

**WAIROA DISTRICT COUNCIL**

**INFRASTRUCTURE  
STRATEGY**

**2021-2051**

**APRIL 2021**



**WAIROA**  
**DISTRICT COUNCIL**

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1.1 OVERVIEW

This Infrastructure Strategy (strategy) encompasses infrastructure services provided by Wairoa District Council (Council) for the following activities for 30 years being the period of 2021 to 2051:

- Water supply;
- Wastewater;
- Stormwater;
- Roads and footpaths;
- Solid waste; and
- Wairoa Airport.

These activities support the delivery of Council’s vision and community outcomes.

This strategy is intended to be a useful document for Council to guide long term decisions holistically across the different infrastructure assets as well as meeting legislative requirements. This strategy communicates the infrastructure requirements at a high level to internal and external decision makers, and key stakeholders.

Council owns and manages infrastructure with a replacement cost valued at \$445.6M of as at June 2020 across these activities including:

<b>WATER SUPPLY</b>	<ul style="list-style-type: none"> <li>• Serving Wairoa, Tuai and Mahanga (non potable)</li> <li>• Frasertown Water Treatment Plant serving Wairoa and Frasertown and AFFCO meat works</li> <li>• Approx 2,360 connections, 118km of pipes, 11 reservoirs, two pup stations and one treatment plant, with replacement value of \$46.5M (as at June 2020)</li> </ul>
<b>WASTE-WATER</b>	<ul style="list-style-type: none"> <li>• Four wastewater schemes</li> <li>• Servicing Wairoa, Tuai, Mahia and Opoutama</li> <li>• Approx 2,170 connections, 58km of pipes, pump stations and wastewater treatment plant, with replacement value of \$32.9M (as at June 2020)</li> </ul>
<b>STORM-WATER</b>	<ul style="list-style-type: none"> <li>• 42km of stormwater reticulation, 219 manholes, 914 sumps and 1063 inlet structures</li> <li>• Focused in Wairoa urban area, Tuai and Mahia, with a replacement value of \$24.3M (as at June 2020)</li> </ul>
<b>ROADS &amp; FOOTPATHS</b>	<ul style="list-style-type: none"> <li>• 845km of roads of which 301km is sealed</li> <li>• 176 bridges and 447 retaining structures</li> <li>• 47km of footpaths</li> <li>• Replacement value of \$336.1M (as at June 2020)</li> </ul>
<b>SOLID WASTE</b>	<ul style="list-style-type: none"> <li>• Wairoa Landfill and associated facilities, including weighbridge, valued at approximately \$1.1M</li> <li>• Recycling collection facilities</li> <li>• Management of five closed landfills</li> </ul>
<b>WAIROA AIRPORT</b>	<ul style="list-style-type: none"> <li>• 910m long all-weather sealed runway, with associated sealed taxiway, apron area, refuelling area, and terminal building</li> <li>• 1370m long grass Airstrip</li> <li>• Valued at approximately \$6.9M.</li> </ul>

Flood protection and control assets are the responsibility of the Hawke’s Bay Regional Council (HBRC) while State Highways are the responsibility of the New Zealand Transport Agency (NZTA). 1.2.

1.2 KEY DISTRICT INFRASTRUCTURE ISSUES

In preparing this strategy, Council has identified seven key district infrastructure issues that need to be at the forefront of infrastructure planning and decision-making. They are:

- Legislative and policy change
- Climate change
- Land use change
- Servicing Mahia
- Affordability
- Resilience
- Economic development

In addition to the key district infrastructure issues, Council has identified the following key issues for each of the infrastructure activities. Options to respond to the issues are identified later in this document.

Activity	Key Issues
 <b>Water Supply</b>	<ul style="list-style-type: none"> <li>• Water reform and changes to legislation are likely to result in higher standards for water treatment and compliance costs</li> <li>• Effects of climate change on drinking water supply sources and infrastructure</li> <li>• Identification of an alternative drinking water source for Wairoa township / Frasertown Water Treatment Plant to mitigate reliance on the Wairoa River</li> <li>• Water network losses</li> <li>• Resource consents need renewing but there is uncertainty about what the conditions will involve (e.g. duration and compliance)</li> </ul>
 <b>Wastewater</b>	<ul style="list-style-type: none"> <li>• Water reform and changes to legislation are likely to result in high standards for wastewater treatment and compliance costs</li> <li>• Effects of climate change on wastewater infrastructure</li> <li>• Resource consent needs renewing but there is uncertainty about what the conditions will involve (e.g. duration and compliance)</li> <li>• An alternative option and funding for the discharge of wastewater is required.</li> </ul>
 <b>Stormwater</b>	<ul style="list-style-type: none"> <li>• Water reform and changes to legislation are likely to result in high standards for stormwater treatment and compliance costs</li> <li>• Effect of climate change on stormwater infrastructure capacity</li> <li>• Effects of growth in Mahia on limited existing stormwater infrastructure</li> </ul>

 <b>Roads &amp; Footpaths</b>	<ul style="list-style-type: none"> <li>• Wairoa District Council is heavily reliant on Waka Kotahi subsidy, which may reduce in future</li> <li>• Effects of climate change on roading and bridges</li> <li>• Effects of land use change on expected levels of service</li> <li>• Safety on Wairoa roads, with Wairoa having the highest overall personal risk in the country</li> <li>• Limited access for heavy vehicles resulting from poor condition aging bridge stock and low structural capacity</li> <li>• Confidence in data related to location and condition of retaining structures is limited</li> </ul>
 <b>Solid Waste</b>	<ul style="list-style-type: none"> <li>• Impacts of legislation change</li> <li>• Impacts of China's National Sword / Blue Sky policy change</li> <li>• Resource consent for the landfill will need renewing but there is uncertainty about what conditions may involve and the potential increase in compliance costs</li> <li>• Ongoing financial viability of the landfill</li> </ul>
 <b>Wairoa Airport</b>	<ul style="list-style-type: none"> <li>• Ability to continue funding the activity and maintenance of the asset</li> </ul>

## 1.3 ACTIVITIES OVERVIEW

### WATER SUPPLY

Significant developments have occurred at a national level over the last three years. The New Zealand Government is reforming how drinking water, wastewater and stormwater (three waters) services are delivered across New Zealand. The reforms began in response to the issues identified following the Havelock North drinking water contamination in 2016. Since early 2019, Wairoa District Council has been working together with the other Hawke's Bay Councils to review the benefits and costs of a range of water service delivery options in the region. This work primarily focussed on assessing the current state of council three waters services in the Hawke's Bay and developing a recommended approach to ensure the sustainable delivery of these critical services over the long term.

Subsequent to the Hawke's Bay regional review, in July 2020, the Government launched the Three Waters Reform Programme – a three-year programme to reform local government three waters service delivery arrangements. The Government's starting intention is to reform local government's three waters services into a small number of multi-regional entities with a bottom line of public ownership. The exact size, shape and design of these entities is still being worked through. Council has been working to provide required information to the Department of Internal Affairs to assist this process.

Implications from water reforms on service delivery, including the impact of a water regulator and changes to legislation are relatively unknown and may impact on levels of service and structural changes. However, it will be stricter regime with higher compliance requirements. Budget impacts are unknown but are expected to be significant and may be unaffordable for District's small population.

Effects of climate change could result in issues including the need to extract silted or dirty water which could likely impact on Wairoa's main water supply. Since the Wairoa River is the primary water source for the Wairoa township and Frasertown, Council will be looking at possible alternative supply options over the life of this strategy to avoid over-reliance on the River. Council are also part of the HBRC Raw Water Assessment group which covers the entire Hawkes bay district, being part of this group will help inform Council and better understand the risk.

In 2018 a proactive water loss management programme was implemented which resulted in an improvement in loss detection and repair. This has resulted in reducing current water leakage rates. While water loss management is improving, it continues to be a focus as leaking pipes can cause property and infrastructure damage. Thermal imaging will continue to be used to regularly assess the network to locate unreported leaks in water pipes to maintain an ongoing proactive detection and repair programme. This proactive programme has significant benefits such as identifying major leaks early.

There is currently sufficient capacity to accommodate population projections in the areas that currently have a water supply. There is a risk associated with a shift towards population decline which could result in water supply schemes becoming unaffordable given the small population they serve. However currently the projections are not showing population decline with the medium and high growth projections (incorporating the impact of COVID-19).

Water supply resource consents will need renewing during the 30-year planning period. It is likely that requirements to prepare each resource consent will increase (e.g. environmental impact assessments). New consent conditions will likely require more monitoring increasing the overall operational costs. Additional capital expenditure may also be required to meet new consent conditions.

### WASTEWATER

Additional to the three waters reform and climate change issues outlined above, Council is in the process of renewing their wastewater discharge consent for the Wairoa Wastewater Treatment Plant into the Wairoa River in the coastal marine area. Council is uncertain as to the conditions that may be part of a new consent, and the costs to comply and monitor those conditions, however it is expected that these will be higher than existing expenditure.

The river discharge is only one aspect of a broader package of proposed changes to Wairoa's wastewater system. Community and iwi do not want the wastewater discharged into the river. Alongside this desire, Government's freshwater reforms to clean up the nation's waterways, are likely to lead to higher discharge standards for wastewater, and greater treatment of stormwater. Therefore, the intention is to transition over time to land discharges (irrigation). Council recognises that the idealistic goal of rapid transition to land discharges is probably unrealistic and this may be unaffordable for the Wairoa community, even if the costs are spread over several decades.

Council does not know how long the consent will be granted for; however, has applied for a 35-year term and Hawke's Bay Regional Council have recommended a 20-year term. The extent of transitioning to land discharges that is achieved during this consent term depends on availability of funding and farmland for irrigation and storage ponds. Each storage pond and irrigation scheme will also require separate resource consents and will incur separate operational and monitoring costs.

### STORMWATER

A global resource consent application is being prepared for the stormwater discharges in the Wairoa Township. It is likely that through this process, and because of the impacts of water reforms, we will need to improve the quality of our stormwater discharges. This will result in increased compliance costs.

Climate change is resulting in Higher frequency / intensity of rainfall events. Wairoa receives the highest level of rainfall in the region raising river levels and increasing the flooding hazard in Wairoa. Existing stormwater infrastructure may not have capacity to cope with additional rainfall.

If growth in the district is focused in Mahia over the next 30 years, stormwater will become a constraint for the settlement and additional investment and infrastructure will be required. Most rural stormwater is provided via road drainage.

### ROADS AND FOOTPATHS

Climate change is affecting weather patterns, river flows, and runoff in the Wairoa District, putting increased pressure on the resilience of Council's network. Sea level rise is causing increased coastal erosion issues on coastal routes. Resilience has been identified as a key issue for Wairoa, as the district already has a history of being impacted by storm events causing flooding, slips and dropouts on the road network. This is exacerbated by the geology and poor soils in some areas of the network, resulting in erosion and sediment risks.

In order to ensure communities remain connected and to unlock the potential of Wairoa's land, providing a resilient network is critical. Specific impacts of road resilience include Lifeline Routes. These are critical routes where failure will have significant impact on communities access to health, education and economic opportunities. A key example of this is the damage to access to Mahia from ongoing coastal erosion along Nuhaka Opoutama Road. This not only impacts route security and access for residents but also access to the Rocket Lab launch site, which is anticipated to bring economic benefit to the district. Council has successfully obtained central government funding to seal sections of the road to Rocket Lab and has completed a Business Case to identify the preferred option to address ongoing coastal erosion along Nuhaka Opoutama Road to ensure route resilience and security for Mahia communities. As Council cannot afford to complete this project within its current budgets, the business case will be used to support applications for other funding sources.

The district is also seeing changes in land use. Farm conversions to forestry and fruit are impacting expectations on Council's roads to get products to market or the ports at Napier or Gisborne. The increased demand will come primarily from forestry industry. Forecast predictions based on maturing age of forests in the Hawke's Bay Region indicate demand on some roads will increase significantly from their current heavy vehicle movements. Council needs to review the levels of service across the roading network. This may require changes to Council's response to ensure funding is provided to support economic activities for the district.

The Waka Kotahi New Zealand Transport Agency 'Communities at Risk Register 2019' highlights personal risk to road users. Wairoa District Council has the highest overall personal risk in the country. Wairoa District Council has the highest personal risk ranking in the 'Rural road loss of control and/or head on' and 'Speed' crash categories.

Poor condition aging bridge stock and low structural capacity results in limited access for heavy vehicles. In recent years, the rules governing heavy vehicle size, weight and operation limits changed. As a result of both the poor structures capacity and the

heavy vehicle weight limit changes, increased pressure will come on Council to open key local roads routes to HPMV vehicles. Bridge condition and capacity assessments will be required to open key routes to HPMV vehicles. Currently 80% of bridges are restricted to full HPMV vehicles.

Confidence in the data relating to the location and condition of retaining structures for roads is relatively limited. Council is undertaking a four-year project to survey the location and condition of these structures. However, the implications from this work will not be known until nearer the development of the 2024-2054 Infrastructure Strategy.

### SOLID WASTE

Changes to legislation are anticipated to the waste levy and the Emissions Trading Scheme that may also impact on the viability of the landfill, and the cost structures to operate it. The Ministry for the Environment has committed to increasing the waste disposal levy, and are working on how much and by when (potentially significant). This will have to be passed to the user. Council is increasing education initiatives for the Wairoa community to increase diversion from the landfill as well as reduce waste entering the site.

The consent for the Wairoa Landfill will require renewal by 2031. Given the current life expectancy of the landfill an alternative site or an option for disposal of the district's waste needs to be found prior to consent renewal in 2031. . It is anticipated that conditions on any new consent granted are likely to increase compliance costs and may have a reduced consent duration.

In addition, and prior to determining if a renewal of the resource consent will be sought, Council will need to ensure that the landfill remains viable given the relatively low tonnages it receives. The landfill revenue does not currently cover all operating costs, so the cost of service is supplemented through rates. A full options analysis of the future service provision is required to assess the levels of service required and various options for meeting these, and understanding the long-term viability of the solid waste service.

### WAIROA AIRPORT

The Wairoa Airport has been identified as a critical asset for lifeline for emergency services and supports the horticultural and agricultural sector for crop dusting and Medical facilities, however it is costly to own. While the likelihood of the airport becoming a commercial airport is remote, there are opportunities from Rocket Lab and other private operators to increase tourism opportunities and the use of the facilities. This will help to improve its financial performance.

Regardless of asset ownership costs, Council must maintain the airport to an adequate standard to enable the airport to be used by emergency services.

## 1.4 FUNDING

Council funds its infrastructure activities through a mixture of rates, subsidies, grants and other fees and charges, seeks central government funding, and potentially development contributions particularly for Mahia growth related infrastructure.

Most funding comes from rates, with roading and footpaths heavily subsidised by Waka Kotahi NZ Transport Agency (Waka Kotahi). Council also uses debt and reserves to spread the funding of large costs, especially capital expenditure, over the life of the asset.

Over the period of this strategy Council will be exploring alternative funding sources to maintain its current levels of service to the district.

## 1.5 OVERALL POSITION

Our financial position has changed since our last Infrastructure Strategy in the following ways:

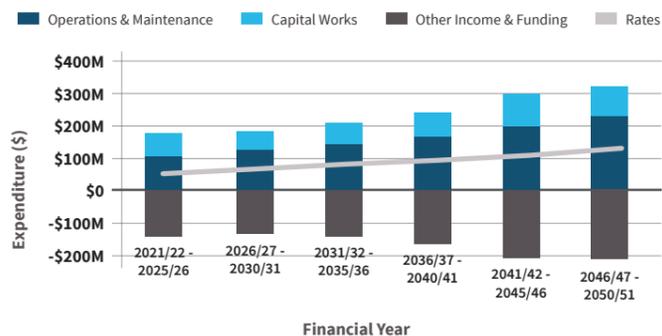
### 30 YEAR EXPENDITURE FORECAST

Table 1 shows the total expected capital and operational expenditure for each infrastructure activity over the 30-year period 2021 to 2051.

**Table 1: Expected total operating and capital expenditure (inflated adjusted)**

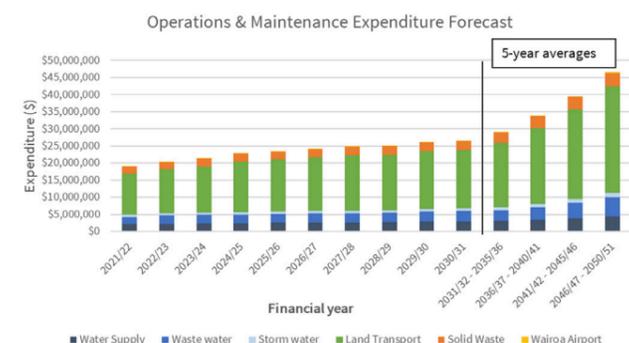
Infrastructure Activity	Operational Expenditure	Capital Expenditure
Water supply	\$46.4 million	\$28.5 million
Wastewater	\$49.8 million	\$47.2 million
Stormwater	\$27.28 million	\$6.59 million
Roads and footpaths	\$292.3 million	\$208.9 million
Solid waste	\$93.19 million	\$7.34 million
Wairoa Airport	\$6.30 million	\$2.57 million
<b>Total</b>	<b>\$466 million</b>	<b>\$302 million</b>

Figure 1 shows the most likely scenario for total operating and capital expenditure for combined assets.

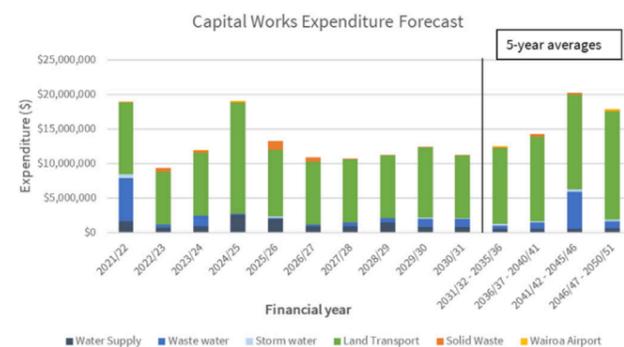


**Figure 1 Combined activities forecast expenditure and funding 2021-2051 (inflated) - totals for 5 year blocks**

Figure 2 and Figure 3 show the breakdown of expenditure for Operations and Maintenance, and Capital Works, by activity over the 30-year period.



**Figure 2 Operations and maintenance expenditure forecast for 2021-2051 split by activity (inflated)**

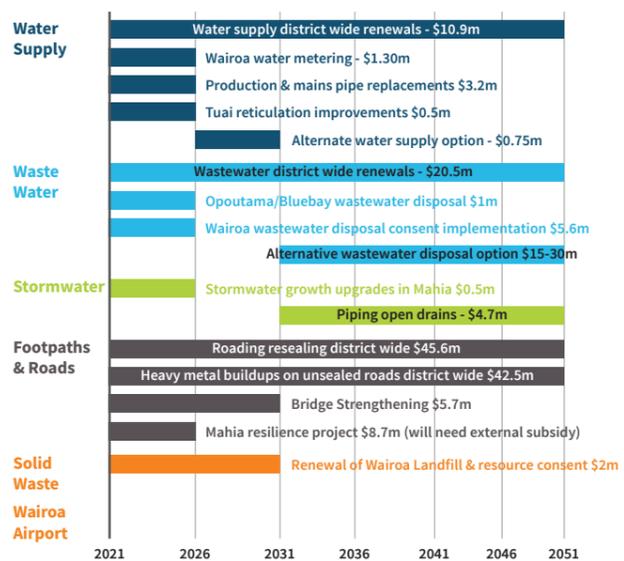


**Figure 3 Capital works expenditure forecast for 2021-2051 split by activity (inflated)**

Over the next 30 years it is expected that:

- Given the estimates of growth will be gradual, with the bulk of the growth in Mahia, there will be limited additional infrastructure required to address growth. Predicted expenditure is primarily focussed on stormwater improvements in Mahia.
- Operational expenditure accounts for 68% of the expenditure over the 30 year period.
- Planned expenditure on capital renewal works across all infrastructure activities is variable over the 30-year period. There is aging infrastructure, and this will be the focus of the prioritised work programme. In order to make forecast expenditure affordable, renewals will be focussed on critical infrastructure.
- Expenditure on levels of service improvements is focused on:
  - Gaining resource consents for water supply, wastewater and stormwater and ensuring any new facilities and infrastructure renewals meet revised consent conditions
  - Strengthening bridges on key heavy traffic routes
  - Securing Mahia route resilience
  - Securing additional or alternative landfill disposal capacity, along with necessary consents.

Figure 4 presents the timeline for the major infrastructure projects for the most likely scenario.



**Figure 4 Major infrastructure projects timeline**

## 2. INTRODUCTION

Council strategies and policies are developed to deliver Council's vision and community outcomes.

Council's vision defines our aspirations for Wairoa's future. It helps us to focus on what matters the most for our community.

Sitting beneath this vision is a statement outlining the expected Strategic Result for each activity. The vision is supported by four community well beings and four Council Outcomes.



### 2.1 PURPOSE OF THIS STRATEGY

This strategy has been prepared in accordance with the requirements of section 101B of the Local Government Act 2002 (LGA). The purpose of Council's Infrastructure Strategy, as stated in the LGA is to:

- Identify the significant infrastructure issues over the period covered by the strategy; and
- Identify the principal options for managing those issues and the implications of those options.

This strategy is intended to be a useful document for Council to guide long term decisions holistically across the different infrastructure assets as well as meeting the requirements of the Act. This strategy communicates the infrastructure requirements at a high level to internal and external decision makers, and key stakeholders. It is a document to discuss and align expectations between Council's elected members, community, and officers. It sets the strategic context, defines the current state of the assets, and outlines the intended strategic responses for the key issues and risks for the infrastructure.

This strategy includes the core infrastructure assets identified in section 101B(6) of the LGA being:

- Water supply
- Wastewater
- Stormwater
- Roads and footpaths.

In addition to the above assets, and in accordance with section 101B(6)(b) of the LGA, this strategy also includes:

- Solid waste; and
- Wairoa Airport.

This strategy is a 30-year strategy. Over time, and as information improves, Council will be working towards developing a 50-year Infrastructure Strategy.

### 2.2 INFRASTRUCTURE STRATEGY PRINCIPLES

This strategy is guided by the following principles:

- Prudent financial management provides for maintaining levels of service for current and future generations
- Proactive provision and management of critical assets
- Integrated provision of infrastructure
- Making the best use of our existing investment
- Robust asset management practices
- Partnership with Māori.

### PARTNERSHIP WITH MĀORI

Council acknowledges the inclusion and importance of mātauranga Māori in its infrastructure design and implementation processes. Council is committed to exercising due diligence in this area in order to achieve the best outcome for the community and the environment.

Council is committed to meaningful engagement with Māori on issues that are pertinent to all parties and working together to agree on the best pathway forward for the community and the environment.

### 2.3 CONTEXT

Wairoa District is located in the north of the Hawke's Bay Region covering an area of approximately 4,120km<sup>2</sup> with approximately 130 kilometres of coastline. It is bounded to the north-east by Gisborne District, south west by Hastings District and to the north by Whakātane and Taupō Districts. The district includes Lake Waikaremoana in Te Urewera, which is home to one of the country's Great Walks.

### OUR PEOPLE

Wairoa is home to **8,960 people** (estimate as at 30 June 2020) and has the highest proportion of Māori of any local authority area in the country, with approximately **67% of the district's people being of Māori descent**. This is significantly higher than New Zealand average Māori population of 16.5%.

Statistics New Zealand predict that the population of the district will increase to 9,130 in 2051 (under the medium growth projection).

### OUR COMMUNITIES

While Wairoa township is the primary service area for the district there are a large number of other smaller rural communities throughout the district. Smaller settlements are scattered throughout the districts and include Frasertown, Tuai, Mahia, Raupunga, Nuhaka, Maungataniwha, Ruakiturimorere and Whakaki.

It is expected that growth, if any, will occur in Mahia, as that is a desirable location for holiday homes and more people are retiring and returning to the area. It is relatively affordable for coastal property.

### OUR CULTURE

Wairoa has a rich cultural heritage which is an integral part of the

Wairoa community today. 20% of the population speak Te Reo Māori. Māori communities and Marae are located throughout the district, and many of these communities are in isolated parts of the district, with limited access opportunities.

The tangata whenua of Wairoa and their culture and traditions have special relationships with their ancestral lands, water, sites, waahi tapu and other taonga. Some activities and developments can have significant adverse effects on these relationships. Council plays an integral part in promoting and encouraging Māori culture and values and ensuring this remains central to key decision making.

### OUR CLIMATE

Wairoa district receives the highest levels of rainfall out of the territorial authorities in the region. Over the next 30 years Council expects to see an increase in the frequency and intensity of storm events and droughts. Flooding continues to be a major hazard in Wairoa with many lowland areas, including the Wairoa township, at risk.

### OUR ECONOMY

Economic Development is viewed as a vital element in keeping the Wairoa District alive and thriving, both now and into the future. The economy of Wairoa is based on the rural sector. Approximately 60% of the total land is in productive use, of which some 48% is in pasture. Sheep/beef farming and related processing, and forestry are the leading rural production industries in Wairoa district. Land used for forestry is increasing in the district with a trend of productive farmland being converted to forestry. Rocket Lab on the Mahia Peninsula provides a significant tourism opportunity for the future as it is expected that launches will become more regular.

Council's Economic Development Plan focuses on issues that have an impact on our economic and social well-being. Fostering economic and business development is one of the core objectives as Council strives to make the district a better place to live, work and do business. Core infrastructure must be provided to support economic growth. There is also a Regional Economic Development Strategy led by the Hawke's Bay Regional Council (HBRC) which is currently under review.

## 2.4 WHAT WILL THE DISTRICT LOOK LIKE IN 30 YEARS?

In planning for this strategy, Council has considered what the district and community will look like in 30 years, and what that might mean for its infrastructure. At a high level Council anticipates that:

- The district population will increase slightly from 2020 estimate
- It is expected that growth will primarily occur in Mahia, as more people return home to retire and due to an increase in holiday homes. This will influence the level of expectation on Council-provided services.
- Increased papakāinga housing
- Rocket Lab will generate tourism to the district which we will look to maximise
- Rocket Lab and growth at Mahia will impact on levels of service provided by Council, particularly with regards to providing resilient roading access to private property and the launch site
- There will continue to be an increase in the conversion of land from farming to forestry, fruit and possibly hemp
- Wairoa will be a destination for tourists and not a drive through town / district
- The community will be fully connected providing more business, employment and learning opportunities for residents
- Technology will continue to advance and change the way people do things
- Rail between Gisborne and Napier may be reinstated providing more economic opportunities, including rail tourism
- Wairoa town centre will continue to be the urban centre of the district and Mahia will continue to grow, while small settlements remain the same
- Council's partnerships with Māori will be stronger, including in decision making.

## 2.5 LINKAGES TO OTHER DOCUMENTS

This Infrastructure Strategy is a key strategic Council document that links to other core plans and strategies as identified in Figure 4.

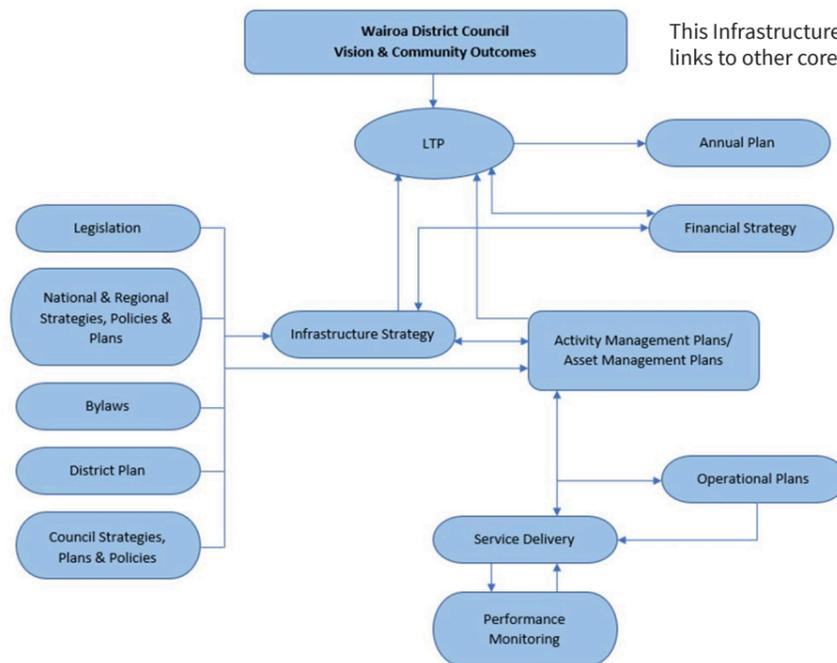


Figure 4A Infrastructure Strategy linkages with other documents

## 3. LEVELS OF SERVICE

### 3.1 CUSTOMER LEVELS OF SERVICE

Levels of service for Council's infrastructure includes customer needs (i.e. reliable kerbside refuse collection) as well as legislative requirements (i.e. meeting drinking water standards). Appropriate customer levels of service support Council's strategic vision and Community Outcomes.

The high level customer levels of service for the infrastructure are set out in Table 2 with detail in the supporting technical Activity Management Plans for each activity. The levels of service reflect customer needs, ensure legislative compliance, and functional infrastructure is sustained, maintain appropriate levels of safety and

reliability, and optimise resilience. This level of service framework provides alignment and strategic linkages between Council's vision and Community Outcomes, Infrastructure Strategy, and the Activity Management Plans.

The level of service statements (based on best industry practice) are what Council intends to deliver. Levels of service are provided across various customer outcomes, i.e. safety, reliability / quality, availability, resilience, environmental and financial sustainability. These are supported by suitable performance measures or how well Council is doing on delivering, including the mandatory performance measures required by Department of Internal Affairs and Waka Kotahi.

Table 2: Levels of Service framework

	Safe, supported and well-led community		Strong and prosperous economy			Protected and healthy environment
	Safety	Reliability / Quality	Availability / Accessibility	Resilience	Financial sustainability	Environmental sustainability
<b>Water Supply</b>	Safe, high quality water supply is provided	To provide reliable water networks	Water pressure and flow appropriate for its intended use	Water supply disruption during natural disaster events is minimised	Water supply assets are managed prudently to ensure long term financial sustainability for current and future generations	Water resources are used efficiently and sustainably
<b>Wastewater</b>	Mitigate the risk of environmental and public health impacts	To provide safe and reliable wastewater service to customers	All urban residents are provided with adequate wastewater provision	Wastewater disruption during natural disaster events is minimised	Wastewater assets are managed prudently to ensure long term financial sustainability for current and future generations	Protection is provided to the community and the environment
<b>Stormwater</b>	Mitigate the risk of flooding in urban areas	To provide reliable stormwater networks	All urban residents are provided with an adequate stormwater outlet	Stormwater disruption during natural disaster events are minimised	Stormwater assets are managed prudently to ensure long term financial sustainability for current and future generations	Effects on the natural environment are minimised
<b>Roads &amp; Footpaths</b>	The land transport network is designed and maintained to be safe	Road users will experience a fair ride quality on a well-maintained and managed sealed road network asset	The land transport network is managed in a manner that assists the economic development of the district	Council quickly restores access on key routes after natural event	Road assets are managed prudently to ensure long term financial sustainability for current and future generations	Effects on the natural environment are minimised
<b>Solid Waste</b>	Provide safe refuse and recycling kerbside collection services and rural waste services	Provide reliable refuse and recycling kerbside collection services and rural waste services	Provide the Wairoa Landfill for safe waste disposal	Council quickly restores service after natural event	Solid waste assets are managed prudently to ensure long term financial sustainability for current and future generations	Effects on the natural environment are minimised Council facilitates waste minimisation practices and promotes reduction of the amount of waste going to landfill
<b>Wairoa Airport</b>	All airport operations and infrastructure shall meet the Civil Aviation Authority requirements	Airport service supports health care by providing patient transport	Airport service is available for industry use	Council quickly restores Wairoa Airport after natural event	Wairoa Airport assets are managed prudently to ensure long term financial sustainability for current and future generations	Effects on the natural environment are minimised

### 3.2 GAPS IN LEVELS OF SERVICE

The customer outcomes to be delivered by the activities now and in the future are summarised in the following scorecard. (Refer to Appendix A for the full table). This shows at a high level where there are gaps between the existing level of service provided and Council's

targeted level of service. Investment will be required to close these over the short, medium and long term. Full details on levels of service are include in the Activity Management Plans.

**Table 3: Score card of current activity performance against customer outcomes**

	Safe, supported and well-led community		Strong and prosperous economy			Protected and healthy environment
	Safety	Reliability / Quality	Availability / Accessibility	Resilience	Financial sustainability	Environmental sustainability
<b>Water Supply</b>	●	●	●		●	●
<b>Wastewater</b>	●	●			●	●
<b>Stormwater</b>	●	●	●	●		●
<b>Roads &amp; Footpaths</b>	●	●	●	●	●	●
<b>Solid Waste</b>	●	●	●		●	●
<b>Wairoa Airport</b>	●	●	●		●	

**Key:** ● Not meeting targeted level of service; ● Just below targeted level of service; ● Meeting targeted level of service; where there is no dot, the level of service performance is not currently measured.

### 3.3 REVIEW AND MONITORING

The strategy is living document that need to be kept current and relevant as priorities for Council and Wairoa's community change. The review of activities will be undertaken as follows:

2. Formally assess achievement on implementing the key actions identified in this strategy every three years alongside the update of the Long Term Plan.

1. Review the achievement of meeting the customer levels of service on an annual basis. It will be reported to elected members and the Wairoa community.

### 4. ASSUMPTIONS

In developing this strategy, the following key planning assumptions have been made:

- Over the short term, Council will continue to be responsible for the core infrastructure activities included in this strategy. However, the Government's launch of the Three Waters Reform Programme (a three-year programme to reform local government three waters service delivery arrangements), indicates reform of local government's three waters services into a small number of multi-regional entities with a bottom line of public ownership. Preparation for operations of new water services entities is likely to commence from 2023. While this is the case, financial planning for the 30-year period has been based on the scenario of Council continuing to deliver three waters services, due to the uncertainty surrounding future service delivery.
- There is likely need for increased expenditure in the short to medium term to meet requirements for the management of three waters and implement water reform requirements. Government has provided external funding in the form of a Covid stimulus package to maintain and improve water networks infrastructure in the short term. Ongoing funding support is unknown.
- Key external funding subsidies will continue throughout the duration of the 30-year strategy. This includes a financial assistance rate of 75% from Waka Kotahi for roading and footpath activity. Other external funding will need to be sought from central government (e.g. Provincial Growth Fund) for the Mahia route resilience capital works.
- The district population will increase slightly from 2020 estimate. It is expected that growth will primarily occur in Mahia.
- The rating base remains constant or slightly increasing.

- Levels of service are defined in the Activity Management Plans for each activity, to meet legislative requirements and agreed to / accepted by the communities. Given financial pressures and the challenges faced by Council, there is no intention to increase them.
- Activity Management Plans will test the affordability of delivering the customer outcomes.
- Council will maximise the useful and economic lives of our assets.
- Council will use risk management practices to maximise assets and the management of risk of a critical asset failing. Renewals will be targeted towards critical assets.
- There will be increased costs for the acquisition, implementation, compliance and monitoring of resource consents for three waters and solid waste activities. Future resource consent conditions will be more restrictive and will cost more to comply with, implement and monitor.
- Sea level rise, coastal erosion and weather events as a result of climate change will increase requiring better management of the assets.
- More Treaty Settlements will be completed, and Māori will be a key partner with Council.
- Technology advances result in a fully connected district that enables flexible working arrangements and the retention of residents within the district with the potential for higher incomes from higher value work that can be undertaken without the need to go out of the district.
- Rocket Lab will remain on the Mahia peninsula and be successful with its goal of a launch every two days over the duration of this strategy.

## 5. LEVELS OF UNCERTAINTY AND IMPLICATIONS

In developing this strategy, there are a number of things that Council do not or cannot know. This has flow on effects on the identification of issues and options for dealing with issues and how Council can best respond.

The identified areas of uncertainty are:

- Legislative changes, National Policy Statements and National Environmental standards that may require significant changes to the way we plan, manage and fund the infrastructure.
- Three Waters reform.
- The District Plan is due for review alongside changes to the Resource Management Act. This may introduce controls, limits or incentives on land use activities and the management of environmental effects that may impact on land use change on the district which may have flow on effects on Council's infrastructure and economic development.
- The effect of climate change on Council's infrastructure. As Council develops its understanding of the impact from climate change, the long-term response will need to be adapted for how to manage those effects on the infrastructure.
- Further work is required to understand what years 11-30 look like across the infrastructure classes as at the moment there are gaps in information which do not enable to Council give certainty of what the future is expected to look like.
- Council has various levels of reliability of information across its infrastructure activities. Gaps have been identified in the following areas:
  - The location of future growth, the impact on the capacity of infrastructure and how it will be funded
  - Effects of climate change and the impact on funding
  - Condition of Council's infrastructure e.g. the location and condition of retaining structures for roads is relatively limited
  - Information about the condition of the stormwater network is limited
  - Government's proposed suite of legislative and regulation changes for freshwater management to improve the ecological health of the waterways
  - Potential new legislative requirements from treaty settlements
- Macro-economic and global political factors that may affect input prices, migration and the availability of resources.

### 5.1 RELIABILITY OF INFORMATION

Council has made significant improvements in data collection and quality in relation to its assets since the 2018-2048 Infrastructure Strategy. However, there are still varying levels of reliability across the activities covered in this strategy, to give certainty to what years 11-30 of the strategy looks like. Council is actively looking to fill the gaps to inform the 2024 -2054 strategy.

Key gaps have been identified in the following areas:

- The extent of the effects of climate change on roads and water supply infrastructure and how it will be funded
- The condition of stormwater reticulation assets and treatment plants
- The condition of the retaining structures and bridges
- The condition of waste management assets.

### DATA QUALITY

The data records for three waters assets are recorded in Council's asset management system for most asset classes. Water supply asset condition is based on samples taken in the field and analysed in the lab. Wastewater asset condition is based on CCTV surveys. The data confidence of the three waters asset data has been classified in accordance with the 2015 International Infrastructure Management Manual as follows:

- Water supply – reliable for inventory completeness, age and condition
- Wastewater – reliable for inventory completeness, age and condition
- Stormwater – reliable for inventory completeness, age, and uncertain for condition.

The data records for roads and footpaths are recorded in Council's RAMM system. The data confidence of these assets was independently assessed for the 2019/20 year by the Road Efficiency Group (REG) as follows:

- Overall asset management data score of 82%
- Data accuracy is to expected standards for 71% of the data set, there are minor data quality issues for 10% of the data set and major data quality issues for 19% of the data set. The main gaps are for condition as stated above.
- Data completeness is to expected standards for 71% of the data set, there are minor data quality issues for 19% of the data set and major data quality issues for 10% of the data set. The main gaps are for condition as stated above.

Data quality for both Solid Waste and Wairoa Airport has not been formally assessed. However, there have been some recent data collection initiatives that have been undertaken. Further data improvements have been identified.

## 6. KEY INFRASTRUCTURE ISSUES

Council has identified seven key strategic infrastructure issues that will impact on its provision of infrastructure over the next 30 years. The significant issues for each activity are covered in Section 7.

### 6.1 LEGISLATIVE AND POLICY CHANGE

There are significant changes to legislation that are either planned or underway that will impact the delivery of infrastructure in the district.

#### WATER REFORM

The Government announced its three waters reforms on 31 July 2019 in response to the Havelock North water contamination outbreak. Key features include a dedicated water regulator, a new Water Services Bill, extending regulatory coverage to all water suppliers (except individual households), strengthening the stewardship of wastewater and storm water with regional councils remaining the primary regulators, and transitional arrangements of up to five years.

A standalone Crown entity Taumata Arowai has been created to regulate drinking water. The independent regulator will have high degree of focus and independence. The extent of the regulatory coverage to all drinking water supplies includes schools, maraes and community halls. It will be a stricter regime with higher compliance requirements and standards.

In July 2020, the Government announced funding to provide immediate covid stimulus package to maintain and improve water networks infrastructure, and to support a three-year programme of reform of local government water services delivery arrangements. Wairoa received \$11.04 million to help fix the backlog of waste water and water infrastructure projects.

As the Government's three-year programme to reform local government three waters service delivery arrangements progresses, more certainty will be given to Government's starting intention is to reform three waters services into a small number of multi-regional entities with a bottom line of public ownership. The impacts of reform can then be considered and revaluated within the next infrastructure strategy review in 2024.

#### FRESHWATER MANAGEMENT

The National Policy Statement for Freshwater Management 2020 (Freshwater NPS) provides local authorities with direction on how to manage freshwater under the Resource Management Act 1991. Councils are required to implement the Freshwater NPS in their policies and plans as promptly as is reasonable, so that it is fully completed by no later than 31 December 2025.

Requirements of the Freshwater NPS include, but are not limited to:

- Manage freshwater in a way that 'gives effect' to Te Mana o te Wai
- Improve degraded water bodies, and maintain or improve all others using bottom lines defined in the Freshwater NPS.
- Avoid any further loss or degradation of wetlands and streams, map existing wetlands and encourage their restoration.
- Identify and work towards target outcomes for fish abundance, diversity and passage and address in-stream barriers to fish

passage over time.

- Set an aquatic life objective for fish and address in-stream barriers to fish passage over time.
- Monitor and report on freshwater with a single ecosystem health score and respond to any deterioration.

This focus on stopping and reversing decline to waterways, is heavily impacted by drainage practices. The Action for Healthy Waterways package sets higher standards around the cleanliness of swimming spots, includes a new bottom line for nitrogen toxicity, sets controls for farming practices like winter grazing and how much synthetic fertiliser is used, and requires mandatory and enforceable farm environment plans.

At this stage Council is working to understand the minimum discharge standards for wastewater and stormwater and any changes it is required to undertake to meet those standards.

#### ROAD SAFETY

There is an increased focus on road safety nationally and the Government has recently released its proposal for the new road safety strategy, Road to Zero. The proposed Vision Zero is based on a world leading approach that says no death or serious injury while traveling on our roads is acceptable. The focus areas that will have the greatest impact include infrastructure improvements and speed management, vehicle safety, work related road safety, road user choices and system management.

The Regional Council is preparing a Roadsaw Hawke's Bay strategy that Council is contributing to. At a local level, road safety is an ongoing focus with mandatory reporting. Crash statistics throughout the district are analysed in conjunction with discussions with Roadsaw Hawke's Bay and New Zealand Police to ensure that investment is made in the right areas. There is also preventative discussions and safety initiatives to improve safety for the district's road users.

#### ONE NETWORK FRAMEWORK

The One Network Framework is being developed nationally to provide a common language to reflect the role the transport system plays in the movement of people and freight across all land transport modes, the social spaces provided and the system's role in providing access to adjacent land. This will ensure investment decisions are made consistently by local authorities rather than in an ad hoc manner. The Wairoa road network will be classified through movement and place dimensions. Council will use the framework to guide its decisions on its footpath network to ensure that it is accessible for the community particularly the aging population.

#### ZERO CARBON ACT

The Climate Change Response (Zero Carbon) Amendment Act includes a target of reducing emissions of biogenic methane within the range of 24 to 47% below 2017 levels by 2050, and an interim target of 10% by 2030. It also has a target of reducing net emissions of all other greenhouse gases to zero by 2050. This will impact Council's asset portfolios including three waters, land transport and solid waste. The Act does not explicitly exclude any activities such as methane produced at wastewater treatment plants. It will also impact the solid waste asset portfolio with increasing Emissions Trading Scheme costs (carbon tax) and to a lesser degree transport costs used to collect and cart to landfills.

## WASTE LEVY

In November 2019 the Ministry for the Environment announced proposed change to the landfill levy. The proposal would increase the landfill levy. From 1 July 2021, the waste levy will increase from \$10 per tonne to \$20 per tonne for municipal landfills. This rate will continue to progressively increase annually, reaching \$60 per tonne on 1 July 2024. For construction and demolition landfills the levy will be applied at a rate of \$20 per tonne from July 2022, increasing to \$30 per tonne on 1 July 2024. These levy increases will result in increased landfill disposal costs for Wairoa.

The Government will invest this revenue into waste minimisation projects and initiatives to continue a transition towards a circular economy for New Zealand. Half of the levy revenue will continue to be distributed to Councils for waste minimisation work.

## EMISSIONS TRADING SCHEME

The New Zealand Emissions Trading Scheme is the Government's main tool for reducing greenhouse gas emissions, by putting a price on greenhouse gas emissions. The Government has recently reformed the New Zealand Emissions Trading Scheme through the Climate Change Response (Emissions Trading Reform) Amendment

Act, to help New Zealand reach its greenhouse gas emissions reduction targets. The associated regulations are expected to be published later in 2021. Changes to the Emissions Trading Scheme may also result in increased landfill disposal costs.

## CHINA'S BLUE SKY POLICY

In early 2018, China's Blue Sky Policy, imposed tighter restrictions on the importation of certain recyclables, primarily mixed paper and plastic. China was the largest importer of recyclables. This has impacted the commodity price for recyclables globally. Nationally, the consequences of China's Blue Sky Policy has impacted on the recycling collection contracts with significant cost escalations. Alternative markets are hard to find and are quickly getting overwhelmed. This has highlighted New Zealand's lack of investment in solid waste infrastructure. WasteMINZ (the national industry organisation) and the Ministry for the Environment are the leading the national response to China's National Sword Policy.

At a local level, Council's current contract provides for management of types 1-7 plastics. At the end of the contract term this is likely to reduce to fewer plastic types and residual plastics will likely be landfilled where there is no market.

**Table 4: Summary of Council's response to legislative changes**

Response	Impact
Keep a watching brief on legislative, policy and regulator change that impact on our core activities.	Enables early understanding and planning for changes that impact on the way Council delivers its infrastructure and how to measure compliance.
Plan and budget on the basis of increased costs to meet legislative change. Routinely review service delivery models.	Early financial modelling of potential cost scenarios will better enable Council to understand the potential impacts on rates and if necessary, identify alternative funding sources to manage these costs. Ensures renewals planning and budgets factor in increased compliance costs. Enables early engagement with the community around costs and potential impacts on levels of service.
Manage relationships with key industry partners and government departments.	This will help Council to ensure up to date information is used to inform early planning. Relationships will better enable Council to ensure it is able to communicate potential impacts on the district and its ratepayers early on and help inform the development of legislation and policy as it relates to smaller rural councils.

Council's response to legislation change will enable it to understand timing implications for change and prioritise its responses. It will enable Council to understand the potential impacts on asset and financial modelling and prioritise funding. It will ensure that Council identifies the critical components of its infrastructure networks and prioritises renewals.

It will also enable Council to have strong relationships with key government departments and industry groups to ensure that it has the opportunity to communicate potential impacts on the district and identify alternative options to help inform legislative and policy direction.

## 6.2 CLIMATE CHANGE

The climate change impacts at regional and local levels, and Council's adaptation response to this are detailed in the draft report Adapting to Climate Change, prepared for the 2021 Long Term Plan purposes.

## REGIONAL LEVEL

The regional snapshot of climate change is:

- Temperature:
  - Under the low emissions scenario – 0.7° warmer by 2040 and 0.7° warmer by 2090
  - Under the high emissions scenario – 1.1° warmer by 2040 and 3.1° warmer by 2090
- Rainfall:
  - Gisborne and Napier are expected to have 1% less annual rainfall by 2040 and 3% less by 2090
  - Winter rainfall is likely to decrease by 8% in Gisborne and 10% in Napier by 2090
- Cyclones – ex-tropical cyclones will likely be stronger and cause more damage as a result of heavy rain and strong wind
- Sea level rise / coastal erosion – There may be increased risk to coastal roads and infrastructure from coastal erosion and inundation, increased storminess and sea level rise.

Hawke's Bay Regional Council announced a climate emergency for the Hawke's Bay region on 26 June 2019. In declaring a climate emergency, the Regional Council is making climate change a focus in all its decision-making and relevant work programmes.

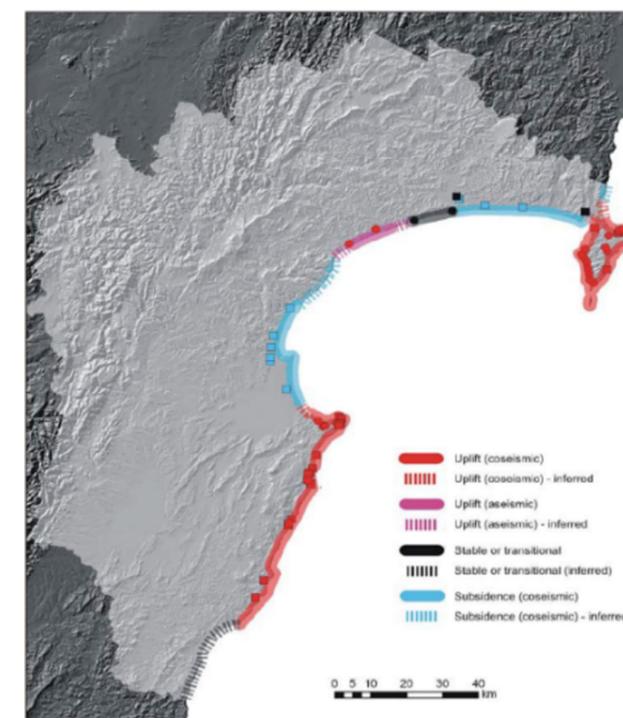
Government has also since declared a national climate change emergency for New Zealand in December 2020.

## LOCAL LEVEL

Wairoa district receives the highest levels of rainfall out of the territorial authorities in the region. Over the next 30 years Council expects to see an increase in the frequency and intensity of storm events and droughts. This will impact on the provision of infrastructure, including the provision of safe drinking water, the disposal of wastewater and stormwater, and impacts of coastal erosion on coastal roads.

Coastal erosion is damaging roads across the district. For example, the damage to access roads to Mahia from coastal erosion not only impacts residents but also the access to the Rocket Lab launch site. This needs to be addressed given the anticipated economic benefit to the district from Rocket Lab, and to maintain access to private properties in a part of the district that is expected to grow.

Figure 5 shows how the coastline around the Wairoa district is subsiding, apart from along Mahia Peninsula where there is tectonic uplift. Areas of subsistence will exaggerate the coastal impacts associated with rising sea levels.



**Figure 5 Estimates of geological land elevation along the coastline of Hawke's Bay (Beavan & Litchfield, 2009)**

Potential for flooding from the Wairoa River is great, with high run-off occurring for a number of reasons. The area has the highest variation in rainfall in New Zealand, where heavy rain occurs after long hot dry spells, resulting in rapid runoff. Another contributing factor is the short, steep catchment, made up of shallow soils underlain by impermeable mudstone sub-strata. With increases in dry days expected for Wairoa, conditions could be more favourable for flooding in the district.

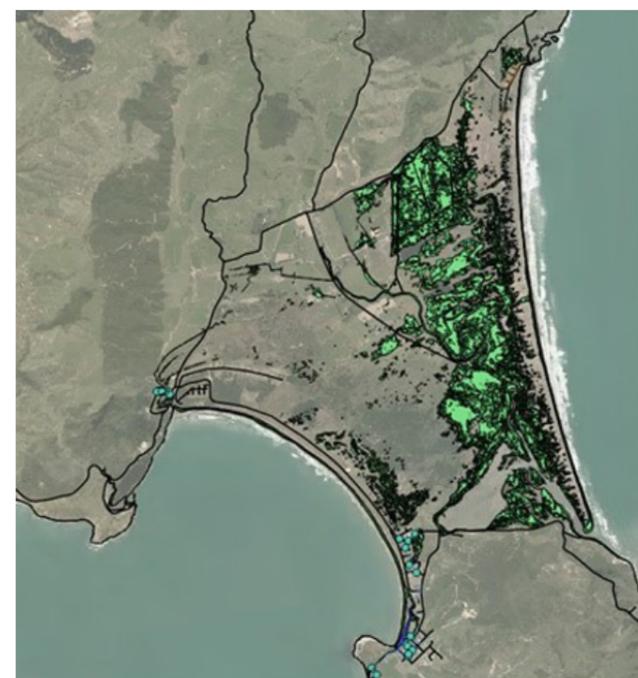
Climate change is a factor considered with Council's decision-making processes, particularly for core infrastructure. The extent to which climate change is important will depend on:

- Whether there is a particular driver such as a major investment decision
- Duration, location, extent and nature of the issue being addressed.

**Table 5 Summary of Council's response to climate change**

Response	Impact
Monitor local trends in weather events, climate change and associated legislation.	Enables early planning in response to those trends and enables Council to better identify when issues require action.
Identify assets at risk.	Identify options for those assets most at risk and implement projects on a priority basis as funding becomes available.
Monitor flooding, slips and coastal erosion.	Enables early planning and helps prioritisation of assets at risk.
Manage relationships with HBRC and National Institute of Water and Atmospheric Research (NIWA).	This will help Council to ensure up to date information is used to inform early planning.
Develop catchment management plans.	Prioritisations can be based on areas prone to flooding as these are developed e.g. along the Wairoa River.
Embed Sustainability Policy.	To ensure this is a key part of decision making.
Consider climate change factors with Council's decision making process, such as the Long Term Plan.	Ensures investment decisions are evidence based and future proofed as far as possible.
Participate in national climate change programmes (refer to Figure 6).	This will ensure Council is able to compare nationally the extent and value of local government owned infrastructure exposed to sea level rise.

Four elevation scenarios for sea level rise were assessed and mapped for the National Climate Change Programme, coordinated by Local Government New Zealand. The programme is to understand the extent and value of local government owned infrastructure exposed to sea level rise. Figure 6 shows the impact of 1.5m sea level rise scenario.



**Figure 6 Map of 1.5m sea level rise**  
Source: Wairoa District Council (January 2020)

Council's response to climate change will help it to identify key assets at risk, ensure it recognises climate change and its impacts in its asset and financial modelling, and prioritise funding for resilience. It will ensure that Council identifies the critical components of its infrastructure networks and prioritise renewals so that the network can continue to operate.

### 6.3 LAND USE CHANGE

The district has continued to experience changes in land use which has a direct impact on Council's infrastructure and expected levels of service from our residents and ratepayers. Primarily land use is changing with conversions from productive farming to forestry and some fruit.

Forestry harvest is expected to increase over the duration of this strategy (based on areas harvested), with conversion of farmland to forestry already happening at a relatively quick rate, with land prices rising as a result. Land use changes from pastoral to fruit and horticulture are also occurring, and in the future, it is expected there will be more growing of hemp. Irrespective of the industry, there are costs to get the produce to market in its best saleable state. The quantum of trucks on the district's roads is expected to increase in response to the increase in land use change, regardless of the capacity of the rail line.

Council expects that landowners who are converting land to other use may ask for unsealed roads to be improved or sealed, to assist in getting product to market in the best possible state. As well as expectations to improve roads or seal, this comes with ongoing maintenance of the road which has cost implications when it is being regularly used by heavy vehicles.

Forestry conversion is happening at a relatively fast rate which is reflective and partly enabled by the current government's goal to plant 1 billion trees. The one billion trees programme comes with a \$240m fund to assist reaching this goal.

**Table 6 Summary of Council's response to land use changes**

Response	Impact
Work with the forestry sector to better quantify the effects on roading of the forestry activity.	Enables a better understanding of the location and timing impacts from harvesting on infrastructure while building relationships with the sector.
Assess potential land use change and impacts as part of the review of the District Plan.	Enables an integrated approach to understand the impacts from potential changes to the status of activities and land use and their location on the future planning of infrastructure and levels of service. Will help determine where growth (if any) may go and implications for infrastructure capacity e.g. residential development in Mahia and tourism opportunities for economic development.

Council's response to land use change will help it to understand the ongoing future impacts of forestry and freight movements on its roading assets, and the impacts of growth on three waters and solid waste. This will enable Council to better model the potential financial impacts and prioritise funding.

### 6.4 SERVICING MAHIA

Growth across all parts of the district is anticipated, however more of a focus to being in Mahia with an increase in people retiring to the area, or people that whakapapa to the area returning home, or people building holiday homes. Council already faces a significant challenge from the impact of ongoing coastal erosion on access roads to the Mahia peninsula and the significant costs for sustainable solutions is estimated at a high level at \$8 million.

While Council is used to some population swell at Mahia over the holiday periods and the associated infrastructure struggling to cope with the increased demand, with an expected increase in permanent residents, this will place ongoing increased pressures on Mahia's infrastructure.

If the permanent population increases as anticipated, Council anticipates that the community will want levels of service typical for servicing urban areas rather than for rural settlements. Council will need to invest in Mahia's stormwater infrastructure and wastewater to ensure capacity is available.

Tourism on the Mahia peninsula has been three fold in the last two years. Traffic counts over the summer period (2018/2019) counted 2,300 vehicles per day. The population of Mahia fluctuated from less than 1,000 permanent residents living on the Peninsula to over 15,000 people during peak periods. Shock loading on Council's infrastructure is challenging as design capacities are breached.

It is anticipated that Rocket Lab will achieve its goal of a launch every two days over the duration of this strategy. While this presents an economic opportunity for the district to benefit from this investment and tourism, it presents significant infrastructure challenges to maintain safe access to the site.

**Table 7 Summary of Council's response to servicing Mahia**

Response	Impact
Work collaboratively with planners in the review of the District Plan to understand the potential capacity for increased dwellings and businesses for Mahia.	Potential impact from growth / take up of existing capacity on infrastructure can be better understood, planned and budgeted for.
Work collaboratively with Rocket Lab to understand their ongoing requirements for access to the launch site.	Implications for the needs of our roading infrastructure to meet Rocket Lab's roading requirements can be confirmed and planned for in conjunction with any additional alternative modes for access options that Rocket Lab are looking for independently.
Investigate alternative funding sources given the importance of accessibility to the Rocket Lab launch site.	Provides the opportunity to reduce the financial impact through grants, shared services or partnerships to maintain roading access to Mahia Peninsula.

Council's response to growth at Mahia will help it to understand the future impacts of development and Rocket Lab on its infrastructure. This will enable Council to better model the potential financial impacts and prioritise funding.

### 6.5 AFFORDABILITY

The Wairoa district faces a significantly higher ability to pay challenge than for the Hawke's Bay region as a whole and nationally, in terms of the demographic, economic and income factors and deprivation index. The average standard of living (or GDP per capita

or per person) in the district is 81% of the Hawkes Bay level and 63% of the national level.

With a small rating base and higher ability to pay challenges, Council needs to think more broadly about how to fund its infrastructure programme. This will therefore challenge Council to look for alternative funding sources.

Over the life of this strategy Council needs to understand the funding options available, including Waka Kotahi subsidies, the Provincial Growth Fund, other grants and subsidies, user fees and charges, potentially development contributions, and partnerships to deliver services to the district. Alternative funding sources will enable

Council to reduce the financial impact of increased infrastructure costs to our ratepayers.

If Council's levels of Waka Kotahi funding subsidy for roads and footpaths reduce, it would have a significant impact and Council would need to consider its key priorities as well as its levels of service provided across the district to keep the activity affordable for our ratepayers. Understanding what Council can afford to pay is critical. Council will need to consider potential changes to levels of service in the future to ensure its budget is prioritised to where it is most needed.

Proposed changes to legislation and regulations will also increase costs for users e.g. changes to the amount of the waste levy on Council and those using Council's waste services, including the transfer station and landfill.

Overall, Council needs to make sure its infrastructure is well maintained to avoid future unexpected costs for repair or replacement, and to prevent unexpected disruption of services to the community.

**Table 8 Summary of Council's response to affordability**

Response	Impact
Identify alternative funding sources available to enable Council to maintain current levels of service delivery without any impacts on ratepayers.	A broad spread of funding sources outside of Council will enable it to minimise impacts on ratepayers.
With potential change in areas growing and declining, there be an increased need to reconsider the way in which rates are levied.	Review how rates are levied such as a shift to increased district wide rating, or a change in the way in which targeted rates are applied.
Identify where a change in levels of service, to mitigate cost escalations, will not have a significant impact on residents and businesses.	Review levels of service and community feedback to identify whether Council is over-delivering in any areas which could reasonably manage a reduced level of service.
Keep a watching brief on legislative change to understand potential cost increases to ratepayers e.g. waste levy charges.	Enables early and integrated planning in response to legislation changes.
Build relationship with NZTA.	Enables NZTA to understand the importance of the subsidy for the delivery of services and Council can better understand the allocation of subsidy process and signal potential impacts early on.
Set priorities based on alignment with our vision, community feedback and economic development aspirations.	Asset management is prioritised in the right areas as agreed by the community and costs are understood.
Council's Asset Management Plans consider community affordability with programme development and reviewing service levels.	Affordability is tested against service levels and risk.

Council's response to affordability will help it to deliver infrastructure and appropriate levels of service in a way that maximises alternative funding sources to deliver value to ratepayers. It will help Council to understand community priorities in the planning and funding of its infrastructure.

skilled staff to ensure business continuity of core infrastructure. Council is planning for improvements to infrastructure resilience in the event of natural hazards / disasters, and during times of maintenance or repair to ensure business continuity for Council and its residents and businesses. The road network is vulnerable to closure during adverse events and a lack of alternative routes results in economic and social disruption. Similarly, the main township is reliant on one source for its water supply. Storage is limited, and if impacted by an event, it could have significant consequences.

While resilience is a key issue, Council is constantly making improvements to its resilience through investment in staff, plant and maintenance. For example, Council is installing five new generators at wastewater pump stations, has trained staff, and has access to trained water supply operators from Gisborne District Council and contractors to respond to an event or emergency.

## 6.6 RESILIENCE

Resilience is the ability to cope with and recover from adverse events e.g. if a road slip takes out a critical water main to a township. It is not just about hard infrastructure, but also about social resilience, staff retention, resourcing, and succession planning to ensure Council has the skills and resources to respond to an event. This is a significant issue for Council as it is difficult to attract and retain

**Table 9 Summary of Council's response to resilience**

Response	Impact
Increase Council's knowledge and collection of asset data.	Asset renewal and maintenance forecasts are based on the current information about the condition and the expected remaining useful life of infrastructure assets. The accuracy of asset data has a direct impact on the accuracy of renewals and maintenance forecasts and uncertainties around these costings.

Response	Impact
Identify and prioritise planning for critical assets.	Critical assets that have a high community impact if they fail, and that have the greatest effect on the community should they fail or not be available are identified and planned for, even if there is not a high probability of failure.  Approaches for each of the critical assets are identified and planned for to limit their high impact on the community.
Ensure Wairoa Airport is maintained to retain emergency access for any event.	Enables emergency services to access the district if other means are restricted.  Financial impact for ensuring required maintenance meets Civil Aviation Authority and emergency needs.
Planned and programmed maintenance of critical routes.	Will increase the likelihood of being able to retain access in emergencies.  Funding will be prioritised accordingly which will impact on availability of funding to carry out the maintenance and renewal programmes of non-critical routes.
Identify an alternative water supply for Wairoa	Potential ability to maintain water supply to Wairoa during a disaster or event.  <i>(see Water supply asset section for more information)</i>

Council's response to resilience will help it to manage a level of service if an event should happen and enable critical infrastructure to be identified and a response known to minimise impacts on the community and access throughout the district.

via our local roads is impacting on our roading infrastructure and affordability.

Treaty settlements will continue to be finalised over the duration of this strategy. It is likely that there will be iwi led tourism initiatives, particularly as it is anticipated that State Highway 38 from Lake Waikaremoana will be sealed over the life of this strategy. This will provide different opportunities and open up the district to more tourism.

## 6.7 ECONOMIC DEVELOPMENT

While increased economic development is needed and desired in the district, it has an impact on the capacity of our infrastructure. With economic development comes expectations of those establishing businesses in the district which Council may not be able to meet. For example, accessibility to the Rocket Lab launch site and the conversion of land to forestry has and will continue to have an impact on Council's roading infrastructure and its ability to pay for the maintenance and safety of those roads.

The Regional Economic Development Strategy (REDS) is in the process of being reviewed. The REDS Action Plan includes as part of the strategic framework to become a beacon for investment, new business and migrants. Wairoa District Council is the lead agency to work with Rocket Lab to develop opportunities to leverage business attraction off their Te Mahia initiative. This action needs to be exploited, as the benefits of Rocket Lab are in reality split between Wairoa and Gisborne districts.

The Wairoa to Napier rail line reopened in June 2019. There is a feasibility study required for the Wairoa to Gisborne line to reopen for freight. Kiwi Rail's forecasted demand for forestry exports will triple between 2019 to 2028 from approximately 140,000 tonnes per year in 2019 to a high of 595,000 tonnes in 2023, reducing to 250,000 tonnes in 2030. Even with rail operating 6 days a week, the road network will have to move up to 350,000 tonnes of product through the district at the peak period. While state highways are key to getting the product to port, getting the product to the state highway

It is anticipated that Rocket Lab will achieve its goal of a launch every two days over the duration of this strategy. This presents an economic opportunity for the district to benefit from this investment and tourism. There is a challenge for the district to 'own' Rocket Lab and realise the financial benefits from the facility and tourists. We will need to ensure we have the infrastructure to support tourism opportunities resulting from Rocket Lab.

**Table 10 Summary of Council's response to economic development**

Response	Impact
Prioritise maintaining access to the Rocket Lab launch site.	This will ensure that Rocket Lab have safe access to transport their rockets to the launch site.  Understand the costs involved to seal the road to the site and whole of life costs, and funding arrangements.  This will better support Rocket Lab's launch goals and contributes to potential increases in tourist demand.

Response	Impact
Work collaboratively with Tūhoe, the community, NZTA and Whakatane District Council on the sealing of State Highway 38.	Will bring more visitors into the district.
Alignment of infrastructure investment with REDS.	Integrated response from Council in delivering on the REDS action plan.
Better decision making.	Robust decision making through the business case process for investment decisions.  Trade-offs and prioritisations occur to ensure we get the best value from Council's spend.
Annual review of data on number of visitors, housing construction, businesses and population.	Accurate data will help Council to make robust decisions as it will understand the scale of growth (or decline) across the district.
Identify initiatives to help retain visitors in the district	Ensure roads, footpaths and cycleways are safe and enhanced to draw tourists into our settlements rather than driving / riding through.  Could result in different levels of service or investment where benefits can be clearly demonstrated.

Our response to economic development will help Council to understand the potential costs and impacts of economic development on its infrastructure, including changes to levels of service to encourage tourists to stay/spend time in our district.

## 7. OUR INFRASTRUCTURE

### 7.1. WATER SUPPLY

The water supply activity involves the management, operation and maintenance of the district's water supply network. Council is responsible for providing safe, clean drinking water to domestic, commercial, and industrial customers connected to its water supply networks as a matter of public health.

There are water supply networks that service Wairoa, Tuai and Mahanga, with the Frasertown water treatment plant serving Wairoa and Frasertown and the Talleys' meat works. Council is also working with the community at Blue Bay to come to an agreed approach for water supply for the area.

Wairoa receives the highest level of rainfall in the region which impacts on the water supply in the district by raising river levels and increasing the sediment load carried in the rivers impacting river turbidity therefore our ability to make drinking water. This makes the drawing and treatment of water more difficult and requires regular attention to ensure the provision of safe drinking water. Council has riverbank erosion and stabilisation issues at its water intake point on the Wairoa River which is requiring further investment to secure access to the water supply for Wairoa and Frasertown.

Over the life of this strategy Council will be looking at alternative water supply options (including options to purchase a mobile treatment plant) to reduce its over-reliance on the Wairoa River and increase resilience. Council are also part of Hawke's Bay Regional Council Raw Water Assessment group which covers the entire Hawkes Bay district, being part of this group will help inform Council and better understand the risk.

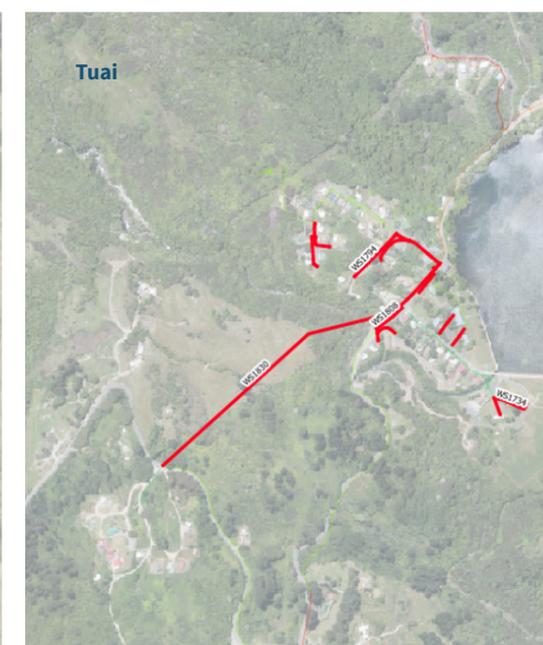
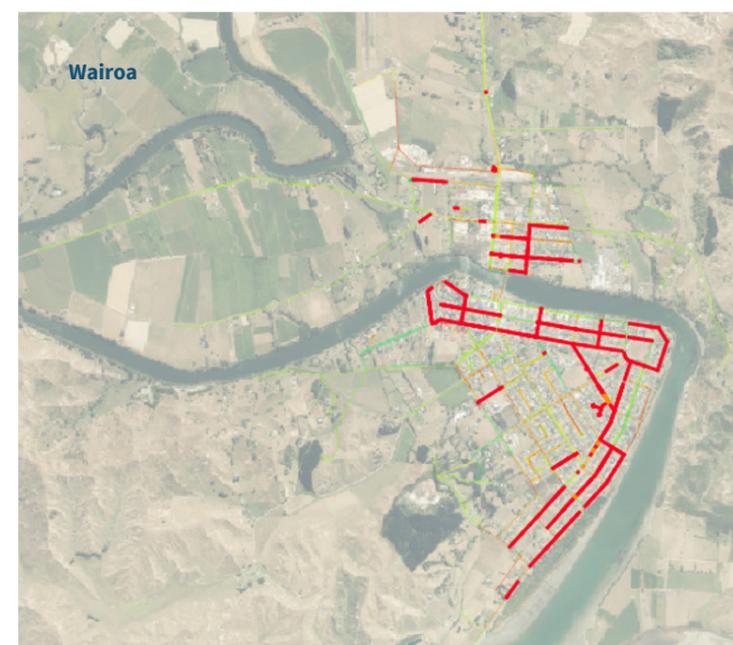
As the Government's three-year programme to reform local government three waters service delivery arrangements progresses, more certainty will be given to Government's starting intention is to reform three waters services into a small number of multi-regional entities with a bottom line of public ownership. The impacts of reform can then be considered and revaluated within the next infrastructure strategy review in 2024. While there is still a lot of uncertainty around water reforms, Council recognises the significant investment and the scale of operational and regulatory requirements across the three waters for the region and its ratepayers.

Because the district's population is predicted to increase slightly (under medium growth projection), and there is capacity to service any growth at Mahia, Council does not anticipate any capacity issues for its water treatment plants. Council does, however, recognise that it has aging infrastructure that will need to be replaced over the life of this strategy, and some of the buildings / structures housing equipment are getting old and may need to be replaced.

#### ASSET CONDITION AND PERFORMANCE

Most of the water supply network (almost 80%) is between 10 and 50 years old so about midway through its asset life, with 34% of the reticulation pipes are in Poor or Very Poor condition. As a result, there is a backlog of reticulation pipe renewals. The majority of this pipeline is within the Wairoa Scheme, with 6.15km being Production Assets. Production assets are those pipes that run from the Water Treatment Plant to the Wairoa tanks/reservoirs, as well as from the water intake to the Wairoa Treatment Plant.

The maps below show where the "backlog" pipes are located in both Wairoa and Tuai.



Asset performance of Council's water supply network is assessed in terms of compliance with drinking water standards, water loss and water quality as follows:

- Compliance with drinking water standards – Council's water quality is measured monthly against the mandatory performance measures and reported in the Annual Report. The latest Ministry of Health Audit, completed in 2020, shows full compliance with drinking water standards for Wairoa's water supply. Mahanga currently has no water treatment facility,

however a Water Safety Plan for Mahanga has been approved. Council has a suite of plans and processes to provide assurance that it is providing safe drinking water. These include the Water Safety Plans for Wairoa and Frasertown, and Tuai schemes that have been approved by the Ministry of Health's Drinking Water Assessor, Emergency Response Plan, and updated Operations and Maintenance Manual for the treatment plants.

- Water loss - A Water Loss Management Plan was completed in May 2020. The purpose of this plan was to gain a better

understanding of the reasons for water loss. Water loss can happen for a range of reasons, including leaks and breaks in the network and this results in Council treating more water than is needed. Key areas of water loss included Frasertown and Tuai. In response, the Water Loss Management Plan covers response times to fix leaks, leak detection, education, metering, and non-revenue calculations. Water loss has already reduced through this programme. This is an ongoing programme.

Significant issues for the water activity and principal options for managing these options is detailed in the following table. The principal options consider a range of strategic responses including policy, regulation, demand management, and not just capital solutions (categorised as programme). This approach has been applied to all activities in this strategy.

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 11 Significant issues and options for water supply

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
<b>Water reform and changes to legislation are likely to result in higher standards for water treatment and compliance costs</b>	Policy change	1. Continue with water services remaining in house. Levels of service may need to be reduced with status quo option to provide an affordable service		<ul style="list-style-type: none"> <li>• Future costs may be unaffordable for District's small population</li> <li>• Central government may force amalgamation for councils that do not collaborate regionally</li> </ul>	2021-2051	Budget impacts likely to be significant	Budget impacts likely to be significant
	Regulation	2. Regional approach with management Council Controlled Organisation (CCO) option	Hawke's Bay councils have been working collaboratively on a review of the current and potential three waters service delivery options for Hawke's Bay.	<ul style="list-style-type: none"> <li>• The full benefits setting up CCO not achieved with this option as assessed in separate Hawke's Bay three waters delivery review</li> </ul>	2021- 2025	Budget impacts are unknown but are expected to be significant	High
	Regulation	3. National conversion of three waters into small number of multi-regional entities with a bottom line of public ownership option (preferred)	Working in partnership with central and local government and iwi/Maori, participate in a centrally-led process to enable Wairoa's waste water assets and services to be combined into a multi-regional entity. This allows for prioritised investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve.	<ul style="list-style-type: none"> <li>• Implications from water reforms on service delivery, including the impact of a water regulator and changes to legislation are relatively unknown and may impact on levels of service and structural changes</li> <li>• There are likely to be increased costs to address health and safety concerns/issues <ul style="list-style-type: none"> <li>• Will require the review of our Water Supply Bylaw</li> </ul> </li> </ul>	2021- 2025	Budget impacts are unknown but are expected to be significant	High
<b>Effects of climate change on water supply</b>	Risk	1. Respond reactively to effects of climate change and take direction from Central Government		<ul style="list-style-type: none"> <li>• Infrastructure such as transport routes and water networks may be damaged <ul style="list-style-type: none"> <li>• Does not allow time to adapt and / or mitigate</li> </ul> </li> </ul>	2021-2051	Budget impacts are unknown	High
	Risk	2. Develop management response specific for Council (preferred)	Develop cross-council climate change response	<ul style="list-style-type: none"> <li>• Response programme developed and costed based on draft Adapting to Climate report (January 2020)</li> </ul>	2021-2031	TBC	Medium
	Policy	3. Inform customers of dirty water periodically		<ul style="list-style-type: none"> <li>• Increase in water quality customer complaints</li> <li>• Potential risk of not complying with Water Safety Plans</li> </ul>		Low	High
<b>Identification of an alternative water source to avoid reliance on the Wairoa River</b>	Programme	4. Upgrade infrastructure to cope with climate change impacts on source (preferred)	Upgrade treatment plants to deal with siltation	<ul style="list-style-type: none"> <li>• Upgrade of water treatment plants may require significant expenditure (but possibly may be required through water reforms regardless of demand)</li> </ul>	By 2051	Significant	Medium There is time to identify and respond to changes in demand
	Policy	1. Ask private property owners to invest in their own resilience solutions (i.e. water tanks)	WDC participation in the HBRC Raw Water Assessment group for the entire Hawkes bay district.	<ul style="list-style-type: none"> <li>• Council would likely need to provide subsidies for owners to install private solutions <ul style="list-style-type: none"> <li>• Community likely not to support this option</li> </ul> </li> </ul>	2021-2025	Low	Medium
	Risk	2. Mobile treatment plant ready to service high risk areas to improve resilience (preferred)	Purchase mobile treatment plant to provide additional treatment for high risk areas (i.e. Wairoa Bridge, Frasertown Plant, Tuai Plant)	<ul style="list-style-type: none"> <li>• Will need to align with water reforms and any agreed three waters service reform and delivery requirements <ul style="list-style-type: none"> <li>• Cost effective investment to improve resilience</li> </ul> </li> </ul>	By 2031	Medium	High

Significant Issue	Strategic Response Category	Options	Principal Option(s)		Implications of the Option	Timeframe	Cost Implications	Risk
Water network losses	Demand management	1. Continue with existing leakage management including detection using drones consistent with good industry practice ( <b>preferred</b> )	Undertake loss detection programme using thermal drones to identify unreported leaks		<ul style="list-style-type: none"> <li>Increased maintenance costs with repairs</li> <li>Increased identification of where water loss occurs</li> <li>Renewal capital programme can be developed</li> <li>The detection programme and corrective action may reduce the volume of water needed from the water intake and costs to treat the water</li> </ul>	2021 - ongoing	Low cost using existing resources	Low
	Programme	2. Universal water metering ( <b>preferred medium term</b> )	Continue to install water meters in urban areas		<ul style="list-style-type: none"> <li>More properties will have water meters resulting in us having accurate data on the amount of water used which can be used to promote sustainable water use</li> <li>Community opposition to water meters and user pays principles for drinking water</li> <li>It will likely be required by the new water regulator</li> </ul>	2021 – ongoing	\$2.6m (some funding from government stimulus package)	Medium
Resource consents need renewing but there is uncertainty about what the conditions will involve	Regulation	1. Secure new resource consents ( <b>preferred and only option</b> )	Allocate funding and resourcing to secure new resource consents and monitoring of conditions		<ul style="list-style-type: none"> <li>The requirements to prepare a resource consent may increase (e.g. completing environmental impact assessments for a new water supply for Wairoa)</li> <li>Additional operational and capital expenditure may be required to meet consent conditions</li> <li>May need to be considered in the light of any regional approach to the delivery of 3 waters</li> </ul>	2024-2032	Medium	Medium (subject to water reform requirements there is time to identify and respond to changes)

## WATER SUPPLY EXPENDITURE FORECASTS

Figure 6 and Table 12 show the forecasted expenditure for water supply. The 30-year total expenditure forecast is \$123.3 million to provide the Water Supply service to the Wairoa Community.

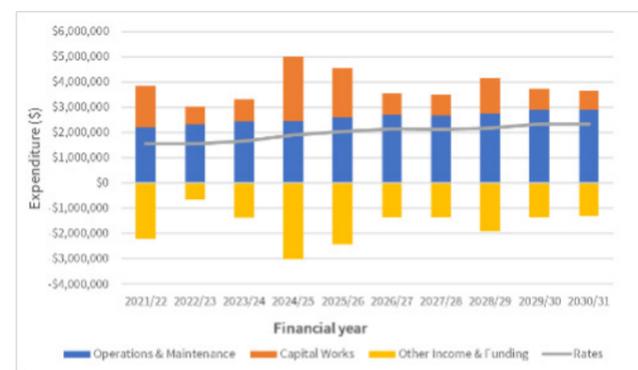


Figure 8 Water supply forecast expenditure and funding (inflated)

Table 12 Water Supply expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	2,221,635	1,628,000
2022/23	2,332,566	698,625
2023/24	2,429,518	901,850
2024/25	2,471,125	2,521,270
2025/26	2,591,087	1,940,872
2026/27	2,703,534	841,575
2027/28	2,668,491	835,670
2028/29	2,756,308	1,413,280
2029/30	2,907,717	817,472
2030/31	2,903,089	744,475

Year	Operational Expenditure	Capital Expenditure
2021-2025	12,045,931	7,690,617
2026-2030	13,939,139	4,652,472
2031-2035	15,659,670	2,354,574
2036-2040	17,247,193	2,458,475
2041-2045	19,577,720	2,700,234
2046-2050	21,893,845	3,074,335
<b>30 Year Totals</b>	<b>\$100,363,499</b>	<b>\$22,930,707</b>

Forecast Expenditure is based on the following assumptions:

- Capacity exists in the network to accommodate any growth
- Levels of service will remain the same
- Legislative and regulatory changes will require water treatment process changes

Over the next 30 years it is expected that Council's major capital expenditure items include ongoing:

- Installation of new water meters in Wairoa in 2021 of \$1.3m
- Tuai reticulation pipe improvements in 2022 of \$0.5m
- Marine Parade replacement main in 2024 of \$1.9m
- Production pipe replacement in 2024/25 and 2025/26 totalling \$3.2m
- District wide pipe renewals over the 30-year period of \$10.9m
- Alternative water supply solution identified and infrastructure in place (mobile treatment plant) for Wairoa and Frasertown in 2028 at \$750,000.

Figure 7 shows the breakdown of expenditure for Capital Works, by Renewal, Level of Service improvement and Growth improvement.

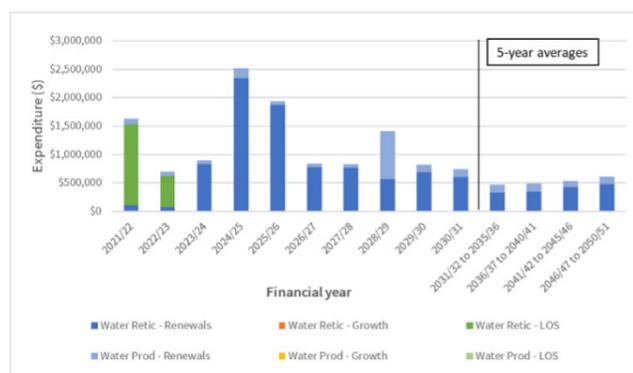


Figure 7 Water supply capital works expenditure forecast (inflated)

Figure 8a shows that the forecast water supply renewals are higher than depreciation over the next 10 years, this is due to the back log of reticulation pipe renewals required as discussed above. Funding for this peak will be supplemented by loans. Longer term indications show a potential underinvestment in infrastructure renewals.

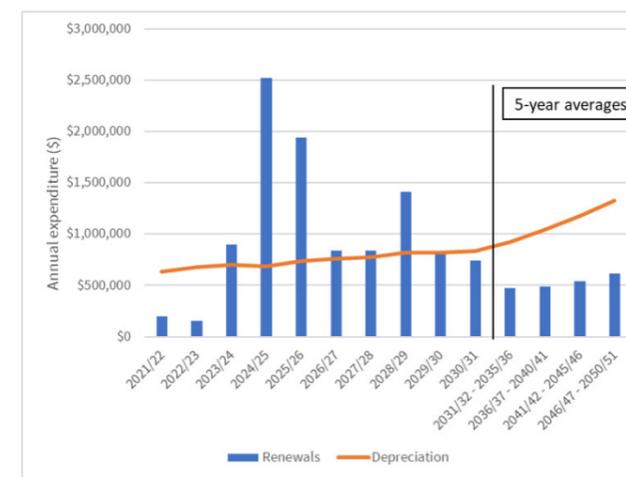


Figure 8a Water supply renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its water supply activity through:

- Targeted water rate (fixed charge) and volume charge (where meters are installed)
- Fees and charges from bulk water carriers.

## 7.2 WASTEWATER

The wastewater activity includes four wastewater schemes serving Wairoa, Tuai, Mahia and Opoutama. Council collects, treats and disposes treated wastewater from domestic, commercial and industrial premises. Council's wastewater network includes four treatment plants with approximately 2,170 connections, 58km of pipes, pump stations and Waste Water Treatment Plant (WWTP).

Resource consents are required for discharging treated water. The current discharge consent for the Wairoa township wastewater discharge expired on 31 May 2019 and Council is in the process of renewing their wastewater discharge consent for the Wairoa Wastewater Treatment Plant into the Wairoa River in the coastal marine area. Council is uncertain as to the conditions that may be part of a new consent, and the costs to comply and monitor those conditions, however it is expected that these will be higher than existing expenditure. Council has committed to installing a grit collector at the WWTP inlet and UV treatment at the Waste Water Treatment Plant outlet. The consents also allow for modifications and/or replacement of the river outfall pipeline. The cost of modifying the existing outfall is less than the cost of a new, extended pipeline.

The river discharge is only one aspect of a broader package of proposed changes to Wairoa's wastewater system. Community and iwi do not want the wastewater discharged into the river. Alongside this desire, Government's freshwater reforms to clean up the nation's waterways, are likely to lead to higher discharge standards for wastewater, and greater treatment of stormwater. Therefore, the intention is to transition over time to land discharges (irrigation) which will also require storage ponds to be built for holding treated wastewater during winter so it can be irrigated in summer or discharged to the river when it is flowing faster.

There are a range of options for each aspect of the broader package which require integrated decision-making processes. For example, converting the main WWTP pond into a storage pond would require a new WWTP to be built. The designs, operational compatibility, timing of implementation, and costs of the options are key factors

in their selection. Council recognises that the idealistic goal of rapid transition to land discharges is probably unrealistic and this may be unaffordable for the Wairoa community, even if the costs are spread over several decades.

Council does not know how long the consent will be granted for; however, has applied for a 35-year term and Hawke's Bay Regional Council have recommended a 20-year term. The extent of transitioning to land discharges that is achieved during this consent term depends on availability of funding and farmland for irrigation and storage ponds. Each storage pond and irrigation scheme will also require separate resource consents and will incur separate operational and monitoring costs.

Sludge from the wastewater treatment plant is disposed of at the Wairoa Landfill, with 12,000 tonnes of sludge expected over the next 30 years at a cost of approximately \$1.3m.

## ASSET CONDITION AND PERFORMANCE

About half of the wastewater network is greater than 50 years old so it is towards the end of its asset life. There is a peak of approximately 14km of pipeline coming to the end of its useful life in 2028, which correlates with the age of the pipe network.

About two thirds of the wastewater reticulation network in average to good asset condition, with 37% of the reticulation pipes are in Poor or Very Poor condition. This group of assets will need replacing in the medium term. Most of Council's wastewater network considered to be significantly important to the community and environment is in average to very good condition.

An assessment of waste water pump stations completed in November 2020, indicated that one out of the five pump stations inspected was in poor overall condition, while all pump stations had some components in poor to very poor condition. Further condition assessments of above ground assets are scheduled as future improvement items.

Asset performance of Council's wastewater network is assessed in terms of unconsented discharge of sewerage and inflow and infiltration as follows:

- Unconsented discharge of sewerage – A dry weather overflow is an uncontrolled wastewater discharge that is not associated with rain event. Dry weather overflows are reported on as a mandatory performance measure and to the Hawke's Bay Regional Council. At times, there have been non-compliant discharges (outside permitted hours) of treated wastewater from the treatment pond across the outfall which has resulted in Council receiving infringement notices from Hawkes Bay Regional Council. Whilst it is recognised that the treatment plant is being assessed in terms of an upgrade or new facility as part of the consent renewal process, a short-term remedial solution has included cable upgrade and automated discharge times.
- Inflow and infiltration - Inflow and infiltration is the term used to describe groundwater and stormwater entering into dedicated wastewater system resulting in the system becoming overloaded and overflows occurring. Inflow and infiltration has been a known wastewater asset performance issue in the past for the district's wastewater network. However, Council has completed a project to determine key contributors to inflow and infiltration, including smoke testing and above ground inspections. The extent of inflow and infiltration of stormwater into the wastewater system during times of wet weather has significantly reduced since the Inflow project commenced.

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 13 Significant issues and options for wastewater

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
<b>Water reform and changes to legislation are likely to result in higher standards for wastewater treatment and compliance costs</b>	Policy change	1. Continue with water services remaining in house. Levels of service may need to be reduced with status quo option to provide an affordable service		<ul style="list-style-type: none"> <li>Future costs may be unaffordable for District's small population</li> <li>Central government reform programme indicates this is unlikely to be an option in future</li> </ul>	2021-2051	Budget impacts likely to be significant	High
	Regulation	2. Regional approach with management Council Controlled Organisation (CCO) option	Hawke's Bay councils have been working collaboratively on a review of the current and potential three waters service delivery options for Hawke's Bay.	<ul style="list-style-type: none"> <li>The full benefits setting up CCO not achieved with this option as assessed in separate Hawke's Bay three waters delivery review</li> </ul>	2021- 2025	Budget impacts are unknown but are expected to be significant	High
	Regulation	3. National conversion of three waters into small number of multi-regional entities with a bottom line of public ownership option ( <b>preferred</b> )	Working in partnership with central and local government and iwi/Maori, participate in a centrally-led process to enable Wairoa's waste water assets and services to be combined into a multi-regional entity. This allows for prioritised investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve.	<ul style="list-style-type: none"> <li>Implications from water reforms on service delivery, including the impact of a water regulator and changes to legislation are relatively unknown and may impact on levels of service</li> <li>There are likely to be increases in costs to address health and safety</li> <li>Likely to require a review of Trade Waste and Wastewater Bylaw</li> </ul>	2021- 2025	Budget impacts are unknown but are expected to be significant	High
<b>Effects from climate change on wastewater</b>	Risk	1. Respond reactively to effects of climate change and take direction from Central Government		<ul style="list-style-type: none"> <li>Infrastructure such as transport routes and water networks may be damaged                             <ul style="list-style-type: none"> <li>Does not allow time to adapt and / or mitigate</li> </ul> </li> </ul>	2021-2051	Budget impacts are unknown	High
	Risk	2. Develop management response specific for Council ( <b>preferred</b> )	Develop cross-council climate change response	<ul style="list-style-type: none"> <li>Response programme developed and costed based on draft Adapting to Climate report (January 2020)</li> </ul>	2021-2031	TBC	Medium
	Demand management	3. Understand changes in demand particularly rainfall patterns as important for drainage ( <b>preferred longer term</b> )	Monitor local trends in weather events, climate change and associated legislation	<ul style="list-style-type: none"> <li>Better informed to plan for changes in Council's infrastructure requirements</li> </ul>	2021-ongoing	Low cost from existing resource	Medium
<b>Resource consents need renewing but there is uncertainty about what the conditions will involve</b>	Regulation	1. Replacing outfall structure and overflow outlets to meet minimum consent requirements		<ul style="list-style-type: none"> <li>Community and iwi opposition as not aligned with their aspirations and values</li> <li>Wairoa River may not be suitable for swimming and recreation contact in summer months</li> <li>Investment in traditional technology that may have a short life due to short consent duration</li> <li>The duration and conditions of consent for the disposal of wastewater into the Wairoa River may mean that this is a shorter-term option and an alternative disposal option will be required over the duration of this strategy                             <ul style="list-style-type: none"> <li>Additional operational and capital expenditure may be required to meet new consent conditions.</li> <li>May need to be considered in the light of any regional approach to the delivery of 3 waters</li> </ul> </li> <li>Provides certainty that the volumes of wastewater generated by Wairoa during storm events can be stored.</li> <li>Provides certainty that the treatment plant ponds will never overflow.</li> <li>Provides opportunities to adjust the discharge flow rates and timing to reflect the river flow rates and the likelihood of community contact via recreation.                             <ul style="list-style-type: none"> <li>Community and iwi still do not want the wastewater discharged into the river</li> </ul> </li> </ul>	2021-2032	\$5.6m projected for Wairoa wastewater disposal consent implementation	High
<b>An alternative option for wastewater disposal may be required</b>	Regulation	3. Dispose treated wastewater to land ( <b>preferred and longer term</b> )	Develop a staged approach to an alternative disposal method of wastewater to land and obtain resource consent	<ul style="list-style-type: none"> <li>Better alignment with Māori values and community aspirations</li> <li>Will need to find an appropriate site and decide whether to buy or lease the land</li> <li>Meets our long-term goal to remove wastewater from the Wairoa River                             <ul style="list-style-type: none"> <li>Improve freshwater quality</li> <li>Additional operational and capital expenditure</li> </ul> </li> </ul>	2024-2051	Estimates of between \$15-30m	Medium

## WASTEWATER EXPENDITURE FORECASTS

Figure 9 and Table 14 shows the forecasted expenditure for wastewater. The 30-year total expenditure forecast is \$164.3 million to provide the Wastewater service to the Wairoa Community.

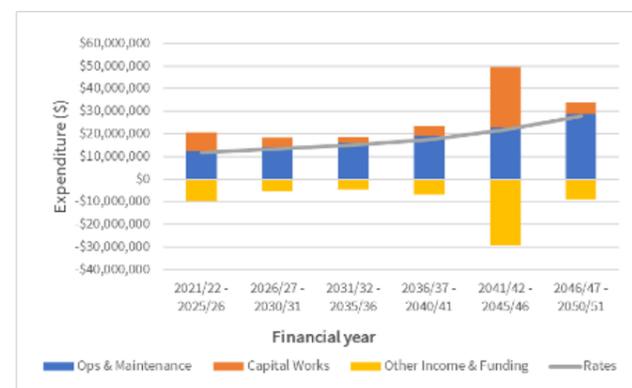
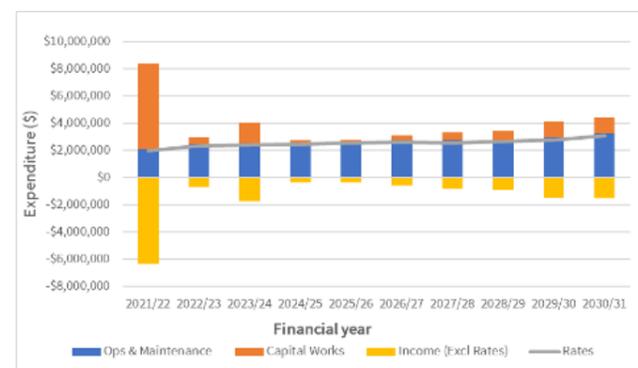


Figure 9 Wastewater forecast expenditure and funding (inflated)

Table 14 Wastewater expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	2,115,733	6,212,550
2022/23	2,450,563	471,287
2023/24	2,513,596	1,508,583
2024/25	2,561,304	150,634
2025/26	2,643,510	128,623
2026/27	2,729,346	351,458
2027/28	2,701,055	606,155
2028/29	2,782,261	635,250
2029/30	2,920,816	1,181,800
2030/31	3,243,052	1,179,375

Year	Operational Expenditure	Capital Expenditure
2021-2025	12,284,706	8,471,677
2026-2030	14,376,530	3,954,038
2031-2035	16,085,762	2,424,335
2036-2040	18,831,750	4,545,725
2041-2045	23,047,628	26,578,535
2046-2050	28,591,541	5,125,270
<b>30 Year Totals</b>	<b>113,217,917</b>	<b>51,099,580</b>

Forecast Expenditure is based on the following assumptions:

- The current resource consent application for the disposal of wastewater into the Wairoa River will be approved
- Consent compliance costs will be higher
- Capacity exists in the network to accommodate limited growth
- Levels of service will remain the same
- Legislative and regulatory changes will require wastewater treatment process changes
- Disposal to land will be achieved over the life of this strategy.

Over the next 30 years it is expected that Council's major capital expenditure items include:

- Wastewater consent implementation 2021-2023 of \$5.6m
- Improvements to wastewater disposal for Opoutama / Bluebay in 2021-2023 of \$1m
- Alternative wastewater disposal to land requires consent, land purchase and establishment of the facility by 2050 up to \$15-30m.

Figure 10 shows the breakdown of expenditure for Capital Works, by Renewal, Level of Service improvement and Growth improvement.

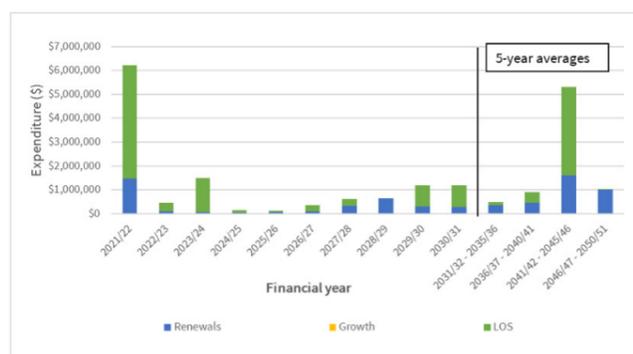


Figure 10 Wastewater capital works expenditure forecasts (inflated)

Figure 11 shows that the forecast wastewater renewals is generally lower than the level of depreciation over the 30-year period, indicating underinvestment. However, the peak of renewals in Year 1 is from renewal work being bought forward from 2022 to 2026, as it is being funded by government stimulus support.

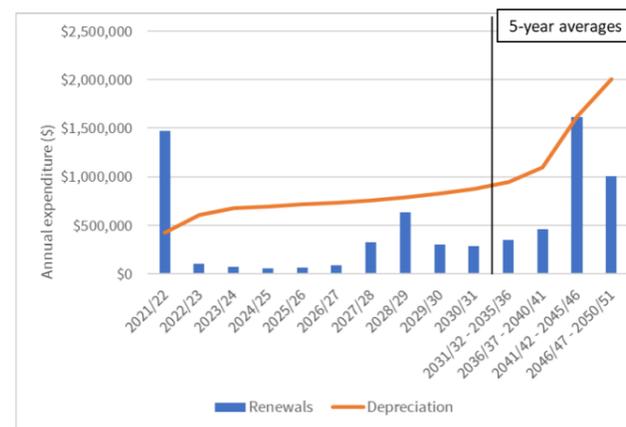


Figure 11 Wastewater renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its wastewater services through:

- Targeted rate for sewerage disposal based on a per pan charge
- Trade waste fees and charges.

## 7.3 STORMWATER

Stormwater is the runoff of rainwater which requires management and disposal using various drainage systems. Council has 42km of stormwater reticulation, 219 manholes, 914 sumps and 1063 inlet structures in the Wairoa township, Tuai, and Mahia. Stormwater assets in the other areas are primarily rural roading open drains.

Council is preparing a global resource consent application to address all public stormwater systems in Wairoa township. Subject to the duration of this consent, it may need to be renewed over the life of this strategy. Through this process, and as a result of the water reforms, there is the likelihood that the quality of stormwater being discharged into the environment will need to be improved.

Flooding is a major hazard in Wairoa. Many lowland areas, including the Wairoa township area itself, are at risk from flooding. There are few measures in place to protect the town. It is, however, very expensive to provide effective protection. The settlement of Nuhaka is also vulnerable to high rainfall and flooding events.

More frequent and intense rainfall is expected to increase over time as a result of climate change which will lead to an increase in water ponding on land and dispersion from roads into the reticulated system at Wairoa, and stormwater channels and drains in rural areas.

There is limited formal stormwater infrastructure in Mahia, where growth is anticipated. The existing stormwater assets are private. It is likely that Council will need to further invest in its stormwater infrastructure for Mahia, as with increased growth and increased scale and severity of rain events, the current infrastructure will not likely be able to cope.

## ASSET PERFORMANCE AND CONDITION

About two thirds of the stormwater network is greater than 50 years old so is reaching the end of its theoretical useful life. The associated age-based condition shows approximately 50% of reticulation pipes are in Poor condition. Although there is a high proportion of the network at the end of its life, stormwater assets can generally still function if there is structural integrity (i.e. no major defects). While considerable progress has been made to determine condition

through desktop analysis, further validation of the condition will be completed through formal survey and materials testing to assess the asset condition is included as part of the asset management improvement programme.

Asset performance of our stormwater network is assessed in terms of capacity constraints or flooding. There were 12 flood events reported in 2019/20 as a mandatory performance measure, just slightly above the annual target of 10. None of these flooding events caused habitable floor flooding incidences in urban areas.

Although the majority of performance targets being met, customer satisfaction is relatively low for stormwater, primarily due to blockages within the network. Council's Inflow and Infiltration Project has identified such blockages and these are being addressed through the Maintenance and Operations Contract.

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 14a Significant issues and options for stormwater

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
<b>Water reform and changes to legislation are likely to result in higher standards for stormwater treatment and compliance costs</b>	Policy change	1. Continue with water services remaining in house. Stormwater activity remains mainly reactive service.		<ul style="list-style-type: none"> <li>Future costs may be unaffordable for District's small population</li> <li>Central government review through Department of Internal Affairs is reviewing how Stormwater services will be rolled up into revised delivery structure. It is highly likely that it will be mandatory for stormwater to be completed through a small number of multi-regional entities with a bottom line of public ownership.</li> </ul>	2021-2051	Budget impacts likely to be significant	High
	Regulation	2. Multi-regional approach with asset owning entity to ensure stormwater management kept with three waters ( <b>preferred</b> )	Working in partnership with central and local government and iwi/Maori, participate in a centrally-led process to enable Wairoa's stormwater assets and services to be combined into a multi-regional entity.	<ul style="list-style-type: none"> <li>Implications of legislation changes will be assessed once they are known</li> <li>Development of a new part to the Consolidated Bylaw to address Stormwater</li> <li>Water cycle promoted with stormwater retained with water and wastewater with multi-regional approach</li> </ul>	2024-2027	Low cost within existing resource	Medium
	Regulation	3. Secure new resource consent ( <b>preferred and only option</b> )	Allocate funding and resourcing to secure a resource consent including ongoing monitoring and compliance costs assuming treatment will be required.		<ul style="list-style-type: none"> <li>The costs to prepare a resource consent may increase and additional operational and capital expenditure may be required to meet consent conditions</li> <li>Development of a new part to the Consolidated Bylaw to address Stormwater</li> </ul>	2021-2022	Medium cost
<b>Effects of climate change on stormwater infrastructure capacity</b>	Risk	1. Respond reactively to effects of climate change and take direction from Central Government		<ul style="list-style-type: none"> <li>Infrastructure such as transport routes and water networks may be damaged                             <ul style="list-style-type: none"> <li>Does not allow time to adapt and / or mitigate</li> </ul> </li> </ul>	2021-2051	Budget impacts are unknown	High
	Policy	2. Allow for increase in rainfall intensity when designing new infrastructure ( <b>preferred and longer term</b> )	Upgrade pipes infrastructure to handle climate change events as pipes are renewed	<ul style="list-style-type: none"> <li>Pipes will be increased in capacity to cope with projected climatic variations as they are replaced, or new infrastructure is installed</li> </ul>	2021-2040	Low to medium	Medium
	Risk	3. Develop management response specific for Council ( <b>preferred</b> )	Develop cross-council climate change response	<ul style="list-style-type: none"> <li>Response programme developed and costed based on draft Adapting to Climate report (January 2020).</li> </ul>	2021-2031	Low	Medium
	Demand	4. Understand changes in demand particularly rainfall patterns as important for drainage ( <b>preferred and longer term</b> )	Complete new stormwater catchment modelling and use prioritisations based on flood prone areas to develop Catchment Management Plans.	<ul style="list-style-type: none"> <li>Provide a more up to date view on climate change impacts</li> <li>Better informed to plan for changes in our infrastructure requirements.</li> </ul>	2021 – ongoing	Low	Low
<b>Effects of growth in Mahia on limited existing stormwater infrastructure</b>		1. Continue with ad hoc approach to stormwater provision in a growth area	Ad hoc approach to provision of public system in growth area	<ul style="list-style-type: none"> <li>This will mean accepting a fragmented and non-standard system</li> <li>Ad hoc development may result in local flooding issues downstream of new developments without catchment approach</li> </ul>	2021 – ongoing	None	Medium
	Programme	2. Develop formal stormwater system progressively to manage growth and mitigate environmental risk from more runoff ( <b>preferred</b> )	Identify capacity constraints and options	<ul style="list-style-type: none"> <li>Capital programme developed to respond to gradual growth                             <ul style="list-style-type: none"> <li>Stormwater provision provided</li> <li>Possible over investment until growth occurs.</li> </ul> </li> </ul>	2025-2035	Medium	Medium

## WASTEWATER EXPENDITURE FORECASTS

Figure 12 and Table 15 shows the forecasted expenditure for wastewater. The 30-year total expenditure forecast is \$164.3 million to provide the Wastewater service to the Wairoa Community.



Figure 12 Stormwater forecast expenditure and funding (inflated)

Table 15 Stormwater expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	\$572,063	\$542,000
2022/23	\$628,801	-
2023/24	\$635,642	\$53,050
2024/25	\$638,331	\$54,400
2025/26	\$667,778	\$279,250
2026/27	\$681,918	-
2027/28	\$695,550	-
2028/29	\$696,382	-
2029/30	\$735,312	\$152,598
2030/31	\$737,200	\$156,400

Year	Operational Expenditure	Capital Expenditure
2021-2025	\$3,142,615	\$928,700
2026-2030	\$3,546,362	\$308,998
2031-2035	\$4,157,167	\$1,273,160
2036-2040	\$4,610,736	\$1,011,278
2041-2045	\$5,411,497	\$1,710,207
2046-2050	\$6,408,718	\$1,357,968
<b>30 Year Totals</b>	<b>\$27,277,095</b>	<b>\$6,590,311</b>

Forecast Expenditure is based on the following assumptions:

- The global stormwater consent will be approved and will result in compliance and monitoring costs not currently incurred
- With the exception of Mahia, capacity exists in the network to accommodate any growth
- Mahia will require a change to the current asset service provision
- Legislative and regulatory changes will require stormwater treatment
- Future modelling will clarify likely future impacts of climate change.

Over the next 30 years it is expected that Council's major capital expenditure items include:

- Improvements to infrastructure at Mahia of \$0.5M in 2021/22
- Piping of open drains over valued at \$4.73M over the 30 year period.

Figure 13 shows the breakdown of expenditure for Capital Works, by Renewal, Level of Service improvement and Growth improvement.

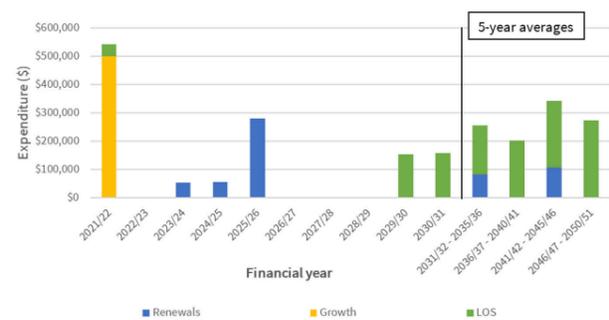


Figure 13 Stormwater capital works expenditure forecasts (inflated)

Figure 14 shows that the forecast stormwater renewals is less than the level of depreciation over the 30-year period, indicating an underinvestment in existing stormwater infrastructure. As Council gets a better understanding of the condition of its stormwater assets, this future view of renewals will need to be refined. With climate change impacts, future capital investment is likely to be required to improve capacity rather than just renew existing assets, hence the higher degree of level of service improvement projects included from 2029 onwards.

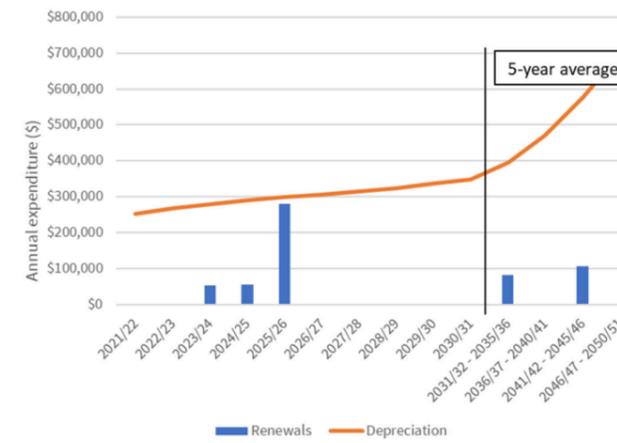


Figure 14 Stormwater renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its stormwater services through:

- Targeted drainage rate on a uniform basis in Wairoa urban area and Mahia township area
- Rural roads drains are included in the road assets.

## 7.4 ROADS AND FOOTPATHS

Council provides 845km of roads in the district of which 301km is sealed, with the remaining being unsealed. Council has 176 bridges, 447 retaining structures, 47km of footpaths and numerous road drainage with a replacement value of \$336.1M (as at June 2020).

The Waka Kotahi subsidy for roading (the Financial Assistance Rate or FAR) is a critical factor in the delivery of Council's roads and footpaths activity. In 2018/19 the base FAR received by Wairoa increased from 70% to 75%. Waka Kotahi have indicated that the base FAR will remain at 75%. The balance is funded through local rates. If this subsidy was no longer available at this rate, there would be a significant impact on rates or levels of service.

Climate change is affecting weather patterns, river flows, and runoff in the Wairoa District, putting increased pressure on the resilience of Council's network. Resilience has been identified as a key issue for Wairoa, as the district already has a history of being impacted by storm events causing flooding, slips and dropouts on the road network. This is exacerbated by the geology and poor soils in some areas of the network, resulting in erosion and sediment risks. This has resulted in unplanned and unbudgeted expenditure being required to keep roads open and to maintain access. Although the FAR is normally higher for emergency response works, the balance is still paid for through rates, or by substituting out planned works.

In order to ensure communities remain connected and to unlock the potential of Wairoa's land, providing a resilient network is critical. Specific impacts of road resilience include Lifeline Routes. These are critical routes where failure will have significant impact on communities access to health, education and economic opportunities. A key example of this is the damage to access to Mahia from ongoing coastal erosion along Nuhaka Opoutama Road. This not only impacts route security and access for residents but also the access to the Rocket Lab launch site, which is anticipated to bring economic benefit to the district. Council has successfully obtained central government funding to seal sections of the road to Rocket Lab and has completed a Business Case to identify the preferred option to address ongoing coastal erosion along Nuhaka Opoutama Road to ensure route resilience and security for Mahia communities. As Council cannot afford to complete this project within its current

budgets, the business case will be used to support applications for other funding sources.

Rocket Lab use the current access roads into Mahia to bring rockets to their launch site. The size of the trucks carrying the rockets currently being launched are able to navigate the unsealed road, but this is tight in some areas, and having unsealed roads is not the optimal condition for transporting rockets to the launch site. Council is also aware that Rocket Lab are looking at alternatives such as air and sea to provide access to their site, as this is a very real issue for them as a business.

The district is also seeing changes in land use. Farm conversions to forestry and fruit are impacting expectations on Council's roads to get products to market or the ports at Napier or Gisborne. The increased demand will come primarily from forestry industry. Forecast predictions based on maturing age of forests in the Hawke's Bay Region indicate demand on some roads will increase significantly from their current heavy vehicle movements. This has a direct impact on Council's infrastructure and expected levels of service from its residents and ratepayers. Council will need to balance the needs of commercial businesses with the wider benefits and costs to the ratepayer when determining appropriate levels of service across the district.

Safety is on our district's roads is also a key concern. The Waka Kotahi New Zealand Transport Agency 'Communities at Risk Register 2019' highlights personal risk to road users. Wairoa District Council has the highest overall personal risk in the country. Wairoa District Council has the highest personal risk ranking in the 'Rural road loss of control and/or head on' and 'Speed' crash categories.

Poor condition aging bridge stock and low structural capacity results in limited access for heavy vehicles. In recent years, the rules governing heavy vehicle size, weight and operation limits changed. As a result of both the poor structures capacity and the heavy vehicle weight limit changes, increased pressure will come on Council to open key local roads routes to HPMV vehicles. Bridge condition and capacity assessments will be required to open key routes to HPMV vehicles. Currently 80% of bridges are restricted to full HPMV vehicles.

Council does not currently have reliable information on the location and condition of its retaining structures. This presents a risk for Council in planning its renewals programme and understanding the potential costs, and critical infrastructure at risk. Council is undertaking a four-year project to survey the location and condition of these structures. However, the implications from this work will not be known until nearer the development of the 2024-2054 Infrastructure Strategy.

## ASSET PERFORMANCE AND CONDITION

Performance and condition across the various parts of the roading and footpath assets is as follows:

- Safety:**
  - Wairoa are currently performing below other Council's with similar networks in terms of safety as shown in Figure 15. Personal risk (the number of crashes per vehicle kilometre) is high on all our roads, except our lowest traffic volume roads. The top crash roads include Nuhaka- Opoutama Road and Mahia East Coast Road.

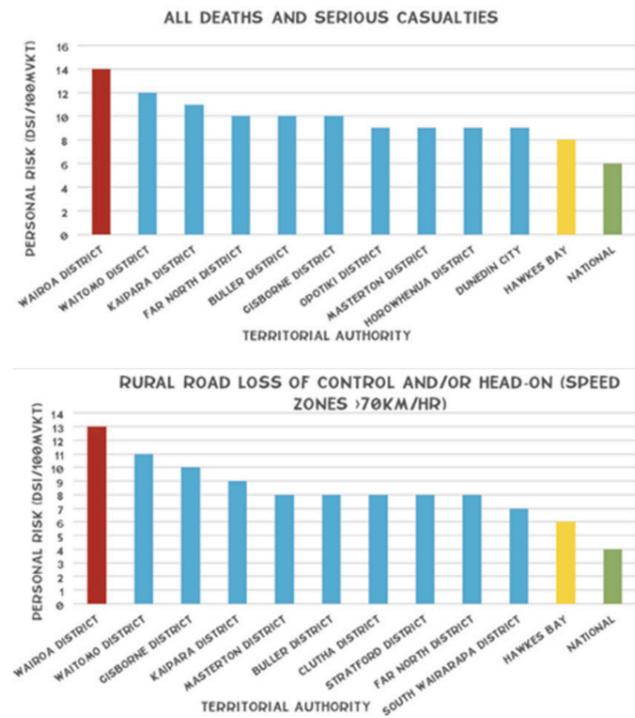


Figure 15 Crash statistics for Wairoa roads compared to other Councils

- **Pavements:**
  - Sealed road performance - The overall state of the sealed network is measured in terms of roughness or the fair ride quality of the road. The average roughness of the district's urban and rural sealed road network has remains below

the target of average NAASRA 110, however it is above (rougher) than other Council's with similar networks.

- Sealed road condition - The sealed road resurfacing is assessed through annual drive overs for developing the forward works programme. The recent forward work inspections have highlighted that the condition of the network is deteriorating and there is currently a 50km backlog of resurfacing. 250kms of resurfacing is required over the next 10 years to clear the backlog and address upcoming seals that require renewal.
- Unsealed road condition - The overall condition of the unsealed road network is measured by monthly visual inspections and measured performance scoring. While current condition generally meets levels of service requirements, test pits have also been completed to assess whether pavement depths meet traffic loading requirements. 69% of test pits completed in the last three years indicate inadequate pavement to carry predicted forestry loads.
- Critical road condition - Road Efficiency Group's One Network Road Classification (ONRC) is used to categorise the criticality of roads with a consistent framework nationally. The performance of the primary and secondary collector roads in terms of safety and roughness is worse than other Councils with similar road networks. Primary roads are locally important roads that provide a primary distributor/collector function, linking significant local economic areas or population areas, while secondary collectors are roads that link local areas of population and economic sites, and they may be the only route available to some places within this local area.

- **Bridges:**
  - Bridge performance - It is important that Council's bridge network is accessible to heavy vehicles that support the district's economy. There are 9 high risk structures

in terms of resilience and condition risks. Council has assessed that 5 bridges do not have capacity to carry regular Class 1 heavy vehicles and require bridge loading restriction postings. 14 bridges do not have capacity to carry the new larger 50Max heavy vehicles and 141 bridges do not have capacity to carry high productivity motor vehicles. In addition, the majority of our bridge network (80%) is single lane. Council has identified that single lane bridges particularly with poor approach alignment are a problem for oversized dimension loads. This may increase the frequency that structural damage occurs to the bridge.

- Bridge condition - Most of the bridges (approx. 80%) are between 50 and 85 years old, and as shown in Figure 16 still have 15 or more years remaining useful life. However, during the period of this strategy approximately 59 structures will reach the end of their (theoretical) remaining useful life. Asset condition is regularly assessed with inspections.

- **Road drainage** - In terms of remaining life, 5477 out of 6417 drainage items in our asset data base have a default construction date of 1974, and therefore it is generally accepted that the age of these assets is unknown. Therefore, remaining life for the network drainage assets cannot be accurately calculated. In the most recent condition inspection (2017) few defects were identified. Significant work has been undertaken in recent years to improve surface water channels. However, issues with under capacity pipes has become more common in recent history as global warming changes weather patterns, and isolated, short duration but high intensity weather events impact Council's network.
- **Footpaths** - Inspections completed in 2019 showed 93% of Council's footpaths were in average or better condition, with 6% of the network being assessed as having poor or very poor condition.

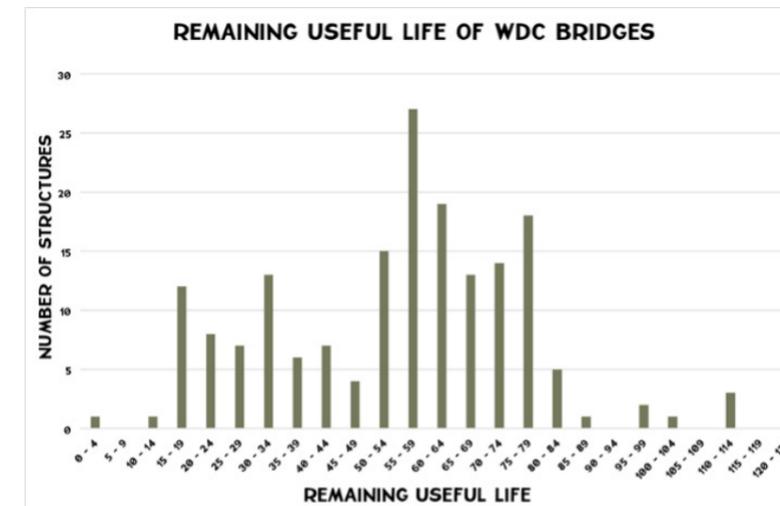


Figure 16 Bridges remaining useful life  
Source: RAMM (as at June 2020)

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 16a Significant issues and options for roads and footpaths

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
The level of Waka Kotahi subsidy may reduce	Regulation / risk	1. Waka Kotahi's subsidy rate is reduce similar to other councils in peer group		<ul style="list-style-type: none"> <li>This does not recognise that Wairoa is a remote community <ul style="list-style-type: none"> <li>Reduced levels of service for the community</li> </ul> </li> <li>Transport assets cannot be sustainably managed long term with lower investment levels</li> </ul>	2024 onwards	Significant	High
	Risk	2. Ensure Waka Kotahi's subsidy remains at current FAR rate for sustainable funding level ( <b>preferred</b> )	Continue to build relationships with Waka Kotahi to ensure Council is following all investment principles and key policy / procedures outlined by Waka Kotahi, to ensure that Council remains at the current FAR rate	<ul style="list-style-type: none"> <li>Any changes to funding for projects within the district will have implications in Council's forecast expenditure and delivering community outcomes</li> </ul>	2024 onwards	Significant	High
Effects of climate change on roading and bridges	Risk	1. Respond reactively to effects of climate change and take direction from Central Government		<ul style="list-style-type: none"> <li>Infrastructure such as transport routes and water networks may be damaged <ul style="list-style-type: none"> <li>Does not allow time to adapt and / or mitigate</li> </ul> </li> </ul>	2021-2051	Budget impacts are unknown	High
	Demand	2. Understand changes in demand particularly rainfall patterns and coastal erosion ( <b>preferred and longer term</b> )	Monitor local trends in weather events, climate change and associated legislation	<ul style="list-style-type: none"> <li>Enables early planning and identification of when issues require action <ul style="list-style-type: none"> <li>Forecast impacts better understood</li> </ul> </li> </ul>	2021-2040	Significant	High

Significant Issue	Strategic Response Category	Options	Principal Option(s)		Implications of the Option	Timeframe	Cost Implications	Risk
Effects of climate change on roading and bridges	Risk	3. Seek alternative funding sources for key transport routes, particularly Mahia access ( <b>preferred</b> )	Work with key stakeholders to identify alternative funding sources to ensure access is maintained. A business case to identify the preferred option to address ongoing coastal erosion along Nuhaka-Opoutama Road, and ensure route resilience and security for Mahia communities was completed in September 2020. The preferred option is to retain the existing route and strengthen it with coastal erosion protection works along Blacks Beach, and a retreat of the blowhole dropout. The estimated cost is \$8.7M, however Council cannot afford to sole fund this project.		<ul style="list-style-type: none"> <li>Possible for joint funding applications</li> <li>Completion of key resilience projects, including Mahia access</li> </ul>	2021-2025	Significant	High
	Risk	4. Develop management response specific for Council ( <b>preferred</b> )	Develop cross-council climate change response		<ul style="list-style-type: none"> <li>Response programme developed and costed based on draft Adapting to Climate report (January 2020).</li> </ul>	2021-2031	Low	Medium
Effects of land use change on expected levels of service	Programme	1. Respond reactively to industry demands			<ul style="list-style-type: none"> <li>Transport infrastructure including bridges may be damaged</li> <li>District may not be attractive for industry sectors and reduces economic activity</li> </ul>	2021-2051	Budget impacts are unknown	High
	Risk	2. Targeted engagement with industry sectors to understand their needs and plan for any changes ( <b>preferred</b> )	Targeted stakeholder engagement to provide a better connection with land owners to assess changes in land use impacting on demand and transport operators, particularly forestry, to better pre-plan which routes will be requiring investment ahead of harvesting.		<ul style="list-style-type: none"> <li>Impacts better understood and planned for</li> <li>Better relationships and understanding between Council and the various industry sectors</li> </ul>	2021-2040	Significant	High
	Policy	3. Assess land use change with District Plan review ( <b>preferred and ongoing</b> )	Assess potential land use change and impacts as part of the District Plan review		<ul style="list-style-type: none"> <li>Enables an integrated approach to understand the impacts from potential changes to the status of activities and land use and their impact on the future planning of infrastructure and levels of service.</li> </ul>	2020 and ongoing	Budget impacts are unknown	High
	Programme	4. Targeted pavement and surfacing renewals ( <b>preferred</b> )	Target Secondary Collector roads/ sections with high maximum roughness. Review high use (forestry) roads. Evidence supports increased resurfacing, particularly for Secondary Collector roads.		<ul style="list-style-type: none"> <li>Clears backlog of renewal work for both sealed and unsealed roads</li> <li>Allows for pavements to be built to adequate standard prior to extensive heavy vehicle loading <ul style="list-style-type: none"> <li>Minimises reactive maintenance costs.</li> </ul> </li> </ul>	2021-2031		High
Safety on Wairoa roads, with Wairoa having the highest overall personal risk in the country	Programme	1. Respond reactively to crashes			<ul style="list-style-type: none"> <li>Puts road users at risk of death or serious injury</li> </ul>			
	Risk	2. Safety audit and speed management review ( <b>preferred</b> )	Inspections and analysis to determine where future safety efforts should be directed.		<ul style="list-style-type: none"> <li>Identify key safety issues on the networks</li> <li>Targets safety improvements to the high risk locations and using the right treatments</li> </ul>	2021-2024	Low	High
	Programme	3. Targeted safety improvements ( <b>preferred</b> )	Targeted to Secondary Collector roads and sections with high crash rates and focus on corners/bends by improving signage and width.		<ul style="list-style-type: none"> <li>Limits overall cost to the community, by targeting high risk areas <ul style="list-style-type: none"> <li>Improves safety on the worst areas of the network</li> </ul> </li> </ul>	2021-2031	Medium	High
	Programme	4. Increase road widths	Road widths across the rural network are substandard. Increasing the road widths will allow capacity for large heavy vehicles to pass each other and other road users safely		<ul style="list-style-type: none"> <li>Improves overall level of service <ul style="list-style-type: none"> <li>Reduce head on crashes</li> </ul> </li> <li>Enhance capacity of rural roads for two way heavy vehicle traffic</li> </ul>	2021-2040	Significant	Medium
Limited access for heavy vehicles resulting from poor condition aging bridge stock and low structural capacity		1. Respond reactively to any defects / asset failures of bridges			<ul style="list-style-type: none"> <li>Critical asset failure may close transport route due to bridge failure</li> <li>Will not allow for high productivity vehicles which will limit economic growth</li> </ul>			
	Risk	2. Bridge Capacity Assessments ( <b>preferred</b> )	Inspections allow us to accurately assess the loading capacity of our bridges, so we can identify which can sustain 50Max and HPMV loading and which will need strengthening works to allow these heavier vehicles to cross. Detailed seismic screening of high risk bridges.		<ul style="list-style-type: none"> <li>Allows us to limit risk of overloading on critical structures</li> <li>Opens roads to high productivity vehicles without necessarily completing physical strengthening works <ul style="list-style-type: none"> <li>Remove unnecessary bridge restrictions</li> </ul> </li> <li>Helps to target physical improvement works to the right locations</li> </ul>	2021-2031	Medium	High
	Policy	3. High productivity motor vehicle permitting ( <b>preferred</b> )	Undertaking bridge capacity assessments on key routes to open them for HPMV access will ensure economic growth and productivity can be achieved		<ul style="list-style-type: none"> <li>Understand demand for high productivity motor vehicle routes</li> <li>Manage risk of heavy vehicles using routes with poor capacity bridges</li> </ul>	2021-2025	Low	Medium

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
Limited access for heavy vehicles resulting from poor condition aging bridge stock and low structural capacity	Risk	4. Undertake condition inspections of bridges ( <b>preferred</b> )	Bridge inspections, material testing and painting screening	<ul style="list-style-type: none"> <li>Better understand long term renewals costs</li> <li>Extend the life of bridges through reduced maintenance costs</li> </ul>	2021-2031	Medium	High
	Programme	5. Bridge Strengthening works ( <b>preferred</b> )	As understanding of capacity gaps improves, continue to strengthen bridges to cope with additional loading	<ul style="list-style-type: none"> <li>Targeted strengthening will open up key routes to high productivity motor vehicles</li> <li>Minimises costs to ratepayers by not needing to complete high cost bridge replacement work</li> </ul>	2021 ongoing	Medium to high	High
	Programme	6. Bridge replacement, particularly targeting one lane bridges on key routes	Improve safety and capacity of one lane bridges on high use heavy vehicle routes	<ul style="list-style-type: none"> <li>Open up more routes to high productivity motor vehicles</li> <li>Will improve safety outcomes, reducing head on crashes</li> <li>High cost to replace bridges on a generally low traffic network <ul style="list-style-type: none"> <li>Affordability for ratepayers will be an issue</li> </ul> </li> </ul>	2031 - 2051	Significant	High
Information on location and condition of retaining structures is limited	Programme	1. Continue to respond reactively to any defects / asset failures of retaining structure		<ul style="list-style-type: none"> <li>Critical asset failure may close transport route due to slip</li> </ul>			
	Risk	2. Undertake condition survey of retaining structures ( <b>preferred</b> )	Undertake survey of retaining structures and their condition	<ul style="list-style-type: none"> <li>Accurate data on location and condition</li> <li>Renewals programme can be developed based on current asset state from survey <ul style="list-style-type: none"> <li>Appropriate prioritisation of investment in critical infrastructure</li> </ul> </li> </ul>	2021-2040	Medium	Medium - High Critical infrastructure may be at risk

## ROADS AND FOOTPATHS EXPENDITURE FORECASTS

Figure 17a/17b and Table 16 shows the forecasted expenditure for roads and footpaths. The 30-year total expenditure forecast is \$1.0 billion to provide the Roads and footpaths service to the Wairoa Community.



Figure 17a Roads and Footpaths forecast expenditure and funding (inflated)

Table 16 Roads and Footpaths expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	12,165,920	10,436,939
2022/23	12,835,425	7,616,493
2023/24	13,378,189	9,019,411
2024/25	14,691,157	16,017,409
2025/26	15,207,039	9,656,854
2026/27	15,613,383	9,063,022
2027/28	16,191,860	9,207,208
2028/29	16,252,488	9,117,473
2029/30	16,903,474	10,170,538
2030/31	16,957,040	9,087,632
2021-2025	68,277,730	52,747,106
2026-2030	81,918,245	46,645,873
2031-2035	93,693,888	55,192,107
2036-2040	110,647,951	61,304,630
2041-2045	130,896,299	69,005,054
2046-2050	155,135,029	78,045,841
<b>30 Year Totals</b>	<b>\$640,569,142</b>	<b>\$362,940,0611</b>

Forecast Expenditure is based on the following assumptions:

- The FAR will remain at 75%
- Levels of service will remain the same
- The access route to Mahia will need to be improved to ensure resilience of the route, otherwise alternative access may need to be investigated and constructed.

Over the next 30 years it is expected that Council's major capital expenditure items include:

- Heavy metal build ups of unsealed roads to cope with increased heavy vehicle loading over the 30-year period of \$42.5m
- Sealed road resurfacing over the 30-year period of \$45.6m
- Bridge strengthening and replacement over the 2021-2031 period of \$5.7m. Longer term costs are unknown until analysis is completed.
- Resilience work to secure Mahia Peninsula access in 2024/25 of \$8.7m. Council will not be able to fund this work without assistance from other funding sources (e.g. Provincial Growth Fund, Waka Kotahi).

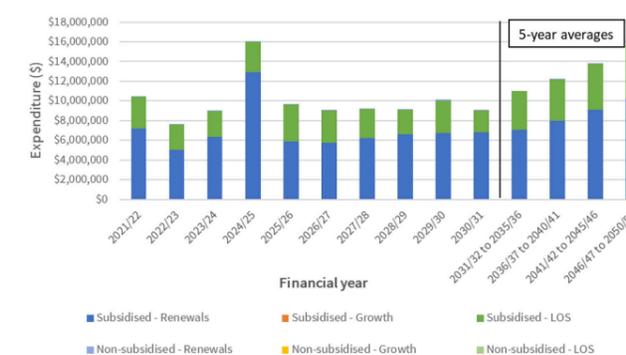


Figure 17b Roads and footpaths expenditure forecasts (inflated)

Figure 18 shows that the forecast road and footpath renewals are generally higher than the depreciation over the 30-year period, as the network generally is performing worse than expected and there is a backlog of renewal work required to meet levels of service and demand expectations.

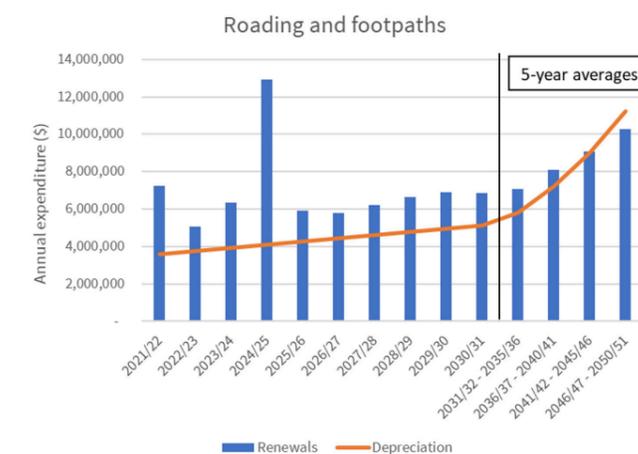


Figure 18 Roads and footpaths renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its roads and footpaths services through:

- Waka Kotahi subsidies (FAR)
- Targeted rate based on land value
- Fees and charges for road corridor access applications
- Other funding sources.

## 7.5 SOLID WASTE

The solid waste activity involves the provision of a domestic waste and recycling collections service, the maintenance of the Wairoa Landfill assets including the landfill, recycling centre, rural drop-off points and weighbridge, and the aftercare of five closed landfills.

Kerbside collection services for waste are provided for Wairoa and most rural settlements on a user pays/bags basis. Wairoa is the only town to receive a kerbside recycling service with drop off points for recycling in Tuai and Raupunga.

Council's waste management and minimisation goal is to manage waste in a cost-effective way that reduces harmful effects and improves efficiency of resource use. While Council is committed to its waste goals, its diversion targets do not help the financial viability of the landfill, which has been marginal in recent years. Because of this, and in order to be within the budget available, Council has had to lower the level of service (opening hours) as part of a new contract for the operation of the landfill. Alongside this, the district's population is only expected to increase slightly, which is likely to result in volumes of waste being disposed at the landfill remaining the same at best.

A survey of the existing landfill capacity has been completed in 2020 and indicates that there is less than 8 years life remaining in the existing cell based on current fill rates. Given the current life expectancy of the landfill an alternative site or an option for disposal of the district's waste needs to be found prior to consent renewal in 2031. Requirements to prepare the resource consent and increased monitoring conditions will likely increase the overall operational costs to provide service.

Council has programmed to complete a full Landfill Service Sustainability Review in 2021/22 to review the long term sustainability of the solid waste service. This will include completing a full options analysis of the future service provision to assess the various options for future waste disposal. This would include full cost accounting assessment of options for disposal within the District, as well as the option of taking waste from Gisborne District Council. As part of this exercise, an initial estimate of the new landfill cost will also be completed.

As the owner of the Wairoa Landfill, Council participates in the Emissions Trading Scheme. The purpose of the Emissions Trading Scheme is to reduce the amount of greenhouse gases emitted in New Zealand. Changes to National Environmental Standards and

the review of the District Plan, may also impact on land use and have implications for the quantity and types of waste generated.

Growth at Mahia may result in increased construction and demolition waste and solid waste, and over the life of this strategy, a recycling kerbside collection service may be an expected level of service by that growing community. This also impacts on the roading and footpath assets as accessibility for rubbish trucks will need to be maintained. There are risks to the delivery of this service if trucks are unable to access Wairoa's settlements and landfill. It is most likely that a recycling centre site will be developed with a site secured expected in 2020.

In November 2019 the Ministry for the Environment announced proposed change to the landfill levy. The levy will increase from \$10 per tonne to \$50 or \$60 per tonne at landfills that take household waste by 2023. This increase is unaffordable for the District's small population. Proposals to increase the waste levy and the types of landfills it is applied to, are currently out for consultation. This will impact on the affordability of providing these services and there is a risk of increased illegal dumping to avoid increased charges. Council's response is to promote smarter facilitation of recycling opportunities, education and user responsibility.

China's National Sword / Blue Sky Policy restricted the importation of certain recyclables. This has impacted on the commodity price for recyclables globally with a flow on impact on our recycling collection contract with significant cost escalations. A government taskforce was established to look at options in response to the Policy, and in 2019 the Ministry for the Environment established a work programme based on the recommendations from the taskforce.

### ASSET PERFORMANCE AND CONDITION

All waste management assets are adequate for current use. Based on visual inspections the buildings in the portfolio are in acceptable condition and generally fit for purpose for the waste management service.

The performance of the Wairoa Landfill and five closed landfills are not currently meeting consent conditions. Over the last few years there have been two infringement notices from Hawkes Bay Regional Council for the Wairoa Landfill regarding leachate and moderate non-compliances at all closed landfills. Consent monitoring improvements have been made to ensure all consent conditions are complied with in future.

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 19 Significant issues and options for solid waste

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
Impacts of legislation change	Regulations	1. Wait for direction on new waste levy and likely legislation changes		<ul style="list-style-type: none"> <li>Not planned for likely increase in waste levy</li> <li>Some operational services may need to be reduced or cut due to less revenue (with higher waste levy)</li> </ul>	2021-ongoing	Medium (less revenue costs need to be reduced)	Medium
	Regulations	2. Engage with industry and Ministry for Environment on potential changes to legislation and regulations ( <b>preferred and ongoing</b> )	Proactively engaging with industry peers, Ministry for Environment and WasteMINZ on potential changes to legislation and regulations	<ul style="list-style-type: none"> <li>Increase costs due to changes to the waste levy</li> <li>May impact on the financial viability of the landfill</li> </ul>	2021-ongoing	Increased costs for users of the landfill and for council/ the landfill operator	High
China's National Sword / Blue Sky policy change	Policy	1. Respond reactively to the effects of China's policy change		<ul style="list-style-type: none"> <li>Recyclables may be stockpiled at the landfill</li> </ul>		Increased contractor's costs due to market change	Medium
	Policy	2. Engage with the Ministry for the Environment on its work programme from the National Resource Recovery Taskforce ( <b>preferred and ongoing</b> )	Engage with the Ministry for the Environment on its work programme from the National Resource Recovery Taskforce to ensure Council's voice is heard and that it is proactively kept up to date on changes in policy	<ul style="list-style-type: none"> <li>Recyclables may be stockpiled at the landfill until a new market can be found that provides a cost-effective solution</li> <li>Opportunity to engage with the Ministry on the work programme and understand potential implications</li> </ul>	2021-ongoing	Low	Low
Ongoing financial viability of the landfill	Risk	1. Close landfill and allow market address refuse disposal provision		<ul style="list-style-type: none"> <li>Less market interest for servicing rural and remote district                             <ul style="list-style-type: none"> <li>Solid waste costs may increase significantly</li> </ul> </li> <li>Still ongoing costs and liabilities with closed landfills including resource consents and ongoing monitoring requirements</li> </ul>	2031 (when landfill consent expires)	Medium	High
	Risk	2. Complete Service Sustainability Review ( <b>preferred</b> )	Full review of all options to ensure continuity of solid waste services, but in particular the Wairoa landfill	<ul style="list-style-type: none"> <li>Alternative options for the disposal of waste identified in the circumstance that the landfill has to close</li> <li>Options can be costed and a business case approach used for an alternative solution if required                             <ul style="list-style-type: none"> <li>Enables early planning</li> </ul> </li> </ul>	2021-2022	Low	Low
	Demand	3. Design and construction of new landfill on same site as existing landfill ( <b>preferred</b> )	Options and costs for replacement of the existing landfill facility once it meets capacity Design and construct new landfill to meet new consent conditions	<ul style="list-style-type: none"> <li>Allows continuity of service based in Wairoa                             <ul style="list-style-type: none"> <li>Solid waste costs will increase</li> </ul> </li> <li>Changes to the Emissions Trading Scheme are still likely to increase landfill disposal costs</li> </ul>	2025-2027	High – Approx capital works cost of \$2.0M including design costs	Medium

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
Ongoing financial viability of the landfill	Demand	4. Review options to increase landfill revenue ( <b>preferred and ongoing</b> )	Work in partnership with Gisborne District Council to take their waste to the Wairoa Landfill, sharing the cost of operation and renewal of the landfill facility	<ul style="list-style-type: none"> <li>Taking waste from Gisborne District Council will increase the financial viability of the landfill</li> <li>Landfill capacity is utilised and the consent maximised</li> <li>Additional waste coming in will reduce the available void space, which reduces the time it takes to fill / asset life <ul style="list-style-type: none"> <li>Reduced rates impact on ratepayers</li> <li>Will inform the next contract review</li> </ul> </li> </ul>	2021-2026	Low – revenue opportunity	Medium
	Demand	5. Encourage the community to use the kerbside collection services ( <b>preferred and ongoing</b> )	Encourage increased participation in kerbside collection services	<ul style="list-style-type: none"> <li>Will result in increased tonnages going to the landfill</li> <li>Makes better use of the capacity of the landfill</li> </ul>	2021-ongoing	Low from existing budgets	Low
Resource consents for the landfill will need renewing but there is uncertainty about what conditions may involve and the potential increase in compliance costs	Regulation	1. Secure new resource consent ( <b>preferred and only option even if close landfill</b> )	Allocate funding and resourcing to secure new resource consents and monitoring of conditions	<ul style="list-style-type: none"> <li>The requirements to prepare a resource consent may increase (e.g. for completing environmental impact assessments)</li> <li>Additional operational and capital expenditure may be required to meet consent conditions</li> </ul>	2029-2031	Moderate costs to go through a consent process and likely increased compliance costs	Medium

## SOLID WASTE EXPENDITURE FORECASTS

Figure 19 and Table 20 show the forecasted expenditure for Solid Waste. The 30-year total expenditure forecast is \$100.5 million to provide the Solid Waste service to the Wairoa Community.

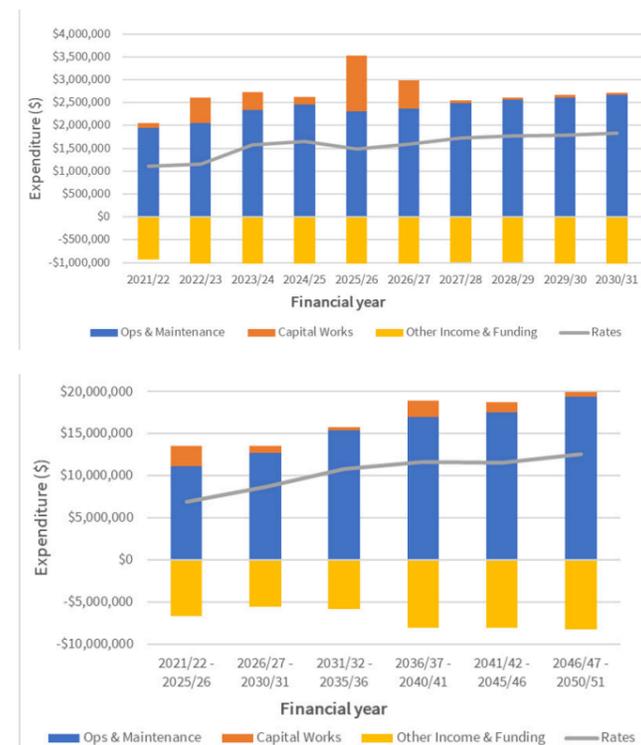


Figure 19 Solid Waste expenditure forecasts and funding (inflated)

Table 20 Solid waste expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	1,941,759	105,000
2022/23	2,048,460	561,350
2023/24	2,342,789	380,160
2024/25	2,461,075	167,710
2025/26	2,315,183	1,219,900
2026/27	2,370,669	608,961
2027/28	2,496,024	59,929
2028/29	2,570,937	35,730
2029/30	2,604,460	67,100
2030/31	2,674,242	37,410
2021-2025	11,109,265	2,434,120
2026-2030	12,716,332	809,130
2031-2035	15,396,906	423,895
2036-2040	16,979,833	1,971,870
2041-2045	17,546,994	1,218,710
2046-2050	19,441,445	482,805
<b>30 Year Totals</b>	<b>93,190,775</b>	<b>7,340,530</b>

Forecast expenditure is based on the following assumptions:

- Changes to the Emissions Trading Scheme are anticipated in the near future that are likely to have a subsequent increase in landfill disposal costs
- Based on Ministry for the Environment announced landfill levy changes, the levy will increase from \$10 per tonne to \$50 or \$60 per tonne at landfills that take household waste by 2023
- Capacity of existing landfill from recent surveys indicates there is less than 8 years life remaining in the existing cell based on current fill rates

Over the next 30 years it is expected that Council's major capital expenditure items include:

- Development of a new landfill cell, including associated resource consent, in 2025-2027
- Further development of landfill cell in 2040-2042

Figure 20 shows the breakdown of expenditure for Capital Works, by Renewal, Level of Service improvement and Growth improvement.

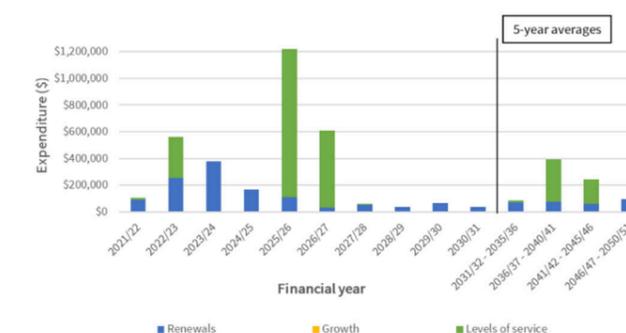


Figure 20 Solid waste capital works expenditure forecasts (inflated)

Figure 21 shows that the forecast solid waste renewals are higher than depreciation in the short term. Longer term indications show an underinvestment in infrastructure renewals.



Figure 21 Solid waste renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its solid waste services through:

- Targeted waste management rate charged on a uniform basis
- User charges (landfill weighbridge)
- User pays (bags).

## 7.6 WAIROA AIRPORT

The Wairoa Airport activity includes a 910m sealed runway, taxiway and aprons, runway edge lighting, Council-owned buildings and perimeter fencing, as well as the operation of the airport as the controlling authority in accordance with Civil Aviation Authority guidelines. The airport is identified as a strategic asset as provides for lifeline for emergency services and supports the horticultural sector for crop dusting.

There are no regular commercial flights operating from Wairoa Airport. The airport is primarily used by private light aircraft, charter

flights and helicopters, including for agricultural use. It is also used by emergency aircraft for transfer of patients into and out of the district. More recently, the airport has been used by Rocket Lab to bring in staff and plant. Rocket Lab has boosted tourism opportunities and the airport may be used for future growth in tourism, although currently most tourists arrive by motor vehicle rather than air travel.

Council has made improvements in its data gathering on the number of flights in and out of the airport, and increased reporting has resulted in increased landing fees being taken. The airport does not currently cover its costs and is a financial liability. Regardless of

this, Council must maintain the airport to an adequate standard to enable it to be used by emergency services and to meet legislative requirements.

### ASSET PERFORMANCE AND CONDITION

The general condition of the various components of the airport (including both land and onsite improvements) is monitored on a regular basis by visual inspections carried out by Council's engineering staff, consultants and contractors.

The existing asset information is limited but it is deemed to be fairly accurate and to a suitable level of detail for the airport asset portfolio with limited and non-complex assets. It is adequate to enable forward planning to be effectively implemented to replace and repair assets at the most appropriate time.

Over the duration of this strategy, the development and implementation of a condition monitoring programme will become part of a higher level of management at the airport.

## SIGNIFICANT INFRASTRUCTURE ISSUES AND OPTIONS

Table 21 Significant issues and options for Wairoa Airport

Significant Issue	Strategic Response Category	Options	Principal Option(s)	Implications of the Option	Timeframe	Cost Implications	Risk
<b>Ability to continue funding the activity and maintenance of the asset</b> The asset is currently a financial liability	Risk	1. Close airport as landing fees does not cover the ongoing activity costs		<ul style="list-style-type: none"> <li>Not available for emergency services for the district</li> <li>Community dissatisfaction with risk to patients in emergency situations</li> <li>Impacts horticultural sector with no local runway for crop dusting planes</li> </ul>	2021-2051	None	High
	Programme	2. Continue with reactive renewals approach ( <b>preferred and ongoing</b> )	Fund renewals based on maintenance inspections	<ul style="list-style-type: none"> <li>No proactive renewals</li> <li>Fuel and storage facilities not able to be renewed to meet legislative requirements</li> </ul>	2021-2031	Medium to high	High
	Demand	3. Continue to collect all user fees to strengthen the financial viability of airport ( <b>preferred and ongoing</b> )	Continue to improve data collection of landings and collect all user fees	<ul style="list-style-type: none"> <li>User fees will contribute to the financial position of the airport, funding ongoing operation and maintenance activities</li> <li>Accurate data for forward planning and budgets</li> </ul>	2021-2031	Low	Low

## WAIROA AIRPORT EXPENDITURE FORECASTS

Figure 22 and Table 22 show the forecasted expenditure for Wairoa airport. The 30-year total expenditure forecast is \$8.9 million to provide the Wairoa Airport service to the Wairoa Community.

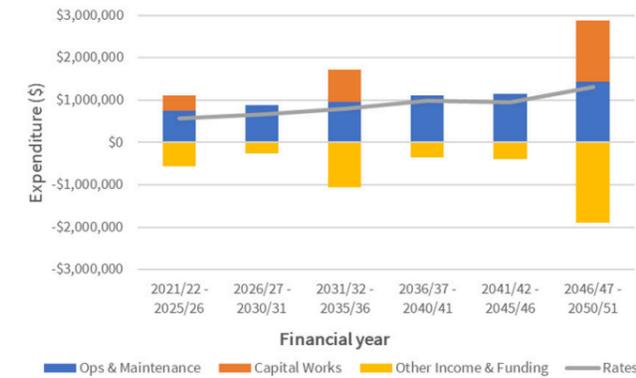
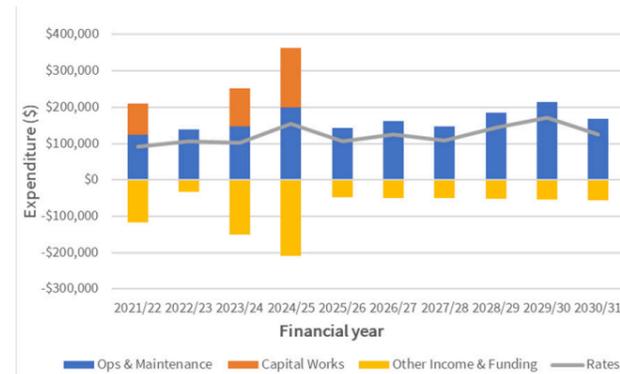


Figure 22 Wairoa Airport expenditure forecasts and funding (inflated)

Table 22 Wairoa Airport expenditure forecasts (inflated)

Year	Operational Expenditure	Capital Expenditure
2021/22	\$124,246	\$85,000
2022/23	\$139,194	-
2023/24	\$147,834	\$105,000
2024/25	\$200,356	\$163,500
2025/26	\$142,383	-
2026/27	\$162,902	-
2027/28	\$147,112	-
2028/29	\$185,190	-
2029/30	\$214,388	-
2030/31	\$168,241	-

Year	Operational Expenditure	Capital Expenditure
2021-2025	\$754,013	\$353,500
2026-2030	\$877,833	-
2031-2035	\$967,488	\$761,300
2036-2040	\$1,104,538	-
2041-2045	\$1,155,761	-
2046-2050	\$1,440,497	\$1,451,580
<b>30 Year Totals</b>	<b>\$6,300,130</b>	<b>\$2,566,380</b>

Forecast expenditure is based on the following assumptions:

- Council will continue to own the airport
- Accurate landing data will result in the real user consumption being charged and reducing the deficit
- Increased landings resulting in an increase in user charges being collected
- Renewals and maintenance activities will be undertaken proactively

Over the next 30 years it is expected that there will be no major capital improvement items.

Figure 23 shows the breakdown of expenditure for Capital Works, by Renewal, Level of Service improvement and Growth improvement.

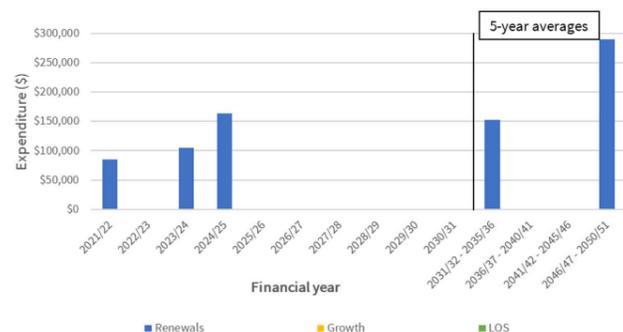


Figure 23 Wairoa Airport capital works expenditure forecasts (inflated)

Figure 24 shows that the forecast Wairoa Airport renewals are higher than depreciation throughout the 30-year period. However, renewals included are required to provide a minimum level of service to operate the airport.

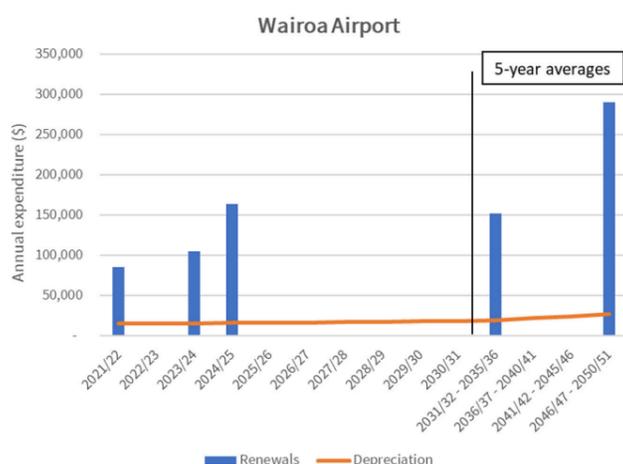


Figure 24 Wairoa airport renewals and depreciation (inflated)

## FUNDING THIS ACTIVITY

Council funds its airport activity services through:

- General rates based on land value
- User pays based on landing, facility and other airport fees
- Rent from facilities.

## 8. FINANCIAL SUMMARY

This Infrastructure Strategy is aligned with Council's Financial Strategy for the 2021-2031 period. The Financial Strategy sets out financial objectives that align with the updated Revenue and Financing Policy. These objectives underpin our approach to funding throughout the 30-year period of the strategy.

### 8.1 SUMMARY OF KEY FINANCIAL ASSUMPTIONS

Further to the planning assumptions outlined in Section 4, the following specific financial assumptions have been made in the development of the Infrastructure Strategy:

- In our financial forecasts we have applied the nationally recognised inflation rates provided by Business and Economic Research Ltd (BERL) based on their assessment of a 'mid-scenario'.
- For the year ended 30 June 2022 we have applied known contract rates. Prices rarely decrease and in the public sector they often go up more than normal. In Wairoa we have the added challenge of remoteness and size, making the local market less competitive due to the small number of suppliers. Noting the inflation rates applied are averages across the entire country, the Wairoa experience may be quite different.
- To meet its capital works programme Council will need to borrow. Council views 100% of revenue as an important borrowing affordability threshold for its community. This is reflected in our Liability Management Policy. Borrowing is an appropriate funding tool for long-term assets. Council will use borrowing prudently to fund the infrastructure that delivers core services now and into the future, without creating an unmanageable affordability challenge.
- The forecast expenditure is based on need, however any cuts in funding made by our funding partner Waka Kotahi will have a significant impact on the programme of work outlined in this Strategy.
- An annual allowance has been made for emergency works for roads and footpaths. The Waka Kotahi subsidy for such work is usually higher than 75%. All emergency works funding applications will be considered by Waka Kotahi on a case by case basis.

### 8.2 FUNDING DEPRECIATION

For the core activities included in this Strategy, Council owned assets with a depreciated replacement value of \$250 million as at 30 June 2020, compared with the optimised replacement value of \$448m. These assets have serviceable lives ranging from 10 years to 120 years. Council maintains Activity Management Plans to ensure these assets achieve their service potential and are renewed or replaced at the optimum time. These assets are significant investments and the renewal expenditure tends to happen in large chunks.

It is a convention of prudence that depreciation is used as a benchmark to assess whether renewal expenditure is sufficient to maintain levels of service in the long-term. From the previous sections in this Strategy it can be seen that renewals expenditure fluctuates according to replacement need, while depreciation remains relatively consistent. Figure 25 shows that over the full 30 year period there is an apparent underinvestment in three waters

and solid waste activities, while more investment is predicted for roads and footpaths and the Wairoa Airport.

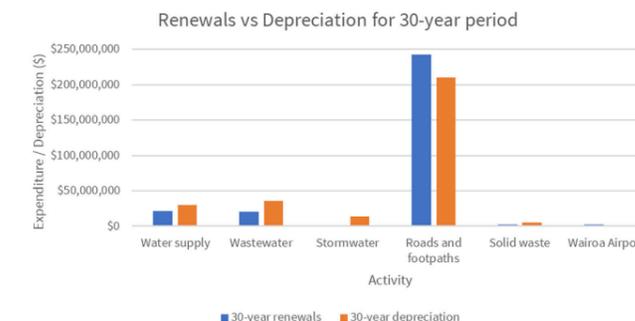


Figure 25 Renewals vs Depreciation for all activities over the 30-year period (inflated)

Council generally rates for depreciation on assets that it expects to replace or renew in the future, where no preferable alternative funding source exists. This ensures that current users pay for their share of the consumption of assets. The money collected for depreciation accumulates in reserves that Council will use to fund the future renewals, and ensures that the assets are capable of delivering the same levels of service to the next generation. This creates intergenerational equity.

Council believes that rating for depreciation is the most prudent way of funding infrastructure renewals because:

- It is more predictable and steady than future capital forecasts which tend to happen in peaks and troughs and are dependent on changing predictive models
- It is less expensive and less risky than financing all expenditure through borrowings
- Council's infrastructure assets are revalued every three years and these regular updates enable Council to keep pace with cost escalations and charge an appropriate depreciation rate.

In recent years Council has exercised judgement in the amount of depreciation that it rated for and it will continue to do so without compromising these fundamental conditions.

Therefore, Council has adopted a funding approach that it considers prudent and sustainable. We will not rate for depreciation where other funding sources are available, but we must maintain the serviceability of core assets, and still be able to pay the bills.

### 8.3 FINANCIAL FORECASTS

Figure 26 and Table 23 shows the total expected capital and operational expenditure for each infrastructure activity over the 30-year period 2021 to 2051.



Figure 26 Combined Infrastructure expenditure and funding forecast 2021-2051 (inflated)

Table 23 Expected total operating and capital expenditure 2021-2051 (inflated)

Infrastructure Activity	Operational Expenditure	Capital Expenditure
Water supply	\$46.4 million	\$28.5 million
Wastewater	\$49.8 million	\$47.2 million
Stormwater	\$27.28 million	\$6.59 million
Roads and footpaths	\$292.3 million	\$208.9 million
Solid waste	\$93.19 million	\$7.34 million
Wairoa Airport	\$6.30 million	\$2.57 million
<b>Total</b>	<b>\$466 million</b>	<b>\$302 million</b>

Figure 27 and Figure 28 show the breakdown of expenditure for Operations and Maintenance, and Capital Works, by activity over the 30-year period.

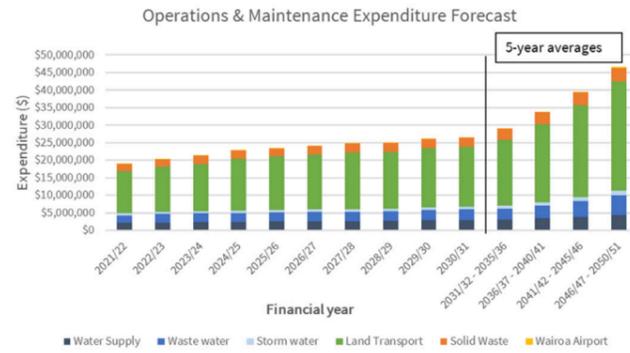


Figure 27 Operations and maintenance expenditure forecast for 2021-2051 split by activity (inflated)

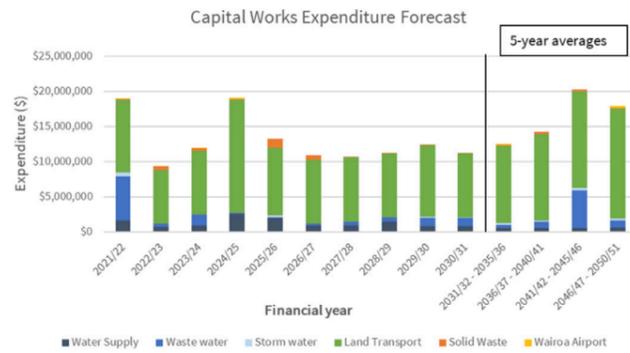


Figure 28 Capital works expenditure forecast for 2021-2051 split by activity (inflated)

Over the next 30 years it is expected that:

- Given the estimates of growth will be gradual, with the bulk of the growth in Mahia, there will be limited additional infrastructure required to address growth. Predicted expenditure is primarily focussed on stormwater improvements in Mahia.
- Operational expenditure accounts for 68% of the expenditure over the 30 year period.
- Planned expenditure on capital renewal works across all infrastructure activities is variable over the 30-year period. There is aging infrastructure, and this will be the focus of the prioritised work programme. In order to make forecast expenditure affordable, renewals will be focussed on critical infrastructure.
- Expenditure on levels of service improvements is focused on:
  - Gaining resource consents for water supply, wastewater and stormwater and ensuring any new facilities and infrastructure renewals meet revised consent conditions
  - Strengthening bridges on key heavy traffic routes
  - Securing Mahia route resilience
  - Securing additional or alternative landfill disposal capacity, along with necessary consents.

### 8.4 DECISIONS WE EXPECT TO MAKE

Council will need to make a number of key decisions over the duration of our strategy. Some of these decisions will be significant to the district and some will not.

Key decisions that will need to be made by elected members over the next 30 years are outlined in Table 23.

Table 24 Key decisions to be made over 30-year period

Activity	Decision	Timing
Water supply	Council considers a regional / national approach to the delivery of the three waters activities to be the most significant decision we will have to make. During 2021, Council and the community will need to make the decision on remaining in or opting out of the reform programme. While subject to Cabinet decisions, the programme for reform currently indicates new entities would be established by 2024, with a subsequent period of transition from delivery of the services by local government to the new water entities of 1-3 years, before full implementation.	Next 3 years
	Identification of an alternative water source to avoid reliance on the Wairoa River	Next 10 years
Wastewater	Remaining in or opting out of the reform programme as outlined above.	Next 3 years
	Council to review alternative option for wastewater disposal	Next 30 years
Stormwater	Remaining in or opting out of the reform programme as outlined above.	Next 3 years
Roads and footpaths	Determine how funding will be secured to ensure resilient access route for Mahia Peninsula, including potentially constructing an alternative route, if the existing route cannot be secured.	Next 3 years
Solid waste	Based on the Landfill Sustainability Review scheduled for 2022, make decisions on whether it is sustainable for Wairoa to have its own landfill or if other waste disposal options will be required in future. If a new landfill is to be constructed ahead of capacity running out at the existing site, and to secure a new consent prior to expiry of the existing consent.	Next 3 years
Wairoa Airport	Whether or not to keep the Wairoa Airport as part of Council's service provision	Next 30 years
All activities	From the cross-council climate change response programme developed over next 10 years, make decisions on key infrastructure impacts.	Next 30 years

### 8.4 FUNDING IMPLICATIONS

Council's Financial Strategy for the 2021-2031 period, outlines key implications of forecast expenditure on funding. These will be similar for the 30 year outlook. Key funding implications include:

- Subsidies** – High level of dependence on external funding from Waka Kotahi for roads and footpaths activity
- Rates** – In January 2021 Council completed its rating review and adopted an updated methodology that addresses the issues of consistency in the previous system, but it is still about the distribution of rates. Specific features that address the impact of land use include:
  - Transitioning to a general rate assessed on capital value, partly on the basis that development drives the cost of infrastructure;
  - Incorporating the forestry roading differential factor into the streamlined capital value rating system and applying a differential factor of four overall to reflect the relative impact on community wellbeing outcomes;
  - Moving 10% of the rates for all water activities to the general rate, recognising that there is benefit to the entire community from healthy water systems.

- Council will retain its objective of keeping rates increases below 5%, but this must be seen as a long-term objective. In order to catch up and keep up, rates increases will need to be higher for the next four years.
- Depreciation** – Renewals will be funded by depreciation, however where shortfalls exist these will be funded by loans because Council will not have sufficient cash reserves.
- Loans** – Borrowing is an appropriate funding tool for long-term assets. Council will use borrowing prudently to fund the infrastructure that delivers core services now and into the future, without creating an unmanageable affordability challenge. Council has modelled its own debt servicing measure to ensure that the scale of borrowing will continue to be affordable. Debt Servicing includes interest expenses and the amount required to be rated for loan repayments and is expressed as a percentage of revenue excluding subsidies. This is the annual cost that the community will bear. Council will maintain a limit of 10%, but it will be based on this adjusted revenue figure. This shows that debt remains affordable throughout the plan.

## 9. APPENDIX A - ACTIVITY PERFORMANCE AGAINST CUSTOMER OUTCOMES

Activity	Customer Outcome	Customer Level of Service		How will success be measured?	What is the current performance?	What will performance be in future (30 Years time)?	Response to LOS gaps (with detail in AMPs)
Water Supply	Safety	Safe, high quality water supply is provided		DIA Mandatory Non-Financial Performance Measure 1: Safety of Drinking Water	●	●	Continuing the upgrade programme of water supply and treatment upgrades. Revise Water Safety Plans and be fully compliant with safety aspects of the NZ Drinking Water Standards
	Reliability / Quality	To provide reliable water networks		Council Performance Measure: Residents satisfied with the water supply	●	●	Proactive Maintenance & Renewals with focus on critical assets coming to end of their life
	Availability / Accessibility	Water pressure and flow appropriate for its intended use		DIA Mandatory Non-Financial Performance Measure 4: Customer Satisfaction	●	●	Continue to identify pockets of low pressure and address with network changes and / or capital improvements
				DIA Mandatory Non-Financial Performance Measure 2: Maintenance of the Reticulation Network <i>Percentage real water loss from system</i>	●	●	Water Loss Management Plan. Installation of accurate water metering. Reticulation renewals programme is preventative measure of water loss.
	Environmental sustainability	Water resources are used efficiently and sustainably		DIA Mandatory Non-Financial Performance Measure 5: Demand Management <i>Average Drinking water consumption per day per resident</i>	●	●	Installation of accurate water metering. Investigating alternate water source
	Financial Sustainability	Water supply assets are managed prudently to ensure long term financial sustainability for current and future generations		DIA Mandatory Non-Financial Performance Measure 3: Fault Response Times	●	●	Proactive Maintenance & Renewals with focus on critical assets coming to end of their life
Wastewater	Safety	Mitigate risk of environmental and public health impacts		DIA Mandatory Non-Financial Performance Measure 1: System Adequacy	●	●	Repairs & Process Automation Wastewater treatment plant upgrade works Proactive Maintenance & Renewals with focus on critical assets coming to end of their life
	Reliability / Quality	To provide safe and reliable wastewater service to customers		DIA Mandatory Non-Financial Performance Measure 4: Customer Satisfaction	●	●	Identify illegal connections Improve performance at pump stations by installing generators for continuous power
	Environmental sustainability	Protection is provided to the community and the environment		DIA Mandatory Non-Financial Performance Measure 2: Discharge Compliance	●	●	Full implementation of the Freshwater NPS's policies by 31 December 2030 in Hawke's Bay. Wastewater treatment plant upgrade works Proactive Maintenance & Renewals with focus on critical assets coming to end of their life
	Financial Sustainability	Wastewater assets are managed prudently to ensure long term financial sustainability for current and future generations		DIA Mandatory Non-Financial Performance Measure 3: Fault Response Times	●	●	Complete installation of generators at wastewater pump stations Proactive Maintenance & Renewals with focus on critical assets coming to end of their life
Stormwater	Safety	Mitigate risk of flooding in urban areas		DIA Mandatory Non-Financial Performance Measure 1: System Adequacy	●	●	Continue to monitor flooding incidents. Analyse costs and benefits to prevent / mitigate flood prone areas, particularly low areas in Wairoa township area.
	Reliability / Quality	To provide reliable stormwater networks		Council Performance Measure: Residents satisfied with the stormwater supply	●	●	Undertake formal survey to assess the asset condition with focus on the critical assets
	Availability / Accessibility	All urban residents are provided with an adequate stormwater outlet		DIA Mandatory Non-Financial Performance Measure 4: Customer Satisfaction	●	●	Continue with renewal programmes and investigating customer complaints
	Resilience	Stormwater disruption during natural disaster events are minimised		DIA Mandatory Non-Financial Performance Measure 3: Response Times <i>To attend a flooding event</i>	●	●	
	Environmental sustainability	Effects on the natural environment are minimised		DIA Mandatory Non-Financial Performance Measure 2: Discharge Compliance	●	●	Consent application underway
Roads and Footpaths	Safety	The land transport network is designed and maintained to be safe		ONRC Safety Measures <ul style="list-style-type: none"> <li>• Deaths and Serious Injuries <ul style="list-style-type: none"> <li>• Collective Risk</li> <li>• Personal Risk</li> </ul> </li> <li>• Loss of control crashes</li> </ul>	●	●	Safety Improvements: Review Primary and Secondary Collector roads for safety LoS improvements Speed management initiatives

Activity	Customer Outcome	Customer Level of Service		How will success be measured?	What is the current performance?	What will performance be in future (30 Years time)?	Response to LOS gaps (with detail in AMPs)
Roads and Footpaths	Reliability / Quality	Road users will experience a fair ride quality on a well-maintained and managed sealed road network asset		Annual customer satisfaction surveys ONRC Amenity Measures <ul style="list-style-type: none"> <li>Average roughness of the sealed road network</li> <li>Peak roughness of sealed road network</li> <li>Smooth Travel Exposure</li> </ul>			Targeted Pavement Renewals: Target Secondary Collector roads to continue to improve STE & roughness through pavement renewals Stakeholder Engagement: to understand customers' desired level of service and allow for better understanding of cost of service vs level of service.
	Availability / Accessibility	The land transport network is managed in a manner that assists the economic development of the district		ONRC Accessibility measures <ul style="list-style-type: none"> <li>Number of restrictions on the specified heavy vehicles routes</li> <li>Bridge restriction postings</li> </ul>			Bridge Inspections & Data Collection: implement Bridge Inspection Policy to collect condition data. Bridge strengthening: based on capacity assessment outcomes
	Resilience	Council quickly restores access on key routes after natural event		ONRC Resilience measures <ul style="list-style-type: none"> <li>Number of journeys impacted by unplanned events</li> </ul>			Drainage: review catchments and drainage capacity requirements in areas where flooding is common. Emergency Event Management Procedure: Review of emergency event management to minimise closure timeframes on key routes.
	Financial Sustainability	Road assets are managed prudently to ensure long term financial sustainability for current and future generations		ONRC Cost Efficiency measures <ul style="list-style-type: none"> <li>General maintenance costs</li> <li>Renewal costs</li> </ul>			Targeted Pavement Renewals: Increase surfacing on higher classification roads to ensure asset integrity maintained and lives not stretched too far. Cost of Service Analysis: Complete full review of maintenance and renewal costs and align with levels of service.
	Environmental sustainability	Effects on the natural environment are minimised		<ul style="list-style-type: none"> <li>CSR complaints related to dust</li> <li>Programmed dust reduction initiatives</li> </ul>			Dust Mitigation Strategy: Review and develop full Dust Mitigation Strategy
Solid Waste	Safety	Provide safe refuse and recycling kerbside collection services and rural waste services		Number of health and safety breaches by waste services contractors, per year			Continue to monitor contractor's performance with health and safety audits
	Reliability / Quality	Provide reliable refuse and recycling kerbside collection services and rural waste services		Number of missed service collections			Continue to monitor contractor's performance on service collections
	Availability / Accessibility	Wairoa Landfill available most days of the year for the public to dispose waste		Hours per day and number of days open			Landfill Service sustainability review
	Environmental sustainability	Effects on the natural environment are minimised Council facilitates waste minimisation practices and promotes reduction of the amount of waste going to landfill		Number of non-compliance events with the resource consent conditions			Improved consent monitoring New landfill construction to meet new consent requirements
				The amount of material diverted from landfill by the Wairoa community increases			Waste minimisation education programme
Wairoa Airport	Safety	All airport operations and infrastructure shall meet the Civil Aviation Authority requirements		Civil Aviation Authority formal certification process			Continue with operation programmes to ensure meeting Civil Aviation Authority requirements.
	Reliability / Quality	Airport service supports health care by providing patient transport		Number of times when the airport is closed (not available to be used), per year			Continue to improve data collection of landings to better understand demand. Continue with regular visual inspections to identify any defects. Implement affordable low risk option to resurface the sealed areas at the Airport (including the runway).
	Availability / Accessibility	Airport service is available for industry use					
Financial Sustainability	Wairoa Airport assets are managed prudently to ensure long term financial sustainability for current and future generations		Capital and maintenance investment versus income (these will not balance)			Continue to identify suitable renewal and maintenance programmes to ensure providing adequate facility at least cost.	
All Activities Except Wairoa Airport	Financial Sustainability	Level of investment for capital and maintenance is at an acceptable level to ensure that asset is not deteriorated		<ul style="list-style-type: none"> <li>Renewal ratio (capital renewal versus annual depreciation for each asset class)</li> <li>Maintenance metric (% of asset value spent on maintenance works)</li> </ul>			Continue to determine suitable renewal and maintenance programmes for each activity to ensure meeting legislative requirements and agreed levels of service within acceptable risk levels in the most cost effective manner.