Budget	$42,585,670	$54,813,281	$82,932,435	$87,550,959	$102,296,719	$103,724,232	$61,357,214	$99,880,326	$138,562,620	$130,258,732
Adopted LTP Budget	$17,533,500	$21,958,500	$31,658,500	$29,358,500	$26,258,500	$28,158,500	$23,858,500	$36,658,500	$47,158,500	$64,558,500
Difference	-$25,052,170	-$32,854,781	-$51,273,935	-$58,192,459	-$76,038,219	-$75,565,732	-$37,498,714	-$63,221,826	-$91,404,120	-$65,700,232

The tables below contain a summary of the capital new programme changes within a 10-year period as a result of the LTP consultation process, implications for the changes and effects on levels of service as a result of a change

STATUS: Final

Budget Decrease

There was a $152,776,272 decrease in the capital new budget. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
243 - City Centre - Transit Hub Redevelopment	AMP View			$10,000,000	$10,000,000							$20,000,000	Reduced budget	Investigations of impact of reduced budget will need to be undertaken	Unknown
243 - City Centre - Transit Hub Redevelopment	LTP View			$6,000,000	$6,000,000							$12,000,000			
1121 - Tennent Drive - Safety Improvements - Food HQ & Massey	AMP View	$146,300	$946,100	$0	$0	$292,600	$1,286,756	$4,941,792	$3,510,068	$0	$0	$11,123,616	Reduced to align with fiscal constraint. Traffic lights instead of RAB	Implications to be assessed	Unknown
1121 - Tennent Drive - Safety Improvements - Food HQ & Massey	LTP View	$200,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,200,000			
1330 - City Centre - Placemaking Implementation	AMP View	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$16,595	$165,950	Reduced to align with fiscal constraint	Less works will be undertaken	Reduced LOS
1330 - City Centre - Placemaking Implementation	LTP View	$8,500	$8,500	$8,500	$8,500	$8,500	$8,500	$8,500	$8,500	$8,500	$8,500	85,000			
1559 - City-wide - Cycling Network Improvements	AMP View	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$27,500,000	Reduced to align with fiscal constraint	Planned works will be undertaken over a longer period of time	None
1559 - City-wide - Cycling Network Improvements	LTP View	$250,000	$2,500,000	$250,000	$2,500,000	$250,000	$2,500,000	$250,000	$2,500,000	$250,000	$2,500,000	$13,750,000			
1680 - City-wide - Public Transport - Network Improvements	AMP View	$844,650	$1,064,650	$1,064,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$3,484,650	$27,366,500	Reduced funding over 10-year period. Aligned with Horizons	New public transport shelters and supporting infrastructure will be prioritised and implemented at a slower rate.	May not be able to provide LoS in some areas
1680 - City-wide - Public Transport - Network Improvements	LTP View	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$5,000,000			
1807 - City-wide - Car Park Infrastructure Improvements	AMP View	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$200,743	$2,007,430	Money in Y1 only	Will carry out pavement repairs	
1807 - City-wide - Car Park Infrastructure Improvements	LTP View	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$500,000			
1944 - Villages - Transport - Road Upgrades to Urban Standard	AMP View	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,600,000	$300,000	$1,600,000	$300,000	1,600,000	$8,700,000	Reduced to align with fiscal constraint	Reduced funding over 10-year period	Slows down LOS expectations on addressing lower urban standards for rural village communities. Community backlash in not seeing their rates reflected against their village community.
1944 - Villages - Transport - Road Upgrades to Urban Standard	LTP View	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,200,000	$300,000	$1,200,000	$7,500,000			
2057 - City-wide - Shared Pathways - New and Link Improvements	AMP View	$6,986,380	$6,730,235	$10,137,959	$9,489,377	$12,556,995	$12,013,69	$7,119,857	$8,770,236	$9,196,841	$3,944,000	$86,945,575	Due to fiscal constraints	Works will be delayed depending on construction costs	LoS not provided until later than originally proposed
2057 - City-wide - Shared Pathways - New and Link Improvements	LTP View	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0	$0	$0	$0	$0	$6,000,000			
2122 - City Centre - Streets for People Upgrade	AMP View	$174,000	$4,840,000	$3,311,211	$10,586,469	$10,061,984	$7,901,310	$4,102,025	$7,757,671	$10,414,167	$1,903,364	$61,052,201	Due to fiscal constraints	Works delayed, except for High Flyers area	No increase in LOS
2122 - City Centre - Streets for People Upgrade	LTP View	$0	$0	$0	$100,000	$5,000,000	$5,000,000	$0	$0	$100,000	$5,000,000	$15,200,000			
2368 - City-wide - Footpaths - New	AMP View	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$690,000	$6,900,00	Due to fiscal constraints		Not able to provide LoS in some areas
2368 - City-wide - Footpaths - New	LTP View	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$5,000,000			
2390 - City-wide - Transport - Low Cost/ Low Risk and Road to Zero	AMP View	$10,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$12,000,000	$118,000,000	Due to fiscal constraints	Majority of these are safety related projects for intersection improvements to offset recorded traffic accident historical data. Reducing funding would slow down	Not addressing safety related intersection accidents, hinder growth, delay Speed Management Strategy around schools and the network.

STATUS: Final

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2390 - City-wide - Transport - Low Cost/ Low Risk and Road to Zero	LTP View	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$40,000,000		these projects where risk of crash history could repeat.	

STATUS: Final

Budget Increase

There was a $600,000 increase in the capital new budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
159 - Kelvin Grove Road - Safety Improvements	AMP View	$400,000	$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0	$10,400,000	Minimal increase	No change	No effect on LoS
159 - Kelvin Grove Road - Safety Improvements	LTP View	$1,000,000	$1,000,000	$1,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$0	$0	$0	$11,000,000			

Programme Timing Change

Changes in the timing of a project is identified in the below table. A decrease of $12,56,92 occurred as a result of a change in scope;

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
1559 - City-wide - Cycling Network Improvements	AMP View	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$2,715,174	$27,151,740	Programme modified to reflect a cycle of design followed by construction the following year.	No Major Implications	Programme currently reflects a cycle of design followed by construction the following year. This will mean a cycleway transformation project will only be completed every 2 years.
1559 - City-wide - Cycling Network Improvements	LTP View	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$500,000	$5,000,000	$27,500,000			
2077 - City Centre - Cuba Street Upgrade Stage 3	AMP View	$0	$0	$0	$0	$0	$2,500,000	$2,500,000	$0	$0	$0	$5,000,000	Delayed by one year	No Major Implications	None
2077 - City Centre - Cuba Street Upgrade Stage 3	LTP View	$0	$0	$0	$0	$0	$0	$2,500,000	$2,500,000	$0	$0	$5,000,000			

Budget Timing Change and Budget Decrease

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
243 - City Centre - Transit Hub Redevelopment	AMP View	$337,000	$400,000	$2,532,904	$4,915,807	$10,215,000	$10,613,470	$550,000	$550,000	$400,000	$400,000	$30,914,181	Brought forward to align with Programme 2122 City Centre - Streets for People Upgrade	Impact of reduced funding to be assessed	Unknown
243 - City Centre - Transit Hub Redevelopment	LTP View	$0	$0	$10,000,000	$10,000,000	$0	$0	$0	$0	$0	$0	$20,000,000			
2013 - PNITI – Strategic Transport Corridor Improvements	AMP View	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000	$20,000,000	$60,000,000	Timing change	Minor change	none
2013 - PNITI – Strategic Transport Corridor Improvements	LTP View	$0	$0	$0	$0	$0	$0	$0	$0	$28,000,000	$30,000,000	$58,000,000			

STATUS: Final

Introduced

There was a $30,125,000 introduced into the capital new budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2231 - City-wide - Public Transport - Transport Choices - Additional Bus Shelters	LTP View	$200,000	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$400,000	To meet obligations to Horizons with electric buses and new bus routes	Improved bus shelters	Minor increase
2335 - Stoney Creek Road - Safety Improvements	LTP View	$500,000	$3,200,000	$4,600,000	$3,200,000	$0	$0	$0	$0	$0	$0	$11,500,000	See Prog 2355 - Stoney Creek Road Safety Improvements (Growth)		
2359 - PNITI - Bunnythorpe - Bridge Replacements	LTP View	$0	$0	$1,000,000	$7,000,000	$7,000,000	$0	$0	$0	$0	$0	$15,000,000	Moved from Renewals. Slight decrease in budget due to refinement of scope.	Will address HCV growth connectivity being lost on main arterial route due to current understrength bridge, and will enable the route for other PNITI initiatives	Improved LoS as bridge width and strength will be increased
2505 - City-wide - Shared Pathways - Slip Prevention	LTP View	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$300,000	$0	$0	$0	$2,100,000	Works will proceed	To address Mangaone Path under slips, and Linton track slips	Retain LOS
2526 - Amberley Avenue Bridge	LTP View	$1,125,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,125,000	Balance of funding to enable project completion	Risk as a result of partial asset failure resolved	Retain LOS

Not Adopted

There was a $211,439,965 reduction in budget due to programmes not being adopted within the capital new budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
187 - Manawatu River - Road Bridge	AMP View	$0	$	$	$	$	$	$	$	$32,500,000	$32,500,000	$65,000,000	Moved outside 10 year plan	Allows time for rest of PNITI network to be developed before this last piece is put in place	Not immediately critical within next ten years. Additional Government signalled input than current may re-prioritise
839 - Rangitikei St / Featherston St - Intersection Improvements	AMP View	$0	$1,084,639	$542,320	$379,623	$4,338,557	$4,338,557	$0	$0	$0	$0	$9,599,056	Works will not proceed	Improvements will not be undertaken	Minor
1695 - PNITI – Intersection & bridge improvements	AMP View	$0	$0	$0	$0	$0	$0	$0	$8,000,000	$8,000,000	$8,000,000	$24,000,000		Push out funding LTP requests	limited impact on first LTP 3-year period, would mean delaying business case development for WK co funding justification / future discussions with WK on overall direction / affordance re council's FAR share. Future may become a Central Govt decision on progressing PNITI.
1803 - Neighbourhood Centres Streetscape Improvements	AMP View	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$599,931	$5,999,310		Reduced funding over 10-year period	Renewals will be prioritised and undertaken at a slower rate.
2021 - Healthy Streets Improvements	AMP View	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$614,669	$6,146,690	Pushed out past Y10 due to affordability	No Major change	No Major change
2026 - Active Transport Monitoring and Evaluation Improvements	AMP View	$110,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$110,000	$110,000	$110,000	$1,760,000	Pushed out past Y10 due to affordability	No Major change	No Major change
2056 - Cycling Network Supporting Assets - Improvements	AMP View	$29,809	$30,674	$44,798	$46,100	$61,450	$63,231	$79,907	$81,903	$83,949	$86,050	$607,871	Pushed out past Y10 due to affordability	No Major change	No Major change
2061 - Rural Road Safety & Accessibility Improvements	AMP View	$65,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$785,000	Pushed out past Y10 due to affordability	No Major change	No Major change
2111 - Kelvin Grove Road - Safety Improvements	AMP View	$3,000,000	$3,000,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0	$9,000,000	Duplicated Value - See Prog 159	Slow down / lessen annual funding request	Nationally recognised 'black spot' intersection not being addressed for safety. Kelvin Grove road from Stoney Creek to Ashhurst road is becoming un-safe due to its deteriorated road condition for the quantum of traffic utilising this road section as a localised arterial road

STATUS: Final

Programme Type: Capital New - Levels of Service Programmes															
Programme Name	**Budget view**	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**	**Year6**	**Year7**	**Year8**	**Year9**	**Year10**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect on Levels of Service (LOS)**
		2024/25	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**	**2032/33**	**2033/34**				
2119 - Road to Zero - Transport Safety Improvements	AMP View	$4,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$3,000,000	$31,000,000	Duplicated values, see Prog 2390	Lengthens programme of known road safety issues within the network.	
2120 - Off Road Shared Pathway Link Improvements	AMP View	$1,696,416	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$141,368	$2,968,728	Removed due to affordability	Planned improvements will not be undertaken	Upgrades of network will not be undertaken
2126 - Pioneer Highway - Improvements	AMP View	$0	$0	$350,000	$3,500,000	$3,500,000	$3,500,000	$0	$0	$0	$0	$10,850,000		Push out LTP funding request under a network pavement renewal priority assessment.	Community LOS frustration of the road network not being addressed due to lack of council funding
2142 - Physical deterrent (installation of speed humps) at additional location	AMP View	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$500,000	Removed	Removed the ability to have traffic calming measures installed	Minor
2353 - Seal Extension	AMP View	$95,000	$100,700	$106,750	$113,150	$120,000	$0	$0	$0	$	$0	$535,600	Removed due to affordability	If removed no seal extension work will be undertaken converting current gravel roads to sealed roads.	Current LOS remains
2354 - Enabling PNITI, Roberts Line / Kairanga Bunnythorpe intersection improvements	AMP View	$350,000	$750,000	$0	$1,000,000	$8,000,000	$0	$0	$0	$0	$0	$10,100,000	Removed due to affordability	Deferred	Slow down PNITI growth providing a safe intersection layout. Risk potential on further traffic accidents / fatalities
2356 - Turitea Bridge No.1 replacement	AMP View	$0	$0	$350,000	$750,000	$8,500,000	$0	$0	$0	$0	$0	$9,600,000	Removed due to affordability	Push out LTP funding request	Slow down subdivision growth providing safe two-lane access. Risk potential on further traffic accidents
2375 - Unsealed Roads Aggregate Re-Sheeting	AMP View	$80,000	$84,800	$90,000	$95,300	$100,000	$107,080	$113,500	$120,315	$127,530	$135,185	$1,053,710	Moved to Renewals	Council has underfunded this work category where budget over spends have been historically required to the detriment of underfunding other work categories. Reduced funding would create more potholes and road corrugations affecting road safety and LOS expectations.	
2378 - VMS Board	AMP View	$85,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$$85,000	VMS Board not purchased	Eliminate funding request	Increased costs to infrastructure both to Roading and 3 Waters depot team in subcontracting VMS boards to a traffic management company hire rates which are expensive.
2385 - Active Transport Wayfinding Improvements	AMP View	$38,000	$142,000	$142,000	$326,000	$276,000	$276,000	$276,000	$276,000	$276,000	$276,000	$2,304,000	Removed due to affordability	Current wayfinding signage remains	No Change
1094 - Milson Line Overbridge Improvement	AMP View	$0	$0	$220,000	$325,000	$0	$3,800,000	$0	$0	$0	$0	$4,345,000	Works will await a future business case	push out funding LTP requests Refer Prog 2526 Amberley Ave!!	recommend that a business case is undertaken within the next ten years for justification on a bridge replacement. Risk that advanced renewal funding will be required to address current bridge maintenance issues to prolong life expectancy

STATUS: Final

Capital New - Growth

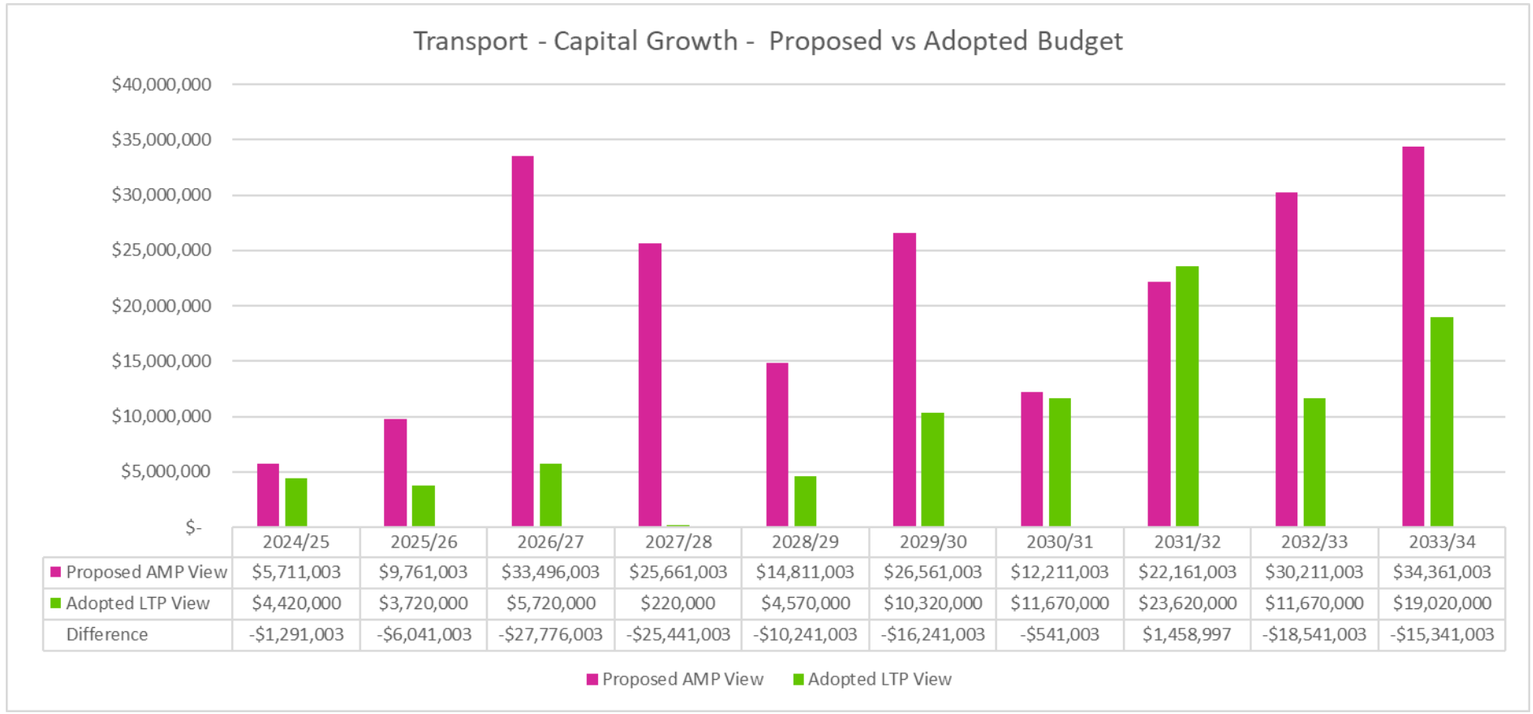
Capital investment is also required to cater for expansion of the city and to meet growth demands. Actual service growth is dependent on timing of developments.

The timing of the growth programmes has been adjusted in accordance with revised growth timing assumptions. As stated in the Strategic Asset Management Plan these assumptions are made Council wide based on population projections, economic projections, government policy on requirements for dwellings and projections of greenfield development areas.

These assumptions have some inherent risks – which are detailed in the Significant Forecasting Assumptions for the Long-Term Plan. Those most relevant to programmes is that growth is at significantly different rates than assumed. The impact on programmes is that budget is not available to service the growth at the time it occurs. This will in turn affect the ability to provide standard levels of service to the growth that has occurred.

Several programmes were adjusted during the Council prioritisation process, as timing expectations for particular development areas were revised by the Strategy and Planning Team.

Funding for Capital Growth in the Transport Activity has been reduced by $119,195,030 overall from $214,945, to $342,960,000 over the 10 year period through the budgeting process, as indicated in the table below.



	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
Proposed AMP View	$5,711,003	$9,761,003	$33,496,003	$25,661,003	$14,811,003	$26,561,003	$12,211,003	$22,161,003	$30,211,003	$34,361,003
Adopted LTP View	$4,420,000	$3,720,000	$5,720,000	$220,000	$4,570,000	$10,320,000	$11,670,000	$23,620,000	$11,670,000	$19,020,000
Difference	-$1,291,003	-$6,041,003	-$27,776,003	-$25,441,003	-$10,241,003	-$16,241,003	-$541,003	$1,458,997	-$18,541,003	-$15,341,003

STATUS: Final

Budget Decrease

There was a $40,085,000 decrease in the capital growth budget. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Growth Programmes														
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect of Levels of Service (LOS)**
2123 - Urban Growth - Kakatangiata - New Roads	AMP View	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$54,000,000	Deferred no negative implication to any associated collection Development Contributions	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None
2123 - Urban Growth - Kakatangiata - New Roads	LTP View	$0	$0	$0	$0	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$27,000,000			
2124 - Urban Growth - Ashhurst - New Roads	AMP View	$350,000	$1,800,000	$35,000	$1,600,000	$350,000	$1,600,000	$350,000	$1,800,000	$350,000	$2,000,000	$10,235,000	Deferred no negative implication to any associated collection Development Contributions	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None
2124 - Urban Growth - Ashhurst - New Roads	LTP View	$0	$0	$0	$0	$350,000	$1,600,000	$350,000	$1,800,000	$350,000	$2,000,000	$6,450,000			
2389 - Urban Growth - Aokautere - Transport Improvements	AMP View	$2,800,000	$2,000,000	$14,500,000	$1,000,000	$7,000,000	$7,000,000	$10,000,000	$8,000,000	$8,000,000	$0	$60,300,000	Deferred no negative implication to any associated collection Development Contributions	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None
2389 - Urban Growth - Aokautere - Transport Improvements	LTP View	$0	$0	$0	$0	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$24,000,000			

Budget Increase

There are no increase in budget within growth programme

Programme Timing Change

Changes in the timing of a single project is identified in the below table. A decrease of $66,200,000 occurred as a result of a change in scope;

Programme Type: Capital New - Growth Programmes														
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect of Levels of Service (LOS)**
2123 - Urban Growth - Kakatangiata - New Roads	AMP View	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$54,000,000	Programme timing changed to align with revised growth projections	Intersection improvements could be done prior to subdivision	No effect on LoS
2123 - Urban Growth - Kakatangiata - New Roads	LTP View	$0	$0	$0	$0	$0	$0	$1,500,000	$12,000,000	$1,500,000	$12,000,000	$27,000,000			
2489 - Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	AMP View	$0	$0	$0	$0	$0	$0	$0	$0	$20,000,000	$20,000,000	$40,000,000	Project moved outside of current LTP 10 year view to align with growth projections	No change	No effect on LoS
2489 - Kakatangiata Te Wanaka / Grand Oaks new bridge crossing	LTP View	$0	$0	$0	$0	$0	$0	$0	$0	$0	$800,000	$800,000			

Introduced

There was a $6,800,000 introduced into the capital new budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Growth Programmes														
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect of Levels of Service (LOS)**
1681 - Urban Growth - Kikiwhenua - Transport	LTP View	$3,000,000	$3,000,000	$0	$0	$0	$0	$0	$0	$0	$800,000	$6,800,000	Included to enable growth to proceed	No Risk	None

STATUS: Final

Not Adopted

There was a $19,710,030 reduction in budget due to programmes not being adopted within the capital budgets. The table below provides a detailed view of affected programmes and the effect on risk, opportunity, and levels of service;

Programme Type: Capital New - Growth Programmes														
Programme Name	**Budget view**	**Year1 2024/25**	**Year2 2025/26**	**Year3 2026/27**	**Year4 2027/28**	**Year5 2028/29**	**Year6 2029/30**	**Year7 2030/31**	**Year8 2031/32**	**Year9 2032/33**	**Year10 2033/34**	**Total**	**Description of Change**	**Implication/Risk/Opportunity**	**Effect of Levels of Service (LOS)**
1925 - Urban Growth Development Contributions - Active Transport	AMP View	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$141,003	$1,410,030	Funding not adopted due to funding constraints	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None
2065 - Urban Growth - Whakarongo - Transport	AMP View	$500,000	$2,500,000	$2,500,000	$2,500,000	$0	$0	$0	$0	$0	$0	$8,000,000	Funding not adopted due to funding constraints	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None
2355 - Stoney Creek Road Upgrade	AMP View	$500,000	$2,600,000	$4,600,000	$2,600,000	$0	$0	$0	$0	$0	$0	$10,300,000	Funding not adopted due to funding constraints	Risk of development occurring prior to availability of funding, requiring funding to be brought forward	None

STATUS: Final

Te Kaunihera o Papaioea
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