WEAVING THE FUTURE, TOGETHER
KOTAHITANGA
ŌTOROHANGA DISTRICT COUNCIL

INFRASTRUCTURE STRATEGY

ŌTOROHANGA DISTRICT COUNCIL

2024-2054

Te Kaunihera ā-Rohe o Ōtorohanga District Council
Where kiwi can fly

CONTENTS

INTRODUCTION

WHAT THIS STRATEGY IS ABOUT

Ōtorohanga District Council currently manages Land Transport (roads and footpaths), three waters (drinking water, wastewater, stormwater), flood protection works and coastal structures and community facilities for the benefit of everyone who lives and works in and visits our district. Thinking ahead and planning for the long term is vital to make sure that the wellbeing of current and future generations is maintained and enhanced, and that we contribute meaningfully to the achievement of community outcomes for our district. Well maintained infrastructure located in the right place and provided for at the right time, with sufficient capacity and resilience is critical to the economic prosperity and social wellbeing of people living and working in the district. This 30-year Infrastructure Strategy is a key part to ensuring that happens.

Required by the Local Government Act 2002 (LGA), this Strategy sets out the likely scenarios for how our key infrastructure will be managed and the important decisions we're going to need to face with our communities in the future.

This Strategy does not stand alone – it is developed alongside our Financial Strategy, which sets out the funding challenges for us and our communities over the next 10 years. Together these Strategies underpin the Council's Long-Term Plan (LTP), which contains more detail on activities, plans and programmes. Importantly, these Strategies inform the community consultation process for the preparation of Council's LTP. Both Strategies support our overarching vision - Ōtorohanga District – Where kiwi can fly.

PURPOSE AND SCOPE

This Strategy provides a connection between the operational management of assets and their contribution toward the achievement of our community outcomes and statutory obligations. It outlines:

- How we intend to manage our key infrastructure assets, including having regard to matters such as when these assets need to be renewed or replaced
- How we intend to respond to growth or decline in demand for services
- How we plan for increases or decreases in levels of services
- Other matters, such as the need to improve public health or environmental outcomes (or mitigate adverse effects on them) and to manage risks from natural hazards.

The management, operation and development of infrastructure assets is both complex and expensive. It is therefore important that the approach undertaken optimises value to our communities. We apply a sound management approach to our asset management which means making the best decisions in the long-term interests of our communities.

Figure 1 below shows the relationship between the infrastructure strategy and other documents.

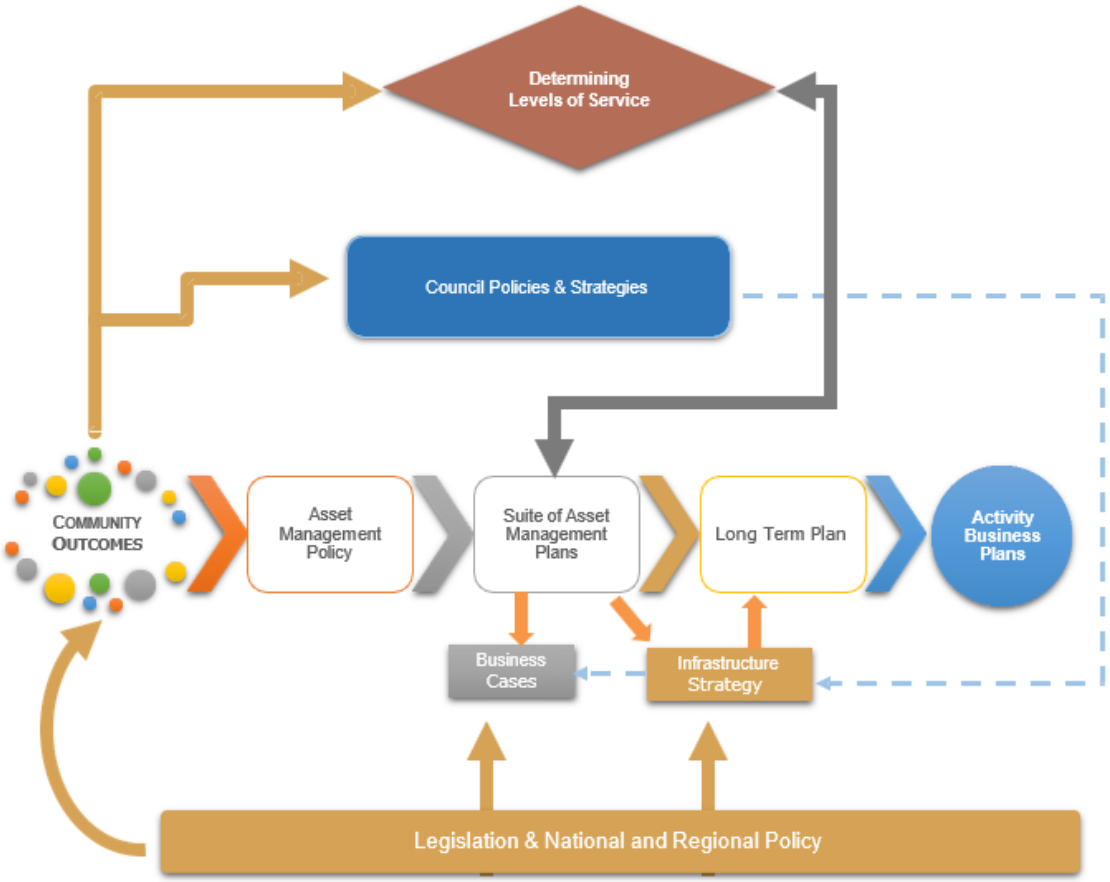

Figure 1: Relationship between the infrastructure strategy and other documents

This Strategy covers the following infrastructure:

- Land Transport (roads and footpaths)
- Three Waters
- Flood Protection and Coastal Structures.

Infrastructure not covered includes:

- Community facilities (libraries, parks and reserves, public conveniences, pensioner housing, swimming pools, halls)
- State highways, as these are the responsibility of NZTA - NZTA - Waka Kōtahi NZ Transport Agency

Infrastructure strategies are not required to include community facilities. However, we intend to include these facilities in a future iteration of this Strategy because of the growing importance these assets play in supporting and enhancing the wellbeing of people and communities.

Currently, we're working on an overarching Community Services Asset Management Plan (likely to be finalised later in 2024). This overarching document will be supplemented by asset management plans and associated work programmes for specific types of facilities. Together these plans will help inform future infrastructure strategies.

STRUCTURE

This document is divided into six sections:

SECTION		SUMMARY
1.	Introduction	Identifies the purpose of the Strategy and illustrates the linkage with other strategic documents.
2.	Strategic Context:	Covers: • Key characteristics of the district • Our story – our approach to delivering on wellbeing - our vision, community outcomes, and key themes which shape our approach to managing our infrastructure • Who we work with (our partners) • Our challenges and drivers influencing our approach to infrastructure planning and delivery • Key assumptions (in brief)
3.	Managing Our Infrastructure	Identifies: • The most likely approach we will take to infrastructure management over the next 30 years • Key infrastructure issues we and the community need to consider
4.	Activity Overview(s)	Covers: • Land Transport • Three Waters • Flood Protection • Coastal Structures
5.	Activity Risks	Identifies: • Significant external and internal risks that could affect our activities • Steps proposed to mitigate these risks • Any implications for our organisation and the community
6.	Assumptions	Outlines the assumptions we have made when preparing our infrastructure programmes and budgets in relation to the lifecycle of our assets, demand and levels of service.

STRATEGIC CONTEXT

DISTRICT OVERVIEW

Small in size but rich in history and agriculture, Ōtorohanga District stretches 90 kilometres from the Tasman Sea in the west to the Waikato River in the east – an area of 1,976 square kilometres. Our near neighbours are the districts of Waipā to the North, Waitomo to the South and Taupō and South Waikato in the East.

GEOGRAPHY

Around 30 kilometres wide, the district is relatively narrow with two distinct landscapes:

- In the west[1] rugged papa hill country and harbours dominate
- In the east the rolling lowlands are part of the Waipā river catchment - the single largest tributary of the Waikato River.

SETTLEMENT

Ōtorohanga District falls within the rohe of a number of iwi and hapū – Maniapoto, Raukawa, Ngāti Hikairo, Ngāti Apakura, Ngāti Mahuta, Ngāti Wehi and Te Patupō, with approximately 17 marae located in different parts of the district

Today the district population is largely rurally based (69.9%)[2], supported by the two main urban areas - Ōtorohanga township and the Aotea/Kāwhia community.

POPULATION

District population in 2023 was estimated to be 10,900, up 0.9% from a year earlier[3]. Figures for that same year show that the district's dependency ratio was 60.7% - higher than the New Zealand ratio (54%). This elevated ratio reflects both the slightly higher proportion of residents aged 65 years and older (17%; cf. New Zealand 16.5%) and higher proportion of young people aged under 15 years (20.6%; cf New Zealand 18.5%)[4].

Nearly 30% of the district population identify as of Māori decent (cf. New Zealand – 16.5%) and 11.3% of residents were born overseas[5].

Population growth is expected to continue albeit gradually. By 2048, resident population is projected to be 12,656[6] with a corresponding growth in households from 3,872 in 2024 to 4,644 by 2048 (20% increase)[7].

ECONOMY

Primary industries account for almost 50% of district's GDP[8]. Rental, hiring and real estate is the next largest sector making up just under 22%.

In 2023, there were 2019 businesses operating in the district up 0.9% from the previous year (cf. New Zealand 1.7%). The average number of employees was 2.3 per business in 2023 (cf. 2.6 in 2013).

The Māori economy is growing, and iwi and post settlement governance entities are expected to play a major role in New Zealand's financial future. While local data is limited, anecdotally it is thought Māori businesses have an important contribution to make to district growth.
In the year to March 2023, mean annual earnings in Ōtorohanga District were $64,186 (cf. New Zealand $74,754). The district's dependency ratio (discussed above) may in part explain the lower-than-average earnings.

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1 Waikato Regional Council, West Coast Zone Plan, 2016, pages 11 – 13.
2 WSP, Ōtorohanga Town Concept Plan (Final), October 2022, page 52.
3 Source: Infometrics
4 Ibid
5 Ibid
6 Under a medium variant scenario. Refer: Waikato Regional Council Technical Report 2021/22, 2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068.
7 Ibid. The report estimates the population of the district in 2048 to be 14,083 under a high variant scenario; 12,656 under a medium; 11,241 under a low.
8 According to Infometrics, 45.9% in 2022 (Cf New Zealand 10.7%).

WELLBEING

While generally satisfied with their local environment (72%), a 2019 study of Waikato residents reported that just under half of respondents felt that its state had declined in recent years[3]. Water pollution from towns and cities and the spread urban areas across farmland were issues of particular concern for Ōtorohanga respondents. This finding is reinforced in our recent engagement with district residents. Caring for the moana (sea) and the awa (rivers) were frequently mentioned themes.

Overall people are satisfied with the network of green, open spaces throughout the district. However, needs are changing, and community facilities - venues, sports grounds and open spaces - need to be flexible to cater for the new and emerging demands.

OUR STORY

Three years ago, we adopted a fresh approach to looking at our role and services. We began using the concept of wellbeing as our lens for examining what we did. This, in turn, has led to a much sharper focus on the outcomes wanted from our services and how these services are delivered.

Ōtorohanga is a fabulous district and we want to ensure that everyone who calls this place home is nurtured and enabled to be their best. We want the district to be dynamic, inclusive and unique - a place where kiwi can fly, this means focusing on people, place and partnerships to achieve the vision and outcomes below:

Building on the gains we have made over the last three years our strategy is to:

- Continuing connecting with the community
- Pressing forward with making Ōtorohanga an even better place to live
- Being targeted. Nurture and grow partnerships with iwi and external influencers and shapers

Threaded through our strategy relating to people, place and partnerships are the following themes.

THEMES	THIS MEANS ...
RESILIENCE	• Continue to provide leadership that builds trust and confidence for social resilience. • Embed climate adaptation and mitigation practices into the way we work and: – Actively seek to reduce risks – Build back better where possible.
SUSTAINABILITY	• Adopting environmental protection and restoration practices when carrying out our work • Having and implementing a plan to reduce our emissions • Implementing better waste management to contribute to the national goal of a circular economy
TRANSFORMATION	• Continuing to improve delivery • Make sure the district and the organisation is well positioned for the future

OUR PARTNERS

TANGATA WHENUA

The iwi and hapū we have established/are developing strong relationships with include Ngāti Maniapoto, Raukawa, Ngāti Hikairo, Ngāti Apakura, Ngāti Mahuta, Ngāti Te Wehi and Te Patupō and the 17 marae across the district. We recognise the importance of Te Tiriti o Waitangi and actively invite partnerships with mana whenua, including engaging/involving mana whenua early in both project planning and delivery.

NZTA - WAKA KŌTAHI

The Land Transport activity (roads, footpaths and streetlights) accounts for 36.1% of our overall budget. Most of the Land Transport activity attracts funding assistance from the Government through NZTA - Waka Kōtahi.

As a major funding partner, we have a close relationship with NZTA - Waka Kōtahi which is focused on finalising and supporting the delivery of our three year Land Transport programme in line with local and national priorities and objectives. Collectively, the focus of the programme is on:

- Ensuring the safety of network users
- Providing multi-modal transportation options
- Achieving value for money
- Providing economic and social benefits
- Minimising environmental impacts
- Identifying and managing risks
- Enabling and improving resilience

We acknowledge the current increased cost/constrained funding environment and anticipate this will impact on the programme finalised for 2024-2027 and possible longer.

PRIVATE DEVELOPERS

We do not undertake development in our own right but we do enable appropriate development in the district, including occasionally partnering with developers. Currently we are working closely with our communities and stakeholders on the preparation of concept plans covering all areas of our district. The plans will provide a framework for public and private development/investment. Implementation of district land development under the concept plans will be enabled via the Ōtorohanga District Plan.

CHALLENGES/DRIVERS

In brief, the key things that have the most influence on our approach to infrastructure planning and delivery are:

ISSUE	EXAMPLE
Compliance	Legislative changes, meeting funding requirements/TTM NZTA - NZTA - Waka Kōtahi
Growth	0.5-1% growth; hollowing of population age cohorts – high young and old, less family/middle age; shortage of commercial/industrial space; heavy vehicles - forest harvest
Resilience	Climate change
Affordability	Continued inflationary pressures (supply chain, fuel, materials, interest rates, staff/skill shortages, etc) - community expectation of rates affordability
Sustainability	Decarbonisation

These challenges and other drivers, possible scenarios, the likely impacts and, if relevant, our possible response to managing these impacts are outline in the table on the following page.

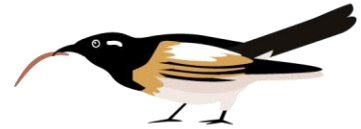
KEY ASSUMPTIONS

Long-term infrastructure planning does not occur in isolation – it is set within a wider context of what else is happening in the district, the region, nationally and globally. Within this wider context, assumptions are made about the future which in turn shape our operations and capital spending. In addition to the scenarios outlined in the table on the following pages, we make some general forecasting assumptions about future directions for the district affecting our infrastructure planning and these are outlined in this section. Later in this Strategy we have also identified some more specific assumptions relevant to each activity.

THREE WATERS REFORM

When we began preparing this Strategy, we were working on the premise that the three waters were to transfer to the proposed new water services entities no later than 2026. Under the legislation at that time, we were not permitted to include three waters in our Strategy. The Coalition Government repealed the Water Services Entities Act 2022 in February 2024 requiring a complete reset of how we plan to maintain three waters infrastructure over the next 30 years. Although asset management plans were created by the National Transition Unit, the plans were fiscally unconstrained and bringing them back into councils has required a more detailed, affordable financial lens to be applied. This has required a full review of asset management plans and budgets within a very short time frame.

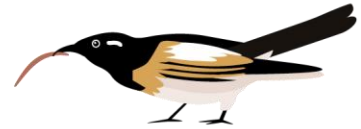
Given the short timeframe, the approach taken has been to create a modest programme of renewals for the next 3 years whilst being alert to the changes that could result as the Coalition Government's *Local Water Done Well* policy develops.



CHALLENGES/DRIVERS		
CHALLENGE/ DRIVER	MOST LIKELY SCENARIO(S) FOR OUR DISTRICT	IMPACT ON INFRASTRUCTURE/RESPONSE
COMPLIANCE	• Constrained funding means we will need to continue to be financially efficient and prudent to meet the expectations of our funding partners and to achieve a satisfactory level of service for our ratepayers. • Temporary Traffic Management (TTM) changes driven by NZTA - Waka Kotahi, with additional minimum training and increased on-site requirements. • Increased pressure to meet compliance with Drinking Waters Rules and resource consent conditions.	• Reduction in funding may create difficulties in maintaining our existing assets. The focus will need to shift to a needs-based assessment before any investment decisions are made. • TTM changes have continued to increase the cost of projects across all activities and for our community. Closing roads instead of keeping them open during works is becoming an option to try and reduce costs. • Meeting consent conditions and compliance is going to continue increase the cost to council into the future in both capital expenditure and operating costs. • Renewal of consents has shown to be expensive and a lengthy process and an opportunity to tighten conditions.
GROWTH	• Population growth is expected to continue albeit gradually. By 2048, resident population is projected to be 12,656[9] with a corresponding growth in households from 3,872 in 2024 to 4,644 by 2048 (20% increase)[10]. • The district age profile is expected to continue to hollow out, meaning proportionally more people in both the younger and older age groups.	• Growth and development and the extra capacity required is accounted for when planning renewals and upgrades. • The makeup of households has an impact on the location and type of development that will occur. For example, an increase in young families with children might lead to more suburban residential development which may mean roading networks on the fringes of town need to accommodate more cycling/walking. On the other hand, increases in older persons may translate to more intensive development near the town centre, where reliance on motor vehicles should be less, but footpaths must be able to accommodate mobility scooters • Our three waters assets can absorb the small amount of growth we are seeing over the next 10 years, but we must not get complacent and continue to improve our assets with future growth in mind and tightening compliance.
RESILIENCE	• Over the medium–long term climate change is expected to bring an increase in the frequency and intensity of storm events and higher temperatures • Rising sea level (1.0 metre rise for Kāwhia/Aotea over the next 100 years) • A change in rainfall patterns, with a 5% increase in rainfall intensity, producing more extreme weather events and increased drought events.	• New and renewed infrastructure needs to be designed to remain as serviceable as possible, or be quickly repaired, after a natural disaster or other major disruption. This will affect construction priorities and methodologies but may also necessitate the relocation of some assets.

9 Under a medium variant scenario. Refer: Waikato Regional Council Technical Report 2021/22, 2018-base Population, Family and Household, and Labour Force Projections for the Waikato Region, 2018-2068.

10 Ibid. The report estimates the population of the district in 2048 to be 14,083 under a high variant scenario; 12,656 under a medium; 11,241 under a low.



CHALLENGES/DRIVERS		
CHALLENGE/ DRIVER	MOST LIKELY SCENARIO(S) FOR OUR DISTRICT	IMPACT ON INFRASTRUCTURE/RESPONSE
	• Drought conditions placing pressure on water resources. • These expected climatic changes are likely to significantly impact our district and communities through: – Increased susceptibility for slips and drop-outs affecting road accessibility – More frequent overwhelming of culverts and flooding of roads reducing accessibility – Coastal inundation/erosion impacting public infrastructure – Increased flood-level events on rivers and stream testing the integrity of the Ōtorohanga flood protection system and bridges on our road network, resulting in land/property inundation and reduced accessibility – Extended dry periods accelerating the deterioration of roads through seal and sub-base failure.	• The District Road network layout has been shaped by geology and topography. Some areas, particularly the western part of the district, are prone to slips and drop-outs which could lead to extended periods of disruption. Consideration is being given to increasing the resilience of the network in these areas to ensure the risk of any significant disruption to access is minimised. • As part of the regular renewal programmes, we prioritise the replacement of critical or vulnerable assets (such as bridges). We consider the resilience of the replacement solutions at the design phase. • Climate change and other extremes are considered whenever assets are renewed, replaced or new assets planned, and proposed work programmes already account for this (e.g. culvert replacement). • Where flooding is a recurring issue on parts of the road network these are addressed either with an engineering solution (which may remove or minimise the effect of the flooding) or a standard procedure (traffic management). • We must continue to look after the available water resources, improving storage and maintaining a sound network repairing water leaks. • Continued maintenance programmes on our flood control assets are important as they need to operate when called upon.
AFFORDABILITY	• Financial forecasts show that future road infrastructure spending will remain within affordability benchmarks, although these may mean reduced levels of services if NZTA - Waka Kōtahi funding levels are reduced. • We will face increased pressure to keep rates affordable. This means future rates rises and borrowing limits have caps to work within. There is the potential for reduced levels of service if additional external funding constraints are imposed and costs continue to increase. • Interest rates are forecast to remain high (relative to recent levels) in the short to medium-term. However, these levels are closer to the long run average interest rate levels. Good access to funds at preferential rates remains through Council's membership of the Local Government Funding Agency (LGFA). • There is likely to be increased pressure on engineering resources (people and plant) due to the Government's enhanced infrastructure programmes, and reduced availability of skilled staff, which will likely result in continued rising costs. • Ongoing oil price volatility will affect construction costs and bitumen prices.	• Ongoing infrastructure maintenance and renewal programmes may not be able to continue as they currently do. Cost-efficiencies will continue to be sought wherever possible, including improved procurement approaches such as larger work packages or longer term delivery contracts. • Major project work can have a significant effect on rates. Where practical, the timing of major projects will be coordinated across Council's activities to manage their impact on rates affordability. However, where there is an immediate need, this may not be possible. • The strain on resources, coupled with reduced NZTA - Waka Kōtahi funding (forecast for at least the 2024-27 period) will require judicious decision-making when programming forward work. In the roading activity, forecast works are initially based on need rather than available budget, so any funding constraints will be managed by undertaking a final programme that is affordable, having regard to resilience. Flexibility in programming is always required as works may change in priority, which is why the Land Transport programme is managed across a 3-year period (rather than annually).

CHALLENGES/DRIVERS		
CHALLENGE/ DRIVER	MOST LIKELY SCENARIO(S) FOR OUR DISTRICT	IMPACT ON INFRASTRUCTURE/RESPONSE
		• With three waters no longer transferring to the water entities council will now have to factor in the next 10 years of operational and capital expenditure, while remaining agile to the changing political environment while we see what *Local Water Done Well* looks like in mid-2025.
SUSTAINABILITY	• A focus on environmental enhancement and decarbonisation is expected to continue, with consideration given to: – Energy use – Environmental restoration • We must continue to improve our practices in water, wastewater and stormwater to make sure we do not have a negative impact on our natural resources.	• Council has committed to a shift to hybrid/electric vehicles for its fleet and is exploring options to reduce energy costs (eg, time of use changes and/or the use of solar panels on major community buildings). • Our community and mana whenua partners have told us that the health of the environment and environmental restoration are important. With mana whenua as partners on key projects, the opportunity to factor in environmental outcomes can be considered at the project scoping stage. • We must continue to maintain a balance between what is aspirational and what is affordable for the community.
AGING INFRASTRUCTURE	• Some of Council's key community infrastructure is aging to the point where decisions on its future need to be made – whether that be renewal (upgrading), replacement or disposal	• The earliest bridges built in the district were in the early 1900's. Bridge renewals are planned to start in the next 40 years. • We will continue with a modest renewal programme in the three waters activity for the next three years, no significant upgrades are forecast within the next 10 years. • Coastal Structures such as seawalls are expensive to build and maintain. Renewal of structures over the next 3 years will require significant investment and, as our understanding of the effects of climate change improves, we may not be able to build these structures in the same locations. • Kāwhia Wharf was rebuilt in the 1960's[11] and its use has changed becoming more of a recreational facility than a freighting resource. As it reaches the end of its useful life, what is built in its place will need careful consideration.
THREE WATERS REFORM	• The new coalition government have repealed the Water Services Entities Act 2022 and councils will continue to manage three waters into the future.	• This has required a complete reset for infrastructure planning for the 2024-34 LTP as previous legislation only required two years of planning for three waters. We need to remain agile in our planning as the direction of three waters is better understood.

[11] Doc #: 485857; 475628

CLIMATE CHANGE

We intend developing a Climate Change Response Policy/Plan (CCRP) in 2024, which will include both an organisational focus and a district focus. Our Plan will be developed in conjunction with mana whenua, stakeholders and the wider community, and we expect it to contain a series of specific assumptions about climate change impacts in/on our district. We already know the main threats to our infrastructure from climate change come from extreme weather events: heat, rain and wind. We also have assets in areas likely to be affected by sea-level rise (Kāwhia and Aotea). Flooding and storm damage threaten bridges and culverts, some of which also carry other lifeline assets (telecommunications, electricity, and water).

NATURAL DISASTERS

We've made the assumption that there will be no significant emergency events (natural disasters) affecting our district in the next 10 years that cannot be funded out of budgetary provisions or met by insurance arrangements. For infrastructure, we intend taking the following actions to mitigate the risk posed should this assumption prove incorrect:

- Ensure that we have adequate insurance to cover the district's assets against such events
- Ensure that the commercial insurances are at a level to cover the district's assets against such events when taking into consideration central government's role in disaster recovery and restoration
- Continue to give focus and attention to our involvement with sub-regional emergency management activities, and local emergency management and business continuity planning.
- In the event of an emergency, our response will be immediate, with appropriate resources redirected for that purpose.

In addition, a committed cash advance facility of $5 million is available to be called upon in the event of a natural disaster, and short-term lending opportunities exist with the Local Government Funding Agency.

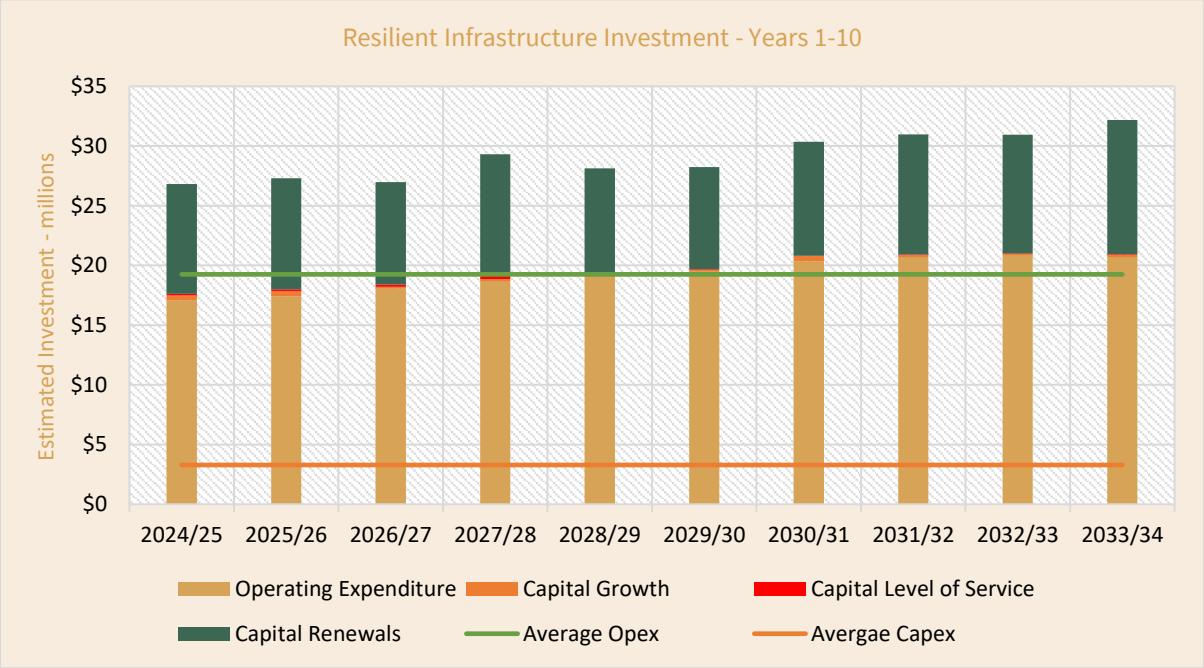
NZTA - WAKA KŌTAHI FUNDING

Our Land Transport activity is supported with Government funding through NZTA - Waka Kōtahi. Our Funding Assistance Rate (FAR) is currently 63% and this Strategy assumes this level of support to continue for the next 10 years.

MANAGING OUR INFRASTRUCTURE

Asset management is process of planning for the cost of maintaining and renewing significant assets over a long life and generations. With many assets to manage and all with varying degrees of value, this strategy focuses on significant assets of high value and criticality.

Our approach to asset management is to apply a sound management philosophy and to keep the wheels turning while paying attention to resilience. The graph below shows the overall investment over the 2024- 34 period in the resilience of our infrastructure.



	2024/25 (000's)	2025/26 (000's)	2026/27 (000's)	2027/28 (000's)	2028/29 (000's)	2029/30 (000's)	2030/31 (000's)	2031/32 (000's)	2032/33 (000's)	2033/34 (000's)
Operating Expenditure	17,066	17,419	18,052	18,691	19,273	19,461	20,340	20,693	20,822	20,704
Capital Growth	425	409	158	162	165	169	455	176	179	182
Capital Level of Service	130	169	200	598	6	45	6	47	6	49
Capital Renewals	9,203	9,307	8,558	9,866	8,678	8,558	9,549	10,055	9,933	11,245
Average Opex	19,252	19,252	19,252	19,252	19,252	19,252	19,252	19,252	19,252	19,252
Average Capex	3,289	3,289	3,289	3,289	3,289	3,289	3,289	3,289	3,289	3,289
Total	26,824	27,303	26,968	29,317	28,122	28,232	30,350	30,970	30,939	32,179

Asset management plans are a critical part of our approach. The plans help us to understand the state of assets and, throughout their lifecycle, when they will need upgrading and what investment is needed.

In this section we provide information on:

- How we manage our assets
- Key infrastructure issues.

HOW WE MANAGE OUR ASSETS

ASSET MANAGEMENT PLANS

Key documents underpinning this Infrastructure Strategy are the asset management plans (AMPs) - primarily the Land Transport Asset Management Plan and Water and Drainage Asset Management Plan. AMPs integrate management, financial, engineering and technical practices to ensure that the level of

service required by customers is provided effectively and efficiently. This requires taking a whole-of-life approach to asset investment planning, procurement and delivery.

An integrated long-term approach based relies on good underlying data about the assets to:

- Optimise the way in which we operate, maintain, renew or replace our assets
- Ensure our infrastructure meets the needs of current and future generations in an affordable way
- Ensure that future generations are not disadvantaged by short term decisions
- Ensure that risks to service levels and public safety are acceptable.

Our asset management planning work identifies current and future asset requirements, and the financial forecast for capital (renewals and new capital projects), and operational expenditure for each asset group. We have detailed AMPs for land transport and three waters but have only really begun the journey of detailed AMPs for community services with our first fully complete AMP due in 2024. AMP's for flood protection and coastal structures have yet to be created and will be one of improvements we intend to undertake in the next three years.

This Infrastructure Strategy enables residents and stakeholders to see at glance what work is proposed, and why, should further detail be required this can be seen within the individual AMPs.

HOW WELL DO WE KNOW OUR ASSETS

We know our land transport assets well, and we work closely with NZTA - Waka Kōtahi to maintain best practice. Roads, bridges, footpaths and other transport assets are inspected regularly for defects and condition to inform the upcoming renewal programme. Replaced or new assets come with high-quality data, which improves our overall knowledge.

We also have good asset data on our three waters/flood protection assets, but we do not have that level of data on our community facilities or coastal structures. Now we have a dedicated assets team, bringing all our assets up to the same level will be a focus.

The table below list the data confidence grades given to each roading asset class and the three waters. Grades are based on:

- the quantity of assets in each class and location (eg. the length of pipe);
- the replacement cost of those assets;
- the life remaining in them
- the depreciated replacement cost, which is a measure of the remaining value of the assets, after accounting for their age.

On the whole, this gives us reasonable confidence that the information we're using in our planning is correct and that our plans represent good use of funds.

DATA CONFIDENCE				
ASSET	QUANTITY	REPLACEMENT COST	LIFE EXPECTANCY	DEPRECIATED REPLACEMENT COST
LAND TRANSPORT				
Land	B	B	-	-
Formation	B	B	-	-
Unsealed Pavement Structure	B	B	-	-
Seal Pavement Structure	B	B	B	B
Surface Structure	A	A	A	A
Bridges	B	B	C*	C*
Drainage	B	B	B	B
Footpaths	A	A	A	A
Markings	A	A	A	A
Railings	B	B	B	B

Signs	A	A	A	A
Streetlights	A	A	A	A
SW Channel	A	A	A	A
THREE WATERS				
Water	B	B	B/C**	B/C**
Wastewater	B	B	B/C**	B/C**
Stormwater	B	B	B/C**	B/C**

KEY		
CONFIDENCE LEVEL	GRADE	DESCRIPTION
Highly Reliable	A	Data based on sound records, procedures, investigations and analysis, document and recognised as the best method of assessment
Reliable	B	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example the data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation
Uncertain	C	Data is incomplete or unsupported, or extrapolated from a limited sample
Very Uncertain	D	Data based on unconfirmed verbal reports and/or cursory inspection and analysis

* Data with a C has a lower confidence in life expectancy and replacement costs due to condition ratings being held within Junoviewer bridge inspections system and this data does not flow into the Land Transport Asset Management System, this has been identified and currently being worked on.

** Data with a B/C is when we hold minimal condition data within our Asset Management System or maintenance history against assets so therefore have a lower confidence level in life expectancies and replacement costs. Higher than a C but not higher enough to reach a B

MAINTENANCE AND RENEWALS

Maintenance is the required levels of service to make sure an asset reaches its expected life. Renewals are the progressive replacement of existing assets as they reach the end of their useful life, preferably before failure, but not too soon before an asset reaches its desired service life. Replacing assets too early is not cost effective unless the asset is critical to operations and failure of the asset will result in substantial loss of levels of service to the community.

Asset management is often the balance between ongoing maintenance and renewing assets depending on cost and criticality. An example of replacing a critical asset proactively is the 315mm rising water main installed in Ōtorohanga in 2023. Although still functioning, the existing rising main was reaching the end of its useful life. With a risk of failure at any time and an expensive repair, it was decided to install a second rising main to ensure a continual supply of water to Ōtorohanga.

At the other end of the spectrum a minor or less critical asset may only be reactively maintained and renewed upon failure. This determination is often based on the value of the asset and the cost to maintain compared to cost of replacement.

Overall, the level of maintenance and rate of renewal should maintain the overall condition of the asset to a standard that the community expects and so the asset life is not premature and wasting the community's investment.

CRITERIA FOR ASSET RENEWAL

When deciding to renew an asset several factors are considered, but not all factors are necessary to reach a decision, it may only be one factor that determines the renewal or not.

CRITERIA FOR RENEWAL

- Criticality
- Age, condition, cost
- Service requests, poor performance, community feedback and staff input
- Consideration of other projects, road renewals, developments
- Risk of failure

Although a lot of asset management is data driven, it still requires a sense check by staff to make sure the data is accurate and onsite assessment validates the data.

Our roading data is very good because of years of improvements. However, data for the three waters is fair to good whilst coastal structure data is not as good. To reach a high level of asset management requires considerable investment and we're committed to reaching the standard set by our roading data for all our critical assets. The creation of the new asset team is the start of this process and will take some years to reach the ideal industry standards of asset management.

UNEXPECTED RENEWALS

Even with the best asset management system unexpected renewals are always a risk. Sometimes the unexpected happens and the cost of the renewal may sit outside any forecasted budget within the LTP. This occurred in 2020 when the failure of a sewer main on Kakamutu Road Ōtorohanga resulted in a $300k unbudgeted renewal. When these unexpected events occur, we evaluate and apply one of the following options:

- Depending on the criticality of the asset, maintain a reduced level of service until such time as a capital budget is available
- Explore existing budgets within the same activity and reprioritise
- Increase the existing capital budget by bringing work forward.

FINANCING ASSETS

How we finance the investment in infrastructure is covered in the following documents:

- Financial Strategy
- Revenue and Financing Policy
- Development Contributions Policy

SERVICE DELIVERY APPROACH

SERVICE DELIVERY APPROACH		
ACTIVITIES	KEY SERVICES	DELIVERY MODEL
LAND TRANSPORT	• Roads, footpaths, bridges and cycleways including associated structures and facilities	• Asset Management Team • Road Maintenance contracts • Bridge Inspections • In house roading team, project team. • Shared services agreements with Waikato LASS (Colab)
3 WATERS AND FLOOD PROTECTION	• Management and maintenance of three waters and Ōtorohanga Flood Protection assets, stopbanks and flood stations	• Asset Management Team • In house water services team and quality compliance team. • In house project delivery team • Shared Service agreement for sampling and testing with Waikato LASS (Colab)
COASTAL STRUCTURES	• Monitoring and maintenance of rock structures in coastal areas of Kāwhia and Aotea. Boat Ramps and Kāwhia Wharf.	• Asset Management Team • Maintenance and monitoring of seawalls to meet consent conditions. • Resource Consent reporting and renewals • In house Project Team and Asset Team to manage consents and maintenance.

DEMAND CHANGES AND MANAGEMENT

DEMAND CHANGES AND MANAGEMENT			
ACTIVITIES	DEMAND CHANGES	DEMAND ISSUES	MANAGEMENT STRATEGY
LAND TRANSPORT	• Requests for seal extensions from rural ratepayers • Increases in rural subdivisions, Increasing traffic volumes on rural roads and expectations. • Urban development and connectivity to town • Climatic storm events and Intense rainfall	• Increase demand for seal extensions. • Increase in rural subdivisions and increased traffic flow on rural roads. • Resilience within the network to meet extreme weather events	• To continue with seal extensions is going to require additional unsubsidised funding. Seal extensions are cost prohibitive currently. • It is important that planning/development and Land Transport align through any processes to identify any issues. • Minimal urban development will have no effect on the roading infrastructure but there will be a need to improve footpath and connectivity over time. • Catchment survey and culvert assessments, will improve resilience in the network.
THREE WATERS	• Extreme weather events causing either swollen rivers or low flows puts pressure on water treatment • Unaccounted water losses continue to put pressure on water capacity • Increased compliance and monitoring increases demand on staff resources • Consent conditions becoming more restrictive on wastewater and stormwater • three waters remaining with council and continued investment in renewals	• After intense rain events staff must shut down plants until rivers settle down and draw on water storage • Low river flows and higher water temperatures reduces the volumes the plants can treat. • Unaccounted water losses increase treatment costs and reduces capacity in existing plants • Increasing consent conditions will place more demand on staff and council resources to remain compliant.	• Improved water storage has allowed for water plants to shut down until normal operations can be resumed, up to 8 hours. • Leak detection programme to be introduced to help locate difficult leaks in the network • We will continue to work with regional council to make sure we make the necessary improvements to meet our consent conditions • We have prepared a moderate renewal programme for the efficient, financially prudent continuation of renewals.

DEMAND CHANGES AND MANAGEMENT			
ACTIVITIES	DEMAND CHANGES	DEMAND ISSUES	MANAGEMENT STRATEGY
		• Continued investment in renewals will require funding from ratepayers unless government funding is made available.	
FLOOD PROTECTION	• Climatic storm events and Intense rainfall • Changes in use increasing costs.	• Balancing the infrastructure and amenity value of shared spaces. • Changes of use of stopbank grazing areas has increased the cost of maintenance to an improved level of service. • Increase focus on flood protection given recent flooding events. •	• Large retention areas (Lake Huiputea) have dual purposes - flood protection assets and recreation reserves. Flood protection must take precedence over amenity value, but not to the detriment of these values. • The stopbank pathway and the retirement of the grazing areas has resulted in an increase in level of service (mowing). • With recent flooding events there is considerably more focus on the Waipa River and the stopbanks than there has been for some time and we must continue our high standards of maintenance.
COASTAL STRUCTURES	• Existing structures in Kāwhia are old and in need of maintenance. • Erosion of private property increases demand on construction of the structures, or the increase in ad hoc unpermitted structures.	• Kāwhia coastal defences are a mismatch of different structures and at varying degrees of condition. • Aotea Sewall has reached the end of it consent and renewals are in progress. • Coastal structures are expensive and require consents. • Kāwhia Wharf use has changed	• Government funding has been granted to assess the Kāwhia seawall defences and undertake limited maintenance. We are also investigating whether some of this funding can be also be applied to the Aotea Seawall. • Aotea seawall consent process to continue until obtained. • We need to proactively work with community to avoid ad hoc structures appearing. • Renewal of the wharf is expected in the next 15 -20 years.

RESPONDING TO GROWTH

Existing levels of service and infrastructure will meet the needs of the growth expected in Ōtorohanga and Kāwhia over the next three to 10 years. Although we have seen an increase in small lot subdivision in the rural areas, these developments are not having a significant impact on the current network.

NKC subdivision in Harper Ave (128 lots) is the largest subdivision Ōtorohanga has seen in many years and this growth was responded to in the 2021/22 to 2023/24 period. With the completion of stages 1 and 2 it is expected that there will be an increase in traffic exiting Harper and Thomson Avenues. There is also expected to be an increase in foot traffic with people walking into town. Changes in intersection designs are scheduled in 2024.

As urban growth increases, we will need to consider the connectivity of foot traffic within the urban centre, as anticipated in the Ōtorohanga Town Concept Plan. We will take a business-as-usual approach until such time as there are signs of a large increase in need.

MAINTAINING LEVELS OF SERVICE

Levels of service (LOS) statements describe the outputs or objectives an organisation intends to deliver to its customers reflecting the social, political, economic, and environmental outcomes wanted. Any increases to LOS have a direct impact on expenditure and finding a balance of meeting expectations and the cost to benefit ratio is always challenging. We're not proposing any significant changes to the LOS delivered in the previous three years.

LOS, measures, and targets for the first 10 years of the Strategy, are covered in detail in our Long Term Plan and are not repeated here.

CHALLENGES TO MEETING LEVELS OF SERVICE

The key factors that will challenge our ability to deliver the desired LOS and meet the community's expectations, while avoiding unsustainable debt for future generations are:

- As populations grow the demand for services increases, in particular an aging population and the changing LOS required to suit the needs of an older community
- Costs associated with maintaining compliance with resource consents and renewing existing consents
- Increasingly restrictive consent conditions as more environmental standards impact on LOS
- Climate change – planning for the unknown is fraught and cost prohibitive
- Finding the balance between protecting natural resources and providing an affordable LOS
- Demand for more public amenities and open spaces, playgrounds, public conveniences.

DELIVERY OF CAPITAL PROGRAMME

Delivery of capital programmes has always been a significant challenge to councils as large capital work can often span over more than one financial year. It makes sense that intergenerational assets take more than a year to design, plan, and build.

Planning and delivering large capital projects in one year are simply not achievable and we need to adapt and adjust our thinking, budgeting and reporting of capital work.

The last LTP cycle we adopted the philosophy of a three-year programme to deliver large capital projects or renewals, this has been successful to date, largely due to the creation of a dedicated project delivery team within the Engineering and Assets Group. The project delivery team is responsible for delivering large capital works, which is determined by overall cost and public/political interest in the project. The team's success is measured by:

- Working with activity managers to deliver what is required
- Managing projects from start to finish within scope, time, and budget
- Reporting on capital works to Council and Risk and Assurance Committee
- Having robust, best practice procurement methods that align with procurement manuals and strategies
- Accurate budget forecasting and reporting to prevent any cashflow issues over the term of the project
- Inclusive stakeholder engagement and communications.

ACTIVITY OVERVIEWS

OVERVIEW

As outlined earlier, the activities covered within this document are land transport (roading), three waters (water, wastewater and stormwater) flood protection and coastal structures. In this part of this strategy these activities are discussed in more detail.

Most of our projects planned over the next 30 years are maintenance and renewals which are centred around roading and three waters, with no significant projects planned within the next 1 - 10 years. Many of the projects are within the land transport group of activities, which is confirmed on a three-yearly basis in conjunction with NZTA - Waka Kōtahi.

We anticipate changes to our three waters programme, especially within the next two years given the dynamic nature of our operating environment and the likelihood of new policies and priorities associated with of the Coalition Government., As a consequence we have developed a modest programme so that we can remain agile to make changes easily.

Other key infrastructure investment expected relates to our coastal structures. With resource consent renewals in preparation or underway, we anticipate that future maintenance needs will be identified through the consent processes. We have received government funding to assist with aspects of the work required.

LAND TRANSPORT

Ōtorohanga District is reliant on road transport to move people, goods and services around. The network is predominantly rural at 96.1%, and sealed roads make up 65% of the total network (526km of 804km) with an additional 278km of rural unsealed roads.

The roading activity involves the maintenance, renewals and development of roads, kerb and channel, bridges, street lighting, footpaths, culverts and underpasses, and signage for all roads (except state highways) in the district. State highways fall under the jurisdiction of NZTA - Waka Kōtahi. We maintain roads in accordance with our Land Transport Asset Management Plan (AMP).

Our recent Land Transport bid to NZTA - Waka Kōtahi for funding over the next three years is currently at $42 million (rounded)[12]. The value of the bid is based on the most accurate data available and is focussed on building resilience in the network and maintaining current levels of service. This bid does not include depreciation of the asset or any unsubsidised budget. The budget is pending final moderation and approval by NZTA - Waka Kōtahi and confirmation is expected in May 2024. Should the bid not be successful we will need to decide to either fund the shortfall or reduce the level of service to fit within the allocated budget. Below is a break down on the budget allocation and activities for the next 1 – 10 years, with a modest escalation out to 30 years.

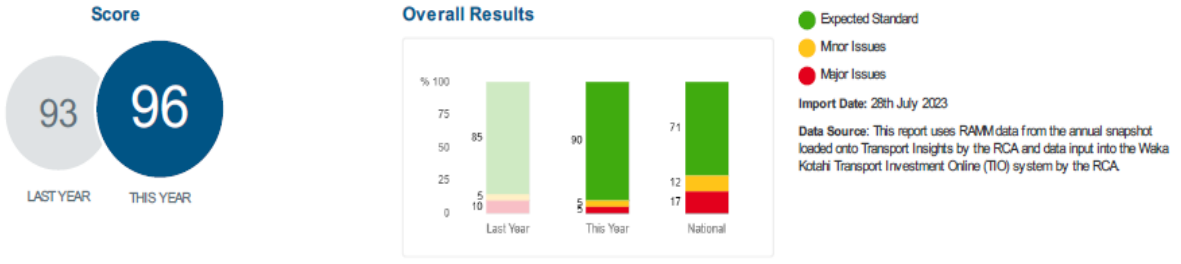
The overall cost of our full land transport programme is detailed later in this document.

LAND TRANSPORT INFRASTRUCTURE

INFRASTRUCTURE SUMMARY			
AIM	To provide a safe and efficient road network that meets the short and long-term needs of the district at the lowest overall whole of life cost.		
GOALS	Requests are responded to in a timely manner	Council Ensures quality of roads and safety of users	Council ensures roads are safe for all users.

Asset Summary:	
Sealed Roads	526 km
Unsealed Roads	278 km
Bridges and Underpasses	217 total
Culverts	7 km
Kerb and Channels	42 km
Surface Water Channels	969 km
Footpath	35 km

Replacement Value:	
Formation	$123,211,209
Sealed Road Surfaces	$22,350,617
Sealed Pavement Layers	$60,476,703
Unsealed Pavement Layers	$23,937,040
Bridges	$58,744,033
Drainage	$48,863,664
Footpath	$11,179,935
Railings	$1,577,430
Marking	$514,164
Signs	$1,133,589
Street Lighting	$909,479
Land	$54,331,852
TOTAL	**$407,229,720**



[12] Note: Overall investment in roading for the next three years is $59 million, including items not funded by NZTA – Waka Kōtahi.

WHAT WE DO

Essential for the community's economic and social wellbeing, we have invested large amounts of funding over many years in creating the best possible surfaced roads our residents can afford. The district's roads, footpaths and associated infrastructure have been consistently well designed, constructed and maintained, and provide levels of service that meet current and expected future needs. No significant level of service issues are expected to arise in the next three years.

Our vision for land transport is *to provide a well maintained and consistent roading network that meets a pleasing level of service in the most cost-effective manner*. Evidence that our vision is being achieved is measured through our performance framework.

Data is regularly captured to identify, classify, value, and rate the condition of our assets. All this information is stored in the RAMM software where it can be accessed when required in formats that satisfy the district Forward Works Programmes (FWP).

Condition surveys and validations are regularly undertaken to keep the data in RAMM as accurate as possible. This information is then used to determine the treatment options for road maintenance, reseal sections and rehabilitation sites. The best option is selected for longevity and value for money.

To illustrate how we use the data we collect, a recent negative trend has emerged from the results of measures used to assess the deterioration of water proofing of road surface layers. Whilst not a major concern as of yet, steps have been taken to address any issues as rapid deterioration of the road can occur when the tipping point is reached and water enters the pavement layers.

Ōtorohanga District Council has very low numbers of fatal and serious crashes compared to national statistics. We propose to maintain our current level of service of targeted education of road users and working toward speed management.

Based on the performance information we collect on customer levels of service, customers and stakeholders are generally well satisfied with the current land transport standards and management practices.

WHAT INFLUENCES OUR APPROACH

Continued themes in NZTA - Waka Kotahi's (30 year plan) include sea level rise, increased rain and storm intensity and frequency which will affect communities, particularly Kāwhia and Aotea. These matters are taken into account in our road planning and resilience improvements, particularly in the areas that are vulnerable to increased sea levels. Waikato Regional Council Sea level rise tool has not changed in the last three years which indicates that the model remains relevant for planning purposes. Furthermore, we are committed to increasing the size of culverts when needed and, amongst other matters, taking a stronger focus on vegetation control.

With 96% of the district's roads being rural, a large portion of our road users in the district are associated with the agricultural sector, either directly or via support industries. Two State Highways carry the bulk of the through-district travellers and a challenge for us is unplanned events requiring a road closure/detour off the State Highway network for road crashes, weather events or similar, placing more pressure on local roads.

Another challenge influencing our roading decisions is the increasing size of commercial vehicles which puts pressure on the capacity (width) of some roads; To help mitigate this change, a significant budget is allocated for widening roads which fall below the desired width standard to make these roads safer.

SIGNIFICANT ACTIVITIES

PAVEMENT RESEALS

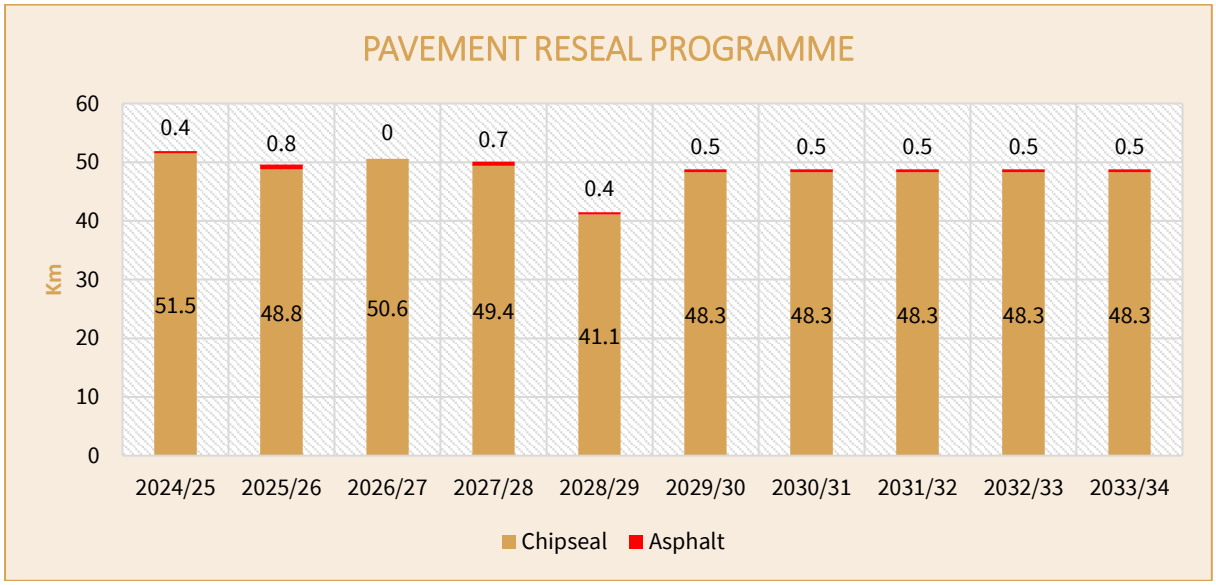
The overall approach taken to maintain the network's sealed pavement is a mix of proactive planning, assessment, and inspections, while reactive work is driven by exception reports and service requests. The

maintenance needs of these sealed roads are identified through service requests, and resurfacing is scheduled as per our FWP.

The current average surface life achieved of all surfacing in the network is 13.84 years. This therefore implies that approximately 8.2% (43km) of the network requires sealing annually as a minimum. The **R**oad **A**ssessment and **M**aintenance **M**anagement database (**RAMM**) shows that there is a backlog of 124km of reseals.

Council has calculated the need to add 20% of the backlog (24kms) for resurfacing to each year's programme for the next five years. To achieve this council will plan an average reseal programme of 48km per year for the next five years, resulting in the reduction of the backlog and improving the overall condition. The preferred programme is detailed in the below graph.

The table below shows the total kilometres of pavement reseals programmed over the next 10 years - a total investment of $19 million.



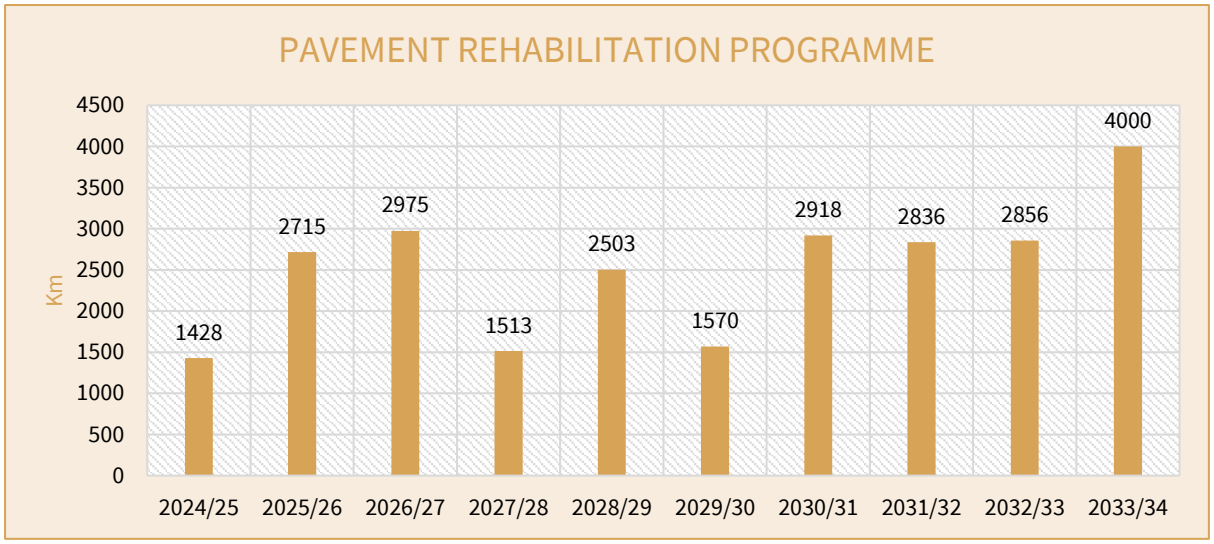
PAVEMENT REHABILITATIONS

The need for pavement rehabilitation is generally determined by a combination of:

- Detailed network inspections (forward works programme)
- Historical maintenance cost records
- dTIMS[13] pavement deterioration modelling analysis.

The RAMM data shows that there is a backlog of 70km of roads to be rehabilitated based on their remaining useful life, this was found to be quite inaccurate based on field validation and has therefore not been considered. Instead, we have applied a multi criteria analysis of rehabilitation options to choose the best programme that is fit for purpose and delivers value for money. The table below shows the total kilometres of pavement rehabilitations programmed over the next 10 years - a total investment of $13 million.

[13] **D**eighton **T**otal **I**nfrastructure **M**anagement **S**ystem

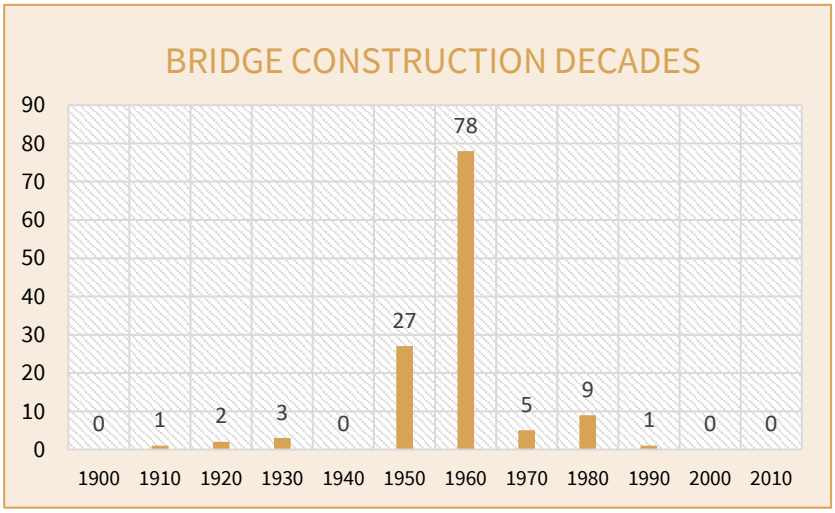


UNSEALED BULK METALLING

The calculated road length of the unsealed bulk metalling per annum is between 45 and 60km per year. A cyclic approach to metalling is adopted ensuring every unsealed road receives additional metal at least once every five years. Regular grading and maintenance of the road profile ensures that the minimum quantity of metal is used to retain the required formation depth. The current methodology of road bulk metalling will be continued as it has been tried and proven over many years.
Over the next 10 years we expect to spend $7.2 million on unsealed bulk metalling which is two full cycles.

BRIDGES AND STRUCTURES

Within Ōtorohanga District there are 134 structures classed as bridges, including five stormwater culverts which are over 1.2m diameter, generally 4m^2 in area. There are also 83 stock underpass structures.



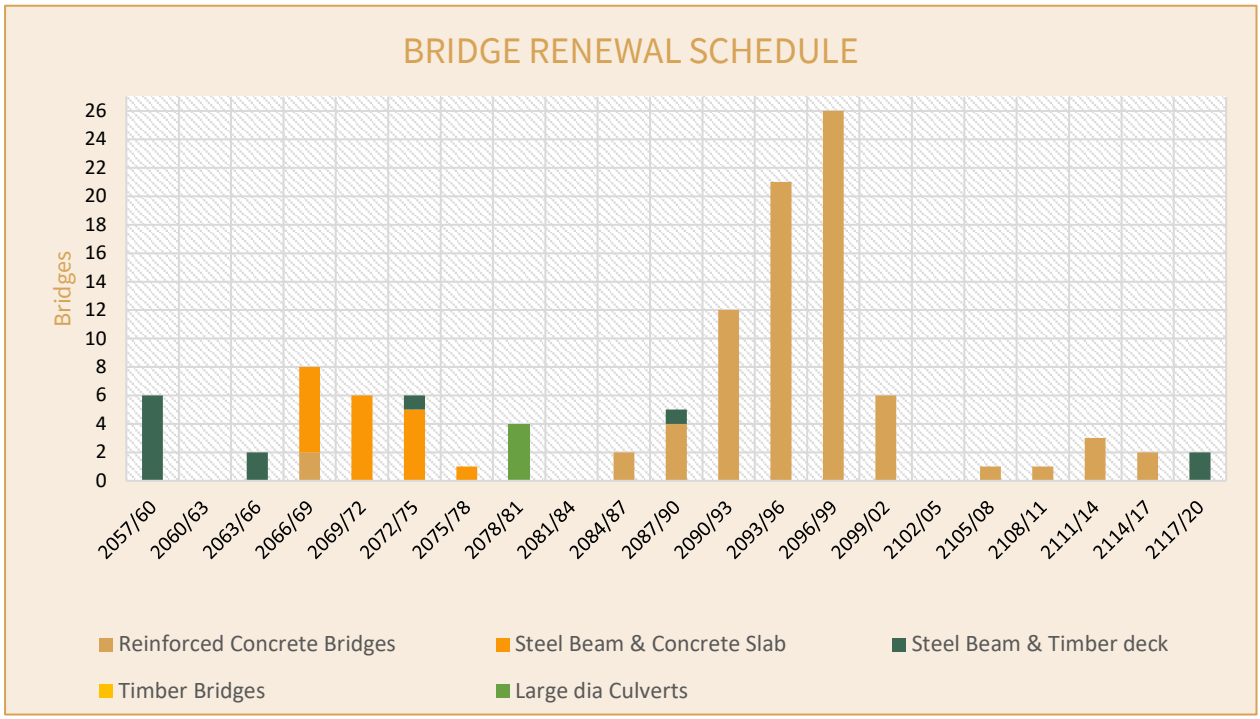
The bridges were constructed from 1910 onwards, with a large proportion constructed from the 1950s to 1960s. Most of the structures are generally in very good condition even though some of them are now over 100 years old.

Most of the bridges are of reinforced concrete construction, typically being either a reinforced concrete deck or timber deck on steel beams, with only a small number of fully timber bridges. Large diameter culverts of Armco construction or similar make up the remainder.

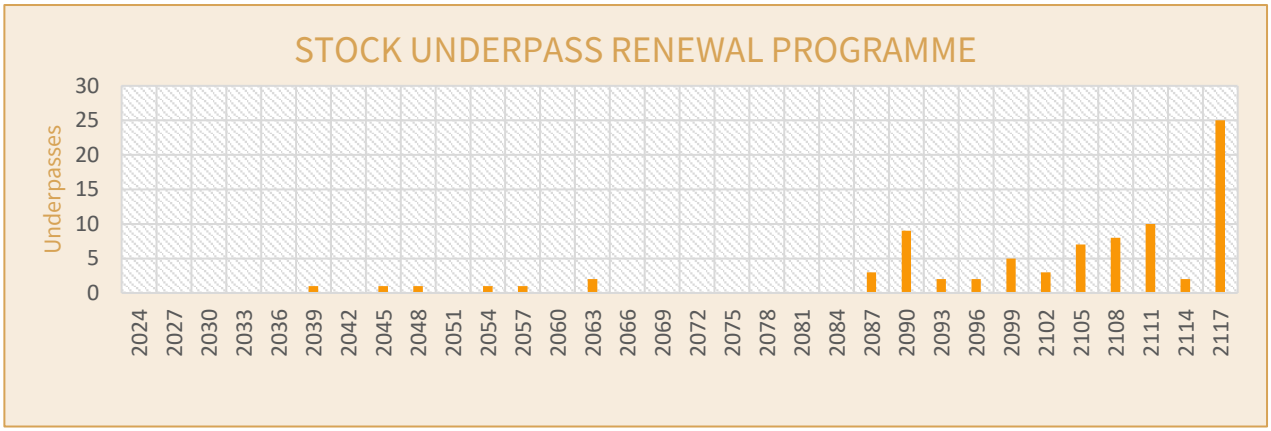
As the graph below shows there are no bridges planned for renewal until late 2050/early 2060. This does not include the current investigations into the replacement of the Wooster Culvert on River Road that may need replacing in this LTP cycle, this cost has been factored into the existing budgets.

After 2066 we will start a 20–30-year programme of bridge renewal that will be a significant cost to Ōtorohanga. Up until then regular inspections and maintenance will be continued to ensure the bridges reach their intended life.

Although there are no replacements, we will still invest $3.5 million on maintenance of existing structures over the next 10 years



As vested assets, stock underpasses are also our responsibility to replace. Currently we do not have any significant renewals until 2087, although there are several singular outliers in 2039, 2045, 2048, 2054 and 2057. As with bridges there is a bow wave of renewals to occur at and around the same time as the bridge renewal programme.



FOOTPATHS

Most footpaths have now been assessed for condition, with 61% being at an average or better condition. All the poor or very poor condition footpaths are of concrete construction, being a length of 4.3km or 3651m^2, and these have been programmed for repair/replacement.

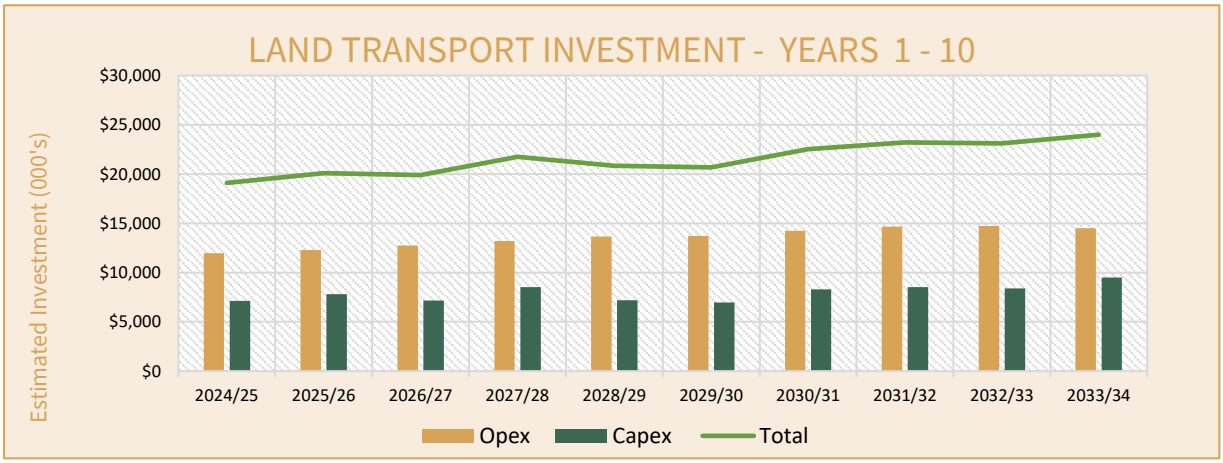
In general terms, the existing roadside footpath network is considered sufficient to meet the current needs of the community due to very low traffic volumes, few recorded pedestrian injuries on roads without footpaths and no requests for additional footpaths from residents.

Kāwhia Township has a lower proportion of roads with footpaths and continuation of a limited footpath expansion programme could be considered. However, for much of the year the holiday homes have low occupancy rates and consequently pedestrian traffic volumes are also very low. Combined with wide grassed berms which are generally free from physical obstructions and the local practice of utilising small four-wheel motorbikes for local trips (generally at speeds much lower than 50km/h) the pedestrian environment is very safe.

In the short term, the current Ōtorohanga Township footpath network is adequate and fit for purpose. A previous mobility audit in the central community in Ōtorohanga identified a small number of potential improvements which have largely been completed, however with the forecast change in the community makeup increasing the number of elderly residents, and the growing availability, performance and need for powered mobility aids, it is likely that the path network in both Ōtorohanga and Kāwhia will need to be considered in more detail in future.

Council have planned to invest $3.6 million in footpath renewal over the next 10 years.

LAND TRANSPORT INVESTMENT



	2024/25 (000,s)	2025/26 (000,s)	2026/27 (000,s)	2027/28 (000,s)	2028/29 (000,s)	2029/30 (000,s)	2030/31 (000,s)	2031/32 (000,s)	2032/33 (000,s)	2033/34 (000,s)
Opex	11,966	12,297	12,733	13,214	13,646	13,717	14,241	14,666	14,727	14,505
Capex	7132	7,795	7,170	8,520	7,179	6,961	8,283	8,533	8,386	9,488
Total	19,098	20,092	19,903	21,734	20,825	20,678	22,524	23,199	23,113	23,993

	2034/39 (000's)	2039/44 (000's)	2044/49 (000's)	2049/54 (000's)
Opex	79,374	89,332	98,594	107,676
Capex	33,570	37,195	40,784	44,123
Total	112,944	126,527	139,378	151,799

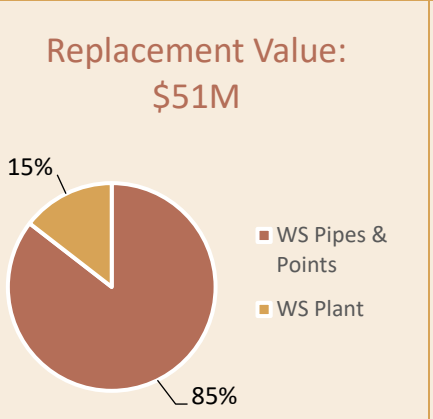
THREE WATERS

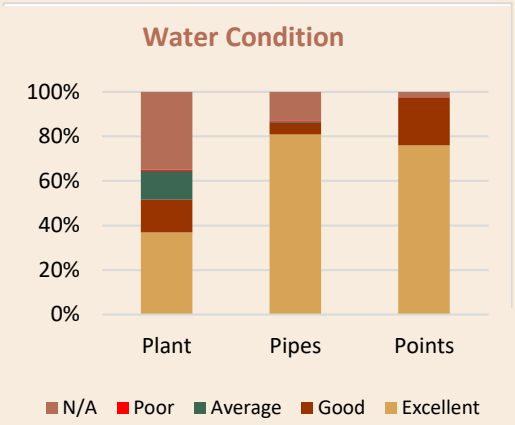
INFRASTRUCTURE SUMMARIES

INFRASTRUCTURE SUMMARY - WATER SUPPLY							
AIM	To provide a reliable, compliant, and cost-effective supply of safe, potable water in reticulated communities.						
GOALS	A reliable water supply	Water provided at a consistent volume.	Water looks and tastes good	Interruptions to supply are minimised	Water provided is safe to drink	Issues relating to water supplies responded to	Wastage of water is minimised

Schemes:

- Ōtorohanga / Waipa
- Tihiroa
- Kāwhia
- Kahorekau
- Huirimu
- Taupaki
- Ranginui (Stock Only)

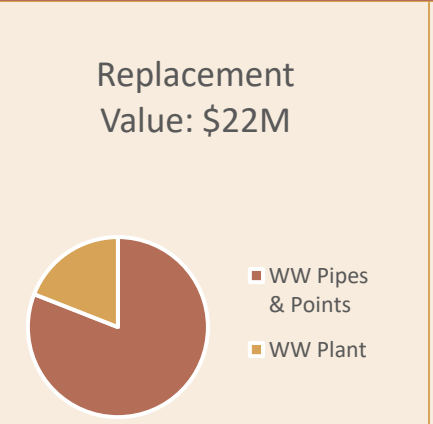


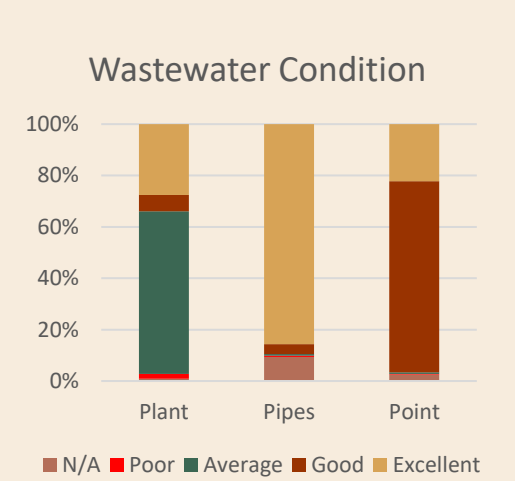


INFRASTRUCTURE SUMMARY - WASTEWATER				
AIM	To provide compliant network systems for the urban areas with a reliable wastewater system that protects people's health and our environment.			
GOALS	A reliable wastewater service	Risks to public health and our natural environment are minimised	We respond quickly to customer complaints	Services meet customer expectations

Schemes:

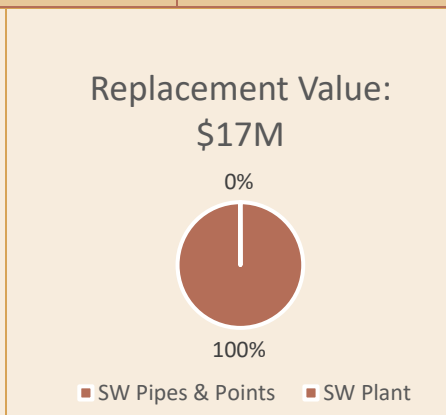
- Ōtorohanga Only

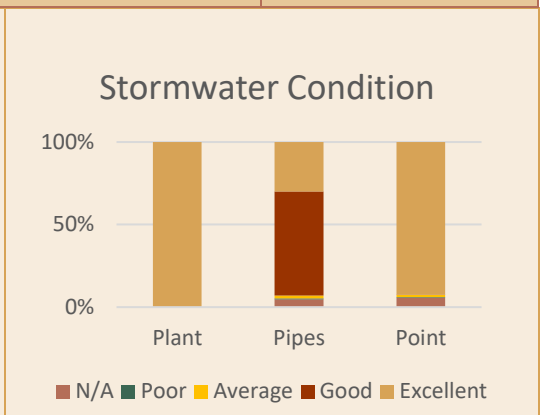




INFRASTRUCTURE SUMMARY - STORMWATER				
AIM	To provide compliant network systems for the urban areas with a reliable stormwater system that protects people's health and our environment.			
GOALS	A reliable stormwater service	Risks to public health and our natural environment are minimised	We respond quickly to customer complaints	Services meet customer expectations

Schemes:
- Ōtorohanga
- Kāwhia





WHAT WE DO

With the significant change in direction from central government following the 2023 general election and the subsequent repealing of the Water Services Entities Act 2022, local councils have retained responsibility for managing and delivering services for three waters. Our approach continues to be ensuring that we manage existing three waters infrastructure assets efficiently, effectively and with a level of financial prudence. This is particularly important given the significant investment we have made in the assets over the last three years.

In the immediate future it is our intention to progress a smaller renewals programme than what was carried out the previous three years. This does not mean sweating assets, but rather taking a conservative approach until there are clear indications of what new government policy will look like under *Local Water Done Well* and, once there is more clarity, we will explore options for the district under the government's new regime.

We manage six water networks and reticulations across the district, two urban networks Ōtorohanga and Kāwhia and four rural Water Schemes (RWS):
- Waipā RWS (connected to Ōtorohanga)
- Arohena RWS located in the east of the district
- Tihiroa RWS to the north of the district
- Ranginui, which is stock water only on our southern border with Taupō District.

Currently there is only one wastewater network in the district and it services the Ōtorohanga community. Although there are no plans in the immediate future to invest in any further reticulated wastewater systems, Kāwhia is still considered in need of a system to protect public health and support local economic growth.

Both Ōtorohanga and Kāwhia have reticulated stormwater assets within the urban area, with Kāwhia stormwater discharging into the Kāwhia Harbour and Ōtorohanga stormwater discharging into the Waipa River. Both systems hold comprehensive consents which are currently being renewed with Waikato Regional Council.

WHAT INFLUENCES OUR APPROACH

Investment in three waters infrastructure is one of the most significant of all our activities second only to land transport. the cost of maintaining and developing our assets needs to be affordable for current and future ratepayers.

Our approach to ensuring that we manage existing infrastructure assets efficiently and effectively and invest in new infrastructure assets wisely is based on our Criteria for Asset Renewal process outlined above (see page 16). However, although renewal programmes are developed using these criteria, it is not an exact science, and a sense check is also applied to ensure that the asset has reached its full potential and is not being renewed prematurely, while also not extracting more value from an asset beyond its original intended use.

Initial asset renewal/replacement strategies are largely age based, depending on when the existing asset was constructed and its expected useful life. This is especially relevant for underground water reticulation infrastructure and although we have made some improvements in this area, minimal condition information exists due to the cost and complexity of collecting the data.

Replacement of assets is only one part of the management of the three waters activity. Compliance is increasingly adding cost to operational expenditure. Meeting Drinking Water Quality Assurance Rules and changes in the climate also increase pressures on our ability to maintain an affordable level of service for the community. To meet the extra demands for information, over last few years we have had to make substantial investments in monitoring and collecting data through telemetry and SCADA systems.

A growing cost for us is maintenance due to the increasing complexity of the plants and associated equipment. More and more staff are becoming plant operators with all substantive reticulation repairs now having to be carried out by contractors adding further expense.

Meeting resource consent conditions and renewing consents for water takes and discharges is a another area of increasing expense. Renewal of consents often requires technical experts that cannot be provided in house, necessitating the need for consultants to fill the knowledge gaps. Furthermore, once the renewal process starts, we have very little control over the process or the cost. These increased costs to maintain and renew consents is not set to change anytime soon and will continue to place financial pressures on the three waters activity.

Climate change and extreme weather events will have an influence on how we manage the three waters. The key considerations are long dry spells resulting in low water flows in our rivers, streams, and springs, these low flows often coinciding with high demands for water. High intensity rain events are putting more pressure on stormwater networks and pumps.

Investment in resilience is important but there needs to be a pragmatic approach also as there is a cost associated with resilience. Resilience is not just about larger pipes and building things bigger, it is about being able to withstand events and recover quickly. We have invested in increased water storage and have generator readied our Ōtorohanga and Kāwhia water treatment plants, our sewer pump stations and stormwater pump stations. In addition, we have invested significantly in our wastewater network and critical water mains and we will continue to invest wisely into assets with resilience in mind.

SIGNIFICANT ACTIVITIES AND ABILITY TO ACCOMMODATE DEMAND CHANGES

WATER

As detailed in our asset management plans, with moderate investment Ōtorohanga and Kāwhia can cater for the future demands expected over the next 10 years including the additional 128 lot subdivision in Ōtorohanga.

Ōtorohanga water take is due for renewal in 2028 and current abstraction rates will be sought with a level of future redundancy. The largest demand on Ōtorohanga is during the summer months when 35% of the water treated is sent to the Waipā RWS. With increased storage in Ōtorohanga and the Waipā RWS, Ōtorohanga has the resilience to maintain a good level of service. Investment in 2028 on improving the capacity of the clarifiers at the plant will further accommodate any changes in demand.

The significant investment in upgrading Kāwhia water assets and the introduction of water meters has improved the capacity of the water treatment plant to meet demand. While Kāwhia continues to be under pressure during the holiday season, improvement in the supply since the upgrades are evident. An

alternative water source for the township will need to be considered long term but not within the next 10 years.

Rural Water Schemes are reaching capacity with little room for further development or new connections, especially in Tihiroa and Kahorekau. Tihiroa's water take consent is due for renewal in 2026 and existing conditions will be sought along with further water for redundancy to meet future needs.

Unaccounted for water (ie. water losses) is an ongoing concern for all our schemes with Ōtorohanga having high levels of unaccounted for water in 2022-23. Water leaks are repaired expediently but the unaccounted water showing in our calculations is proving very difficult to locate. A budget has been provided for leak detection in the 2024/34 LTP.

ABILITY TO COMPLY WITH DRINKING WATER QUALITY ASSURANCE RULES

Ōtorohanga, Kāwhia and Tihiroa can meet Drinking Water Quality Assurance Rules (DWQAR) but have fallen short of full compliance in the last few years due to technical non compliances around sampling and turbidity limits. Components of the Arohena RWS not compliant and are under permanent boil water notices.

In October 2023 we received instruction to provide a funding plan to bring Kahorekau and Huirimu[14] up to protozoa compliance. Given the small rating base, our current position is that no further investment will be made in these schemes to comply with the DWQAR and we will continue to leave the schemes under a permanent boil water notice. However, although we have taken this position, we are investigating the compliance needed to meet the DWQAR as there have been changes in the requirements for rural water supplies which differ from the previous Drinking Water Standards. These changes may mean there is the ability for these schemes to reach compliance by making minor adjustments but at this stage it is too soon to know.

WASTEWATER

Ōtorohanga is the only community with reticulated public wastewater network and wastewater treatment plant. We have invested significantly in this network with a new pump station on Harper Avenue, upgrade to the Te Kawa pump station and trunk sewer main on Rangitahi Street. Further work as part of this programme is scheduled to start in 2024/25 with the upgrade of Kakamutu Road – Phillips Avenue sewer main. We will continue with our sewer main renewal programme but at a more moderate level.

The wastewater treatment plant is situated to the north of Ōtorohanga Township. There are two main issues we need to consider in relation to the plant.

- Future development on site is limited due to the plant being landlocked and access difficult. It is important that we explore options to acquire further land.
- Although compliance is achieved for most consent conditions, there are challenges with the levels of discharge contaminants from the plant and managing the sludge within the main oxidation pond. To improve the plant, we are investing in desludging of the main pond, installation of a grit removal system on the inlet structure and mechanical clarification to replace the coagulation ponds.

The Kāwhia community is still in need of a public wastewater system in the medium to long term. Concept plans were designed during the last LTP and, although feasible, the system was unaffordable for the community. Aside from cost, we don't have a suitable site for effluent disposal and this would need to be confirmed before any public wastewater system could be built. Until funding becomes available, we will not be progressing wastewater in Kāwhia in the short term.

STORMWATER

Both Ōtorohanga and Kāwhia have limited stormwater reticulation consisting of pipes and open drains, which have met the needs of the communities for many years. Recently with the increased extreme rain events parts of the networks no long able to cope due to limited capacity and this has resulted in some

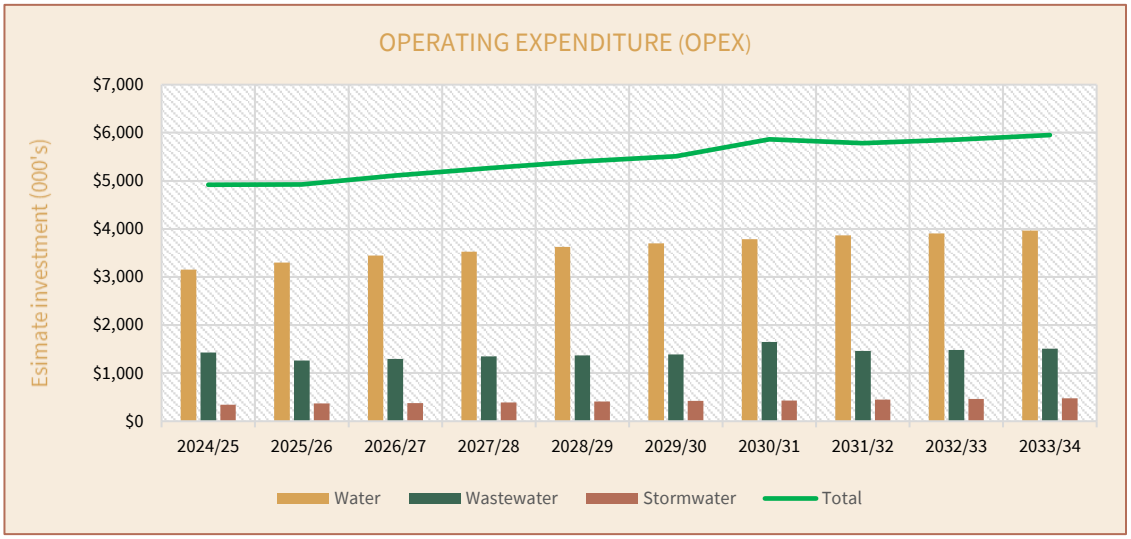
[14] Kahorekau and Huirimu are part of the Arohena RWS.

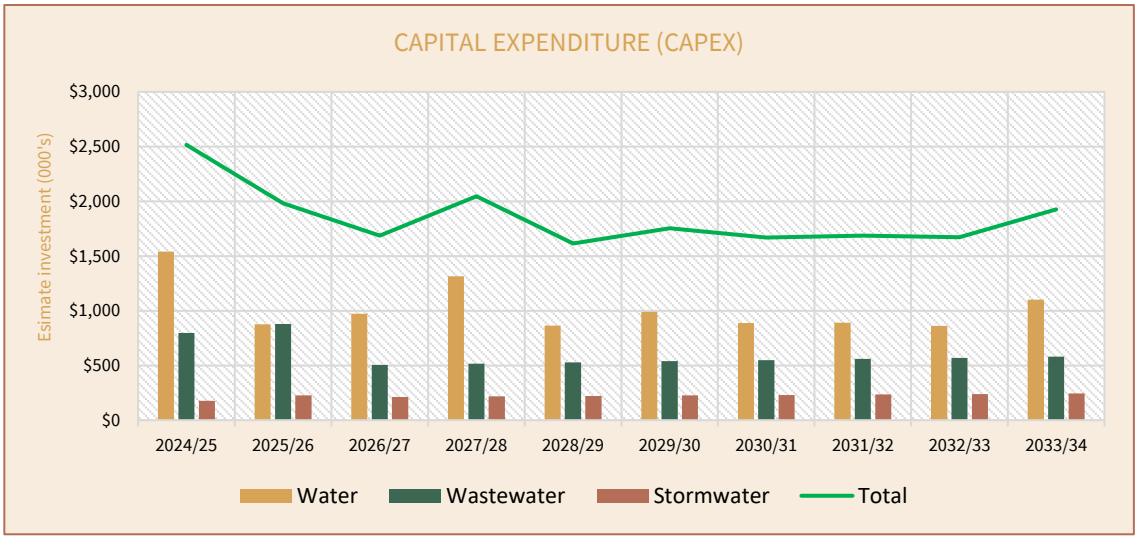
surface flooding on roads and open spaces. However, these events are generally short lived and recede rapidly.

Ōtorohanga stormwater network is interconnected with the Ōtorohanga flood protection assets with the majority of stormwater passing through the three flood pump stations. Although separate activities they are maintained as one activity by the water services team.

This LTP we are increasing the investment in stormwater renewal programme which will be informed by the condition assessment programme.

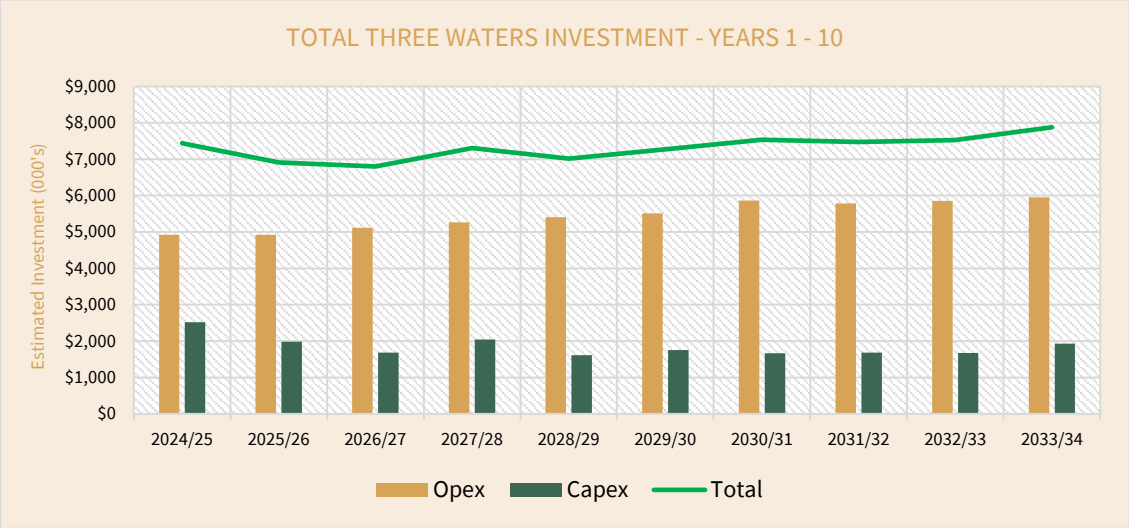
THREE WATERS INVESTMENT





	2024/25 (000's)	2025/26 (000's)	2026/27 (000's)	2027/28 (000's)	2028/29 (000's)	2029/30 (000's)	2030/31 (000's)	2031/32 (000's)	2032/33 (000's)	2033/34 (000's)
Opex	4,918	4,925	5,113	5,262	5,403	5,513	5,865	5,785	5,853	5,952
Capex	2,516	1,982	1,687	2,047	1,615	1,754	1,669	1,686	1,672	1,926
Total	7,434	6,907	6,800	7,309	7,018	7,267	7,534	7,471	7,525	7,878

	2034/39 (000's)	2039/44 (000's)	2044/49 (000's)	2049/54 (000's)
Opex	30,996	34,025	37,090	38,594
Capex	8,872	9,776	10,681	11,584
Total	39,868	43,801	47,771	50,178



WATER

Project	($000's)
Pipe Renewals	$2,500
Plant Renewals	$200
Point Renewals	$180
Water Meter Renewals	$300
Tūrongo St & Main North Road Water Main Renewals	$500
Development Sundry	$500
Leak Detection investigation	$160
Tihiroa Resource Consent renewal	$150
Tihiroa Smart Meter Project	$70
Cannon Road Water main renewal	$100
Tihiroa High Lift Pumps	$60
Ōtorohanga Resource Consent Renewals	$150
MEICA – (Mechanical, Electrical, Instrumentation, Control and Automation) Network & Plant	$210
Ōtorohanga Water Treatment Plant – Clarifier Upgrades	$300
Ōtorohanga Water Treatment Plant – staff facilities upgrade	$90
Designated carrier fill station	$50
Ōtorohanga Treatment Plant – Filter media renewal	$200
Ōtorohanga & Kāwhia Treatment Plant Pump renewals	$175
Sundry Renewals – (combined value across all water schemes)	$1,550
Sludge Pond Backwash discharge	$50
Treatment Plant H&S Improvements	$50
Building Improvements	$30
Turbidity meter renewals	$40

WASTEWATER

Project	($000's)
Pipe Renewals	$2,250
MEICA – (Mechanical, Electrical, Instrumentation, Control and Automation)	$985
Replacement of Te Kawa St Rising Main	$500
Development Sundry	$500
Sundry Renewals	$300
Ōtorohanga WWTP Grit Separation/clarification	$440
Pump Renewals	$230
WWTP pond desludging	$460
Points Renewals	$70
Plant Renewals	$160
H&S Improvements	$50

STORMWATER

Project	$(000's)
Renewals – Ōtorohanga/Kāwhia	$960
Condition Assessments	$100
Kakamutu Rd & Domain Dr Stormwater Investigation	$130
Development Sundry	$525
Sundry Renewals	$250
Catchment improvements – Ōtorohanga & Kāwhia	$40

FLOOD PROTECTION

BACKGROUND

Ōtorohanga township was established on a flood plain of the unpredictable Waipā River. While flooding was always a risk, the February 1958 flood event was catastrophic. Most of the town centre was inundated and homes in low-lying areas and the recently opened Ōtorohanga South School were also flooded. This event was the catalyst for the Ōtorohanga Flood Protection (ŌFP) Scheme which was opened 1966 at a cost of $885,000 pounds.

Design of the ŌFP Scheme stopbanks was done by Ministry of Works for the Waikato Valley Authority and construction started in 1962. Built of river metal, faced with clay, the stopbanks had a core beneath the surface dug 1.5 metres deep and 4 metres wide. This core was filled with compacted clay and there was almost as much fill below ground as above. The level at the top had to be consistent.

Over the years the ŌFP Scheme has stood the test of time and prevented events similar to the 1958 flood. Today, the stopbanks and adjacent land are appreciated by the community for not only flood protection but also their amenity value. In 2018 the northern stopbanks were retired from grazing and a new shared pathway was constructed providing a walking/cycling route around the township. Although this has created an excellent connection for pedestrians and recreational users more maintenance, in particular mowing is now required.

ŌTOROHANGA STOPBANK CONSTRUCTION 1962 *Photo courtesy of Ōtorohanga Museum Archives*

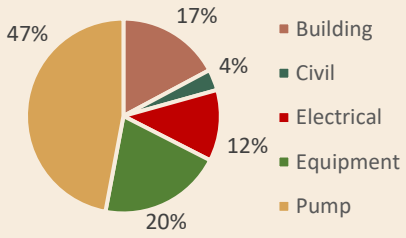
FLOOD PROTECTION INFRASTRUCTURE SUMMARY

INFRASTRUCTURE SUMMARY - FLOOD PROTECTION			
AIM	Protection of community property from flooding by providing systems that enable stormwater to dissipate as quickly as practicable, while increasing the amenity value of the flood reserves areas and connection to the Waipā River.		
GOALS	Affordable protection for urban community assets, commercial properties, and habitable dwellings from flood events, while improving amenity value to the community.	Primarily providing reliable flood protection network, secondly increasing the connection to the river for recreation users	Council ensures quality and efficiency of the flood protection network without detriment to the environment.

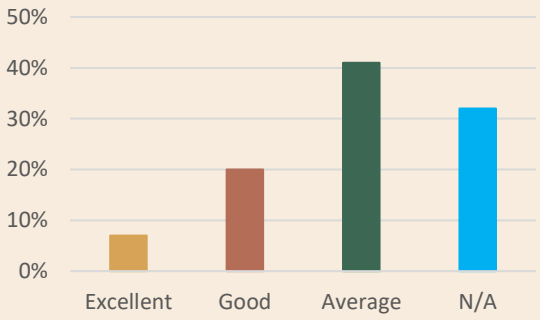
Schemes:

- Mair Street
- Huiputea Drive
- Otewa Road

Replacement Value: $2M



Condition:



ADDITIONAL INFORMATION

Council has never depreciated the stopbank but are reviewing the level of depreciation required for the future. Current estimates of stopbank replacement value at $6 million, depending on the available of materials close to project.

LEVELS OF SERVICE

Ōtorohanga District Council owns the stopbanks and all the assets that make up the ŌFP Scheme. The Scheme is part of the wider Project Watershed administered by Waikato Regional Council (WRC) for the overall management and co-ordination of river and catchment management within the entire catchment. WRC has divided the catchment of the Waikato River into five management zones based on sub catchments or sections of the main river channel. One of these catchments is the Waipā Zone.

We have a Service Level Agreement (SLA) with WRC and receive annual funding as part of Project Watershed. The objectives under Project Watershed for the Ōtorohanga Township Area of the Waipā Zone include:

- Management and maintenance of the Waipā River channel and its tributaries.
- Maintenance of the stopbanks and pump stations for the purposes of ensuring the overall channel capacity and stability is maintained
- Ensuring that the integrity of the flood control assets are not compromised (this includes the objective of reducing surface flooding and control of erosion in the main channel and associated tributary streams).

As part of the SLA, we are required to report annually on the operation and maintenance of the flood protection assets. A new SLA is currently being negotiated with WRC which will improve reporting and resilience of the scheme into the future.

LEVEL OF SERVICE CHANGES

In recent years the amenity values of the ŌFP Scheme stopbanks have been enhanced. The retirement of the northern stopbanks, the change from grazing to cut and carry, and formation of Te Ara a Waiwaia I O-Rahiri (Ōtorohanga Stopbank Pathway) and associated riparian planting has created a recreation space well used by the community.

The higher amenity value has necessitated a higher level of maintenance including mowing and fertilizing of 3.5 kilometres of previously grazed stopbank. Currently funded from rates collected by WRC through Project Watershed, this increased level of service costs upwards of $60k per annum. WRC have noted during discussions on the renewal of the SLA that the extent of mowing now required is not related to flood protection and therefore not appropriate use of Project Watershed funding. From 2024/25 mowing costs will be our responsibility funded from the land transport budget (the shared pathway is classified as a roading asset).

The Te Ara a Waiwaia planting project on the northern side of the Waipā River has also contributed to the changing use and the opening up of this area more to recreation. However, it also means we have ongoing responsibility for maintaining the riparian planting.

In 2024/25 the area of grazing around the Otewa Road pump station is also to be retired for construction of a wetland and furthering the amenity value. This work will improve the quality of stormwater entering the pump station and discharging into the Waipā River. It will also coincide with the additional riparian planting on the confluence of the Mangawhero and Waipā Rivers and other catchment improvements. The disadvantages of making this change are:

- Small loss in grazing income ($5k)
- Increased maintenance costs for ongoing mowing and riparian planting ($3k per annum) as these costs will not be eligible for Project Watershed funding.

FLOODING RISK

We cannot predict when and where large flood events will occur, or the damage that may be sustained during such a flood. The ŌFP Scheme stopbanks have never been put under any significant pressure since they were built and, although the risk is considered low, in a large event there is the potential for erosion or stopbank failure. We have assumed that if this occurs, we will have enough funds available to undertake repairs – whether it is through reprioritisation of maintenance activities or accessing emergency funding provisions from central government.

When large events happen more frequently, this may trigger higher expectations from our communities to provide a higher level of service. Providing a higher level of service will come at a higher cost and require more funding than has been budgeted for.

As with large floods, we also cannot reliably predict when moderate floods will occur or their impact. We have used historic trends to determine maintenance funding levels for the future and have assumed that these levels will be sufficient. If more floods occur than assumed, it is likely that we will be required to spend more than planned. If floods are less or more minor than assumed, it is likely that we will be required to spend less than planned.

Flooding is always a risk to Ōtorohanga and the stopbanks provide a level of security that should not be taken for granted. In 2004 the eastern side of Ōtorohanga was flooded but not due to failure of the stopbanks but from water that came across the flats to the east of town and came into Phillips Avenue. Although there was property damage it was limited to a small area.

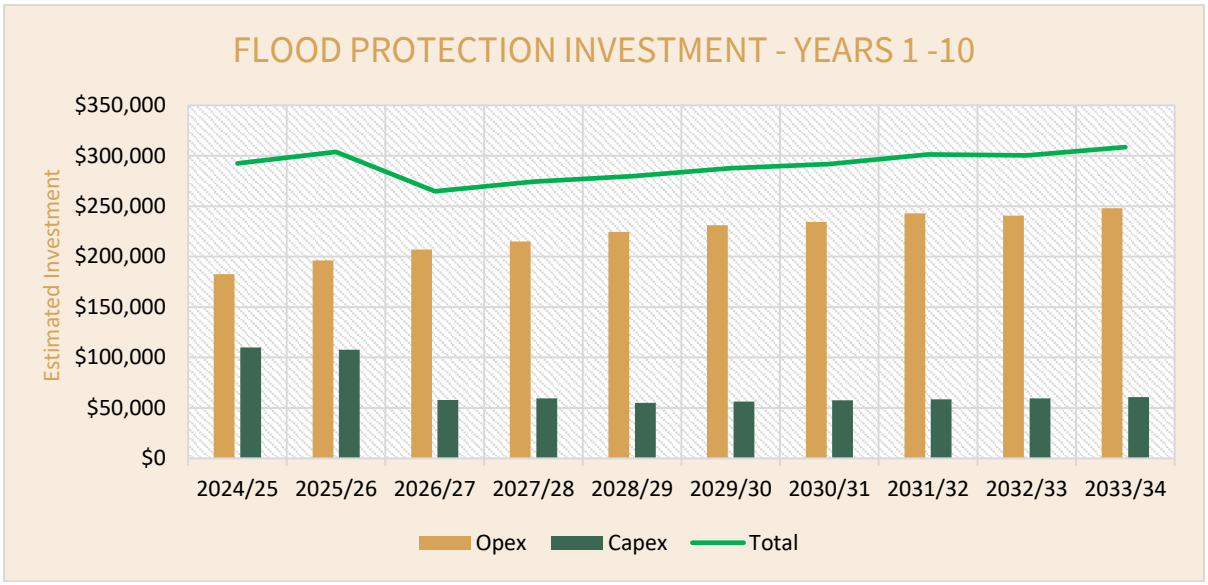
The building of the stopbanks keeps the river out, but also stops surface flooding from getting back to the river. To overcome this issue, three large flood pumps stations (eight pumps in total) are in place to pump water back to the river from with the banks. These are situated on Mair Street, Huiputea Drive and Otewa Road.

FLOOD PROTECTION INVESTMENT

We have invested significantly in the ŌFP Scheme over the last LTP with all three outflow pipes replaced or relined and several of the major flood pumps rebuilt.

While we have depreciated the physical assets over the life of the scheme, we have not depreciated the actual stopbanks. This is something that has been highlighted to us in the recent review of the SLA and will need to be factored into the 2027/37 LTP cycle. Depreciation is funded through Project Watershed and will be negotiated through future reviews of the SLA.

We will continue with the regular maintenance programme investing $2.9 million over the next 10 years.



	2024/25 (000's)	2025/26 (000's)	2026/27 (000's)	2027/28 (000's)	2028/29 (000's)	2029/30 (000's)	2030/31 (000's)	2031/32 (000's)	2032/33 (000's)	2033/34 (000's)
Opex	183	196	207	215	225	231	234	243	241	248
Capex	110	108	58	59	55	56	57	59	60	61
Total	293	304	265	274	280	287	291	302	301	309

	2034/39 (000's)	2039/44 (000's)	2044/49 (000's)	2049/54 (000's)
Opex	1,321	1,398	1,480	1,563
Capex	327	365	404	443
Total	1,648	1,763	1,884	2,006

FLOOD PROTECTION INVESTMENT PROGRAMME - 2024/34

Project	Cost $(000's)
Renewals – Ōtorohanga	$200
MEICA – (Mechanical, Electrical, Instrumentation, Control and Automation)	$300
Pump Refurbishments	$100
Otewa Road – Wetland Project	$25

COASTAL STRUCTURES

OVERVIEW

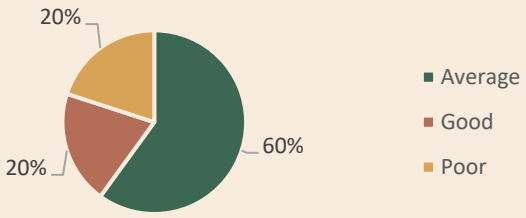
The sea and how people connect and access it is important for the social, economic, cultural and environmental wellbeing of communities. We're responsible for a number of significant assets that enhance this relationship communities have with the coast and the sea – assets that need to be maintained in an often harsh environment.

COASTAL STRUCTURES INFRASTRUCTURE SUMMARY

INFRASTRUCTURE SUMMARY - COASTAL STRUCTURES				
AIM	To provide a safe access to the sea while reducing the effects on the environment.			
GOALS	Assets are fit for purpose.	Monitored and maintained to an acceptable level.	Compliance with consents conditions.	Harmful effects on the environment reduced.

Asset Summary:		**Replacement Value:**	
Seawall	2 (Kāwhia, Aotea)	Seawall	$1,620,000
Wharf	1	Wharf	$575,000
Boat Ramp	3	Boat Ramp	$62,000
		TOTAL	**$2,257,000**

COASTAL STRUCTURES CONDITION RATING



ADDITIONAL INFORMATION

Council has limited information on the condition of the coastal structures and have recorded an average condition. We are about to undergo a full condition assessment in 2024/25.

WHAT WE DO

Our asset management activities relating to coastal structures include:

- Provision and maintenance of boat ramps around the district.
- Provision and maintenance of wharf and pontoon facilities.
- Protection of both council and private property from coastal erosion.

The key structures we maintain are:

- Kāwhia Wharf
- Kāwhia Seawalls
- Kāwhia Boat ramps
- Aotea Seawall

LEVELS OF SERVICE

Our goal is to ensure the access to the sea can be enjoyed by all while managing the effects of human activity on the environment and the physical effects on coastal property. We do this by:

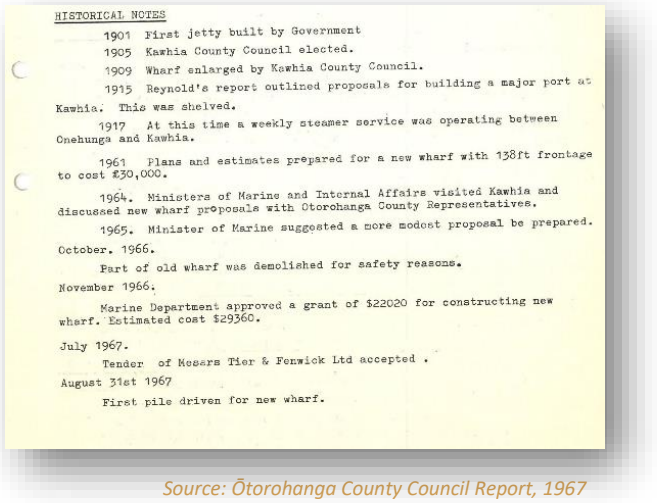
- Managing the effects of coastal erosion realising that prevention may not be achievable or affordable long term.
- Ensuring our structures are safe for the public to use

- Maintaining our coastal assets to an appropriate and affordable level that satisfies the community's expectations, with the realisation that we cannot hold back nature.

COASTAL STRUCTURES

KĀWHIA WHARF

The current Kāwhia wharf was constructed in 1967. It is an offset 'T' shape 45m long, 4.8m wide across the outward leg and with a head width of 19.2m. Construction consists of precast reinforced concrete piles driven to ultimate bearing of 54 tons and a very substantial vertical load limit of 38 tonnes. The deck is precast, prestressed slabs set inside poured in-situ pier capping which has since been overlaid with an asphaltic bitumen coating. Timber fender piles have been placed around the structure where ships berth.



HISTORICAL NOTES

1901 First jetty built by Government

1905 Kawhia County Council elected.

1909 Wharf enlarged by Kawhia County Council.

1915 Reynold's report outlined proposals for building a major port at Kawhia. This was shelved.

1917 At this time a weekly steamer service was operating between Onehunga and Kawhia.

1961 Plans and estimates prepared for a new wharf with 138ft frontage to cost £30,000.

1964. Ministers of Marine and Internal Affairs visited Kawhia and discussed new wharf proposals with Otorohanga County Representatives.

1965. Minister of Marine suggested a more modest proposal be prepared.

October. 1966.

Part of old wharf was demolished for safety reasons.

November 1966.

Marine Department approved a grant of $22020 for constructing new wharf. Estimated cost $29360.

July 1967.

Tender of Messrs Tier & Fenwick Ltd accepted .

August 31st 1967

First pile driven for new wharf.

Source: Ōtorohanga County Council Report, 1967

Use of the wharf has changed over time. When it was first constructed coastal shipping, fishing trawlers, passenger boats serving Te Maika were all frequent users along with occasional use by coastal vessels seeking shelter, including Naval Fishery Patrols. The wharf now only services recreational fisherman and a small number of fishing charters with the main commercial user being the Taharoa Ironsand maintenance vessel the Margerat J. The other main use for the wharf is a diving/bombing platform by the community during the summer months, despite warnings signs prohibiting this activity.

A report prepared in 2011 estimated that, with good maintenance, the wharf had 20 – 30 years of serviceable life remaining. Planning for its replacement would need to start between 2035 – 2040 and cost in the vicinity of $1.1 to $1.3 million in its current form. Long term considerations as the wharf reaches end of useful life are:

- Should the wharf remain as and where it is?
- Should the wharf be shifted to another site to accommodate greater commercial and visitor numbers, and larger ships?
- Should the current wharf be retained and replaced like for like?
- How would visitor and recreational uses and needs be provided for?
- Should an alternative cheaper option be considered?
- Who would pay for a new wharf?

Before any replacement is considered a feasibility study should be undertaken to ensure any replacement structure meets the needs of the users and the community.

Although the wharf is used by commercial operators the income from the wharf is negligible and will not cover the long-term replacement.

Planned Expenditure - Next Ten Years

A full structural assessment of the wharf has not been undertaken since 2011. However, regular diver inspections are carried out to identify obvious defects and several wooden piles on the main wharf and the pontoon have been replace within the last five years. An assessment is planned in 2025/26 as part of the wider coastal structure conditional assessment being carried out utilising government funding.

A small sundry budget of $8k for minor repairs has been provided in 2024/25 and $51k has been budgeted in 2025/26 for any capital investment informed by the condition assessment. This budget may be adjusted at the 2025/26 annual plan if it is determined insufficient after reviewing the assessment.

KĀWHIA SEAWALLS

We hold resource consents authorising various long term existing seawall and groyne structures adjacent to Kāwhia Township in Kāwhia Harbour. The structures range from concrete seawalls, gabion baskets, riprap, timber retaining walls and timber groynes located in 12 sections along the foreshore (Figure 1). In addition, a separate resource consent is held for the wooden seawall in the Omimiti reserve extending from the museum around to Kāwhia Motors. All consents are due to expire in 2029.

Maintenance of the seawalls is our responsibility and only the bare minimum to meet compliance has been done for many years. Recently we have been fortunate to secure funding from central government to apply to the various structure within the next five years. Planning for the project has started and the project itself will begin with an up to date condition assessment to inform any future maintenance. This work will also form part of the future consent renewal process.

Planned Expenditure - Next Ten Years

Government funding of $730k has been provided for the condition assessment, maintenance, and the consent renewal process however, there is a possibility that this will not be enough to cover the project and additional funding maybe required.

KĀWHIA BOAT RAMPS

There are three boat ramps in Kāwhia which are used free of charge by the public. The level of service around the boat ramps is continued reactive maintenance as and when required and any work is funded through the Kāwhia harbour services budgets.

The boat ramp on Kaora Street was upgraded in 2014, but very little maintenance has been carried out since then except for minor repairs. This boat ramp is subject to a current resource consent which expires in 2040.

While there is no specific expenditure planned for boat ramps in 2024/25 to 2026/27, these structures will be incorporated into the condition assessment of the Kāwhia foreshore structures.

AOTEA SEAWALL

The Aotea seawall lies within the Coastal Marine Area (CMA) and provides low-lying properties and the Aotea community with protection from coastal erosion and inundation. We hold the resource consent for the seawall and have overall responsibility for its maintenance on behalf of Aotea residents and ratepayers.

Granted in 2003, the existing resource consent was to construct a 750 m long wooden seawall fronted with rock armour and in so doing reclaiming approximately 4,000 m^2 of the CMA, on the seaward side of the line of mean high-water springs (MHWS) adjacent to Lawton Drive, Aotea. The consent duration was for 20 years

and expired May 2023. Application for a 35-year renewal was lodged prior to the original consent expiring and the seawall is currently operating under existing use conditions under the Resource Management Act.

The consent renewal lodged with WRC seeks to keep the seawall in place and includes:

- Retaining the existing seawall as a coastal defence structure to manage coastal erosion andprotect property loss
- Mitigate any adverse effects on the CMA
- Undertake any necessary maintenance, as a condition of consent
- Maintain ongoing monitoring, including annual reporting on the seabed and structural integrity.

Based on the products used in the construction, the seawall has a useful life of 50 years. It is likely that to obtain a 35 year consent considerable improvements will need to be made including increasing the crest level of the wall to reduce inundation, and replacement of portions of the rock revetment.

We will continue to maintain the seawall based on existing levels of service (LOS), however the condition assessment carried out by our consultants has identified a need for an increase in LOS. Early indications from the renewal process also suggest a need for some capital investment, mainly around the rock revetment associated with the deterioration of the limestone rock used in the seawall's construction. We are currently investigating whether the government funding for the Kāwhia seawalls can also be applied to Aotea.

Planned Expenditure in the Next Ten Years

Consent conditions and any associated costs will not be known until the resource consent is granted. However, $50k has been budgeted for three years from 2025/26 to 2027/28 for any immediate maintenance needed to meet new consent conditions.

COASTAL STRUCTURES INVESTMENT

	2024/25 (000,s)	2025/26 (000,s)	2026/27 (000,s)	2027/28 (000,s)	2028/29 (000,s)	2029/30 (000,s)	2030/31 (000,s)	2031/32 (000,s)	2032/33 (000,s)	2033/34 (000,s)
Opex	138	241	197	202	162	164	165	166	170	173
Capex	8	54	3	67	30	3	3	3	73	33
Total	146	295	200	269	193	167	168	170	244	206

	2034/39 (000's)	2039/44 (000's)	2044/49 (000's)	2049/54 (000's)
Opex	891	825	807	835
Capex	19	21	22	14
Total	910	846	829	849

ACTIVITY RISKS

RISK MANAGEMENT

RISK TO SERVICE DELIVERY

It is a general expectation of the community and stakeholders that our infrastructure and networks will always be available for use, even if occasional minor reductions in standards are experienced. However, there is always a risk that circumstances or events will result in a reduced level of service, including partial unavailability. Recent events such as Cyclones Hale and Gabrielle have highlighted the potential for events to have a major and ongoing effect on a community. In response to these potential risks, we have significantly reviewed the risk sections of our Asset Management Plans and other relevant documents.

POTENTIAL RISKS

The possible risks to service delivery facing the Ōtorohanga District can be separated into two principal areas - external risk and internal risk - each with its own likelihood of occurrence as discussed below:

EXTERNAL RISK

- Climate change (extreme rain events, rising sea levels, extending dry periods)
- Earthquake
- Volcanic activity
- Changes in regional or central government policy
- Pandemic
- Construction sector capacity and capability
- Funding availability

INTERNAL RISK

- Council management performance
- Council staff leaving and unable to find replacements (Market conditions)
- Asset capability
- Poor asset information leading to poor decision making

EXTREME WEATHER EVENTS

In the past Ōtorohanga District has experienced damaging extreme weather events sufficient to cause a loss of service to our communities. In 1958 a reportedly 1 in 100 year rainstorm caused widespread flooding and damage, particularly in the Ōtorohanga Township (now protected by flood stop banks) as well as widespread damage to rural roads and bridges.

Localised heavy rainfall events have often occurred which have caused washouts and slips/slumps blocking or destroying discrete sections of the rural network, taking a few weeks to return to full service. The potential effects of climate change may increase the likelihood of these sorts of events in the future, and recent weather patterns support the potential for climate change to have a noticeable impact on the frequency of extreme rainfall events.

It is considered that heavy rainfall events are the most likely event to impact our infrastructure, effecting roads, bridges and access and affecting our ability to treat water and wastewater. For our land transport network, in a medium-term return period event, damage is likely to be localised and, while not significant across the network, affected areas could suffer from loss of access for periods of several weeks or months, as evidenced in recent storm events.

Swollen rivers for long periods affect our water treatment processes and can often result in being unable to treat water for extended periods. Increased storage capacity has helped to reduce our exposure to the effects of these events to a more acceptable level.

Although the wastewater ponds have considerable retention capacity prolonged rain can increase the risk of ponds overflowing. Provisions within the Resource Management Act provide a mechanism to discharge directly to water courses to protect infrastructure and we have used this provision in the past.

While avoiding the heaviest impact of the recent extreme weather events – Cyclones Hale and Gabrielle – the Ōtorohanga District roading network showed good resilience traits and stood up well. However, the risk remains significant as evidenced by the devastation in the Coromandel, Gisborne and Hawkes Bay Regions, which geographically are not that far away from Ōtorohanga District.

SIGNIFICANT ISSUES

The following tables set out the significant issues for each type of infrastructure. A high-level summary on the implications of the issues and Council's suggested response is included against each issue

LAND TRANSPORT

AFFORDABILITY	
Significant Risk	Due to our small local rate payer base relative to the size of our large road network, Council are reliant on National Land Transport Fund subsidies to fund the transportation activity. This is currently set at 61% and will increase to 63% from 01/07/24.
Proposed Mitigation	Council has a high confidence in the underlying asset information that underpins the 2024-34 Transportation Asset Management Plan. Local Government NZ and NZTA - Waka Kōtahi identifies and showcases optimal asset management and maintenance practices. This gives Council confidence in asset data and required levels of funding.
Implications	Reduced support from Central Government via co-investment, would require Council to lower the maintenance and renewal programmes across the district roads. This would have a direct negative impact on safety and freight productivity, alternatively council may decide to rate fund any shortfall.
AFFORDABILITY # 2	
Significant Risk	Council have seen significant cost increases in getting work done over the last three years. To maintain the current level of service is going to put further strain on the existing ratepayer base, especially if there are any reductions in subsidised funds from central government.
Proposed mitigation	Continue to manage the current levels of service and consolidate spending into the critical areas, so long life assets do not deteriorate, or large costs will be incurred in the long term
Implications	Without the required investment assets will not reach potential useful lives.
ASSET FORM, AGE AND CONDITION	
Significant Risk	Increasing number of lifestyle blocks in our rural areas may lead to more conflicts with heavy vehicles causing increased safety risk and deterioration of road shoulders and edges of seal.
Proposed Mitigation	Funding has been included in the LTP for: • Continue to identify improvements within the network where justified. • Road widening associated with pavement rehabilitation. • Road widening associated with reseal.
Implications	No impact.
PUBLIC ACCESS FOR RECREATIONAL USERS	
Significant risk	Council in the past has looked to divest public road on low volumes roads to reduce road maintenance costs, but at the detriment to public access to recreational areas. Often resulting in challenging discussions between landowners, the recreational user and consuming staff time.
Proposed mitigation	Upskilling staff on the rules and roles councils play in maintaining public access to recreational areas over low volume and unformed roads is critical as caretakers of the crown land. Council should not be divesting roads to private users, but more so protecting public access rights to our natural resources.

Implications	This may result in an extra cost to council, but it is believed to be minimal. This will improve access to rivers, streams and native forestry for the public to use and enjoy.
ENVIRONMENTAL IMPACTS	
Significant Risk	Changing climate conditions highlight that our road network is vulnerable to significant environmental events affecting reliability and resilience.
Proposed Mitigation	Our key action is to ensure that road drainage is adequate and well-maintained to decrease the likelihood of landslides or land movement for roads built on unstable land. We also take a proactive approach to inspecting roads during and before known storm events, particularly those segments straddling unstable land. If roads are damaged, but do not need to be completely closed, we may need to put restrictions in place to ensure the safety of road users, for example, reducing sections of road to one lane or putting speed reductions in place.
Implications	Continue working with maintenance contractor to ensure proactive inspections of culverts and water table outlets. We will continue to use practical solutions to repairs to reduce cost to ratepayers.
ENVIRONMENTAL IMPACTS #2	
Significant Risk	Stormwater systems beside roads in the urban area are generally high in contaminants from brake linings, and oils from engine fuels, or resealing cutbacks. This can affect Council's stormwater consents.
Proposed Mitigation	Continue to look at ways to improve the quality of water that runs off road surfaces and enters the stormwater network, through treatment devices.
Implications	Any changes are likely to be slow and will take years to implement
DISTRICT GROWTH	
Significant Risk	Additional residential growth may create increased demand for urban transport infrastructure, such as footpaths, and other walking and cycling facilities.
Proposed Mitigation	Increasing numbers of elderly residents using mobility scooters rather than personal cars will lead to more conflicts on footpaths. Whilst the previous footpath width of 1.4m was adequate for pedestrians and push chairs, 2m and above is required to enable two mobility scooters to safely pass in opposing directions, especially when the berms are wet through winter. Council can utilise some of the development contributions received towards these upgrades.
Implications	Identification of pinch points to be completed as part of the deficiency database work funded in the first three years of the LTP. Alignment with Town Concept Plans is necessary.

THREE WATERS

WATER	
AFFORDABILITY	
Significant Risk	Our District includes multiple small towns and communities each with their own water schemes. The low number of ratepayers relative to the number of schemes creates challenges in terms of delivering a safe and reliable service that is affordable to our ratepayers.
Proposed Mitigation	Review of the towns and villages and assessment of possible addition, disposal and/or amalgamation of schemes.
Implications	Increased cost of water to the end users.
ASSET FORM, AGE AND CONDITION	
Significant Risk	Our water network assets are ageing. It is expected that much will reach the end of its effective useful life over the next 30 years and will need renewal to maintain existing levels of service.

Proposed Mitigation	Continue to increase the focus on asset management activities such as investigations, data gathering, break analysis, renewal candidate assessments, field verification, and improved asset records and information about asset condition.
Implications	As our assets age, they are more likely to fail which will result in service interruptions. These unplanned water outages will become increasingly unacceptable for our residents and businesses. There may also be increased operational costs with responding to the breakages as well as major leakages.
ASSET FORM, AGE AND CONDITION #2	
Significant Risk	Many of our water supply schemes are serviced by a single supply main pipeline in the road corridor. This means that these water supply schemes are vulnerable to asset failure or damage resulting from the work undertaken in the road corridor. Unaccounted for water is a risk both capacity wise and economically.
Proposed Mitigation	• Regular maintenance, renewal and replacement of our water supply assets to ensure that they continue to deliver service. • We are taking resilience into account in our discussions about how we develop and replace or infrastructure • Reducing the unaccounted for water levels will require specialised detection. Encourage the use of on-site storage tanks attached to new or existing dwellings where these tanks are dedicated to either treated water provision, or non-potable supply for gardens and ancillary usage.
Implications	There is a risk of communities being without water services which are an essential service for drinking water as well as providing firefighting capability. This may result in health and safety risks if there are major water outages. Reducing the percentage of unaccounted for water will have a positive effect on the cost of treatment.
ENVIRONMENTAL IMPACTS	
Significant Risk	Increases in long dry periods will put significant pressure on our already stretched summer water supplies, especially where increased treatment processes will require more frequent backwashing. It is expected that minimum flow restrictions on surface water takes will require more water restrictions into the future. With water meters already installed on urban supplies, this has provided capacity for growth in the next 10 years without the need for increased abstraction limits. Reducing the unaccounted for water will reduce the pressure on demand.
Proposed Mitigation	Our key actions include: • Sound leakage management practices are put in place to ensure water is not accounted for and not wasted unnecessarily, and we will continue to look at bulk metering of networks to help with early detection. • Increasing the capacity of Ōtorohanga Treatment Plant medium term will help buffer dry periods.
Implications	Water restrictions in the summer period may be required. We have sufficient capacity in our water take consents to attract development into our District. High unaccounted for water is not sound resource management.
ENVIRONMENT IMPACT # 2	
Significant Risk	The impact of infrastructure failure due to natural hazards has been highlighted by the Canterbury earthquakes. Our water supply and wastewater networks are the most vulnerable of all our infrastructural assets to seismic risk.
Proposed Mitigation	We manage the risk of earthquakes in several ways: • We check and action any leaks that may arise after earthquake activity as part of our emergency response plans • We use modern (more flexible) materials when renewing water pipelines so that there is less likelihood of failure • We ensure that our water reservoirs can cope with seismic risk We ensure that insurances are adequate to ensure adequate cover in case of widespread seismic damage.
Implications	In the event of a natural disaster our communities may be without water services for a significant period. This may result in health and safety risks with limited or no drinking water as well as firefighting capability.

DISTRICT GROWTH	
Significant Risk	Increasing urban (and fringe urban) development is expected to place increased pressure on the capacity of our existing water supply networks. This can also result in pressure on Council to extend existing networks so that these developments can connect to town water supply.
Proposed Mitigation	To ensure the continued affordability of our water supply networks our current approach is: • To encourage utilisation of existing infrastructure where existing capacity allows • Limit extending existing networks beyond our existing supply boundaries (e.g. encourage onsite collection and treatment as the first option) • Conduct assessments as per LGA 2002 before committing to installing new services in areas which are currently un-serviced. • Better understanding of our unaccounted water.
Implications	Extending our reticulated systems could have major cost implications, and the priority for limited funding is increasing compliance with mandatory standards, then capacity, then connections. (Additional scheme members may help aggregate these costs.) Extending our water supply networks would increase demand for water and may mean we need additional water sources to meet demand. There would be an increase in operational costs and staff.
LEGISLATIVE CHANGE	
Significant Risk	Changes to the Drinking Water Standards has resulted in a higher level of compliance but has also created more options for meeting compliance in our rural schemes which until now have struggled to meet compliance. Meeting compliance has always been difficult and unaffordable for the smaller schemes, this increases the risk to the end users.
Proposed Mitigation	Council have employed extra staff in quality and compliance to understand the implications of the new rules and will continue to measure current schemes against the new rules to meet the new compliance standards. Arohena Rural Water Scheme will remain under Boil Water Notices until this is resolved.
Implications	The risk of our communities becoming ill because of their drinking water is not acceptable and council must resolve these issues. Increasing compliance requirements are also resulting in additional operational cost and, in some networks, capital investment. The cost of water is likely to increase.
LEGISLATIVE CHANGE #2	
Significant Risk	Changes to three waters reform continue to leave uncertainty in the management of three waters activities for councils. With the repeal of the Labour Governments reforms and the introduction of Local Water Done Well there is still considerable unknown what this means to councils. It is confirmed that the activity will stay with councils at this time.
Proposed Mitigation	Continue to operate the activity as we have done for many years and continue to look at ways to improve and comply with the rule changes. Remain agile in our process so we can make changes without too much disruption. Keep staff engaged and informed on reform.
Implications	Council has navigated reform for the last four years and we continue to engage in the process. Regional collaborations will continue to be explored which is a signal from government on what the future may entail.

WASTEWATER	
AFFORDABILITY	
Significant Risk	Whilst Ōtorohanga has a land based wastewater treatment system, there is a need to acquire additional land around the plant to future proof existing plant and provide for future growth. Kāwhia will need a public wastewater system in the future as onsite septic systems become more difficult to maintain and renew. Public wastewater in Kāwhia is viable from an engineering concept design but is

	unaffordable given the small ratepayer base. The other difficulty is finding a suitable location for effluent disposal which would require significant land base treatment.
Proposed Mitigation	Consider purchasing more land area for Ōtorohanga wastewater treatment disposal to enable growth Continue to explore options for Kāwhia in the medium term and be ready for any government funding initiatives that may be available in the future.
Implications	Ensuring capacity to support growth will not be achieved without suitable investment being made. This is especially true of Kāwhia.
ASSET FORM, AGE AND CONDITION	
Significant Risk	Our wastewater network assets are ageing. Over the next 30 years, much of the network will reach the end of its effective useful life and will need renewal to maintain existing levels of service. Compounding this is the lack of robust age and condition information making it difficult to plan effectively and manage medium-long term risks.
Proposed Mitigation	Improvements to asset management and project delivery will provide a more targeted approach to renewals over the next 10 years. Significant investment during the last LTP has accelerated our renewals programme, we will not continue at that level for the next 3 years. We actively seek and utilize various pipe renewal methodologies, including traditional open trenching as well as pipe relining and trenchless pipe bursting. No one methodology suits every installation given the various soil types in Ōtorohanga.
Implications	As our assets age they are more likely to be subject to service interruptions or to fail and this may impact on levels of service and on the resilience of our wastewater networks. Assets which are ageing or in poor condition are more likely to have a negative impact on the quality of our environment and on public health. This can also contribute to increased stormwater inflow and infiltration. If a steady renewal programme is not followed, we could have significant periods in the future when large portions of our networks will require replacing and the cost of this work could increase our debt considerably.
ASSET FORM, AGE AND CONDITION # 2	
Significant Risk	Our wastewater reticulation networks are vulnerable to damage from earthquakes, which can cause anything from minor displacement to full asset failure.
Proposed Mitigation	Proactive CCTV inspections to monitor the condition of pipe assets and identify faults and confirm maintenance and renewal needs. We ensure that our insurances provide adequate cover in case of widespread seismic damage.
Implications	Damage resulting from earthquakes can cause anything from minor displacement to full asset failure. This will have differing negative impacts in terms of service delivery, public health, environmental and disruption to communities.
ENVIRONMENTAL IMPACTS	
Significant Risk	Climate change could have an impact on some of our wastewater networks. For example, in the future our district could experience more intense periods of storm activity, resulting in: • Large volumes of stormwater entering our networks which may be unable to treat the resulting volume of wastewater and potential for discharges to water courses. • Our wastewater assets being damaged, for example by flooding. Longer and more intense periods of drought which may result in damage to underground services as the moisture content reduces and the soils dry and contract, this is more likely to affect the shallower infrastructure. Network failure – Maintaining the quality and continuity of sewerage systems, which are particularly susceptible to severe damage in seismic events and inundation in high rainfall events.
Proposed Mitigation	To manage the impact of natural hazards on our assets we monitor and assess the risk that climate change poses to our existing assets. Where new infrastructure is planned the potential risk from climate change, e.g. rising sea levels, or increased flooding, is considered when determining location and design. The Resource Management Act has provision for controlled discharges to prevent failure of infrastructure, this is a last resort but mitigates damage to infrastructure in the short-term during rain events.

Implications	Some options for mitigating the impact of climate change, such as raising critical assets like control cabinets would be relatively affordable. However, it may sometimes be costly to minimise the impacts of climate change on our assets. If our wastewater networks are subject to more intense or frequent storm events it could result in our networks being unable to treat the volume of wastewater and this could result in discharges to our natural environment. If this occurred: • Council could breach the discharge limits set allowed under our resource consents • It could have a negative impact on our natural environment and water quality It could have a negative impact on public health.
DEMAND GROWTH	
Significant Risk	Increasing development is expected to result in pressure on Council to extend existing networks so that these developments can connect to town wastewater networks. We also expect to continue to see more intense development within our existing towns. This type of development can place pressure on the capacity of our existing wastewater networks. However, we need to ensure that our wastewater supply networks remain affordable and sustainable for current and future generations.
Proposed Mitigation	Continue to make improvement to the network and treatment plant to maintain capacity to align with growth. Currently the network has sufficient capacity to absorb the project levels of growth in Ōtorohanga. Acquiring additional land around the wastewater plant will improve long term resilience to meet significant growth.
Implications	Extending our wastewater networks would increase demand for water and may mean we need additional water sources to meet demand. Failure to extend and increase the capacity of the system will limit growth and hence affect the sustainability of the district.
Legislative Change	
Significant Risk	Complying with resource consents is always a significant risk to Council in having to make changes or improvement to treatment to align with consent conditions. Discharge consents are due to expire in 2037 and renewal will be expensive, and conditions are likely to change. Although we continue to meet nearly all the compliance requirements, discharge effluent quality is still difficult to remain consistently within consent limits. As compliance demands increase dedicated wastewater staff maybe required to improve the level of service which will have a cost to residents and ratepayers.
Proposed Mitigation	We intend to invest in influent treatment improvements and effluent treatment improvements over the next three years, along with a desludging programme to improve pond retention.
Implications	No significant changes in compliance are expected under the existing consent conditions, but we still need to reach consistent compliance with all conditions. Renewal of consents will likely result in changes that are too early to predict, but it will be around quality of discharge which could trigger more mechanical improvements to the plant in the future, which could be expensive.

STORMWATER	
AFFORDABILITY	
Significant Risk	There are very low levels of service requests for enhanced stormwater. Significant investment would be required to improve the infrastructure to level that provides for every rain event.
Proposed Mitigation	There has been very little targeted stormwater investment in the past, however development has required investment partnerships to improve stormwater over the last few years. We intend on investing more in stormwater renewals over the next 10 years to renewal aged infrastructure.
Implications	Increase rain events is resulting in surface flooding, which may result in property damage. Renewals will have a financial impact on ratepayers.

ASSET FORM, AGE AND CONDITION	
Significant Risk	Little data and condition assessments exist on parts of the stormwater network, although there are few complaints about the performance of the existing network.
Proposed Mitigation	Gathering asset data and condition assessments will help inform renewals in the future and get a better understanding of the network.
Implications	Failure of the stormwater network or lack of capacity may result in surface flooding and property damage if left with little investment.
ENVIRONMENTAL IMPACTS	
Significant Risk	With climate change, increased downpours overloading systems.
Proposed Mitigation	Renewal programme and better understanding of the network will reduce the impacts of rainfall events.
Implications	Possible cross connections between sewer and stormwater resulting in unlawful discharges that will have a negative impact on public health and the environment.
DEMAND GROWTH	
Significant Risk	Demand for extending networks and infill development increasing demand on existing systems.
Proposed Mitigation	New developments are required to have onsite attenuation/retention and treatment devices to avoid impacts on the network and environment. Onsite soakage systems also help recharge water tables where possible.
Implications	Councils existing infrastructure does not have the capacity for all development to discharge directly to the network.
LEGISLATIVE CHANGE	
Significant Risk	Council is currently undergoing the renewal of comprehensive stormwater discharge consents for Ōtorohanga and Kāwhia. Renewal of the consents is currently on hold and, until the new consents are granted, we are uncertain as to what the new conditions may look like and the likely cost implications.
Proposed Mitigation	Continue to manage stormwater discharges under existing conditions and monitor for contaminants to ensure these remain within acceptable limits. A new wetland is proposed on the Otewa Road discharge to improve water quality.
Implications	Until such time as the new consent conditions are determined, the operational or capital impacts to council are unknown. Unlawful or accidental discharges of contaminants to the stormwater network can have financial and environment costs to council.

FLOOD PROTECTION	
AFFORDABILITY	
Significant Risk	As the recreation use of flood protection areas increases, the cost of maintenance also increases due to the need for mowing and plant management.
Proposed Mitigation	Traditionally the flood protection areas were grazed by farm animals and the lease income offset some of the maintenance costs. With the change in use we need to assess how the flood protection schemes are funded with a portion of funding coming from Parks and Reserves to cover mowing and plant management.

Implications	Funding from Project Watershed via WRC is not intended for the mowing of stopbanks and will not cover maintenance of riparian planting.
ASSET FORM, AGE AND CONDITION	
Significant Risk	The flood pump stations are 60 years old and will require increased investment as they reach end of life within the next 30 years. The actual pumps are in good condition and regularly maintained and refurbished.
Proposed Mitigation	Continued maintenance and joint structural inspections with WRC on asset condition. The pumps have had minimal runtime as they are only activated during flood situations.
Implications	No impact at this time but replacement of the pump stations will possibly need to occur at around the same time as some of our other major structural assets reach end of life.
FAILURE OF THE STOPBANKS	
Significant Risk	In the event of catastrophic failure there is the potential for considerable property damage and risk to life.
Proposed Mitigation	It has long been said that the stopbanks were well engineered for any flood event that Ōtorohanga should face, however, with rain events that seem to be more intense the risk is always there. Continued focus on monitoring and maintenance is key to resilience. Further retirement of stopbanks from grazing should be considered, to reduce stock damage.
Implications	Low risk at this time, the stopbanks have withstood multiple flooding events over the last 60 years but should never be taken for granted.

COASTAL STRUCTURES	
AFFORDABILITY	
Significant Risk	Council is the owner of significant coastal assets that are reaching end of life or consenting periods within the next five to 10 years. Aotea seawall may face considerable maintenance costs in the next three years.
Proposed Mitigation	Government funding will provide us with good asset condition data to inform future repairs.
Implications	Seawalls, wharves and boat ramps are constructed in areas with harsh environmental conditions, often in an attempt to slow down the effects of tidal elements or prevent or slow down coastal erosion. These structures are expensive structures to build and maintain. Long term climate strategies will inform future decisions around coastal structures
LOSS OF PROPERTY AND CULTURAL ASSETS	
Significant Risk	The loss of coastal defences will have an impact on private property, roads, public amenities but also significant cultural assets, for example Te Papa o Karewa and Tangi Te Korowhiti - both notable Pohutukawa trees on the coast of the Kāwhia Harbour.
Proposed Mitigation	Carry out the full conditional assessment of the coastal structures and decide on the next steps for maintenance.
Implications	Until such times as assessments are completed council will not realise the extent of the long-term issues and solutions and what the costs will be.

ASSUMPTIONS

Planning involves making assumptions about the future which may or may not hold true. Here are the key assumptions we have made when we put together our activities and budgets:

TYPE	ASSUMPTION	LEVEL OF CERTAINTY	POTENTIAL EFFECTS
LIFECYCLE	That asset replacement costs, and useful lives are as stated in, (or close to), the Asset Valuation, and that the depreciation reserves will adequately fund the renewal of assets. Valuation figures are based on good industry practice and are peer reviewed by an external expert in infrastructure asset valuation.	Medium low	Increases in asset value have a direct impact on future depreciation, a major driver of rate increases
	That the three-yearly Financial Assistance Rate (FAR) from NZTA - NZTA - Waka Kōtahi through the National Land Transport Fund will remain, for the foreseeable future, for investment in transportation infrastructure.	High	If either the FAR Council receives is reduced at the end of the new three-year period, or the total allocation provided by NZTA - Waka Kōtahi to Council is reduced, this will lead to deterioration in the local roads. The cost to return the roads to similar or improved residual life, will be significantly higher in the future than now, based on construction price indices.
	The condition of the coastal structures will require minor to moderate maintenance, which will be covered by government funding secured for this purpose.	Medium	If the condition assessment reveals substantial defects that require extensive maintenance, the shortfall will need to be loan funded.
	That current assumptions of asset age are accurate and depreciation reserves will be adequate to fund required asset renewals. Improvements to asset management processes and planning will improve our ability to predict, prioritise and plan the asset investment required to intervene at the right time.	Medium	Asset data is inaccurate and renewal programmes are accelerated due to failure of assets earlier than predicted
DEMAND	That district growth projections will remain low to medium growth and sufficient capacity is within existing infrastructure	High	Council will be able to manage and encourage growth within the district.
	That forecast budgets will be sufficient to deliver expected service levels	High	There has been an overall increase in the cost to deliver new projects and maintain existing operations. Council is comfortable that we have factored enough redundancy into the budgets.
	That the impacts of land use change can be managed within forecast budgets.	High	Significant growth more than projected would put strain on budgets and capacity of infrastructure.
	That forecast budgets will be sufficient to deliver expected service levels despite the supply chain impacts because of increased infrastructure investment in the region, or there is some level of flexibility with regards to project timeframes to ensure value for money.	Medium	It is uncertain what the inflation and interest rates will have on supply chains and costs of materials.
LEVELS OF SERVICE	That planned investment will slowly improve the form of our infrastructure networks to align with modern day standards and expectations. That Asset Management Plans identify key vulnerabilities, especially for critical assets, and there are mitigation strategies to reduce risks to Council and impacts on customers.	Medium	The programme of work in the LTP aligns with the Asset Management Plans. If additional work was required, that would require higher staff resourcing above that currently budgeted for.

TYPE	ASSUMPTION	LEVEL OF CERTAINTY	POTENTIAL EFFECTS
	It is assumed that natural disasters will not be catastrophic in scale and that Council will be prepared to respond to any natural hazards including floods, storms, earthquakes and volcanic activity that may occur. It is assumed that Council will be able to obtain insurance cover as required from private insurance companies.	Medium	Council obtains insurance through a collective involving multiple Councils across NZ, and the insurers annually assess the maximum probable loss and communicate that back to the clients for consideration.
	It is assumed that the district will be affected by long-term climate change in parallel with predicted changes as advised by government agencies, and that any impacts will be managed within forecast budgets.	Low	Forecasts will be reviewed every three years as part of the LTP cycle and will consider the latest agreed scientific evidence of mitigation and minimisation.
	Conditions of existing resource consents held by Council will not be altered significantly from that budgeted. Any resource consents due for renewal during the 10-year period will be renewed accordingly. Resource consents issued for new / upgraded infrastructure will not contain significantly different conditions / standards to those anticipated in the project. Forecast investment will be sufficient to meet more stringent service standards for drinking water, and resource consent requirements for wastewater consent renewals, That legislated minimum levels of service / standards (such as drinking water quality) will not be changed.	Medium	Potential costly renewals and restrictive conditions will result in substantial costs to councils in the future.