



# Infrastructure Strategy

2024 - 2054



TE KAUNIHERA Ā ROHE O  
**WHAKAAHURANGI**  
**STRATFORD**  
DISTRICT COUNCIL

Long Term Plan 2024-34

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# 1. Introduction

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Section 101B of the LGA requires that the Council must, as part of its Long Term Plan (LTP), prepare and adopt an Infrastructure Strategy for a period of at least 30 consecutive years.

The Infrastructure Strategy (IS) 2024-2054 is a significant infrastructure strategy developed by the Stratford District Council ('the Council') spanning the 30-year period between 2024 and 2054. The IS has been prepared along with the LTP 2024-2034, for the purposes of identifying:

- Significant infrastructure issues for the Council over the 30-year period;
- The principal options for the management of those issues; and
- Implications of the identified options.

The IS considers a number of asset and lifecycle management issues including:

- Response to growth in the service demand and increase in service levels;
- Maintenance or improvement of public health and environmental outcomes;
- Asset resilience through appropriate risk management.

The IS presents an overview of how the Council will manage its core infrastructure assets over the 30-year planning horizon. It presents the most likely cost scenario for the management of the assets,

following the identification of the long-term significant issues and options.

The Council has an important stewardship role for the infrastructure assets and for the services they deliver. Council's vision for its significant infrastructure assets is: *'Infrastructure is resilient, fit for purpose, affordable and meets the needs of today without compromising the needs of tomorrow'*.

Infrastructure provides the foundation for efficient delivery of services and enables population and economic growth. It supports the fabric of modern living and is taken for granted until something fails or no longer provides the expected service. Infrastructure enables the Council to achieve desired community outcomes and meet asset ownership goals and objectives.

The IS aims to ensure core services provided by Council meet the agreed level of service and the infrastructure assets that deliver them are fit for purpose and can meet the needs of a changing community today and in the future. The IS will guide Council's decision making process and inform the community of the Council's long-term priorities with respect to the core services it delivers. It presents the Council's approach for addressing identified issues within the core local government infrastructure categories.

This Stratford District Council IS covers the four core local government infrastructure categories:

- Roading (and transport);
- Stormwater and drainage
- Sewer treatment and disposal;
- Water supply

Flood protection and control is addressed where it falls under each respective core service category. This IS describes the:

- Growth and Demand Drivers;
- Significant Issues the Council will address over the next 30 years;
- Options for addressing the identified issues, including the Council's preferred option;
- Significant Assumptions underpinning the strategy including Risks, Consequence, Mitigation;
- Level of Service, Risk and Lifecycle Management Strategies;
- Council's 30-year Investment Funding Strategy, including Capital and Operating Expenditure;
- Timeline for Investment.

The IS is reviewed and updated every three years in line with the LTP.

## 2. Mission, Vision, Values, Priorities and Community Outcomes

The Stratford District Council is the territorial authority for the Stratford District. Council's role in accordance with the Local Government Act 2002 (LGA) is to:

- Enable democratic local decision-making and action by, and on behalf of communities;
- Promote the social, economic, environmental, and cultural well-being of communities in the present and for the future

The Stratford District Council's **Mission Statement** is 'To serve the District and its communities through advocacy, promotion, services, facilities and positive leadership'

The Stratford District Council's **Vision Statement** is 'A welcoming, Inclusive, Safe community - Te Pūmanawa o Taranaki'. Te Pūmanawa o Taranaki translates as 'The Beating Heart of Taranaki'.

The Stratford District Council's **Values** are:

Integrity	<i>Be loyal to the organisation and trustworthy, honest and courteous with everyone we deal with.</i>
Teamwork	<i>Work together in the same direction, assist each other and have respect for others. Maintain a positive attitude and encourage teamwork.</i>
Excellence	<i>Be effective in everything we do using our experience and knowledge. Do the right thing at the right time. Be efficient by being cost effective and ensure prudent management of public money and assets.</i>
Pride	<i>Take pride in our performance and our organisation.</i>
Commitment	<i>Have commitment and respect for each other, our business and our customers.</i>
Innovation	<i>Examine alternatives, challenge the obvious and have a flexible attitude.</i>

The Council's key **Priorities** over the next 30 years are to:

- Ensure the provision of long-term, affordable core services to the community;
- Maintain agreed levels of service;
- Optimise the replacement of ageing infrastructure;
- Maintain compliance with legislative requirements; and
- Manage changing customer expectations and needs in a cost-effective manner.

Elected Members have reviewed the Council's **Community Outcomes** as part of the LTP process.

An assessment of the achievement of the Community Outcomes through the delivery of the four Core Infrastructure Services of Roading; Water; Wastewater and Stormwater, is provided below

## Achievement of Community Outcomes through the delivery of Core Services

Community Outcomes		Roading	Water	Wastewater	Stormwater
<b>Welcoming</b>	<ul style="list-style-type: none"> <li>We celebrate the unique stories of our district</li> <li>We are inclusive, and value our diversity</li> <li>Stratford is a friendly place where our visitors feel welcomed</li> <li>Our diverse community feels safe and supported</li> <li>We promote the district as the place to visit, live, play, learn and work.</li> </ul>	✓	✓	✓	✓
<b>Resilient</b>	<ul style="list-style-type: none"> <li>We consider our natural resources as taonga (treasures) and we will work with our treaty partners and the community to protect and look after them.</li> <li>We support a low-emissions future for our community.</li> <li>We enable our rangatahi (youth) to be sustainable leaders.</li> <li>We strive to have resilient infrastructure that meets the current and future needs of the district.</li> <li>We respect and apply Te Ao Māori values and Mātauranga Māori in our mahi (actions/work).</li> </ul>	✓	✓	✓	✓
<b>Connected</b>	<ul style="list-style-type: none"> <li>We provide opportunities for families and people of all ages to connect with others in the community</li> <li>Our community is engaged and actively participates in democracy</li> <li>We value local knowledge when making decisions</li> <li>We advocate for the services that our community needs to live safe and healthy lives</li> <li>We welcome opportunities to work in partnership with others to help achieve our community outcomes</li> <li>We are committed to fostering meaningful and genuine partnerships with Mana Whenua</li> </ul>	✓	✓	✓	✓
<b>Enabling</b>	<ul style="list-style-type: none"> <li>We are a business friendly district</li> <li>We encourage a diverse and sustainable business community</li> <li>We enable economic growth by supporting business investment and development in our district</li> <li>We support the growth of employment opportunities within our community; with a particular focus on our rangatahi (youth)</li> <li>We carefully balance the needs and wants of our district when funding services and infrastructure</li> <li>We encourage partnerships to collaborate with Mana Whenua for the benefits of the Stratford district.</li> </ul>	✓	✓	✓	✓

### 3. District Overview

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The Stratford District is a beautiful land-locked area situated in the heart of the Taranaki region and encompassing approximately 2,170km<sup>2</sup> of land. To the north, west and south of the district are the New Plymouth and South Taranaki districts in the Taranaki region; to the east, the district is bordered by the Ruapehu and Whanganui districts within the Horizons region.

Within the Stratford District are four distinct geographical areas:

- The alpine and bush environment of Te Papakura o Taranaki;
- The ring plain around Taranaki Maunga;
- The hill country located between the ring plain and the eastern hill country; and
- The eastern hill country to the boundary with Ruapehu District Council.

The district's population as at 2020 ranks 10th smallest out of the 67 districts in New Zealand. The rural landscape supports large farming, forestry and Department of Conservation reserves. The Stratford District is a growing tourist destination owing to key attractions such as the Te Papakura o

Taranaki, the Manganui Ski Field, Forgotten World Highway (SH43), Dawson and Mt Damper Falls.

The Stratford District is home to many settlements, with the four main centres being Stratford, Midhirst, Toko and Whangamomona.

Stratford is the main town in the Stratford District. It is located on the banks of the Patea River roughly 48 km south-east of New Plymouth and 30 km north of Hawera at the junction of State Highways 3 and 43.

Stratford with a population of approximately 9880 (Statistics NZ, June 2020) is near the geographic centre of the Taranaki region and the largest settlement of the Stratford District. The town is central Taranaki's main rural servicing centre, and the administrative base of the Stratford District Council and the Taranaki Regional Council.

Midhirst is located approximately 4 km north of Stratford, on State Highway 3. Inglewood is 17 km north of Midhirst and New Plymouth is 35 km to the northwest. An estimated 234 (Statistics NZ 2013) people live in Midhirst.

One of the most distinctive features of Midhirst is the towering concrete and glass

milk-powder drying plant, which was one of New Zealand's most advanced in its time (1980). The factory closed after amalgamating with Kiwi Dairies in 1983 and is now used for bulk grain storage.

Toko is located 10 km east of Stratford, at the intersection of East Road (State Highway 43) and Toko Road. It is situated on a railway, the Stratford–Okahukura Line, the western portion of which was operated as a branch line known as the "Toko Branch" prior to the line's completion.

The Toko Stream flows through the area to join the Patea River. An estimated 1,350 (Statistics NZ 2018) people live in or around Toko. This includes people living in the settlement and those living in the surrounding rural areas.

Whangamomona is a rural settlement 65 km North East of Stratford on State Highway 43. Once quite a thriving settlement and the headquarters of the Whangamomona County Council with a hotel, a number of stores and a post office, it suffered decline from the mid 20th Century with only the hotel remaining as a business in town. Today an estimated 126 people live in and around Whangamomona.



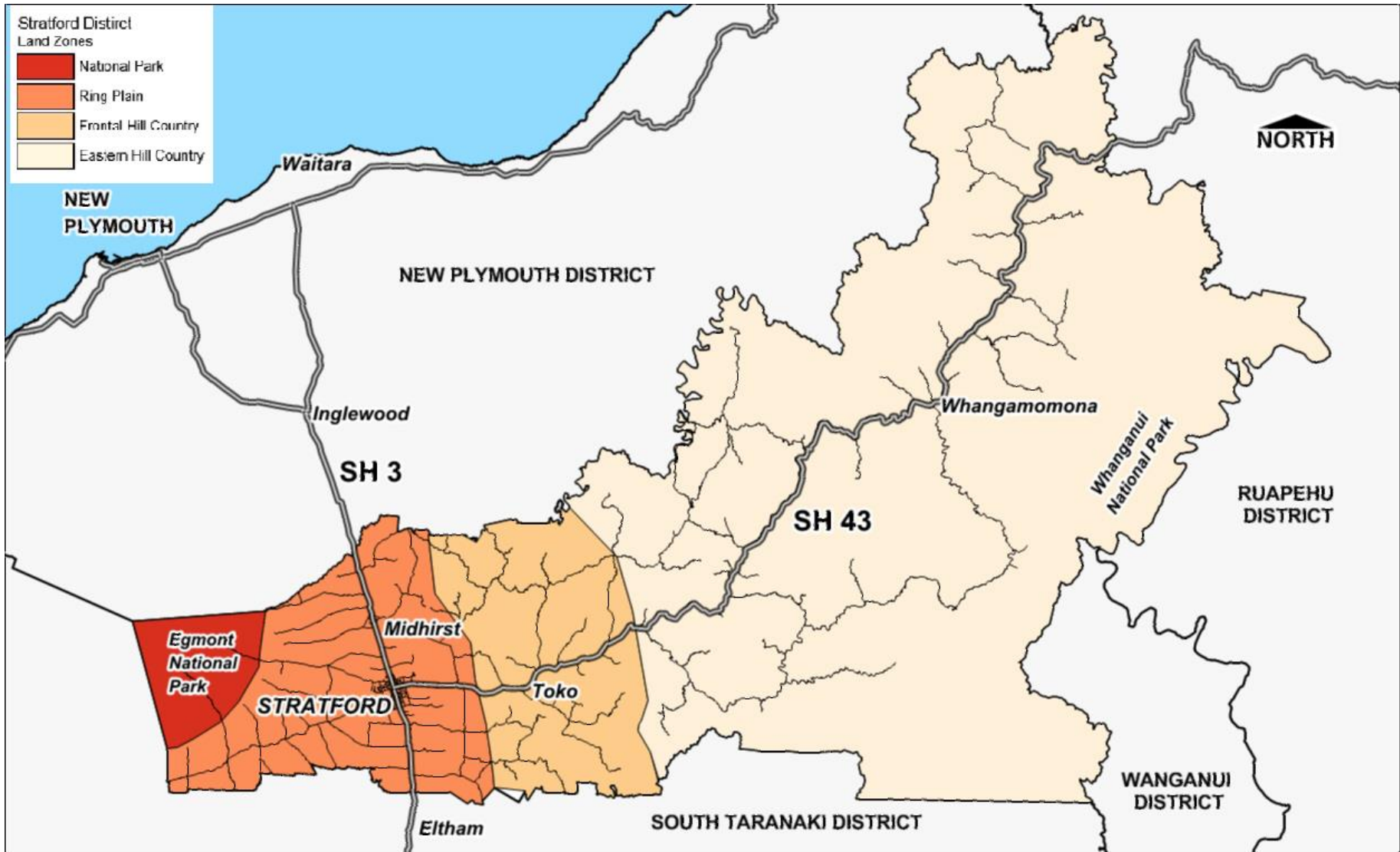


Figure 1 - The Stratford District

## 4. Legislative and Strategic Context

The Legislative and Strategic context of the IS is presented in Figure 2.

Section 101B of the LGA (2002) requires that the Council must, as part of its Long-Term Plan (LTP), prepare and adopt an Infrastructure Strategy for a period of a least 30 consecutive years. One principle by which a local authority should perform its role in Section 14(g) of the LGA is that:

*'a local authority should ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including by planning effectively for the future management of its assets'.*

Undergirding the preparation of this long-term strategic document is the principle to ensure that the Council maintains the sustainable delivery of its core services to the community.

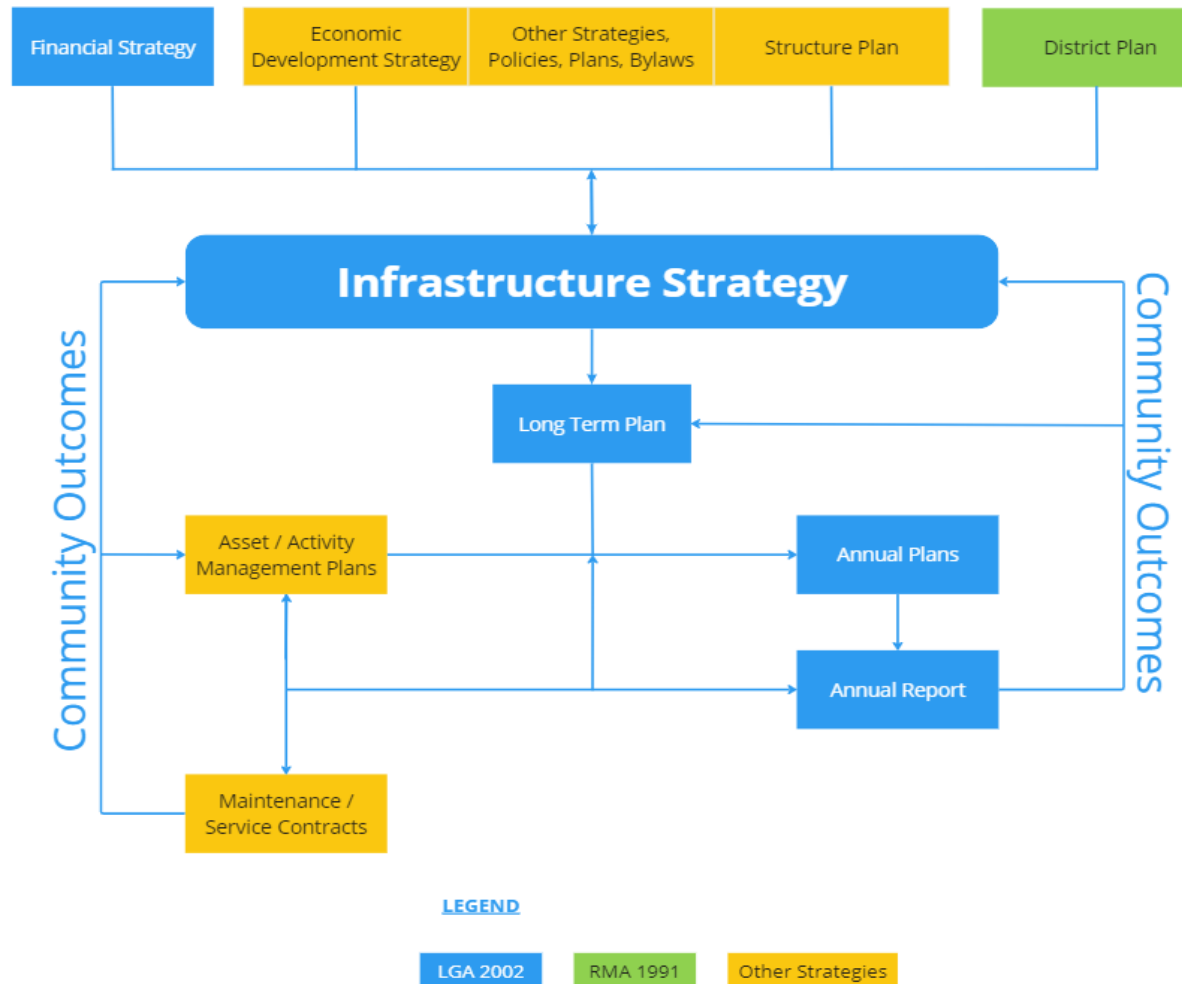


Figure 2 – Legislative and Strategic Context

## 5. Growth and Demand Forecast

The future growth and demand for services in the district can be attributed to a number of factors including:

- Population growth;
- Economic development;
- Tourism;
- Regulatory Changes; and
- Land-Use Changes.

Anticipated impacts of growth and increased demand include:

- Increased demand for services and the infrastructure that delivers these services;
- Increased pressure on existing infrastructure; and
- Increased maintenance and renewal costs.

Demand increases can impact affordability positively as well as negatively, depending on how these are managed. The uncertainties and reliability of these assumptions are discussed in the *Significant Assumptions* Table in Section 8.

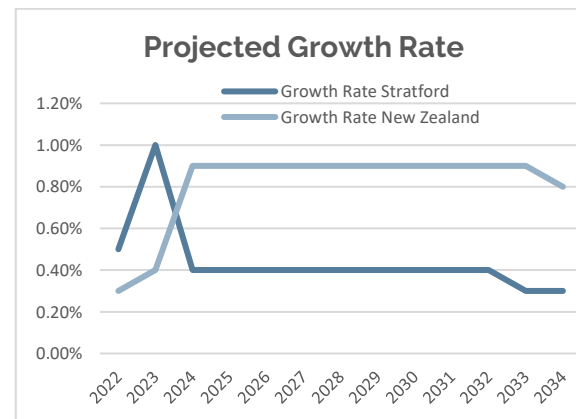
### Population Growth

The Council is forecasting the district's population will grow from 10,295 in 2024 to 10,679 by 2034, at an average of 0.4% per year. This level of growth is unlikely to put significant pressure on council infrastructure. There is a low risk that growth may exceed these

projections and Council may need to invest in additional urban growth infrastructure which will impact on capital budgets and revenue. There is also a low risk that growth is lower than the projections and Council over invests in infrastructure and services.

The growth in the Māori population of the district has been consistently higher than the growth of all other ethnicities for each of the last ten years. Stratford district's Māori population was 1,550 in 2022, up 2.6% from the previous year.

The chart below shows total population projections over the ten years of the LTP, against the growth projections of the total New Zealand population.



### Economic Development

This district's economic development strategy as well as its participation in Tapuae Roa – Make Way for Taranaki, the regional economic development strategy, set a direction for economic development and identify priorities and measurable goals for the district. It is anticipated that both strategies will enable and support economic growth and development in the Stratford District.

The two biggest contributing industries in Stratford are the Agriculture and Forestry sector contributing 27% of district GDP, and the Utilities sector (electricity, gas, water and waste) contributing 13%. Stratford has the region's largest electricity generation site at Contact's 575MW gas powered plant – it is considered a nationally significant generation site.

### Tourism

Tourism currently makes up 0.9% of Stratford District's GDP (*Infometrics. 2022*).

Potential growth opportunities are:

- Walking and Cycling;
- Forgotten Highway; and
- Taranaki Maunga.

The Visitor Sector Action Plan (VSAP) is one of six action plans developed as part of the *Tapuae Roa – Make Way for Taranaki* - Regional Economic Development Strategy. The action plan describes the current regional sector dynamic, growth objectives, challenges, opportunities and the actions required to achieve sector growth. It is anticipated that the VSAP will facilitate growth in the Stratford District.

### **Land Use Changes**

The Council is preparing a review of its District Plan. Core infrastructure assets will be planned to service new policy areas as required.

The Council has recently successfully completed the creation of a quality and affordable subdivision in one of the identified growth areas by supplying new residential lots to jumpstart and facilitate growth in the district. The uptake of the newly created lots was quick and attracted homeowners from all parts of the Taranaki region and beyond. The Council has recently commenced the development of a new subdivision, which is expected to support the creation of affordable residential lots to support the growth forecast for the Town.

### **Relationships with Tangata Whenua**

While there are no formal agreements with Iwi, engagement occurs regularly with Iwi Authorities that have mana over whenua within

the Stratford district, on project by project as the need arises. Council has made a commitment through the Communication and Engagement Strategy to involve iwi in Council decision making at an early stage and through the Community Outcomes to work with iwi to achieve the following outcomes:

The Council has an ongoing relationship with a number of Iwi groups in the District, including;

- Ngaruahine Iwi Authority;
- Te Runanga o Ngāti Ruanui Trust; and
- Ngāti Maru Wharanui Pukehou Trust

### **Regulatory Changes**

The SDC regularly reviews regulatory changes that may or will affect the delivery of our core services. This primarily includes updates to resource consents and changes to drinking water legislation and standards.

Regulatory changes, as seen in recent times, are likely to require the implementation of stricter outcomes from Territorial Authorities such as the Council. For example, current changes to the National Policy Statement for Freshwater (FVNPS) 2020, will have an impact on the management and cost of core service delivery of the 3-Waters Activity, with a direct impact on rates.

Also expected to have a key impact on future Water, Wastewater and Stormwater operations

are the new government's proposed bills on 3-Waters Reform and possible changes to the Government Policy Statement (GPS) on Land Transport.

## 6. Infrastructure Assets Information, Condition and Performance

The Council maintains its core infrastructure assets to support the delivery of its agreed level of service. The Council's core assets are in four categories:

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

Asset Management Plans (AMP) are maintained for all major assets, including the four core asset categories above. The AMPs contain information on the life, age and condition of the assets. They also contain details of the asset's location; valuation; useful lives; condition assessment system and data accuracy/confidence.

A summary of Council's core assets as at 19 January 2024, including the associated Optimised Replacement Cost (ORC), is provided below.

The Council owns and operates three urban water supplies servicing the Stratford, Midhurst and Toko Communities. Table below is a total of all 3 water supplies Data for the 3-Waters and roading infrastructure assets is held in AssetFinda and RAMM

databases respectively. More details are provided in the respective AMPs.

### Water Supply Assets

Asset Group	Quantity
Reticulation	102,693 km
Fittings	6,297 No.
Treatment	394 No.
<b>Total RC</b>	<b>\$56,894,821</b>

### Wastewater Assets

Asset Group	Quantity
Reticulation	60,551 km
Point and Plant	3,342 No.
<b>Total ODRC</b>	<b>\$37,198,337</b>

### Stormwater Assets

Asset Group	Quantity
Reticulation (pipes)	26,485 km
Points – Inlets, Outlets, etc.	375
<b>Total RC</b>	<b>\$23,893,854</b>

### Road Assets

Asset Group	Quantity
Sealed Roads	402 km
Unsealed Roads	206 km
Footpaths	73 km
Bridges/Large culverts	157 No.
Culverts	3976 No.
Tunnels	5 No.
Retaining Walls	259 No.
Signs	5525 No.
Markings	2450 No.
Guard Rails	910 No.
Streetlights	755 No.
Surface Water Channels	827 km
<b>Total RC</b>	<b>\$450,673,329</b>

The Council Roothing assets include all land transport infrastructure assets including walking and cycling facilities.



## Asset Condition and Data Confidence

Grade	Condition	Description
1	Very Good	Asset in structurally sound and excellent physical condition. No work required
2	Good	Asset in structurally sound and acceptable physical condition. Minor work required (if any)
3	Fair	Asset is structurally sound but shows deterioration. Moderate work required to return asset to agreed level of service
4	Poor	Asset failure likely in the short term. Significant work required now to return asset to agreed level of service
5	Very Poor	Asset has failed/is about to fail. Renewal/Replacement required Urgently.

Asset condition is a measure of an asset's physical integrity, while asset performance is a measure of whether the asset is delivering level of service requirements. Knowing the condition of an asset is a core part of what the Council and its contracting partners do as it enables more accurate prediction of its performance and supports its development, maintenance and renewal/replacement requirements. The

Council has no backlog or deferred maintenance in its work programme.

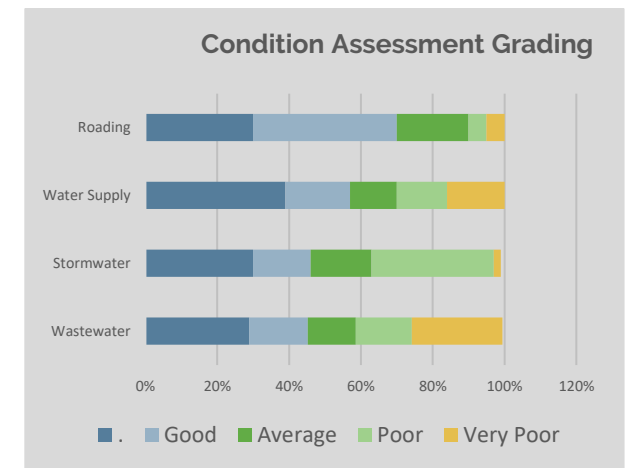
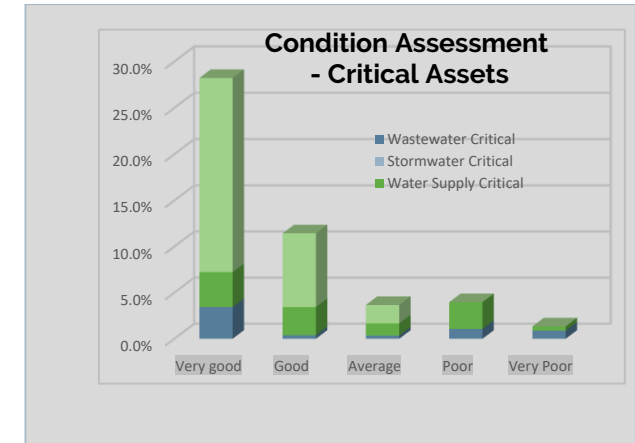
The Stratford District Council identifies the condition of its infrastructure assets by a combination of the following, based on risk and asset criticality, with higher risk assets inspected and assessed more rigorously:

- Asset Age;
- Visual targeted inspections;
- Analysis of collected statistical data; and
- Maintenance monitoring.

The Stratford District Council has developed a condition grading system to support the classification of our infrastructure assets at the group level. Using the system, assets are ranked from 1-5 as illustrated in the table above. The figures below provide a summary of the condition grading for our core assets, and our critical assets.

Given that some data in our asset database is either incomplete or unsupported, the Council's overall confidence level in the condition data assessment is '*Reliable to Uncertain*'. Therefore, the Council uses a combination of visual inspection, maintenance monitoring and other methods to support the development of its maintenance and replacement forward works programmes.

The Council will continue to deliver on agreed service levels, knowing the asset condition presented above. Council's approach to monitoring the condition of its assets is as described in Section 7.



While Council's overall confidence around its data quality is *'Reliable to Uncertain'*, the Council's confidence level for the 3-Waters is *'Reliable'* for its critical assets and *'Reliable to Uncertain'* for non-critical assets. With regards to roading assets, confidence is *'Reliable to Highly Reliable'* for the critical assets and other assets that receive regular inspections (such as structures, footpaths and carriageways). For other non-critical assets, the confidence is average, translating to *'uncertain'*.

This uncertainty stems from data held around the age of the non-critical assets, which have been deduced from the approximate date of construction, and also from the quality of data held on our service connections. However, given these are non-critical assets, impact of premature asset failure on continued service delivery is very low, as any disruption to service is limited to a few properties. The associated financial impact is also very low.

It is important to note that these assets do not fail simultaneously, as they are individual assets - any failed part can be isolated and managed, so the risk and consequences of failure is very low. This is evidenced from our annual performance indicators reported every month to the Council and summarized in the Annual Report. Our track record is good. Our strategy to mitigate the impacts of this *Uncertainty* is to be ready at all times to respond to all asset failures. Therefore we have, on hand or ready access to, supplies to replace any failed asset. Our contractors are on board as per the requirements of their maintenance contract.

The Council continues to validate the data in the AssetFinda database - as assets are replaced. Our maintenance contractors interact directly with our asset management system and provide corrections and updates to the condition data which is reviewed and/or updated as new data becomes available. Assets that are frequently interacted with therefore, are better documented than those that only get dug up as part of upgrades, renewals or repair work. It will take some time for the assessment of our 'confidence level' of our non-critical assets to be *'Reliable'*.

The charts above provide snapshots of the overall *Condition Grading Assessment* for all assets -critical and non-critical; the table below provides a summary of the *Data Confidence Levels*.

		Data Confidence Level				
		Highly Reliable	Reliable	Uncertain	Very Uncertain	Unknown
Wastewater	Critical		√			
	Non-Critical		√	√		
	OVERALL		√	√		
Stormwater	Critical					
	Non-Critical			√		
	OVERALL			√		
Water Supply	Critical		√			
	Non-Critical		√	√		
	OVERALL		√	√		
Roading	Critical	√	√			
	Non-Critical		√	√		
	OVERALL		√			

## 7. Critical Assets and Significant Infrastructure Issues

### Critical Assets

Critical assets are defined as those assets that if they fail, are likely to have more significant consequences than others and have adverse significant economic, social and environmental impacts on the community.

Generally, the Council takes a risk-based approach to monitoring the condition of assets and conducts condition assessments of its critical assets. Where assets have low risk because they are in the first half of their life, condition monitoring is low. If the consequences of running an asset through to failure are high, the Council, through its AMP and systems employ a more intensive monitoring regime and targeted inspections to collect more information on the asset condition. The Council has assessed the risk of sudden asset failure as minor.

The Council establishes criticality using the Activity and Corporate rating levels. The Council's *Criticality Rating Criteria* is provided below. Activity level criticality is based on certain the criticality criteria – this is detailed in the AMP. The Council's *Corporate Level Criticality* ranking for its core assets is presented below.

Rating	Description
1	<b>Critical with no redundancy</b> - Failure of equipment compromises H&S directly (failure to supply drinking water to hospital)
2	<b>Critical with no redundancy</b> - Failure of equipment does not compromise H&S but affects production or Level of Service
3	<b>Critical with redundancy</b> - Failure of equipment does not compromise H&S but affects production or Level of Service

Rating	Description
1	Roading, Water Supply assets.
2	Wastewater (Sewerage).
3	Solid Waste and Stormwater.

Further details of *Asset Criticality* evaluation, in addition to the operating management of critical assets, are described in detail in the respective AMP.

For non-critical assets that affect a limited number of residents and no critical users (schools, medical centres, etc.), the Council's approach is to maximise the useful life of the asset - until it breaks. Reinstatement of non-

critical assets is generally achievable within four (4) hours. The Council manages flexible operating and renewal budgets that accommodate the re-prioritisation of such failed assets.

The Council has identified a number of significant issues in the medium and long term that are potentially detrimental to the Council's core assets. The *Significant Issues and Options* by asset Group are presented in the Appendix. Cost implications of the most likely scenario (key projects) for addressing these issues are presented in Section 14.

### Significant Infrastructure Issues

The *Significant Infrastructure Issues* are key challenges that must be addressed to enable the delivery of agreed service levels both now and in the future. These challenges are typically renewal, resilience, service standards, changes in legislation, growth demand. These are categorised under four broad categories and include:

- Financial Issues:
- Natural Disasters/Climate Change -
- Operating Issues:
- Strategic Issues:

## Significant Issue 1:

### Financial Issues - Limited Resources, Funding Assistance and Subsidies, Financial Uncertainty

The continued delivery of robust and well maintained infrastructure for the district, at the agreed level of service, depends on our continued ability to attract funding assistance and subsidy from our key partners. Our major Partner is the New Zealand Transport Agency (NZTA) who currently provides a 63 % Funding Assistance rate (FAR) for all Roding Activities.

Key financial issues stem from:

- Increased asset values and associated depreciation contribution;
- Contract cost escalations;
- Affordability pressures to keep rates to a minimum;
- Bridges due for replacement in the next 10 years;
- Customer expectations; and
- Cost to service forestry impacts

Our ability to continue funding our services rely on:

- The number of rateable properties;
- The amount to be collected via rates from our ratepayers;
- Any alternative systems or funding sources to supplement the existing funding inadequacies.

Funding alternatives are as per Council's *Revenue and Financing Policy*.

## Significant Issue 2:

### Natural Disasters/ Climate Change - Resilience

The Taranaki region is susceptible to significant adverse effects from natural hazards. Natural disasters can result in heavy loss of property and threaten lives and livelihoods, forcing communities to learn to live with these hazards.

While it is not possible to reduce the incidence of natural hazards, steps can be taken to reduce the vulnerability of the community to their impacts. Natural hazards that are of concern to the Council include:

- Volcanic activity within next 50 years;
- Flooding, mainly surface flooding;
- Earthquake;
- Windstorm; and
- Land instability and erosion.

## Significant Issue 3:

### Operating Issues - Legislative Changes, Levels of Service increase, Forestry Impacts

There have been considerable legislative changes over the last decade which create a degree of uncertainty and require the Council to be more vigilant in meeting its obligations. Recent legislative changes that will have on-going impact on Council's delivery of its core services include:

**The 3-Waters Reform** - It remains to be seen what the final reform will be. The most recent update of 12 February 2024 stated that central government will, by 23 February 2024, pass

two bills to replace the repealed laws. *'The first bill would be passed by the middle of this year and would set out provisions related to council service delivery plans and transitional economic regulation. ... The second bill would set up the long-term replacement regime ... and the regulatory backstop powers, to be used if councils were failing to meet the requirements to deliver financially sustainable and safe water services'*. - [February 12 update](#)

**The Government Policy Statement on Land Transport (GPS)** - With the recent change in government, it is expected that the priorities of the current GPS will change.

## Significant Issue 4

### Strategic Issues - Renewal of Aging Assets, Growth and Demand Changes

All Council's assets are aging. Many of these aging assets are due for replacement at about the same period. The implication of this is that burden of the cost of renewal or replacement of these assets will fall on ratepayers living in the Stratford District within a certain era.

The Council aims to ensure that the cost of infrastructure replacement is not entirely borne by one generation. Through robust asset management planning, the Council will spread the cost of replacement in a way and at a rate that is fair and affordable to Stratford residents through time.

## 8. Significant Assumptions - Risks, Uncertainties, Impacts and Mitigation

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Stratford District Council conducted an environmental scan as a means of identifying changes in the local economy, local demographics, and land-use, which are direct requirements under legislation. The scan provides an assessment that ensures the integration of all current relevant matters into the LTP development at an early point, to shape the development of both the Financial and Infrastructure strategies, as required by legislation.

### Risk Assessment

In making assumptions about the future, there is a risk that the information relied for future planning is inaccurate. This has been articulated in the Council's Environmental Scan, with an assessment of the risk impact and mitigations.

### Forecasting Assumptions

Stratford District Council has adopted a range of forecasting assumptions which will underpin the preparation of the LTP 2024-34 ("LTP"), and which represent the most likely

future scenario with the information known at present. However, there are several other likely outcomes that have not been factored in. Therefore, variations from the forecasting assumptions are likely, and it is accepted that variations from the LTP may be material.

### Financial Budgeting

The development of the LTP relies heavily on Council's financial modelling systems, which must have a robust methodology and appropriate controls in place to prevent errors. The Council is committed to reviewing the budgeting model used in the development of the LTP 2021-31.

### Decision Making Processes

While the adoption of the final LTP is made in one Council decision, it is essentially the culmination of a large number of individual decisions, made and owned by elected members. To ensure the best decisions are made, all significant decisions will be subject to consultation with the community in line

with Council's Significance and Engagement Policy,

### Future Amalgamation

Although not adopted as policy by the Government, the Future for Local Government review panel have recommended a significant reform of the local government sector, with the suggestion that amalgamation of the 78 authorities is a potential to likely outcome. This is a low risk, due to the uncertainty of government policy, and low support for this from the sector as evidenced at the recent Local Government New Zealand meeting with mayors on the Future for Local Government recommendations. The assumption for the LTP is that the Council continues to operate as a standalone entity throughout the life of the LTP.

In addition to the above, the significant assumptions – *Risks; Uncertainties; Impacts and Mitigation* - are provided in detail in the Table below.



Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<b>1. FINANCIAL ASSUMPTIONS</b>				
<p><b>Revenue</b></p> <p>Council revenue will cover expenditure, providing for a balanced budget. The majority of revenue will be raised from rates, user charges and NZTA funding assistance</p> <p>The number of rating units will not change significantly over the period of the Infrastructure Strategy.</p> <p>Sources of funding for operating and capital expenditure do not change, but will remain as per the Revenue and Financing Policy.</p> <p>Funding Assistance from NZTA will remain at 63 % for all works categories.</p>	<ul style="list-style-type: none"> <li>• Council revenue and reserves do not cover expenditure.</li> <li>• The predicted rate take is not realised.</li> <li>• Sources of funds are not realised.</li> <li>• NZTA funding assistance rate may change</li> </ul>	Medium to High	<ul style="list-style-type: none"> <li>• A significant impact from changes in funding or funding sources may result in a revised operational and capital works programme, or changes in the level of user fees and charges, borrowing or rating requirements.</li> <li>• Operating, maintenance, renewal and level of service improvement budgets are affected.</li> <li>• Planned capital, maintenance and renewal works deferred or cancelled.</li> <li>• Asset ownership may need to be reviewed.</li> <li>• Potential social, environmental and public health implications as a result of reduced service levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Levels of revenue from user charges have been set at realistic levels in accordance with the ratios outlined in the Revenue and Financing Policy.</li> <li>• There is a concentration of risk associated with a small number of industrial consumers for some revenue streams (e.g., extraordinary water charges).</li> <li>• Regular liaison is maintained with these consumers.</li> <li>• Funding for projects and assets is considered before the commencement of each project or asset.</li> <li>• The rating base is reviewed annually when determining the rates for the year.</li> <li>• Any changes to NZTA funding are communicated well in advance</li> </ul>
<p><b>Cost</b></p> <p>Costs will remain stable over the entire period of the Infrastructure Strategy</p>	Costs are higher than anticipated.	High	<ul style="list-style-type: none"> <li>• Variability of prices, such as for oil, could cause variability in costs.</li> <li>• Higher cost of project delivery</li> </ul>	The Council and management will review its budget annually through the LTP/Annual Planning process and may adjust work programmes/budgets where necessary.
<p><b>Capital Expenditure Do-ability</b></p> <p>Council plans to deliver 100% of all budgeted capital expenditure over the life of the Long Term Plan. The</p>	That Council delivers significantly less than 100% of	High	<ul style="list-style-type: none"> <li>• Price fluctuation hinder the completion of entire capital</li> </ul>	<ul style="list-style-type: none"> <li>• Capital budget costs are inflated over the entire strategy period.</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<p>financial model was developed based on this assumption.</p>	<p>capital budget.</p>		<p>projects</p> <ul style="list-style-type: none"> <li>• Service disruption or reduced levels of service as a result of non-completion of projects</li> <li>• Reduced levels of service if assets are not maintained as they should be, over-reliance on repairs and maintenance expenditure.</li> <li>• Potential to over-rate ratepayers if new expenditure is factored into budget, along with operational impacts, and then doesn't materialise.</li> </ul>	<ul style="list-style-type: none"> <li>• Council has prioritised projects and elected members have reviewed and accepted the capital programme.</li> <li>• Major capital projects have also been logically spread taking into account initial development, construction, and implementation phases of a project</li> </ul>
<p><b>Inflation Rates</b></p> <p>The inflation rates remain as indicated in financial tables.</p> <p>Council, along with many other NZ councils, calculates and applies inflation factors to its 10 year budget forecast, using predictions of future inflation levels from New Zealand economic research company.</p>	<p>Inflation is much higher than forecast assumptions.</p>	<p>Medium</p>	<p>A significant change in inflation will result in changed revenue and expenditure. This could be significant and may adversely affect the ability of the Council to set affordable rates in future. Budget increases will be required.</p>	<ul style="list-style-type: none"> <li>• Limited controls available.</li> <li>• The Council will review its budget annually through the LTP/Annual Plan process and may adjust work programmes /budgets when necessary.</li> </ul>
<p><b>Useful Lives</b></p> <p>Infrastructural assets useful lives are determined during the certified valuations using specifications from suppliers.</p> <p>All assets will be replaced at the end of their useful life unless noted otherwise, based on:</p> <ul style="list-style-type: none"> <li>• The asset's theoretical useful life;</li> <li>• The asset condition;</li> </ul>	<p>Those assets wear out earlier or later than estimated.</p> <p>That the useful asset life information held is incomplete or inaccurate</p>	<p>Low</p>	<ul style="list-style-type: none"> <li>• The financial effect of uncertainty is likely to be immaterial.</li> <li>• Depreciation and interest costs would increase if capital expenditure was required earlier than anticipated.</li> <li>• Subsequent depreciation calculations will result in incorrect revenue setting,</li> </ul>	<ul style="list-style-type: none"> <li>• Reprioritisation of capital projects</li> <li>• Update useful life information of infrastructure assets regularly</li> <li>• Council has a comprehensive asset management planning process. Where a decision is made not to replace an asset, this will be factored into capital projections.</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<ul style="list-style-type: none"> <li>The asset technology becoming obsolete;</li> <li>The asset's capability to perform intended work.</li> </ul> <p>Depreciation costs are based on their respective lives.</p> <p>Unit cost assumptions used are the same as used during the most recent Certified Valuation and are determined using latest contracts, construction projects and supplier information.</p>	<p>That Council activities change, resulting in decisions not to replace existing assets.</p>		<p>resulting in incorrect rates collection and leading to insufficient funds.</p>	
<p><b>Revaluation of Non-Current Assets</b></p> <p>Revaluations will take place every three years and the percentage increases assumed are as follows:</p> <ul style="list-style-type: none"> <li>Roading 10% in year 2, and every second year after that; and</li> <li>Utilities 5% in year 2, and every second year after that</li> </ul>	<p>Risk that Council is not funding depreciation at an appropriate level to cover the future asset replacement cost</p>	<p>Medium</p>	<p>Financial impact – revaluations come at a substantial cost to Council in terms of fees and increased depreciation, however they ensure sufficient funds are set aside for future replacement and that the burden is placed evenly on current and future generations.</p>	<p>As above, get quotes early for full revaluation years.</p>
<p><b>Interest on Debt</b></p> <p>Interest cost assumptions are as stated in the Financial Strategy.</p>	<p>That interest costs continue to increase higher than forecast assumptions</p>	<p>Medium</p>	<p>Financial impact on interest expenditure – budget increases will be required (less of an impact after three waters transition date)</p>	<p>Reduce reliance on debt. Comply with treasury policy and LGFA covenant limits.</p>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<b>2. OPERATING ASSUMPTIONS</b>				
<p><b>Levels of Service</b></p> <p>The demand for Council Services and customer expectations regarding levels of service will not change significantly and therefore there will be no significant effects on asset requirements or operating expenditure.</p>	<p>There are significant increases in customer expectations regarding demand for services and/or the level of service provided.</p>	<p>Low</p>	<ul style="list-style-type: none"> <li>Infrastructure and service provision do not meet customer and stakeholder needs and expectations.</li> <li>Maintenance, renewal/replacement, and performance monitoring requirements increase.</li> <li>Customer and stakeholder needs are not met.</li> <li>Customer confidence is eroded.</li> </ul>	<ul style="list-style-type: none"> <li>Regular reviews of Community expectations against levels of service, via customer surveys as well as feedback received.</li> <li>Minor changes may be made to service levels where budget, contracts and resources allow. These will generally occur within existing budgets.</li> <li>Major changes in service levels will be confirmed with the community via consultation. These will generally require increase to fees or rates, depending on how the service involved is funded.</li> </ul>
<p><b>Legislation</b></p> <p>It is assumed that there will be no significant legislative changes that affect infrastructure and service delivery.</p>	<p>There are significant changes in legislation that require a different and/or higher level of service delivery, maintenance or performance standard.</p>	<p>High</p>	<ul style="list-style-type: none"> <li>The ability to meet Levels of Service requirements will be altered.</li> <li>Maintenance and renewal planning and funding requirements will be increased</li> </ul>	<ul style="list-style-type: none"> <li>Very little control as this is usually driven by central government.</li> <li>Current infrastructure and service provision meets good practice and will be able to adapt within reasonable timeframes.</li> <li>Ongoing discussion with Elected Members and stakeholders on the implementation of possible service level improvement requirements e.g. in the water sector - universal water metering.</li> </ul>
<p><b>Resource Consents</b></p> <p>Renewed resource consents will have similar conditions as the expiring resource consents and will not be significantly altered.</p> <p>Any resource consents due for</p>	<p>Conditions of resource consents are altered significantly.</p>	<p>Medium</p>	<p>Council is unable to renew existing resource consents upon expiry.</p> <p>Breach of Consent conditions</p>	<ul style="list-style-type: none"> <li>Appropriate planning and on-going interaction and/or consultation with regulators and other parties for resource consent applications/renewals should ensure that they are obtained.</li> <li>Monitoring of compliance with existing</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
renewal during the ten year period will be renewed accordingly.				<p>resource consent conditions will provide a record of compliance for future processes.</p> <ul style="list-style-type: none"> <li>• The renewal of consents is dependent upon the legislative and environmental standards and expectations that exist at that time.</li> <li>• Work closely with TRC and iwi authorities – particularly in the lead up to consent expiry date.</li> </ul>
<p><b>Three Waters Reform</b></p> <p>Delivery of 3 waters activities by a Taranaki Regional entity</p>	Risk that this may not occur as planned causing uncertainty, additional work and resourcing.	Medium	<ul style="list-style-type: none"> <li>• Service delivery impacts – confusion on who is doing what and when.</li> <li>• Reduced debt and responsibility for Council may not be realised</li> </ul>	The Taranaki region is committed to exploring the possibility of a three waters CCO, now that legislation is repealed by the new government.
<b>3. STRATEGIC ASSUMPTIONS</b>				
<p><b>Population Growth</b></p> <p>The current population is projected to increase on average by 0.4% each year, based on an assumption of medium growth by Infometrics Model 2020.</p> <p>Note: Population projections do not represent forecasts, but indicate what the future size and structure will be if the underlying assumptions regarding births, deaths and migration prevail.</p>	That growth is higher than projected thereby putting pressure on Council to provide additional infrastructure and services.	Medium - High	<ul style="list-style-type: none"> <li>• Accelerated infrastructure deterioration rate;</li> <li>• Increased maintenance and renewal/ replacement needs;</li> <li>• Maintenance and renewal/replacement requirements exceeds current programme of works and funding allocations;</li> <li>• Compromised ability to meet Levels of Service requirements.</li> </ul>	<ul style="list-style-type: none"> <li>• Council will continue to monitor population change in the District. Generally, small increases in population can be managed within the existing level of service.</li> <li>• Declines in population will not necessarily reflect lower number of ratepayers as the number of people per household is declining but will impact affordability.</li> <li>• Where growth requires additional infrastructure (e.g., subdivisions), Council can require financial contributions for this work. Costs over this amount may result in additional Council expenditure which is likely to be funded out of debt.</li> </ul>



Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<p><b>Demographic Change</b></p> <p>The prediction is that the proportion of elderly over 65's and young under 10's will be higher than the national average, and that the Maori population will continue to grow at a faster rate than all other ethnicities.</p>	<p>The demographic make-up of the district differs significantly from previous year changes and expectations.</p>	<p>Low</p>	<p>The district already has a higher dependency ratio than the national average which puts a greater burden on the working age population, and is likely to reduce productivity capacity and growth.</p>	<p>Limited risk mitigations available. Ensure attractions and facilities are available for all age groups, and support is available for ethnic minorities.</p>
<p><b>Asset Management Plans</b></p> <p>AMPs are complete; they include renewal and capital programmes for all major infrastructural assets and are based on sound assessments of asset condition, lifecycle and demand management.</p> <p>AMPs are peer reviewed in accordance with the Asset Management Policy.</p> <p>The following asset parameters are assessed in order to develop the renewals programme:</p> <ul style="list-style-type: none"> <li>• Asset Criticality;</li> <li>• Material type</li> <li>• Asset Age</li> <li>• Asset Condition</li> <li>• Asset Performance (e.g. pipe bursts, leaks, valves not working, blockages and flooding)</li> </ul>	<p>Asset Management Plans are incomplete. Condition ratings and life cycle demand assumptions are erroneous.</p> <p>Asset Management Plans are not peer reviewed.</p>	<p>Low - Medium</p>	<ul style="list-style-type: none"> <li>• Current Levels of Service are not clearly defined.</li> <li>• Improvement planning is not adequately tracked and/or resources and time needed is not adequately allocated.</li> <li>• Misalignment between projected and actual budgets</li> <li>• AMPs present a weak business case for investment.</li> <li>• AM improvement is inhibited.</li> </ul>	<p>Significant investment made in asset management systems and practices as well a condition assessment of assets.</p>
<p><b>Asset Disposal/Acquisition</b></p> <p>There are no substantial asset disposals that will impact significantly</p>	<p>Policy changes result in substantial</p>	<p>Low</p>	<ul style="list-style-type: none"> <li>• Maintenance and renewal planning and funding</li> </ul>	<p>Regular review of levels of service, population growth and legislative environments, which</p>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<p>on the plan.</p> <p>There are no substantial asset acquisitions that will impact significantly on the plan.</p>	<p>asset disposal.</p> <p>Policy changes result in substantial asset acquisition.</p>	Low - Medium	<p>requirements will be reduced.</p> <ul style="list-style-type: none"> <li>• Maintenance and renewal planning and funding requirements will be increased</li> </ul>	would be the most likely drivers of asset disposal and/or acquisition.
<p><b>Programming of Works</b></p> <p>The recommended programme of works will be carried out.</p>	The recommended programmed work is not carried out.	Low	<ul style="list-style-type: none"> <li>• Identified problems/opportunities are not responded to.</li> <li>• The rate of deterioration to infrastructure is accelerated.</li> <li>• Compromised ability to meet agreed LoS.</li> </ul>	<ul style="list-style-type: none"> <li>• On-going monitoring of work programmes.</li> <li>• Identification of root-cause of delays / failure to deliver.</li> </ul>
<p><b>Staff</b></p> <p>Current staff members possess the necessary education and skill sets to adequately perform their designated functions.</p> <p>Current staffing levels are adequate and stable.</p>	<p>Staff leaving results in staff skill levels falling below the standard required - Skills shortage</p> <p>Staffing levels are not adequately maintained.</p>	Low - Medium	<ul style="list-style-type: none"> <li>• Loss of institutional knowledge</li> <li>• Inadequate Operating management of infrastructure and/or delivery of service.</li> <li>• Demand on Council activities not being met by Council staff.</li> <li>• Negative impacts on customer service and reputational damage.</li> </ul>	<ul style="list-style-type: none"> <li>• Active training and recruitment programmes ensuring suitably qualified staff</li> <li>• Strong relationships with key contractors and suppliers are maintained to ensure availability and competency of critical resources</li> </ul>
<b>4. HAZARD ASSUMPTIONS</b>				
<p><b>Resource Consents</b></p> <p>Resource Consent Conditions will be understood, met.</p>	Non-compliance with Resource Consent Conditions	Low - Medium	Breach of Resource Consent Conditions	<ul style="list-style-type: none"> <li>• Suitably qualified and skilled staff</li> <li>• Appropriate technology used to control consent conditions;</li> <li>• On-going consultation with regulators</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<p><b>Water Supply Contamination</b></p> <p>Water quality will be maintained</p>	Water contamination occurs	Low - Medium	<ul style="list-style-type: none"> <li>Breach of Resource Consent Conditions</li> <li>Public health and safety impacts</li> <li>Negative publicity eroding public opinion.</li> <li>Unexpected financial costs.</li> <li>Unexpected legal implication for Council.</li> </ul>	<ul style="list-style-type: none"> <li>Implement regular and systematic routine testing of raw and treated water including for a range of heavy metals.</li> <li>Suitably qualified and skilled staff</li> <li>Appropriate technology used to control consent conditions;</li> <li>On-going consultation with regulators</li> </ul>
<p><b>Contractors Availability</b></p> <p>Council contracts out the majority of its operations and services. It is assumed that:</p> <ul style="list-style-type: none"> <li>Contractors will be available to undertake all contracted works;</li> <li>It is assumed that all contractors will adhere to the terms of the contract</li> </ul>	<p>Contractors are unavailable to undertake works</p> <p>Contractor breaches terms of contract</p> <p>Contractor financial situation declines.</p>	Low - Medium	<ul style="list-style-type: none"> <li>Operations and services are disrupted</li> <li>Compromised Asset and public safety</li> <li>Substandard completed works</li> <li>Negative publicity eroding public opinion.</li> <li>Unexpected financial costs.</li> <li>Unexpected legal implication.</li> </ul>	<ul style="list-style-type: none"> <li>Regular monitoring of and interaction with engaged contractors to ensure acceptable performance.</li> <li>Healthy contracting environment within the district and region that allows for substitution of any one contractor- if significant issues experienced.</li> </ul>
<p><b>Natural Disasters</b></p> <p>Current planned Incident Response would be effective until Level 4-5 at which point this will be treated as per Civil Defence / Emergency Management protocols.</p>	The current Incident Response Plans are not effective until Level 4-5.	Low	<ul style="list-style-type: none"> <li>Provision of service is disrupted.</li> <li>Structural integrity of infrastructure is compromised.</li> <li>Public safety is compromised.</li> <li>Recovery from a major event is inhibited.</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure resilience incorporated into design, planning and maintenance of assets.</li> <li>High-level planning on a regional basis with mutual support during events.</li> <li>Contractual arrangements to ensure resource availability.</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
<p><b>Emergency Event</b></p> <p>Disruptive or destructive emergency events could lead to damage – not budgeted for</p>	<p>Business continuity – continuing to provide agreed levels of service</p> <p>Financial cost – emergency response and rebuild costs</p>	<p>High</p>	<ul style="list-style-type: none"> <li>• Impact on infrastructure, employment, housing, social disruption, health and access.</li> <li>• Increased debt - Likely to require loan funding for rebuild costs</li> </ul>	<p>Business continuity plans, insurance, borrowing capacity. Central government source of funding.</p>
<p><b>Pandemic/COVID-19</b></p> <p>It is assumed that the current "Service Continuity Plan" would be effective in maintaining continuity of service in a pandemic event.</p>	<p>Service continuity Plan is not effective and continuity of service is unable to be maintained</p>	<p>Low - medium</p>	<ul style="list-style-type: none"> <li>• Provision of service is disrupted.</li> <li>• Operation and maintenance of infrastructure is compromised.</li> <li>• Public safety is compromised.</li> </ul>	<ul style="list-style-type: none"> <li>• Staff, being essential workers are set up to operate remotely. Others are able to continue operating essential services, with minor disruption to service levels.</li> <li>• Infrastructure resilience incorporated into design, planning and maintenance of assets.</li> <li>• High-level planning on a regional basis with mutual support during events.</li> <li>• Contractual arrangements to ensure resource availability.</li> <li>• Comply with national/regional Pandemic Action Plan</li> </ul>
<p><b>Climate Change</b></p> <p>Climate change will impact on the Council's operations and will require an appropriate response to adapt and prepare for potential impacts.</p>	<p>The effects of climate changes are more severe than expected.</p> <p>The consequences of adaptation measures may</p>	<p>Medium</p>	<ul style="list-style-type: none"> <li>• The district has no exposure to coastlines, however may be impacted by severe weather events including heavy rainfall and drought.</li> <li>• Unrealised effects of climate change are likely to create additional costs to mitigate their</li> </ul>	<ul style="list-style-type: none"> <li>• Council activities will build appropriate mitigation responses into infrastructure development.</li> <li>• The Council will continue to monitor Climate change science and the response of central government and adapt its response where required.</li> <li>• Work with community where climate change</li> </ul>

Significant Assumptions	Risk	Risk and Uncertainty Assessment	Potential Impacts and Implications	Mitigation / Control Description
	disproportionately harm parts of the community.		impacts, such as improving protection of critical infrastructure. <ul style="list-style-type: none"> <li>• More severe weather events resulting from climate change may increase damage to infrastructure and place pressure on Council finances.</li> </ul>	decisions will impact negatively. <ul style="list-style-type: none"> <li>• Capture baseline emissions data</li> <li>• Work with the business community on diversification</li> <li>• Work with households and schools on waste reduction</li> </ul>
Further details on the significant assumptions are provided in the <i>Council Profile and Significant Forecasting Assumptions – Long Term Plan 2024-2034</i> , underpinning the Council's <i>Financial Strategy 2024-2034</i>				

## 9. Risk Management

Risk management is key for the continued delivery of service and minimising disruption to service delivery for all our infrastructure assets. Thus, are **'resilience'** projects are mainly derived from the mitigation measures identified in our Risk Management framework and from legislative requirements.

The Council's risk management framework is designed to be effective within its specific internal and external environments, and potential sources of risk and aims to:

- establish a systematic and structured approach to managing risks across the Council; and
- embed risk management practices into business strategy, planning and core operations to ensure that key risks are proactively identified, managed and communicated.

The Council has identified risks in its Corporate Risk Register, under six broad risk areas:

- Data and Information;
- Health and Safety;
- Financial;
- Compliance and Legislative;
- Operational; and
- Reputational and Conduct.

Risk management activities are based on the ISO31000 Risk Management Standard which directs governance and management

responsibilities to frame, assess, respond and monitor the identified risks.

The Council's risk management approach is underpinned by principles that will ensure the minimisation of risks for the principal asset systems as a result of the non-achievement of critical business objectives and impact of system failure.

The following are Council's risk management principles:

- Adds value by contributing to the achievement of Stratford District Council's objectives and improving performance;
- An integral part of the Stratford District Council's planning, processes, and decision making;
- Structured approach that is well-defined, transparent, and aligned with good practice;
- Responsive to change by monitoring, reviewing, and responding to the changing environment;
- Pragmatic by focusing on the most important risks and allowing informed risk taking;
- Explicitly addresses uncertainty based on best available information; and
- Undergo continuous improvement as we get better at identifying and managing risks and opportunities.

Benefits of applying effective risk management include:

- Improved achievement of the Council's strategic direction, objectives and priorities;

- Reduced risks – significant risks are identified and managed and early warning of problems and emerging risks are addressed, with appropriate design and operation of internal controls;
- Improved decisions – decisions are made after analysis of risk;
- Improved planning and resource allocation – risks are prioritised and included in business planning so that resources are better managed; and
- Increased accountability and transparency – clarity of key risks and the responsibility and accountability for their management.

The issues identified under these risk areas are consistent with the significant assumptions presented in the Section 8 of the IS. The top 10 risks for each Core Infrastructure Asset are provided in the respective AMPs and their attached Appendices.

The Council has adopted an Insurance Framework which:

- acknowledges the relevance of insurance and how it fits into its risk management function;
- Ensures that, following a risk event, the Council is effectively positioned to return in a timely manner to its pre-event state; and
- Considers Council priorities and the financial impact to ratepayers of risk mitigation through insurance



## 10. Asset Management Policy, Principles and Objectives

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The Council's Asset Management Practices are as detailed in the respective AMPs. Each AMP includes improvement planning which enables the Council to close the gaps between its existing asset management practice and best practice. This will ensure the desired outcome of improved asset management and delivery of agreed service levels to the community.

### Asset Management Policy

The *Asset Management Policy* establishes the management framework for managing infrastructure assets in a structured, coordinated and financially sustainable manner. The objectives of this Policy are to:

- Provide for a consistent approach to asset management planning within Council and ensure plans reflect the strategic direction of Council;
- Demonstrate to the community that Council recognises the critical importance of managing the District's assets and related activities in an effective and sustainable manner in order to deliver appropriate Levels of Service to current and future generations; and
- Confirm a coordinated process for each asset/activity area that links their contribution to the Community Outcomes with specific Levels of Service

performance requirements and desired improvement priorities and strategies.

### Asset Management Principles

The Council's overarching principles for sound asset management are:

- Asset management goals and objectives will be aligned with corporate objectives and community outcomes;
- Capital, operation and maintenance, and renewal/replacement works will be aligned with asset management objectives;
- Sustainable and suitable development will be considered in the options for asset development and service delivery;
- Optimal replacement/lifecycle asset management strategies will be developed;
- Asset replacement strategies will be established through the use of optimised lifecycle management and costing principles;
- Funding allocation for the appropriate level of maintenance in order for assets to deliver required Levels of Service;
- Growth and demand forecasting will be integrated as part of all asset management planning to meet current and future needs of the community; and
- Ensure the design, construction and maintenance of assets, so far as

reasonably practical, are without risk to the health or safety of any person.

### Asset Management Objectives

The Council's Asset Management objectives are to:

- Provide for good quality infrastructure and local public services that are efficient, effective and appropriate for current and future generations;
- Meet the foreseeable needs of the community;
- Ensure that assets are planned for, created, replaced and disposed of in accordance with Council priorities as determined in the Long Term Plan;
- Ensure all legal delegations are met;
- Ensure customer expectations are properly managed;
- Provide technical and professional advice that enables elected members to make sound well informed decisions concerning the management of assets;
- Assets are managed to meet agreed customer levels of service;
- Assets are managed and delivered in accordance with the strategies stated in the Asset Management Plans;
- Ensure data collection systems are in place to collect, store, maintain and use for prudent management of Council owned assets.

# 11. Levels of Service and Lifecycle Management

## Levels of Service

Levels of Service (LoS) define the form and quality of service that the Council provides to the community. They represent a balance between what the community wants and what the community is willing to pay for. Asset management planning helps to determine the relationship between the LoS and the cost of service. The Council's asset management approach will ensure that it maintains the agreed LoS over the next 30 years.

In general, the Council is planning to keep its levels of service the same. In order to maintain the current service levels, the Council is planning to spend more than has been spent in recent years on infrastructure. This increased spending is being balanced with the affordability of our ratepayers to fund the additional cost of service, as detailed Council's Financial Strategy. With this additional Investment our assets will be more resilient and provide a reliable environment for our residents and businesses to live, work and play.

Once determined, the relationship is evaluated through the Long Term Planning process in consultation with the community. The agreed LoS are used to:

- Communicate the proposed LoS;
- Develop strategies to the deliver LoS;
- Develop targets to measure performance;
- Identify and evaluate the costs and benefits of services offered; and
- Enable customers to assess customer values such as accessibility, quality, safety, and sustainability.

As such, LoS cannot be defined beyond the 10-year planning horizon of the LTP.

Current and Planned LoS are presented in the respective AMPs for each core Infrastructure asset. The performance monitoring of the agreed LoS delivery is undertaken through performance measures and targets. The results of the performance monitoring are reported internally and externally through the:

- Monthly reports to Elected Members, which is also accessible to the public via the Council website; and
- LTP, Annual Plan and Annual Report to our customers, key stakeholders and partners.

## Lifecycle Management

Lifecycle Management (LM) involves the planning; procurement, management; renewal/replacement and disposal of the assets for the delivery of the agreed LoS. The Council will employ robust LM strategies to maintain the delivery of the LoS

as agreed with the Community and amended via the LTP process. The rate of asset renewal is intended to maintain the overall condition of the asset system at a standard, which reflects its age profile, and ensures that the Community's investment in the District's infrastructure is maintained. The level of expenditure on cyclic asset replacement varies from year to year, reflects:

- Asset age/life;
- Asset condition; and
- Asset Criticality.

The Council will take into account the key LoS drivers described in earlier sections, including:

- Growth and Demand Forecasts;
- Identified Significant Issues and Options; and
- Potential Risks;

The LM Strategies for the delivery of planned LoS for the next 3 years are described in detail in the respective AMPs and they include:

- Management Strategies;
- Risk Management Strategies;
- Contractual Arrangements; and
- Incident Response Plans.

Further details on these strategies are presented below.

## 12.Asset Management Strategies

The overall management of infrastructure will be driven through strategies aimed at:

- Complying with the legislative and strategic requirements;
- Meeting agreed levels of service;
- Delivering value for money for ratepayers, funding partners and the Council; and
- Balancing customer expectations with the cost of improving the level of service.

These strategies are either under review or currently being prepared and drive the AMPs and Maintenance Agreements with our contractors. The Management Strategy framework fits into Council's overall strategic framework for the Infrastructure Assets as shown in Figure 3.

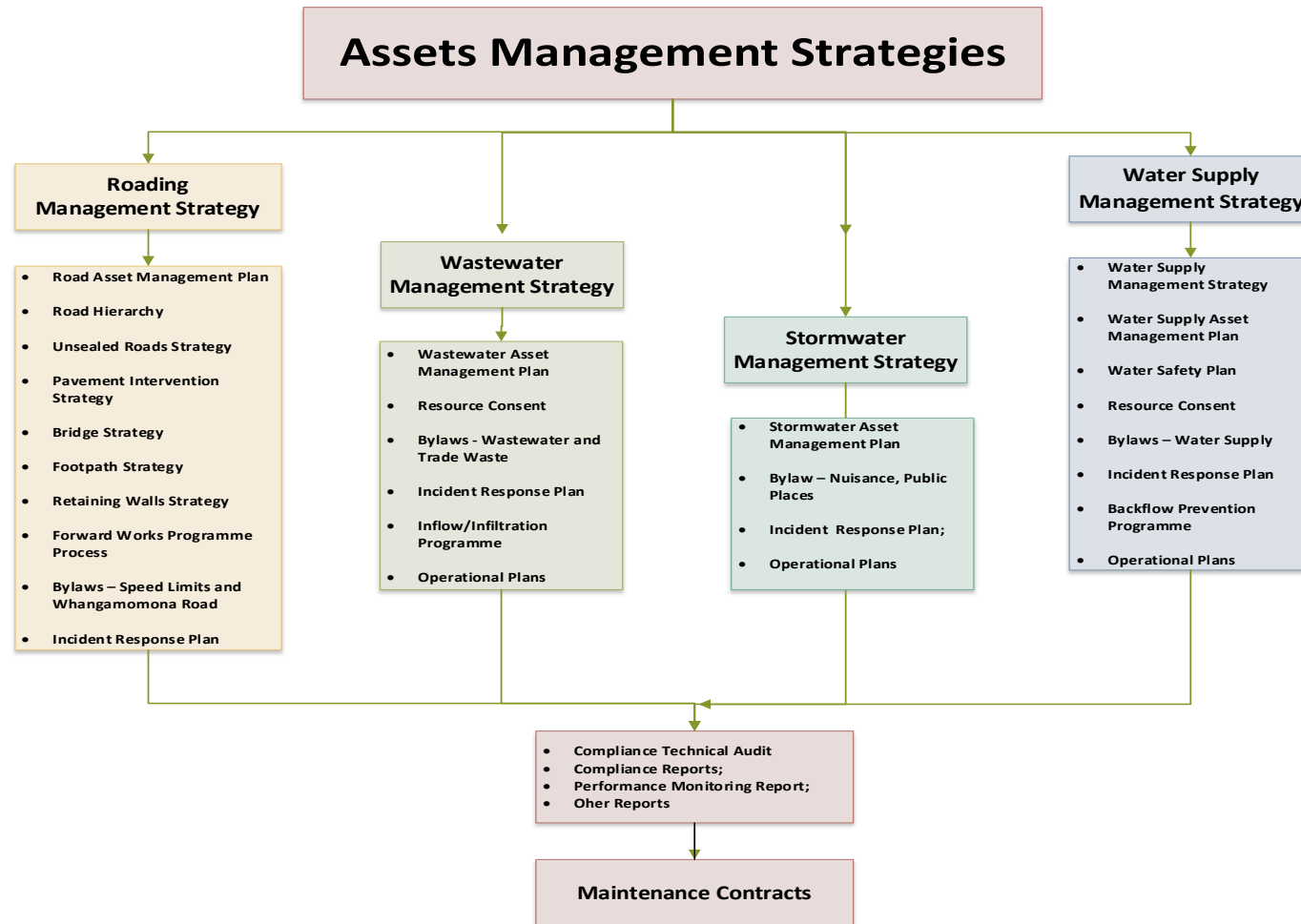


Figure 3: Asset Management Strategies

### 13. Contractual Arrangements

The Council has a number of contractual arrangements for the delivery of the agreed LoS. While these Contractual Arrangements are for current and up to the period agreed under each contract, they are a demonstration of how the Council will continue to deliver the LoS agreed with the Community.

In general, Professional Services are either delivered as part of SDC's 'Shared Service' arrangements or as covered by 'Maintenance Contracts' under each asset group. Physical Works are covered by the maintenance contracts or contracted in accordance with SDC's Procurement Procedures

Activity	Maintenance Arrangement	Operating Arrangement
<p><b>Roading</b></p> <ul style="list-style-type: none"> <li>• Road maintenance</li> <li>• Bridge Inspections</li> <li>• Street Lighting</li> </ul>	<p>A 'General Roothing Maintenance, Resurfacing, Rehabilitation and Road Marking Contract' on a 3 + 2 + 2 term, covers an initial period of three years with the option of two 24-month extensions on satisfactory completion of the initial period. Each 24-month extension is at the Council's sole discretion. This contract was signed in 2019 and expires in 2026.</p> <p>A 6-year Structures Inspection and Reporting contract to inspect all structural assets in the Road reserve. The contract was signed in July 2021</p> <p>A New Plymouth and Stratford District Councils Streetlight Maintenance contract for a five year term with the provision of two one year extensions, for the inspection, reporting, maintenance and upgrading of all street lighting assets owned and/or maintained by the Stratford District Council. This contract commenced on 1 September 2023</p>	<p>Under the Local Government Act (1974), SDC is the road controlling authority and is responsible for the operation and the movement of all traffic, including cyclists and pedestrians, within the District. Roothing network includes all asset types associated with the rooding environment.</p> <p>The Bridge inspection contract is for the inspections of all structural assets, including Road bridges; retaining walls; large culverts; water drives and privately owned stock underpasses. This contract also requires the inspection of Council-owned Parks bridges; playgrounds; 3-Waters bridges and the external examination of the reservoirs.</p> <p>The Street Lighting contract is a joint contract with NPDC and includes all NZTA streetlight assets with the district.</p>
<p><b>3-Waters</b></p> <ul style="list-style-type: none"> <li>• Water Supply (Stratford , Midhirst and Toko)</li> <li>• Wastewater (for Stratford)</li> <li>• Stormwater</li> </ul>	<p>SDC has a 'Services Maintenance Contract' covering three year service delivery with two rights of renewal. This Contract requires the Contractor to provide physical works and a degree of professional services for significant aspects of the work. The Contract was entered into in 2019. This contract is for the continued operation and maintenance of SDC's wastewater, water and stormwater services.</p>	<p>SDC's Engineering staff are responsible for the operation of:</p> <ul style="list-style-type: none"> <li>• both the treatment plant (oxidation ponds) and the pump stations; and</li> <li>• all three water treatment plants (WTP).</li> </ul> <p>The operation of our I &amp; E is as part of a signed shared agreement.</p> <p>Stormwater system is reticulation only with no need for treatment plant Operating management.</p>

## 14. Key Projects

These key projects are Council's principal options for addressing the 'Significant Infrastructure Issues' discussed in Section 7. They are an outcome of a series of 'Early Conversation' workshops held with Elected Members in 2020. Each *Early Conversation* workshop identified:

- Problems and items for improvement in the delivery of our core services;
- Impact of this on the achievement of Community Outcomes and future-proofing Objectives;
- Options for addressing the identified problems;
- An assessment of each option against Community Outcomes and the identified future proofing objectives;
- Risks and Opportunities associated with each option and
- Principal Options to address each problem area.

Key consideration factors in the determination of the preferred options were support for *Future Requirements, Growth, Higher Level of Service, Health Benefits and Reliability and Efficiency*. Indicative costs of delivering the preferred options are presented in the attached Table and reflected in the 'Investment Funding Strategy' section. Further

detail on each key project is provided in the *Significant Issues and Options* sections in the Appendices.

### Brecon Road Extension

This is an ongoing project. A Point Of Entry (POE) discussion paper has been commissioned for NZTA's review prior to the development of the Single-Staged Business Case.

This project aims to address the lack of a crossing infrastructure over the Patea River in the Stratford Urban area to the west of State Highway 3. On completion, this link road will provide an alternative crossing to the residents in this western urban area of Stratford. This is particularly important in case the bridge over the Patea River on State Highway 3 is closed due to emergencies, roadworks, or planned street events like the Christmas Parade and ANZAC Day Parade.

Apart from providing good connectivity between the north and south sides of the Patea River, this route has been identified as a key walking and cycling corridor, to serve schools (one high school and three primary schools), a medical centre, dentist, doctors and kindergartens, TET Multi Sport Centre and hockey pitch as well as the new aquatic

centre. At the present time, residents that live in the western half of Stratford, have to travel to SH3, along SH3 over the Patea River to access two primary schools, (St Joseph's, Avon School) and the medical centre on Romeo Street.

With two of the three emergency services located on Miranda Street, (Fire and Police) this link road will provide an alternative route for these services to attend emergency calls to the south of Stratford, without the need to travel through the Central Business District.

### Walking and Cycling Initiative

The Connecting our Communities Strategy (2023-2053) is a 30-year strategy, the purpose of which is to address current transport network challenges, highlights opportunities for improvement, and outlines proposed actions for strategic investment over the next 30 years. By this, the Council will optimise existing partnerships and create new opportunities to maximise infrastructure investment benefits. A key structure in the delivery of this initiative is the Centennial Bridge, which has been allowed for in Year 8 of the Long Term Plan.

Over the next three decades, our focus will be on fostering sustainable transport in the Stratford district. This strategy outlines our commitment to creating safe and reliable road transport infrastructure, ensuring that our communities are well-connected and secure.

By promoting sustainable transport, we aim to contribute significantly to the realisation of the Stratford district's social, environmental, cultural, and economic objectives. This approach will not only enhance the overall well-being of our residents but also positively impact the surrounding environment, preserving our cultural heritage, and supporting local businesses and industries.

Our commitment to sustainable transport will serve as a cornerstone for the future development of Stratford, fostering a resilient and prosperous community for generations to come. Through a coordinated effort, we aspire to build a greener, more connected, and thriving Stratford district, aligned with the principles of sustainability and environmental stewardship.

The walking and cycling initiatives are as identified in the 30-year strategy which focuses on walking and cycling to work, school, for recreational activities and to support tourism opportunities in the district. These initiatives are designed to support the

social, environmental and health benefits of walking and cycling.

### **Footpath Replacement and Extensions**

With an increasing number of elderly residents using mobility scooters, most of the footpaths within the district are of insufficient width to accommodate pedestrian/mobility scooter use. Of the 63km of footpaths within the district, 45km are less than 1.5m in width. To address this issue, Council has programmed footpath replacement from Year 1 of the LTP, an increased level of service by widening footpaths to a minimum width of 1.5m.

With the current restraints on budgets, the Council is proposing to replace 1300m of footpaths per annum. As a result, the duration of the programme will be extended to 35 years.

The Stratford District Council has identified 16km of urban streets where no footpaths exist. There is the potential to extend footpaths/cycleways under the Connecting our Communities Strategy should these locations form part of the cycling network. At the present time Councillors have decided not to fund new footpaths for the period of this Long-Term Plan.

### **Bridge Replacement**

Following the latest cycle of bridge inspections which informs the development of the 30-year Bridge Replacement Programme, Council has identified 7 bridges that will need to be replaced by Year 10. There are a further 14 bridges to be replaced in Years 11 – 20, and a further 36 bridges to be replaced in years 21-30. The remainder of 100 bridges are due for replacement beyond the time scope of this strategy). The Council's total budget over the next 30 years is approximately \$33M.

### **Retaining Wall Replacements**

Inspections data on more than 250 retaining walls throughout the district shows that approximately 50% of these retaining walls are in the *average to very poor* condition, with 58 retaining walls in *“poor” or “very poor”* conditions. These have been programmed for replacement over the 10-year life of the LTP. The remaining retaining walls in *average* condition will form part of a future works programme as their structural condition deteriorates over time.

### **Uneconomic Bridges**

There have been numerous reports compiled by Council officers over the years on the subject of “Un-economical Bridges”. Within the Stratford District there are 14 bridges that will fall into this category. The definition of this category being *“Bridges built and currently*



*maintained by Council that generally only provide access to individual properties". To clarify Council's legal obligation in relation to Un-economic Bridges, SDC sought a legal assessment in July 2016, which stated "if the Council previously maintained/erected the bridge, then the responsibility for maintaining the bridge continues". In layman's terms, if a public body (County, Borough, or District Council), has spent public funds either constructing or maintaining a bridge, irrespective of its location, the Council still has a responsibility to maintain this bridge. The only avenue to remove this responsibility is for Council to divest itself from the ownership of the bridge and the land on which it sits, or in other terms, sell the bridge and road reserve using the Road Stopping procedures.*

For the purposes of developing a forward works programme for the Roding Activity Management Plan and Infrastructure Strategy, Council commissioned Consultants to produce a 30-year bridge replacement programme based on their in-depth knowledge of the districts bridge stock and the routine bridge inspection reports. Included in this replacement programme are the economic bridges. For uneconomic bridges, Council Officers are assessing several future options, including giving back the bridges to the benefiting owners. Until a resolution is

achieved, Council is committed to ensuring the bridges are fit for purpose.

### **Culvert LoS Improvements**

With changes in climatic conditions, the frequency and intensity of rainstorm events has resulted in Council spending significant funds on remediation works. As a result of the recent changes to the National Environmental Standards for Freshwater, the Council will need to increase the size of the culverts when they are due for replacement, to target outcomes for fish abundance, diversity and passage and address in-stream barriers to fish passage over time. A direct implication of this is that for typical large diameter culvert replacement, a more cost-effective option would be to replace it with a bridge. Improvements programme is as per attached budget and timeframe.

### **Whangamomona Road Upgrade / Bylaw**

Whangamomona Road is a popular tourist attraction and nationally recognised 4x4 club trail route. SDC obtained funding from NZTA to upgrade this road during the 2021-2024 LTP period. This work has been completed. On-going up-keep of this road will be undertaken using roading maintenance and renewal budgets.

The Council has resolved to create a new Bylaw to define the levels of service and to restrict certain types of vehicles from using the road, as this road is not suitable for all vehicle types, e.g. cars, campervans.

### **Road Renewals**

This activity is associated with all the roading work categories, including some of the topics mentioned above. The four main work categories not mentioned are:

- Sealed Road Resurfacing;
- Unsealed Road Metalling;
- Drainage Renewals; and
- Sealed Pavement Rehabilitation.

The funding for these four work categories over the next 10 years is \$47m which is 75% of the total renewals budget for this period.

These activities are for resealing the district roads (25km/year), strengthening sealed roads used by heavy commercial vehicles, replacing culverts, kerb and channel and overlaying unsealed roads with metal. Our target length is to re-metal 15km of road per year.

### **Universal Water Metering**

The case for Water Conservation in the Stratford District is driven by many factors including resource consent; equity in water tariff system and most importantly, the optimisation of water use and consumption to

ensure and support spare capacity for future growth etc.

Our current water-take resource consent from the Patea River requires the Council to undertake and report on our leak detection programme and implement a water use efficiency and conservation programme. The DIA performance measure of *Adequacy of System* is a mandatory performance measure that monitors the percentage of real water loss from the local authority's networked reticulation system. This is referred to as 'Benchmark'. Under the current tariff system, inequality occurs where a household uses more than its intended allocation of (250 m<sup>3</sup>) only to be subsidised by a smaller household or granny flat which uses considerably less.

With water metering comes more efficient consumption of existing water resources, which will also create spare capacity to support the future growth in Stratford – without the need to increase quantity of water taken from our streams. Water metering will also support our leak detection programme and ensure fairness in the consumption and of water by ensuring that costs lie where they fall.

The Council will now extend its water metering programme to include all properties in the district connected to the Council's water

reticulation system. This programme will be supported by the implementation of an electronic meter reading system. This project commenced in 2021 and is expected to be completed by June 2025. The budget for this programme is as per attached tables.

### **Emergency Water Supply**

The Case for Additional Water Storage is driven by resilience and growth – resilience in ensuring that the provision of storage capacity for Stratford residents in emergency situations is adequate and to support future growth.

Resiliency analysis has identified approximately 3 days of water supply for Stratford in the current reservoirs, if there were any incidents that rendered the raw water intake unusable. The addition of a 4,500m<sup>3</sup> water reservoir will provide an additional day of water supply in the event of failure of the water intake and ensure the continued provision of critical clean, safe drinking water for residents, and process water for industry in Stratford. The continuity of clean and safe water also gives confidence to existing and new industries. Year 9/10

For Toko residents, the provision of a new water reservoir will provide an additional 16 hours of water supply to the current 2 days' supply. This depends on the time of the year and water usage. A new reservoir is

programmed for installation in Year 1 of this planning horizon. To further strengthen this resilience plan, the Council is proposing to procure additional land to extend the Toko Water Treatment site to allow the addition of water reservoirs from Year 16 of this planning timeframe.

Given that the Midhirst water storage is approximately 10 days, depending on demand, Council is proposing to install an emergency power supply plug-in device to provide resilience and support the continued treatment and supply of water in the event of an emergency. Council will also replace the existing reservoir in later years for earthquake resilience.

### **Alternative Water Supply**

The need to explore an alternative water supply source for the Stratford Township is mainly driven by Resilience - in the event that we are unable to source water for treatment from the Patea River. The Patea River, supported by the Konini Stream, are currently the sole source of water supply for the Stratford Township.

Inability to source water from the Patea River and Konini Stream may arise as a result of severe drought, poisoning, natural disaster or other extreme weather or climatic event. The starting point is to commission a feasibility study to explore the alternative options

available to us. A feasibility study is expected to provide information on groundwater conditions; water supply alternatives; other alternatives to extend supply, cost evaluations and recommendations, etc. The feasibility study will commence in Year 2 of the LTP, budget as per attached tables.

### **Rider Mains**

The installation of rider mains is a cost-effective way of distributing water in the network. This project continues in Year 1 of the LTP; the implementation timeframe and budgets are as per the attached Tables.

### **Resource Consent - Water Supply Renewal**

The Council is currently going through a process of renewing its Water Take consent for Midhirst Township. With the take being from a stream identified as culturally significant, Iwi is a key stakeholder to this consent process and consultation with affected Iwi groups has commenced.

The Council is committed to working with the affected Iwi groups on achieving a sustainable solution. Iwi has issued a Cultural Impact Assessment (CIA) in support of the application. The new consent will prioritise water efficiency measures such as metering of water use, which Council has already implemented for Midhirst Township. Council

will also plan to renew the water supply for Stratford in the coming years. The current consent granted in 2017 and will expire in 2034.

### **Key infrastructure Renewals**

The primary driver is the need to upgrade key water supply infrastructure to maintain the reliability and resilience of Stratford's water treatment system. The Council is proposing to replace the existing raw water intake line and grit tank for the Stratford Water Treatment Plant. A new raw water intake line and grit tank will improve security and quality of raw water supply to the water treatment plant

Another key project is the relocation of the existing water trunk main from 'under' to 'over' the bed of the Patea River. This relocation is to enable easy access for maintenance, repair and renewal. If desired and funded, this infrastructure could serve as another connection within the Carrington walkway network.

### **Pipework Capacity Increase – Water Supply, Wastewater and Stormwater**

There have been new residential subdivisions and developments, urban infill and other growth-related pressures created in water supply, wastewater and stormwater networks. The consequence of this is that some pipes

are requiring upgrades in capacity to accommodate the increased flow.

To accommodate growth and increased demand, the Council has programmed an increase to the pipework capacity throughout the IS planning period. The pipework capacity programme will be undertaken at the time of renewal, commencing from Year 1 of the LTP, budget and implementation timeframe is as per the attached Tables.

### **Resource Consent – Wastewater Renewal**

There are 2 parts to this; the implementation of the current consent and the renewal of the existing consent come 2034.

Changes to the national policy statement (NPS) on freshwater may require, at the expiry of this current consent, that the Council re-directs its wastewater discharge from water to land. If so, Council must plan to invest either in an appropriately sized and suitably location for this purpose, or seek to pipe this discharge into an established and consented receiving environment. This investment plan must be concluded prior to the expiry of the current consent in 2034. Estimated budget is as per the attached tables.

Following receipt of our new Wastewater Discharge Consent granted in April 2020 with an expiry date of 2034, the Council has

implemented a programme of required system upgrades as per the consent conditions. The Council continues to monitor the performance of the wastewater oxidation pond and provide feedback to the key affected parties including Ngati Ruanui and Fish & Game. Annual meetings are held to discuss performance progress. Intermittent meetings are held where issues arise to ensure they are addressed promptly.

Discharges to and from the wastewater treatment ponds are being sampled on a monthly basis. A health and safety induction document has been created for the wastewater treatment ponds. A wastewater spillage contingency plan for the wastewater ponds and sewer network has been created. Monitoring of the telemetered data and maintenance of the instruments operating at the wastewater treatment ponds is ongoing.

The implementation of the Trade Waste Bylaw is crucial to the successful implementation of the wastewater discharge consent conditions.

### **Reticulation Extension**

An extension of the wastewater network is proposed west of Brecon Road (south) to extend the wastewater network and support growth and new developments in the area.

This project is programmed for implementation from Year 9 of the LTP.

### **Capacity Maintenance – Oxidation Pond Desludging**

Wastewater treatment ponds require desludging to renew their capacity and improve treatment efficiency. The capacity of this pond is renewed approximately every 12-15 years by removing the sludge in the ponds. This project is programmed from Year 4 of the 30-year plan, and as per the tables attached..

### **Inflow/Infiltration Programme**

The Inflow/Infiltration programme is a suite of interventions designed to minimise the inflow and infiltration of surface and groundwater into the wastewater pipe network. This is an important part of our annual network maintenance and renewal programme that ensures that only wastewater collected from households and businesses is transported to the treatment plant. This programme will consider the outcomes from the wastewater modelling commissioned by Council.

The requirement for this programme is also echoed in the conditions of our wastewater discharge resource consent which require the Council to provide a report, to the Taranaki Regional Council, with copies to our key Stakeholders - Ngati Ruanui and Fish & Game NZ.

The Council will continue this programme from Year 1 of the LTP, throughout the life of the LTP and beyond where necessary. The budget and implementation timeframe is as per the attached Tables.

### **Trade Waste Bylaw Implementation**

Stratford District Council's Trade Waste Bylaw 2020 (TWB) was adopted by Council in July 2020, with subsequent amendments adopted in October 2020.

Consent conditions, consent templates and other associated documents have been created; applications for trade waste discharges have been received and processed. The initial focus of the consenting process was directed towards bulk tanker discharges, other industries have been identified as requiring consent and are working through the process, the consent process is ongoing.

Although the Local Government Act 2002 has enforcement provisions for breaches of bylaws using the court system, 'minor' offending does not. Offences are being documented within the TWB infringement fees for the offences have been established and included in the LTP fees and Charges schedule. Consultation process has been completed with the Ministry of Justice, and

the infringement scheme is now being reviewed by both the Parliamentary Counsel Office and Department of Internal Affairs.

### **Capacity Maintenance – Victoria Pond Desilting**

Stormwater originating from the western extent of Stratford flow into the Victoria Park Pond, which is utilised as a sediment retention and stormwater treatment pond. The capacity of this pond is renewed approximately every 10 years by removing the silt and sediment. This is a crucial project that ensure s that stormwater quality downstream into the Patea River is maintained. This project is programmed from Year 9 of the 30-year plan.

### **Network Planning and Modelling – Wastewater and Stormwater**

To accommodate growth and increased demand, Council has programmed to increase pipe capacity to cater for high flows. While

officers are aware of some pipes within the network requiring increased capacity, the Council has commissioned a network modelling project on both our wastewater and stormwater networks to reveal how our network systems are behaving.

This modelling will comprise the evaluation of network capacity, the identification of inflow and infiltration into the pipe network (for wastewater); the identification of bottlenecks in the existing or proposed network and the design of improvements needed to accommodate growth. The modelling project is expected to reveal the areas for improvement in the network from which priority areas can be programmed for improvement. This programme continues in Year 1 of the LTP.

### **Stormwater Safety Improvements**

The Council's programme for stormwater safety improvements will continue through the IS planning period. Safety improvements consist of safety screening for stormwater inlets, outlets and manholes. The improvement programme continues in Year 3, budget and implementation timeframe is as per the attached Tables in section 15.

### **Infrastructure Asset Renewals**

The Council's programme for Infrastructure renewals for Roding and 3- Waters Assets continue throughout the infrastructure strategy planning period. The renewal programme is commences from Year 1, budget is as per Table in section 15.

### **Budget Summary**

The budget summary of these key projects is provided below. Details of the implementation timeline are provided in Section 15.

	No	Project Description	Estimated Budget (\$) 000 Year of Implementation		Total Estimated Budget (\$) 000
			1-10	11-30	
Roading	1	Brecon Road extension	21,075	-	21,075
	2	Walking and Cycling including Centennial Bridge Replacement	5,089	10,659	15,748
	3	Footpath Replacement and Renewals	2,934	6,612	9,546
	4	Bridge and Retaining Walls Replacement	11,949	32,500	44,449
	5	Culvert LoS and Drainage Improvements	11,509	25,000	36,509
	6	Roading Renewals and improvements	68,168	161,550	229,718
	<b>Total</b>			<b>120,723</b>	<b>236,321</b>
Water	7	Network Planning and Modelling	702	700	1,402
	8	Universal Water Metering	1,594	-	1,594
	9	Emergency Water Supply / Additional Storage	8,856	2,200	11,056
	10	Alternative Water Supply	643	-	643
	11	Rider Mains	300	450	750
	12	Resource Consent - Renewal	50	550	600
	13	Key Infrastructure Renewals	13,078	11,225	24,303
	<b>Total</b>			<b>25,222</b>	<b>15,125</b>
Wastewater	14	Resource Consent - Upgrade, Design and Renewal	7,007	45,000	52,007
	15	Capacity maintenance oxidation pond desludging	3,240	6,000	9,240
	16	Inflow/infiltration renewals			



	No	Project Description	Estimated Budget (\$' 000 Year of Implementation		Total Estimated Budget (\$' 000
			2,387	6,500	8,887
	17	Pipework Capacity increase	100	300	400
	18	Network Planning and Modelling	167	1	168
	19	Wastewater Infrastructure Renewals	3,667	5,800	9,467
	<b>Total</b>		<b>16,568</b>	<b>63,601</b>	<b>80,169</b>
<b>Stormwater</b>	20	Pipework Capacity increase	509	2,075	2,584
	21	Network Planning and Modelling	516	850	1,366
	22	Capacity Maintenance - Victoria pond desilting	223	850	1,073
	23	SW Safety improvements	123	780	903
	24	SW Infrastructure renewals	1,118	4,500	5,618
	<b>Total</b>		<b>2,489</b>	<b>9,055</b>	<b>11,544</b>
		<b>GRAND TOTAL</b>	<b>165,003</b>	<b>324,102</b>	<b>489,105</b>

## 15.30-Year (Inflated) Capital Budget for Key Projects

	Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total	
		2024 /25	2025 /26	2026 /27	2027 /28	2028 /29	2029 /30	2030 /31	2031 /32	2032 /33	2033 /34	2034 /35	2035 /36	2036 /37	2037 /38	2038 /39	2039 /40	2040 /41	2041 /42	2042 /43	2043 /44	2044 /45	2045 /46	2046 /47	2047 /48	2048 /49	2049 /51	2050 /51	2051 /52	2052 /53	2053 /54		
	Project Description	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	
Roading	1 Brecon Road extension	-	1,020	9,913	10,141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,075	
	2 Walking and Cycling including Centennial Bridge Replacement	400	408	417	427	436	446	1,136	464	473	482	482	482	482	482	482	500	500	500	500	500	550	550	550	550	550	600	600	600	600	600	15,748	
	3 Footpath Replacement and Renewals	210	225	242	260	279	299	320	342	367	392	392	392	392	392	392	280	280	280	280	280	300	300	300	300	300	350	350	350	350	350	9,546	
	4 Bridge and Retaining Walls Replacement	950	998	1,047	1,100	1,155	1,213	1,273	1,337	1,404	1,474	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	44,449	
	5 Culvert LoS and Drainage Improvements	915	961	1,009	1,059	1,112	1,168	1,226	1,288	1,352	1,420	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	36,509	
	6 Roading Renewals and improvements	5,730	4,863	5,686	5,905	8,095	6,794	7,061	7,009	8,126	8,899	7,350	7,350	7,350	7,350	7,350	7,350	7,400	7,400	7,400	7,400	7,400	8,750	8,750	8,750	8,800	8,800	8,800	8,800	8,800	8,800	229,718	
		<b>TOTAL</b>	<b>8,205</b>	<b>8,474</b>	<b>18,314</b>	<b>18,892</b>	<b>11,077</b>	<b>9,918</b>	<b>11,016</b>	<b>10,439</b>	<b>11,721</b>	<b>12,666</b>	<b>10,724</b>	<b>10,724</b>	<b>10,724</b>	<b>10,724</b>	<b>10,724</b>	<b>10,630</b>	<b>10,680</b>	<b>10,680</b>	<b>10,680</b>	<b>10,680</b>	<b>12,850</b>	<b>12,850</b>	<b>12,850</b>	<b>12,900</b>	<b>12,900</b>	<b>13,000</b>	<b>13,000</b>	<b>13,000</b>	<b>13,000</b>	<b>13,000</b>	<b>357,044</b>
Water Supply	7 Network Planning and Modelling	-	103	-	486	-	113	-	-	-	-	150	-	-	-	-	-	150	-	-	-	-	200	-	-	-	-	200	-	-	-	1,402	
	8 Universal Water Metering	1,594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,594	
	9 Emergency Water Supply / Additional Storage	70	-	-	-	166	6	-	-	1,209	7,406	-	-	-	-	-	-	-	200	-	1,000	-	-	-	-	-	-	-	-	-	1,000	11,056	
	10 Alternative Water Supply	-	103	-	540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	643	
	11 Rider Mains	300	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-	-	150	-	-	-	-	-	-	-	150	-	-	-	-	750	
	12 Resource Consent - Renewal	50	-	-	-	-	-	-	-	-	-	150	300	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	
	13 Key Infrastructure Renewals	2,640	2,270	211	427	244	289	487	231	387	5,894	200	350	650	250	200	900	275	325	875	475	650	1,050	300	500	1,050	500	350	1,425	375	525	24,303	
	<b>TOTAL</b>	<b>4,654</b>	<b>2,475</b>	<b>211</b>	<b>1,453</b>	<b>410</b>	<b>408</b>	<b>487</b>	<b>231</b>	<b>1,596</b>	<b>13,300</b>	<b>500</b>	<b>800</b>	<b>750</b>	<b>250</b>	<b>200</b>	<b>900</b>	<b>425</b>	<b>675</b>	<b>875</b>	<b>1,475</b>	<b>650</b>	<b>1,250</b>	<b>300</b>	<b>500</b>	<b>1,200</b>	<b>500</b>	<b>550</b>	<b>1,425</b>	<b>375</b>	<b>1,525</b>	<b>40,347</b>	
Wastewater	14 Resource Consent - Upgrade, Design and Renewal	50	513	-	-	-	34	-	118	121	6,172	20,000	20,000	5,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52,007		
	15 Capacity maintenance oxidation pond desludging	-	-	-	3,240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,000	-	-	-	-	-	-	-	-	-	-	-	9,240	
	16 Inflow/infiltration renewals	350	205	211	216	221	227	232	237	242	247	250	250	250	250	250	300	300	300	300	300	350	350	350	350	350	400	400	400	400	400	8,887	
	17 Pipework Capacity increase	100	-	-	-	-	-	-	-	-	-	-	-	20	-	-	200	-	-	20	-	-	20	-	-	20	-	-	20	-	-	400	
	18 Network Planning and Modelling	50	-	-	-	55	-	-	-	-	62	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-	0	-	168	
	19 Wastewater Infrastructure Renewals	335	138	311	362	149	153	400	397	1,009	413	200	200	200	200	200	275	275	275	275	275	275	260	260	260	260	260	425	425	425	425	425	9,467
	<b>TOTAL</b>	<b>885</b>	<b>856</b>	<b>521</b>	<b>3,818</b>	<b>426</b>	<b>413</b>	<b>631</b>	<b>752</b>	<b>1,372</b>	<b>6,894</b>	<b>20,450</b>	<b>20,450</b>	<b>5,470</b>	<b>450</b>	<b>450</b>	<b>775</b>	<b>575</b>	<b>575</b>	<b>575</b>	<b>6,595</b>	<b>575</b>	<b>610</b>	<b>630</b>	<b>610</b>	<b>610</b>	<b>630</b>	<b>825</b>	<b>825</b>	<b>845</b>	<b>825</b>	<b>825</b>	<b>80,169</b>
Stormwater	20 Pipework Capacity increase	-	-	158	-	-	170	-	-	181	-	200	-	-	250	-	-	275	-	-	300	-	-	325	-	-	350	-	-	375	-	2,584	
	21 Network Planning and Modelling	400	-	-	-	-	-	116	-	-	-	-	-	200	-	-	-	-	-	300	-	-	-	-	-	350	-	-	-	-	1,366		
	22 Capacity Maintenance - Victoria pond desilting	100	-	-	-	-	-	-	-	-	123	-	-	-	-	-	-	-	350	-	-	-	-	-	-	-	500	-	-	-	1,073		
	23 SW Safety improvements	50	-	21	-	-	28	23	-	-	-	50	25	-	-	105	-	-	35	100	-	40	-	125	45	-	-	200	-	-	55	903	
	24 SW Infrastructure renewals	100	103	105	108	111	113	116	118	121	123	150	150	150	150	150	200	200	200	200	200	250	250	250	250	250	300	300	300	300	300	5,618	
	<b>TOTAL</b>	<b>650</b>	<b>103</b>	<b>284</b>	<b>108</b>	<b>111</b>	<b>311</b>	<b>255</b>	<b>118</b>	<b>302</b>	<b>247</b>	<b>400</b>	<b>175</b>	<b>350</b>	<b>400</b>	<b>255</b>	<b>200</b>	<b>475</b>	<b>585</b>	<b>600</b>	<b>500</b>	<b>290</b>	<b>250</b>	<b>700</b>	<b>295</b>	<b>600</b>	<b>1,150</b>	<b>500</b>	<b>300</b>	<b>675</b>	<b>355</b>	<b>11,544</b>	
	<b>GRAND TOTAL</b>	<b>14,394</b>	<b>11,908</b>	<b>19,330</b>	<b>24,270</b>	<b>12,023</b>	<b>11,051</b>	<b>12,389</b>	<b>11,540</b>	<b>14,991</b>	<b>33,106</b>	<b>32,074</b>	<b>32,149</b>	<b>17,294</b>	<b>11,824</b>	<b>11,629</b>	<b>12,505</b>	<b>12,155</b>	<b>12,515</b>	<b>18,750</b>	<b>13,230</b>	<b>14,400</b>	<b>14,980</b>	<b>14,460</b>	<b>14,305</b>	<b>15,330</b>	<b>15,475</b>	<b>14,875</b>	<b>15,570</b>	<b>14,875</b>	<b>15,705</b>	<b>489,105</b>	

## 16. Investment Funding Strategy

Section 102 of the LGA requires that the Council *'must, in order to provide predictability and certainty about sources and levels of funding, adopt the funding and financial policies listed below:*

- A Revenue and Financing Policy; and
- A Liability Management Policy; and
- An Investment Policy; and
- A policy on Development Contributions (CD) or Financial Contributions (FC); and
- A policy on the Remission and Postponement of Rates on Maori freehold land.

The Council may also adopt either or both a Rates Remission Policy and a Rates Postponement Policy. The Council has adopted all the relevant funding and financial policies which guide Council's funding and financial decisions.

### **Revenue and Financing Policy**

The Revenue and Financing Policy sets out Stratford District Council's policies in respect of the funding for capital and operating expenditure. The current policy has been reviewed. The funding sources are detailed in the LTP 2021-2051 and include general and targeted rates, borrowing, grants and subsidies, etc.

### **Treasury Management Policy**

The Council's Treasury Management Policy incorporates the Liability Management Policy

and the Investment Policy requirements of the LGA. It guides the Council to prudently manage its revenue, expenditure, assets, liabilities, reserves, and investments, in the interest of the Council and district ratepayers.

### **Development and Financial Contributions Policy**

The Council's Development and Financial Contribution Policy is consistent with the purpose as set out in Section 106 of the LGA. The Council does not require Development Contributions; however, the Financial Contributions Policy meet the requirement as set out in Section 108 (g) of the Resource Management Act (RMA) 1991

### **Financial Strategy**

Council's Financial Strategy which aims to:

- Provide guidance for elected members and staff when considering proposals for funding and expenditure.
- Make Council funding and expenditure decisions and their overall effects on service levels, rates, debt and investments, transparent to ratepayers.
- Ensure that services levels are maintained, while ensuring debt, revenue, and expenditure (Operating and Capital) are managed in a financially sustainable way.

Capital projects and activities, including Renewal or Replacement projects and Level

of Service Improvements, for the next 30 years will be funded through one or a combination of the following sources:

- Loans;
- Grants;
- Reserves;
- Targeted rates; and/or
- Subsidies.

Given the present funding regime, the Council anticipates that the Roading Activity projects will continue to be 63 % funded by NZTA. The Council specifies how different projects will be funded in its Financial Strategy.

The cost of capital projects driven by growth will be borne by the Developer,

A summary of Council's Capital Investment funding for our core assets is shown in below.

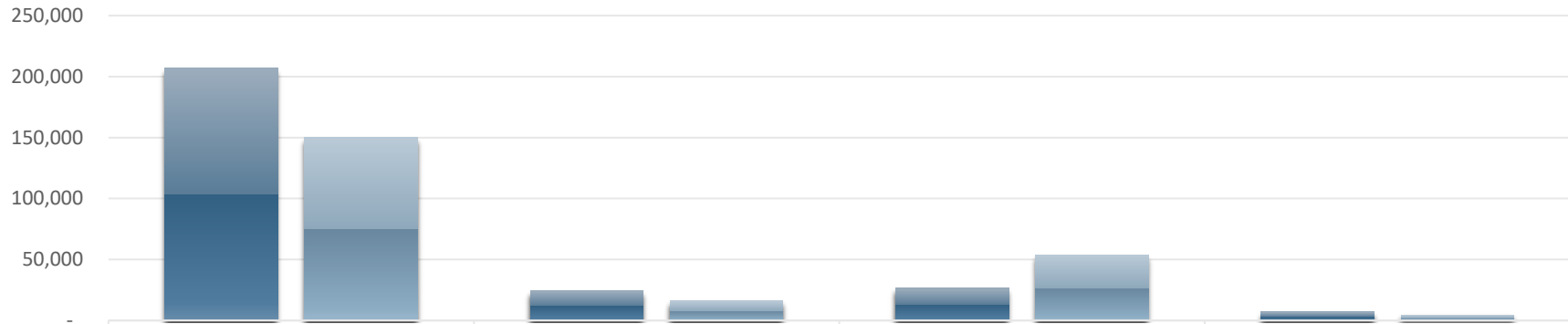
## 17. 30-Year Capital Expenditure Estimates

The Council's total projected 30-year Capital and Operating Expenditure Estimates are presented separately in the Tables and Charts below. The Capital and Operating Expenditure Estimate Tables and Charts - by Asset group - are presented in the Appendices.

The figures in Years 1 – 10 are as per the 2024-2034 LTP. Inflation has been accounted for as *BERL* Indicators have been applied to all expenditure figures for Years 1 to 10 and Year 10 rate applied to Years 11 to 30. Where there are no additional capital works, expenditure figures in Years 11 – 30 are equal to figures in Year 10.

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Roading</b>															
Level of Service Improvement	3,150	3,162	12,731	13,024	4,909	3,436	4,204	3,280	4,196	4,758	22,159	22,450	24,100	24,500	150,058
Replacements	5,055	5,312	5,583	5,868	6,168	6,482	6,813	7,160	7,525	7,909	31,462	30,900	40,250	40,500	206,986
<b>Stormwater</b>															
Level of Service Improvement	450	-	158	-	-	198	116	-	181	-	775	975	800	875	4,528
Replacements	200	103	126	108	111	113	139	118	121	247	805	1,385	1,335	2,105	7,016
<b>Water Supply</b>															
Level of Service Improvement	1,814	246	-	1,026	166	119	-	-	1,330	7,529	850	1,500	350	1,200	21,067
Replacements	2,840	2,229	211	427	244	289	487	231	266	5,770	1,650	2,850	3,550	3,175	19,280
<b>Wastewater</b>															
Level of Service Improvement	150	513	158	216	-	-	232	118	725	6,418	45,020	220	40	20	53,864
Replacements	735	343	363	3,602	426	413	400	633	647	475	2,250	8,875	3,050	4,125	26,305
<b>TOTAL</b>	<b>14,394</b>	<b>11,908</b>	<b>19,330</b>	<b>24,270</b>	<b>12,023</b>	<b>11,051</b>	<b>12,389</b>	<b>11,540</b>	<b>14,991</b>	<b>33,106</b>	<b>104,971</b>	<b>69,155</b>	<b>73,475</b>	<b>76,500</b>	<b>489,105</b>
<b>Key Assumptions:</b>															
1. Capital expenditure Figures in Years 1 – 10 are as per the 2024-2034 LTP;															
2. BERL Indicators have been applied to Capital expenditure figures for Years 1 – 10 and Year 10 rate applied to Years 11 to 30; and															
3. Where there are no additional capital works, capital expenditure figures in years 11 – 30 are equal to figures in Year 10.															

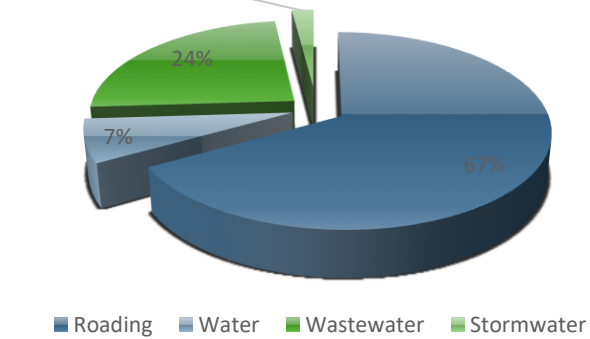
### Total Capital Expenditure - 2024 - 2054



	Roading	Water	Wastewater	Stormwater
■ Replacement	206,986	24,218	26,339	7,016
■ Level of Service	150,058	16,130	53,830	4,528

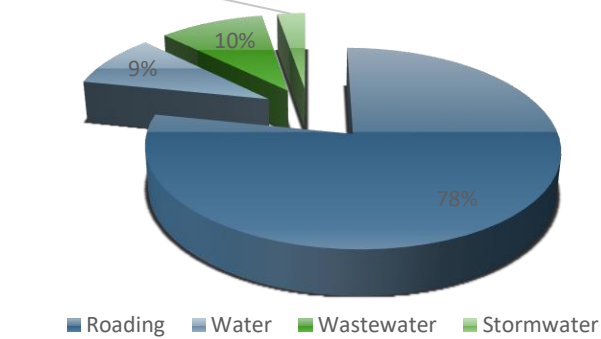
■ Replacement ■ Level of Service

### Level of Service Budget 2024-2054



■ Roading ■ Water ■ Wastewater ■ Stormwater

### Replacement Budget 2024 - 2054



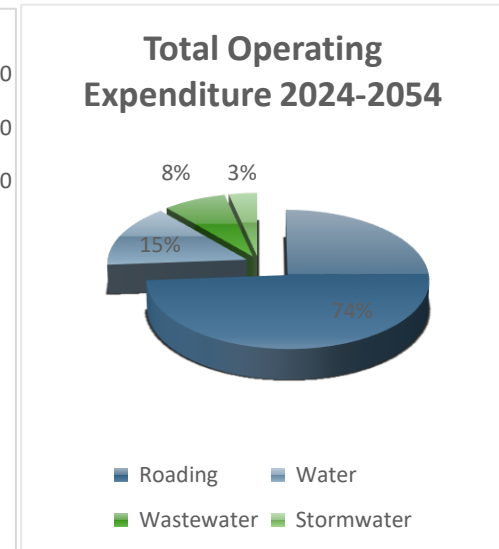
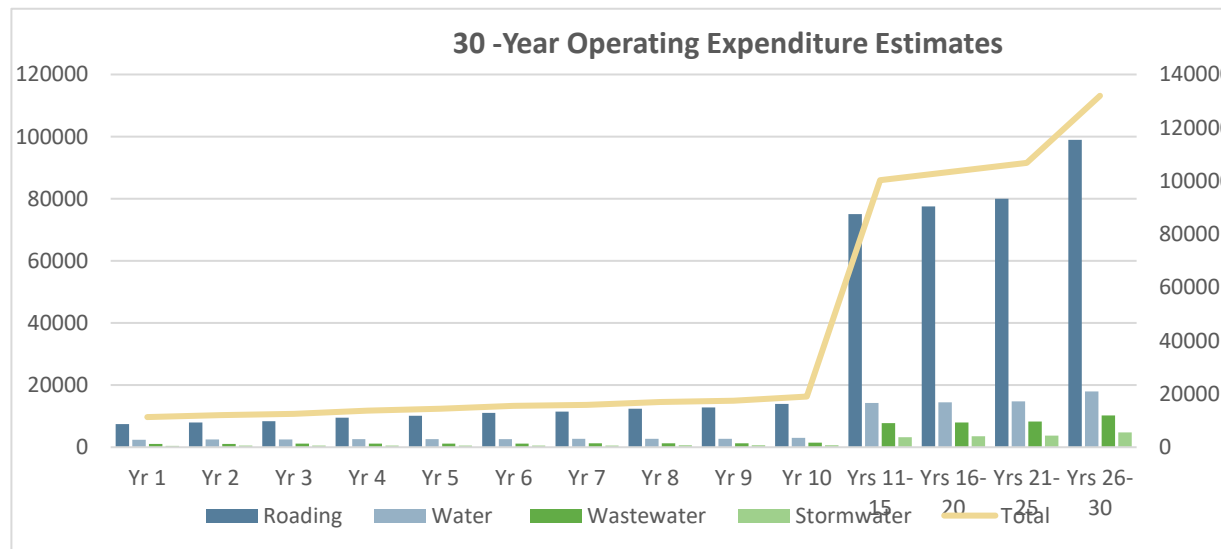
■ Roading ■ Water ■ Wastewater ■ Stormwater

## 18. 30-Year Operating Expenditure Estimates

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Roading</b>	7,441	7,985	8,351	9,540	10,174	11,074	11,473	12,395	12,862	13,935	75,000	77,500	80,000	99,000	436,729
<b>Water Supply</b>	2,370	2,452	2,504	2,563	2,599	2,699	2,694	2,738	2,808	3,128	14,250	14,500	14,750	18,000	88,055
<b>Wastewater</b>	1,025	1,065	1,109	1,153	1,168	1,208	1,218	1,263	1,295	1,475	7,750	8,000	8,250	10,200	46,178
<b>Stormwater</b>	471	495	503	525	524	548	557	577	581	602	3,250	3,500	3,750	4,800	20,683
<b>TOTAL</b>	<b>11,307</b>	<b>11,997</b>	<b>12,466</b>	<b>13,780</b>	<b>14,466</b>	<b>15,528</b>	<b>15,942</b>	<b>16,973</b>	<b>17,546</b>	<b>19,140</b>	<b>100,250</b>	<b>103,500</b>	<b>106,750</b>	<b>132,000</b>	<b>591,646</b>

**Key Assumptions:**

1. Operating expenditure Figures in Years 1 – 10 are as per the 2024-2034 LTP;
2. BERL Indicators have been applied to Capital expenditure figures for Years 1 – 10 and Year 10 rate applied to Years 11 to 30; and
3. Operating Expenditure Figures for Years 11 – 30 are equal to Figures in Year 10.





## 19. Appendices

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- **Appendix 1: Roading**
  - Significant Issues and Options
  - 30 –Year Capital Expenditure
  - 30-Year Operating Expenditure
- **Appendix 2: Water Supply**
  - Significant Issues and Options
  - 30 –Year Capital Expenditure
  - 30-Year Operating Expenditure
- **Appendix 3: Wastewater**
  - Significant Issues and Options
  - 30 –Year Capital Expenditure
  - 30-Year Operating Expenditure
- **Appendix 4: Stormwater**
  - Significant Issues and Options
  - 30 –Year Capital Expenditure
  - 30-Year Operating Expenditure

## Appendix 1: Roothing

### Significant Issues and Options

The Significant Infrastructural Issues for the Roothing Activity are detailed in the Roothing Asset Management Plan and summarised below.

- Forestry Road Strengthening across the district;
- Increasing heavy commercial vehicle use is impacting on the Roothing network;
- Legislative Changes and the impact on existing assets.
- The geology, geography, environmental conditions (i.e. waterways) combined with poor drainage to adequately control the impacts of extreme weather events;
- Increased demand for safe and accessible urban transport infrastructure;
- Reduction in deaths and serious injuries as a result of driver behaviour and road condition;
- Replacement of aging bridges and retaining walls;
- Maintaining levels of service with an increase in the population;
- The future of Whangamomona Rd as a tourist destination.

The options for addressing these significant infrastructural issues drive the Long-term financial forecast for the Roothing Activity.

#### Issue 1 – Forestry Road Maintenance and Strengthening.

Response Options	Implications of Options
Target funding from forest block owners	<ul style="list-style-type: none"> <li>• Funds collected from forestry block owners to be used to better maintain the affected road network</li> </ul>
Maintain and strengthen the roads	<ul style="list-style-type: none"> <li>• Support the increasing demand of forestry traffic on the transport network.</li> </ul>
Strengthen key structures where applicable	<ul style="list-style-type: none"> <li>• Bridge strengthening where applicable will support forest traffic, and the Industry at large, on the road network.</li> </ul>
Maintain reasonable service levels	<ul style="list-style-type: none"> <li>• Ensure the structural condition of the existing road is able to meet a reasonable level of service</li> </ul>

#### Issue 2: Increase in HCV's coupled with current standard of assets is resulting in reactive investment and inefficient allocation of resources

Response Options	Implications of options
Maintain road structural integrity	<ul style="list-style-type: none"> <li>• Accommodate increasing demand of heavy commercial vehicles on the transport network.</li> </ul>
Strengthen key structures	<ul style="list-style-type: none"> <li>• Accommodate both HPMV and 50MAX vehicles. All vehicles including the forestry/ agriculture/oil and gas industry are able to efficiently use key routes.</li> </ul>
Maintain current service levels for bridges	<ul style="list-style-type: none"> <li>• Ensure the structural condition of the existing bridges is able to meet the agreed level of service</li> </ul>

#### Issue 3: Legislative Changes and the impact on existing assets.

Response Options	Implications of Options
Identify affected assets, replacements options to meet the new legislation and delivery timeframes.	<ul style="list-style-type: none"> <li>• Supports consideration of options for replacing large diameter culverts with bridges to meet the New Environmental Standards requirements for fish passage.</li> <li>• Allows for long-term planning for renewal and budgetary requirements to seek funding from both the Council and NZTA.</li> </ul>
Seek appropriate funding from our key funding partner – NZTA.	<ul style="list-style-type: none"> <li>• Ensure Council provides adequate financial contribution to match NZTA's co-investment.</li> </ul>

**Issue 4: The geology, geography, environmental conditions (i.e. waterways) and poor drainage control has reduced the ability of the network to cope with extreme weather events**

Response Options	Implications of Options
Culverts function to allow the passage of water from roadside drains.	<ul style="list-style-type: none"> <li>Annual culvert inspections to ensure they function along with assessing those due for replacement.</li> <li>Increase the capacity of culverts to cope with more intense rainfall events.</li> </ul>
Improvements to outlet controls to reduce the risk of underslips occurring.	<ul style="list-style-type: none"> <li>Reduces the possibility of underslips forming therefore the roading network remains open for use</li> </ul>
Roads are not closed due to un-planned events e.g. flooding, slips	<ul style="list-style-type: none"> <li>Increase the maintenance programme to clear and maintain roadside drains to prevent un-planned closures</li> <li>Improved resilience of the road network in the Stratford district</li> </ul>
Access to productive land is retained.	<ul style="list-style-type: none"> <li>Enables the district to thrive and prosper as access to the markets is maintained</li> </ul>
The community has reasonable access to the land transport network	<ul style="list-style-type: none"> <li>Ensures connectivity to the rural communities.</li> </ul>

**Issue 5: Increased demand for safe and accessible urban transport infrastructure**

Response Options	Implications of options
Future infrastructure requirements	<ul style="list-style-type: none"> <li>Support increase in tourism</li> <li>Access to and through the district is maintained.</li> <li>Suitable parking areas on Mt Taranaki</li> <li>Attractive Urban streets</li> <li>Development of urban cycleways</li> <li>Construction of the Brecon Road Extension</li> </ul>

Response Options	Implications of options
Footpaths improved	<ul style="list-style-type: none"> <li>Meet current and future levels of service</li> <li>For all suitable urban streets</li> <li>Safer footpaths- reducing the risk of personal injury incidents occurring.</li> <li>Suitable for all users, including mobility scooters and wheelchairs.</li> <li>Improved road safety for pedestrians.</li> </ul>
Provision of urban and rural cycle routes for commuting and recreational use	<ul style="list-style-type: none"> <li>Encourages a healthier lifestyle through active transport systems</li> <li>Greater use and uptake on active modes of transport</li> <li>Increase in cycling tourists staying within Stratford District</li> <li>Improved environmental benefits from less vehicle emissions.</li> </ul>

**Issue 6: Poor driver behaviour, challenging road conditions, limited experience with local conditions and unforgiving roads and roadsides is resulting in safety issues and deaths and serious injuries.**

Response Options	Implications of options
Promote safe use of the network through 'Roadsafe Taranaki'	<ul style="list-style-type: none"> <li>Safer use of the transport network resulting in fewer crashes</li> <li>Supports the physical works undertaken and supports use of alternative modes by reducing the perception that they are unsafe.</li> </ul>
Introduce safer speeds to the existing network	<ul style="list-style-type: none"> <li>Reduction in the number and severity of crashes</li> <li>Achieves consistency with national guidance/best practice.</li> <li>Improved amenity for walking and cycling where speeds are lowered</li> <li>Improved efficiency for freight and general traffic where speeds are raised.</li> <li>Speed limit reviews to reduce the number of death and serious injury crashes throughout the district</li> </ul>

Response Options	Implications of options
Undertake minor improvements to the existing network Infrastructure	<ul style="list-style-type: none"> <li>Reduction in crashes and therefore deaths and serious injuries</li> <li>Able to respond to community requests for safety management and improvements of a minor nature; such as pedestrian islands</li> <li>Geometrical improvements to key routes throughout the district</li> <li>Use of road signage and roadmarking to highlight roadside hazards.</li> </ul>
Undertake major improvements to the existing network infrastructure	<ul style="list-style-type: none"> <li>Reduction in crashes, their severity and therefore deaths and serious injuries</li> <li>Able to undertake safety transformation project improvements on key routes.</li> <li>Improved resilience and reliability of the network.</li> <li>Geometrical improvements to key routes throughout the district</li> </ul>

#### Issue 7 – Replacement of aging bridges and retaining walls

Response Options	Implications of Options
Identify all Uneconomic bridges and develop plan options for their replacement (Table below)	<ul style="list-style-type: none"> <li>Potential sources of funding outside of general rates and/or NZTA funding, i.e. targeted rating of benefiting landowners.</li> <li>Alternative service levels, access and treatment options for affected bridges, as appropriate.</li> </ul>
Many bridges are currently single lane.	<ul style="list-style-type: none"> <li>Consider widening to two lane – this will increase replacement costs. Replace like for like at this stage. Can be reviewed at time of replacement.</li> </ul>
Over 250 retaining walls have been identified.	<ul style="list-style-type: none"> <li>Replacement of retaining walls in poor condition to continue over the period of this strategy. Annually - \$200k for years 0-10 to replace the “very poor” rated structures</li> </ul>
Replacing these structures ensures the community remain connected.	<ul style="list-style-type: none"> <li>Council may need to loan fund the replacements, depending on the number of bridges being replaced each year.</li> </ul>

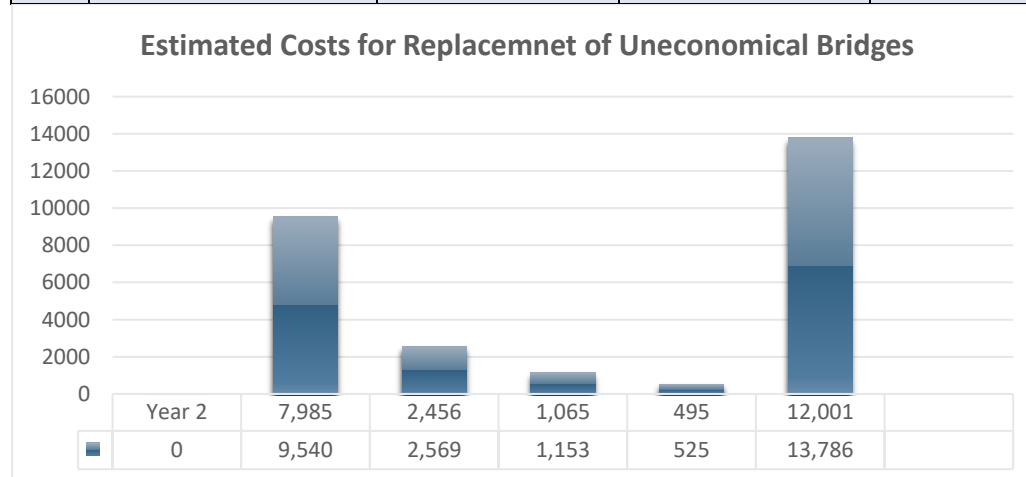
#### Issue 8 - Maintaining levels of service with an increase in the population

Response Options	Implications of Options
Differential levels of service for road hierarchy	<ul style="list-style-type: none"> <li>Many low volume roads will have minimal maintenance</li> </ul>
Increase in contract prices due to cost escalations and new contracts	<ul style="list-style-type: none"> <li>Review the levels of service, contract specifications to remain affordable</li> <li>Development of a Maintenance Intervention Plan for all maintenance activities to provide the right solution and the right time.</li> </ul>
Increase revenue to offset increases in household rates	<ul style="list-style-type: none"> <li>Provides affordable services</li> </ul>
Increase the population of Stratford	<ul style="list-style-type: none"> <li>Bigger rating base to raise revenue</li> </ul>

#### Issue 9 - The future of Whangamomona Rd as a tourist destination.

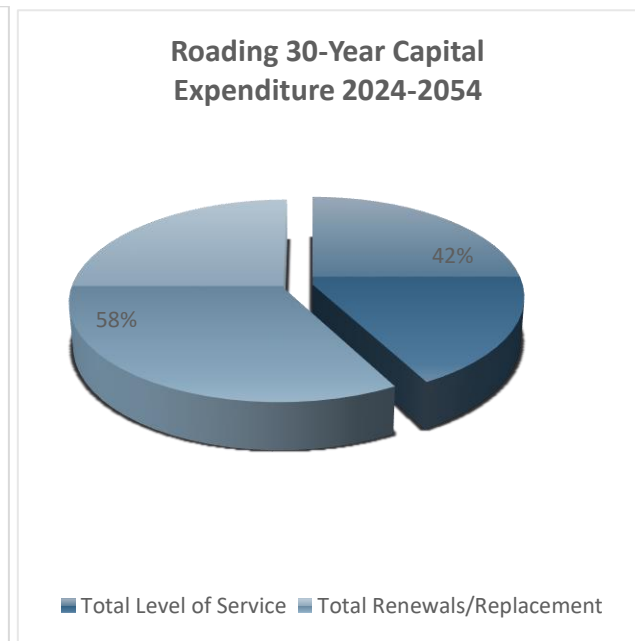
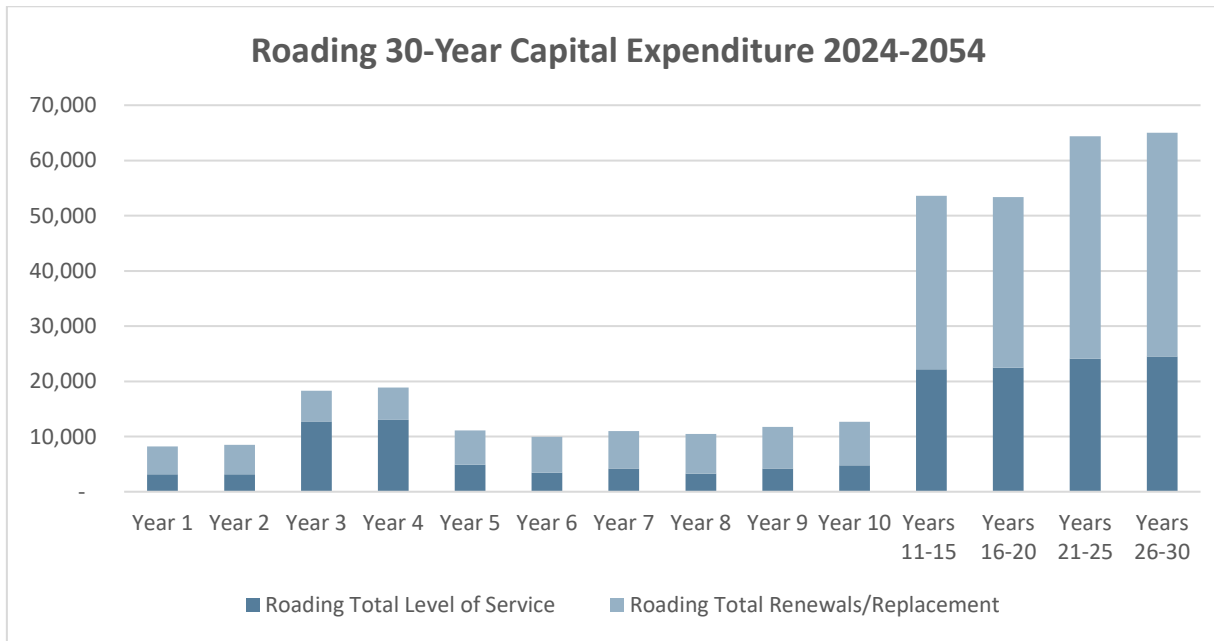
Response Options	Implications of Options
Ongoing maintenance of this road to retain its appeal as a tourist destination	<ul style="list-style-type: none"> <li>Funds incorporated into operational budgets for roading. Cap the level of expenditure to \$40k per annum for minimal maintenance</li> </ul>
Creation of a Bylaw specifically for Whangamomona Road	<ul style="list-style-type: none"> <li>Controls the use of the road by specifically precluding certain types of vehicles</li> <li>Allows for the closure of the road throughout the winter months for maintenance purposes</li> </ul>

Uneconomic bridges for replacement in the next 30 years				
Item	Bridge Location	Bridge Name	Expected Replacement Year	Estimated Costs
1	Lower Kohuratahi Road	Gowers Access	0- 5 years	\$250,000
2	Pukeko Road	Whitianga A	11 – 30	\$300,000
3	Mangaehu Road B	McBrides Bridge	11 – 30	\$2,000,000
4	Lower Kohuratahi Road	Bellringer's Access	11 – 30	\$2,000,000
5	Mt Damper Road	Mt Damper Rd Bridge	21 - 30	\$250,000
6	Upper Mangaehu Road A	Tapuni Rd Bridge	21-30	\$500,000
<b>Total</b>				<b>\$5,300,000</b>



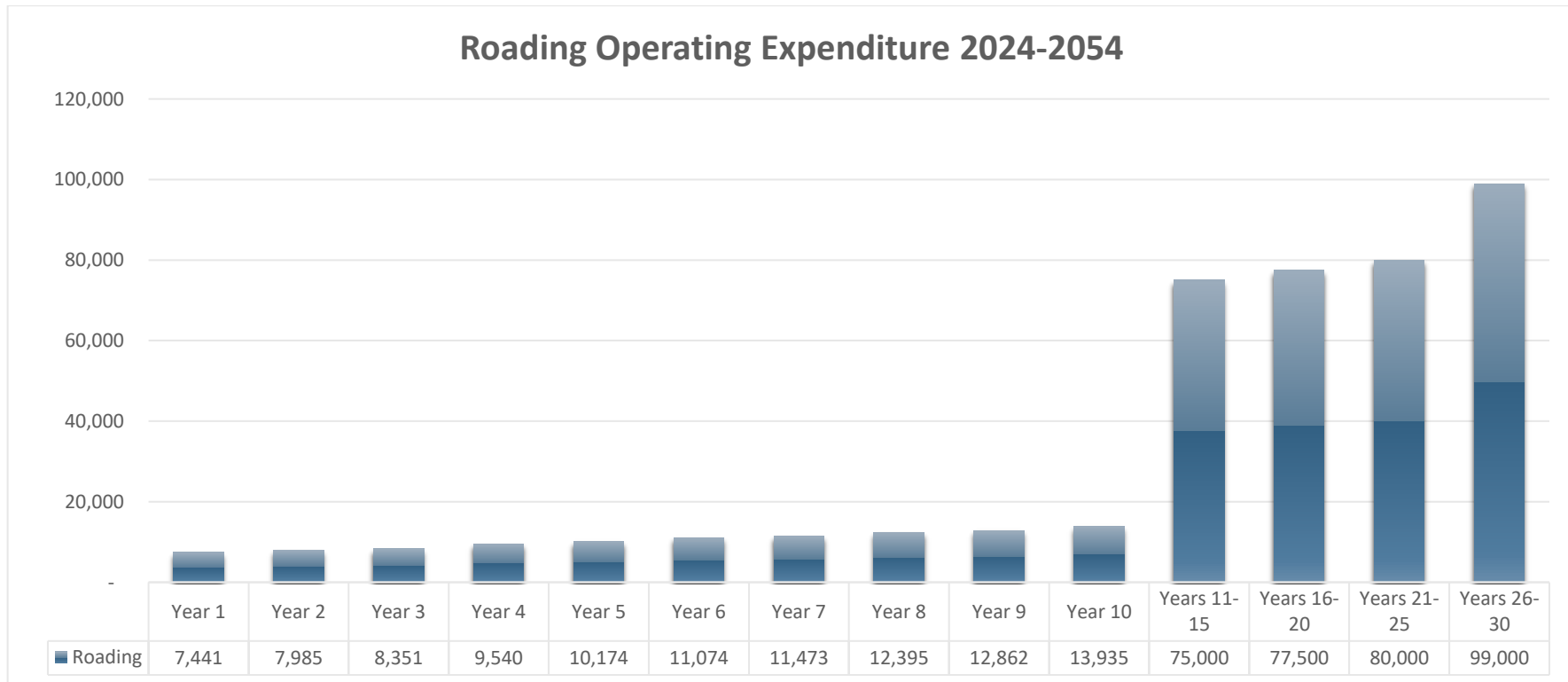
### 30 –Year Capital Expenditure – Rooding

Rooding	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Level of Service Improvement	3,150	3,162	12,731	13,024	4,909	3,436	4,204	3,280	4,196	4,758	22,159	22,450	24,100	24,500	150,058
Replacements	5,055	5,312	5,583	5,868	6,168	6,482	6,813	7,160	7,525	7,909	31,462	30,900	40,250	40,500	206,986
<b>TOTAL</b>	<b>8,205</b>	<b>8,474</b>	<b>18,314</b>	<b>18,892</b>	<b>11,077</b>	<b>9,918</b>	<b>11,016</b>	<b>10,439</b>	<b>11,721</b>	<b>12,666</b>	<b>53,621</b>	<b>53,350</b>	<b>64,350</b>	<b>65,000</b>	<b>357,044</b>



### 30 –Year Operating Expenditure – Roothing

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Roothing</b>	<b>7,441</b>	<b>7,985</b>	<b>8,351</b>	<b>9,540</b>	<b>10,174</b>	<b>11,074</b>	<b>11,473</b>	<b>12,395</b>	<b>12,862</b>	<b>13,935</b>	<b>75,000</b>	<b>77,500</b>	<b>80,000</b>	<b>99,000</b>	<b>436,644</b>





## Appendix 2: Water

### Significant Issues and Options

The Significant Infrastructural Issues for the Water Supply Activity are detailed in the Water Supply Asset Management Plan and summarised briefly below.

- Water Infrastructure Upgrade
- Treated Water Supply Capacity Increase
- Emergency Water Supply
- Alternative Water Supply;
- Backflow Prevention;
- Improvement in the reticulation system; and
- Resource Consent renewal
- Universal Water Metering

The options for addressing these significant infrastructural issues drive the Long-term financial forecast for the Water Supply Activity

#### Issue 1: Water Infrastructure Upgrade

Response Options	Implications of options
Construct of a new raw water intake line and grit tank for the Stratford Water Treatment Plant	<p>This project is primarily driven by the need to upgrade key water supply infrastructure to maintain the reliability and resilience of Stratford's water treatment system. Constructing a new raw water intake line and grit tank will:</p> <ul style="list-style-type: none"> <li>• Improve security and quality of raw water supply to the water treatment plant</li> <li>• Reduce operational risks from use of aged intake infrastructure</li> <li>• Enhance pretreatment capabilities to safeguard treatment processes</li> <li>• Provide resilience to ensure uninterrupted water supply during</li> </ul>

<ul style="list-style-type: none"> <li>• Support continuity and growth of water supply capacity long-term</li> <li>• Ensure compliance with extraction consent conditions and NPSFM 2020</li> </ul> <p>Upgrading these critical assets will ensure Stratford can continue delivering safe, secure, high quality drinking water to its residents and businesses into the future.</p>
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#### Issue 2: Treated Water Supply Capacity Increase

Response Options	Implications of options
Construct a new trunk main for future southern subdivisions	<p>This project is primarily driven by the need to increase capacity in the city's treated water supply to support future residential and commercial growth in southern subdivisions. Constructing a new trunk main will help optimize water delivery and use for the following reasons:</p> <ul style="list-style-type: none"> <li>• It will provide infrastructure needed to enable development of planned southern subdivisions in line with council's land use priorities.</li> <li>• It supports council's obligations around supplying capacity for projected growth and demand.</li> <li>• It allows for more equitable distribution of water supply costs across present and future users.</li> <li>• It improves the flow path and therefore supply of water to the southwestern area of town.</li> <li>• It proactively addresses forecast increases</li> </ul>

in water demand before capacity deficits occur.

The new infrastructure will be designed and built in ways that also promote sustainable use of water resources over the long term.

### Issue 3: Emergency Water Supply

Response Options	Implications of options
Construct new water reservoirs in Stratford, Toko and Midhirst	<p>This project is primarily driven by the need to improve resilience and continuity of Stratford District's water supply system to ensure reliable delivery of safe clean drinking water. New water reservoirs will specifically support:</p> <ul style="list-style-type: none"> <li>• An additional day of water storage capacity in Stratford to mitigate risks from potential failure at the existing water intake site and treatment plant.</li> <li>• Several additional days storage for Midhirst in case of prolonged discolouration in the water source causing prolonged water treatment plant shutdown.</li> <li>• This backup supply will provide critical contingency for provision of drinking water and industrial process water to Stratford District's residents and businesses during crisis events.</li> <li>• Planning for both steady-state and unexpected population growth and economic development across Stratford district by proactively adding storage capacity to meet future water security needs.</li> <li>• Reliable and sufficient water capacity signals Stratford's readiness for residential, commercial and industrial growth, providing confidence for investments and growth planning.</li> </ul>

### Issue 4: Alternative Water Supply

Response Options	Implications of options
Commission a feasibility report to explore the alternative water supply options available for the Patea River/Konii Stream Water Take	<p>This project is primarily to investigate alternative water supply options for the Patea River water source - in the face of an emergency that renders the take from the river unusable or due to environmental conditions such as prolonged low flow events. This project is primarily driven by resilience. The recommendation of the feasibility study, if implemented, will:</p> <ul style="list-style-type: none"> <li>• Provide redundancy in the water supply source to this critical service; and in turn</li> <li>• Allow the Council to continue to perform its duties and responsibilities, under the Local Government Act, to the people of Stratford</li> </ul>

### Issue 5: Backflow Prevention

Response Options	Implications of options
Implement a Backflow Prevention campaign for all properties identify as being at risk of contaminating their water supply.	<p>This project primarily for health and safety purposes and is being achieved in conjunction with the universal water metering project. It is driven by the requirements of Section 18 of Council's Water Supply Bylaw, which requires a backflow prevention device be installed where there is a risk of contamination entering the potable water supply through backflow or syphoning.</p> <p>Once implementation is complete, the Council can be sure that the risk of contamination as a result of backflow or syphoning is minimised. This risk is part of the corporate Risk Register that must be minimised by Council for the health and safety of its residents.</p>

**Issue 6: Improvements to the reticulation system**

Response Options	Implications of options
Continue with the Implementation of rider mains in the water network	Rider mains represent a cost-effective way of distributing water within the network

**Issue 7: Resource Consent renewal**

Response Options	Implications of options
Undertake to renew the Expired Resource Consent to take water from the Te Popo Stream at Midhirst. This consent expired in June 2021.	<p>This process is required to satisfy the requirements of the Resource Management Act (1991) for expiring consents. The Council currently takes water from the Te Popo Stream under an authorisation consent from the Taranaki Regional Council, which expired in June 2021..</p> <p>This resource consent renewal process has commenced and it is expected to take 12 to 18 months to complete in conjunction with stakeholders and regulatory authority. Supporting documentation will need to be commissioned and submitted to the TRC for</p>

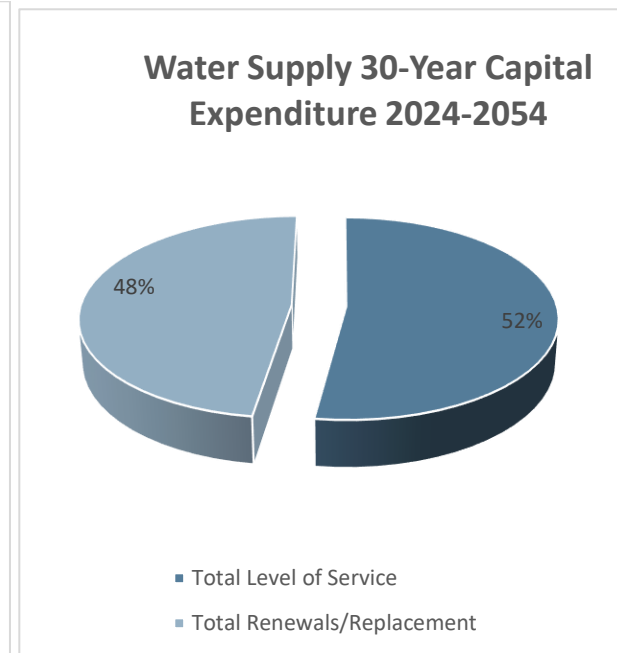
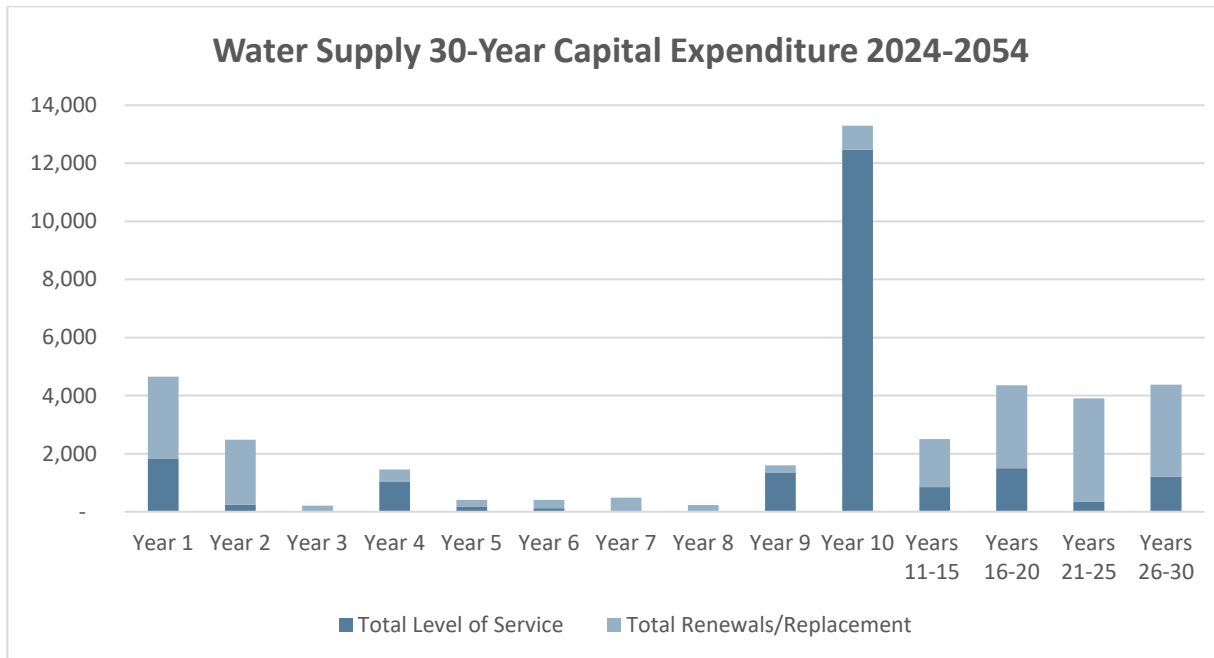
	At the completion of this process, the Council will be able to continue to take water from the Te Popo Stream to supply the residents of Midhirst.
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**Issue 8: Universal Water Metering**

Response Options	Implications of options
Implement universal water metering within Stratford.	<p>This is required to ensure and to demonstrate efficient use of the water extracted from the two sources.</p> <p>This project will allow Council to account for the water that has been treated and supplied to town.</p> <p>This project should assist Council in identifying leaks within its network as well as leaks within private properties.</p>

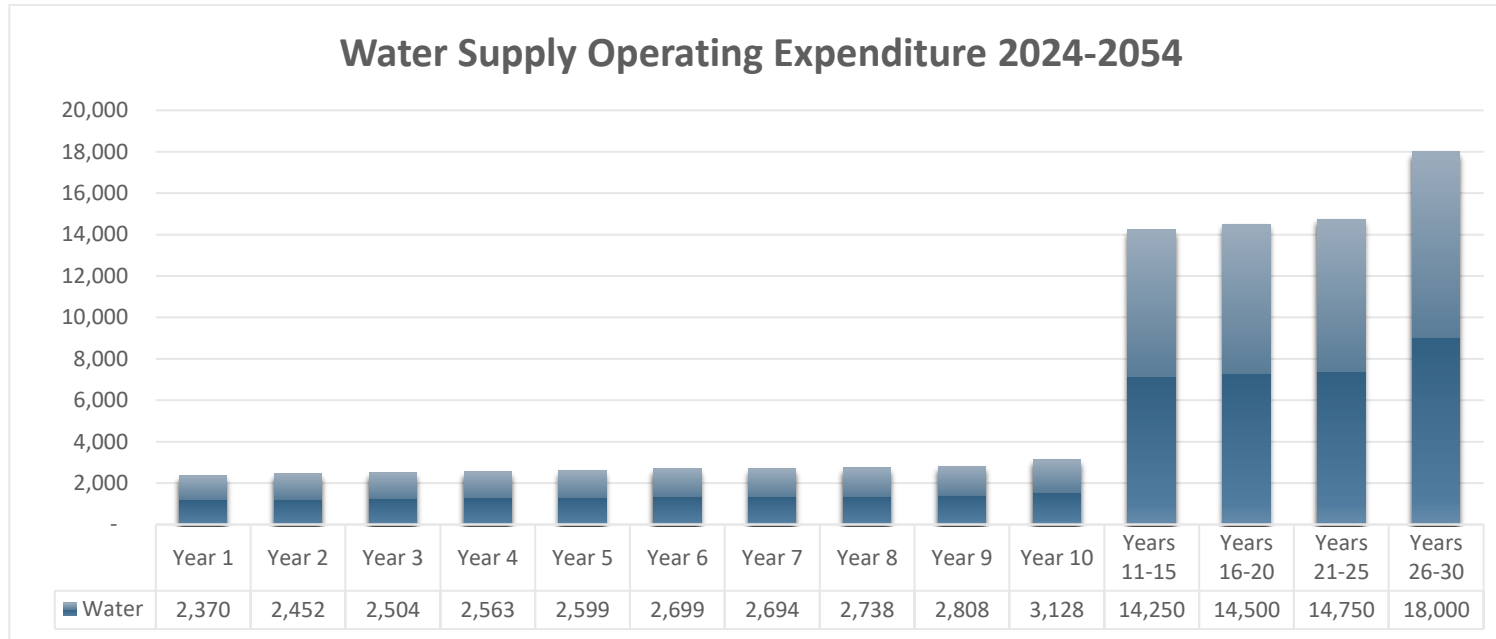
### 30 –Year Capital Expenditure – Water

Water Supply	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Level of Service Improvement	1,814	246	-	1,026	166	119	-	-	1,330	7,529	850	1,500	350	1,200	16,130
Replacements	2,840	2,229	211	427	244	289	487	231	266	5,770	1,650	2,850	3,550	3,175	24,218
<b>TOTAL</b>	<b>4,654</b>	<b>2,475</b>	<b>211</b>	<b>1,453</b>	<b>410</b>	<b>408</b>	<b>487</b>	<b>231</b>	<b>1,596</b>	<b>13,300</b>	<b>2,500</b>	<b>4,350</b>	<b>3,900</b>	<b>4,375</b>	<b>40,347</b>

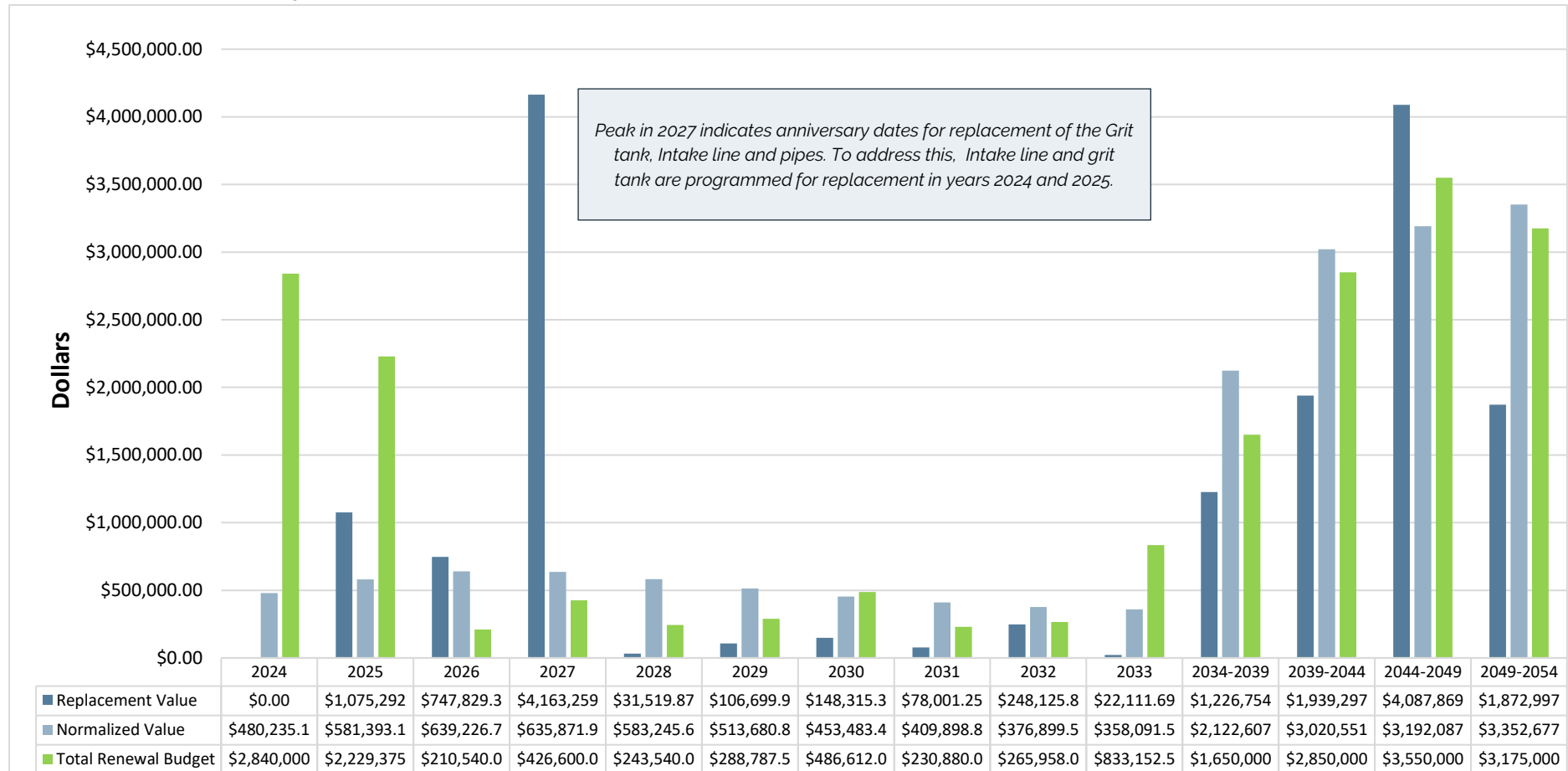


### 30 –Year Operating Expenditure – Water

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Water Supply</b>	<b>2,370</b>	<b>2,452</b>	<b>2,504</b>	<b>2,563</b>	<b>2,599</b>	<b>2,699</b>	<b>2,694</b>	<b>2,738</b>	<b>2,808</b>	<b>3,128</b>	<b>14,250</b>	<b>14,500</b>	<b>14,750</b>	<b>18,000</b>	<b>88,055</b>



### 30 –Year Water Supply Replacement Profile - Water Treatment and Reticulation



**Legend:**

Replacement value: The total amount to spend on replacement based on Council's Asset Management System data;

Normalised Value – Total minimum budget recommended for spending to ensure the entire replacement programme is delivered in the long-term.

Total Renewal Budget – The optimum budget the Council has determined to spend to optimise the asset and service delivery

## Appendix 3: Wastewater

### Significant Issues and Options Assessment

The Significant Infrastructural Issues for the Wastewater Activity are detailed in the Wastewater Asset Management Plan and summarised below.

- Resource Consent compliance;
- Reticulation overload due to inflow/infiltration;
- Pipework Capacity Issues;
- Network Planning and Modelling
- Wastewater Infrastructure Condition and Maintenance

The options for addressing these significant infrastructural issues drive the Long-term financial forecast for the wastewater activity.

#### Issue 1: Resource Consent Compliance

Response Options	Implications of options
Implement all necessary measures to maintain compliance with the conditions of the wastewater discharge consent.	<p>Compliance with the requirements of the wastewater discharge consent is essential for minimising the adverse effects on the environment.</p> <p>Since the issuing of the Wastewater Discharge Consent in April 2020 Council has implemented the required system upgrade at the set time as per the consent condition. Council has monitored the effectiveness of the upgrade and is finding that the desired effect is not being achieved. In conjunction with stakeholders and the regulatory authority alternative treatment methods or infrastructure upgrade will likely need to be considered and implemented.</p>

#### Issue 2: Reticulation overload due to inflow/infiltration

Response Options	Implications of options
Implementation of Inflow/Infiltration programme, including inspections of private property to identify direct discharge of stormwater to sewer.	<p>This programme primarily to optimise reticulation capacity during rainfall events, by ensuring there is no inflow or infiltration of water into the wastewater reticulation system.</p> <p>The Inflow/Infiltration programme is a suite of interventions designed to minimise the inflow and infiltration of surface and groundwater into the wastewater pipe network. This is an important part of our annual network maintenance and renewal programme that ensures that only wastewater collected from households and businesses is transported to the wastewater treatment plant.</p> <p>CCTV inspections are undertaken as part of the network conditions assessments therefore no additional costs are incurred. Identifying areas of high infiltration allows Council to better focus funds.</p> <p>The removal of stormwater maintains the available reticulation capacity during rainfall events.</p>

#### Issue 3: Pipework Capacity Issues

Response Options	Implications of options
Programme the implementation of pipework capacity increase to support growth.	<p>This programme is to address under-capacity of pipe network to support growth, residential infill and other intense land-use activities.</p> <p>There have been new residential subdivisions and developments, urban infill and other growth-related pressures created in our wastewater</p>



network. The consequence of this is that some pipes are requiring upgrades in capacity to accommodate the increased flow.

#### Issue 4: Network Planning and Modelling

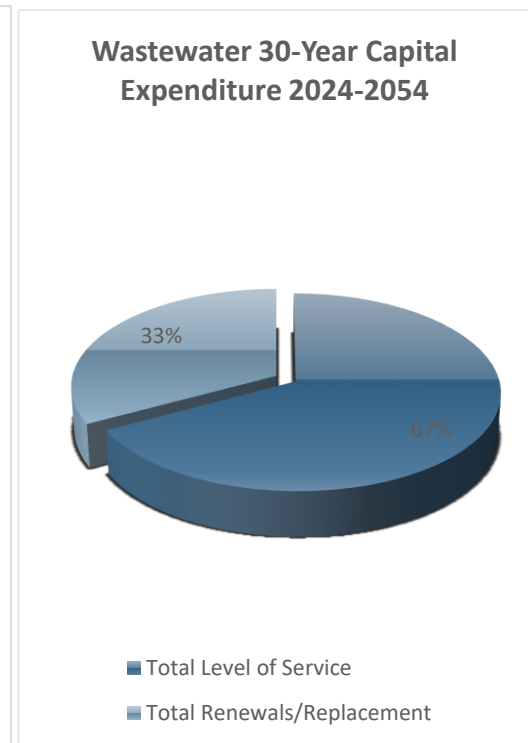
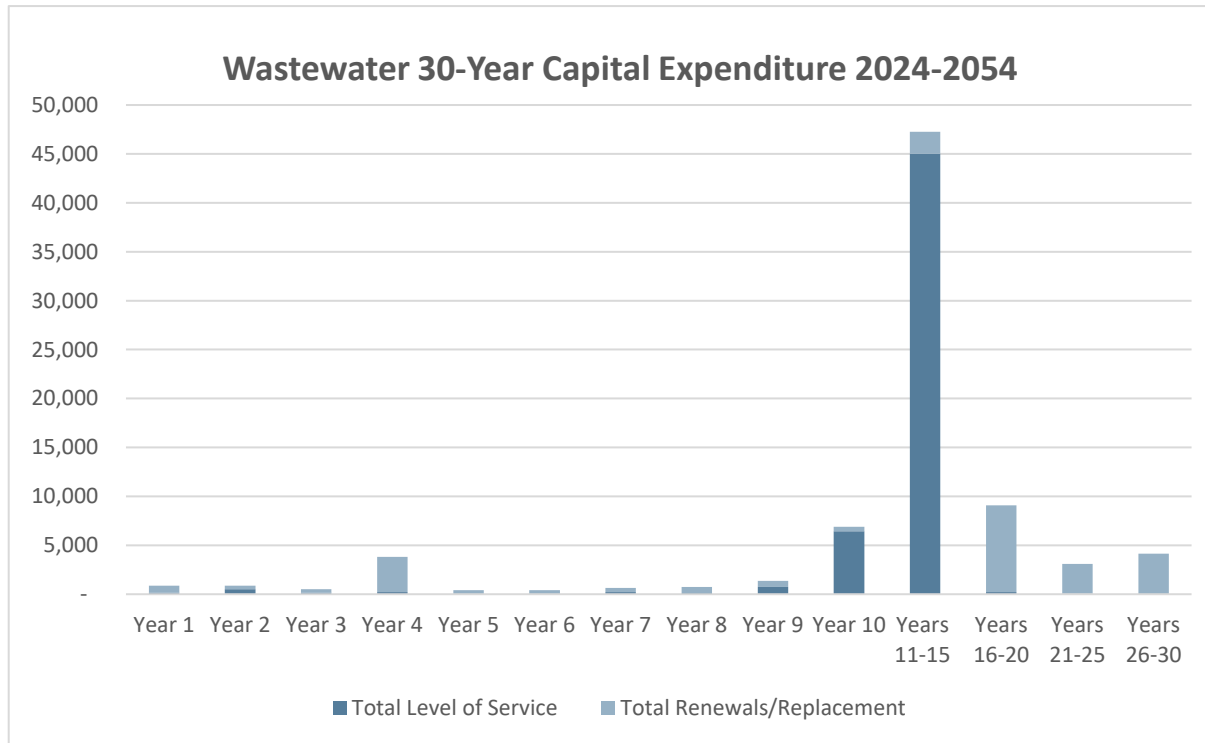
Response Options	Implications of options
Full review and calibration of the existing Wastewater model	<p>To accommodate growth and increased demand, Council has programmed to increase pipe capacity to cater for high flows. While officers are aware of some pipes within the network requiring increased capacity, the Council has commissioned a network modelling project on the wastewater network to reveal how our network systems are behaving and any areas of constraint.</p> <p>This modelling project comprises:</p> <ul style="list-style-type: none"> <li>• Evaluation of network capacity;</li> <li>• Identification of inflow and infiltration into the pipe network;</li> <li>• The identification of bottlenecks in the existing or network; and</li> <li>• Any design of improvements needed to accommodate growth. The modelling project is expected to reveal the areas for improvement in the network from which priority areas can be programmed for improvement.</li> </ul>

#### Issue 5: Wastewater Infrastructure Maintenance

Response Options	Implications of options
Wastewater Treatment Ponds Desludging	<p>This project is primarily driven by the need to maintain operational capacity and performance of the wastewater treatment ponds through regular desludging. Implementing a proactive maintenance strategy will:</p> <ul style="list-style-type: none"> <li>• Remove accumulated solids to sustain required hydraulic retention times and effluent quality standards.</li> <li>• Support continuity of wastewater treatment services for residents and industries</li> <li>• Aid compliance with resource consents related to discharge quality/volumes.</li> <li>• Reduce risks of uncontrolled discharges from overloaded ponds during high flow events</li> </ul> <p>Undertaking regular pond desludging will ensure the wastewater system can continue performing its vital functions over the long term.</p>

### 30 –Year Capital Expenditure- Wastewater

Wastewater	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Level of Service Improvement	150	513	158	216	-	-	232	118	725	6,418	45,020	220	40	20	53,864
Replacements	735	343	363	3,602	426	413	400	633	647	475	2,250	8,875	3,050	4,125	26,305
<b>TOTAL</b>	<b>885</b>	<b>856</b>	<b>521</b>	<b>3,818</b>	<b>426</b>	<b>413</b>	<b>631</b>	<b>752</b>	<b>1,372</b>	<b>6,894</b>	<b>47,270</b>	<b>9,095</b>	<b>3,090</b>	<b>4,145</b>	<b>80,169</b>

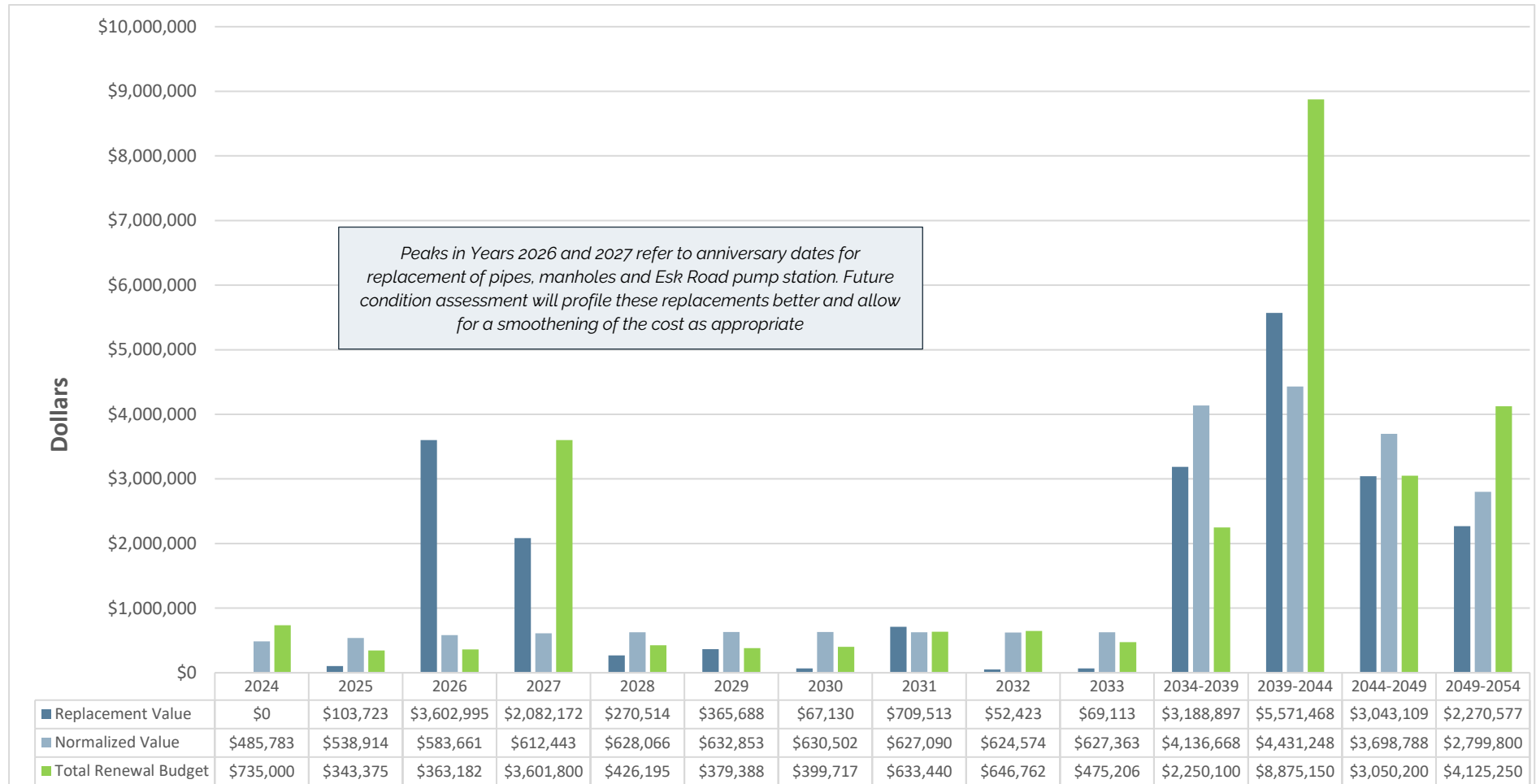


### 30 –Year Operating Expenditure - Wastewater

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	Total
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Wastewater</b>	<b>1,025</b>	<b>1,065</b>	<b>1,109</b>	<b>1,153</b>	<b>1,168</b>	<b>1,208</b>	<b>1,218</b>	<b>1,263</b>	<b>1,295</b>	<b>1,475</b>	<b>7,750</b>	<b>8,000</b>	<b>8,250</b>	<b>10,200</b>	<b>46,178</b>



### 30 –Year Wastewater Replacement Profile - Treatment and Reticulation



**Legend:**

*Replacement value: The total amount to spend on replacement based on Council's Asset Management System data;*

*Normalised Value – Total minimum budget recommended for spending to ensure the entire replacement programme is delivered in the long-term.*

*Total Renewal Budget – The optimum budget the Council has determined to spend to optimise the asset and service delivery*

## Appendix 4: Stormwater

### Significant Issues and Options

The Significant Infrastructural Issues for the Stormwater Activity are detailed in the Stormwater Asset Management Plan and summarised below.

- Network Planning and Modelling;
- Pipework Capacity Issues;
- Stormwater Safety Improvements
- Climate Change; and
- Replacement of Stormwater tunnels
- Stormwater Infrastructure Capacity Maintenance

The options for addressing these significant infrastructural issues drive the Long-term financial forecast for the Stormwater Activity.

#### Issue 1: Network Planning and Modelling

Response Options	Implications of options
Commission a new Stormwater model	<p>To accommodate growth and increased demand, Council has programmed to increase pipe capacity to cater for high flows..</p> <p>While officers are aware of some pipes within the network requiring increased capacity, the Council has commissioned a network modelling project on our stormwater network to reveal how our network systems are behaving.</p> <p>This modelling project will comprise</p> <ul style="list-style-type: none"> <li>• the evaluation of network capacity;</li> <li>• the identification of bottlenecks in the existing or proposed network; and</li> <li>• the design of improvements needed to accommodate growth.</li> </ul> <p>The modelling project is expected to reveal the areas for improvement and continues in Year 1 of the LTP</p>

#### Issue 2: Pipework Capacity Issues

Response Options	Implications of options
Programme the implementation of pipework capacity increase to support growth.	<p>This programme is to address under-capacity of pipe network to support growth, residential infill and other intense land-use activities.</p> <p>There have been new residential subdivisions and developments, urban infill and other growth-related pressures created in both our wastewater and stormwater networks. The consequence of this is that some pipes are requiring upgrades in capacity to accommodate the increased flow.</p>

#### Issue 3: Stormwater Safety Improvements

Response Options	Implications of options
Conduct an inlet structure study, and its implementation, to ascertain the extent of potential upgrades required to meet public safety requirements	Knowledge of what inlet structures are in the network and whether they are adequate is not at an appropriate level. This study will help Council gain the appropriate level of knowledge required to plan for the construction of new, safe stormwater inlet structures.

#### Issue 4: Climate change

Response Options	Implications of options
Create a catchment management plan to support upgrade of existing assets to accommodate a 1 in 100 year storm event	Should improve stormwater management in the existing network Pipeline capacity increase

### Issue 5: Replacement of stormwater tunnels

Response Options	Implications of options
Consider rerouting of larger waterways/pipeline/tunnels to be more accessible and within public land or easements	Properties currently connected to existing infrastructure will need to be accounted for in any new design route

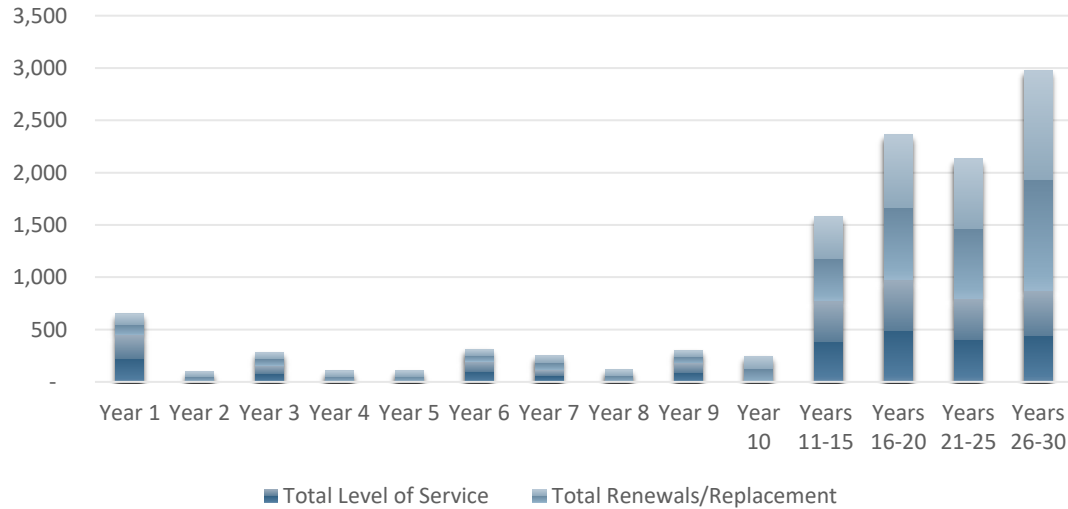
### Issue 6: Stormwater Infrastructure Capacity Maintenance

Response Options	Implications of options
Victoria Park Drainage Desilting / Desludging	<p>This project is primarily driven by the need to maintain capacity and performance of the Victoria Park drainage infrastructure through regular desilting and desludging. Implementing a proactive maintenance strategy will:</p> <ul style="list-style-type: none"> <li>• Remove accumulated solids to sustain required hydraulic conveyance capacity</li> <li>• Mitigate flood risks during high rainfall events</li> <li>• Support continuity of stormwater drainage services</li> <li>• Aid compliance with resource consents related to discharge quality/volumes</li> <li>• Reduce risks of uncontrolled overflows due to reduced pipe capacity</li> </ul> <p>Undertaking regular drainage desludging will ensure the Victoria Park stormwater system can continue performing its vital functions over the long term.</p>

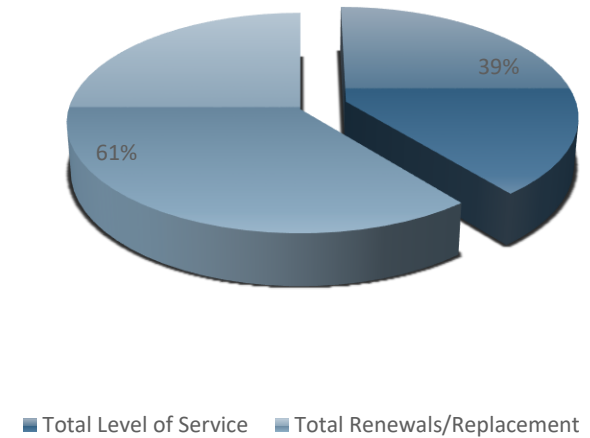
### 30 –Year Capital Expenditure - Stormwater

Stormwater	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Level of Service Improvement	450	-	158	-	-	198	116	-	181	-	775	975	800	875	<b>4,528</b>
Replacements	200	103	126	108	111	113	139	118	121	247	805	1,385	1,335	2,105	<b>7,016</b>
<b>TOTAL</b>	<b>650</b>	<b>103</b>	<b>284</b>	<b>108</b>	<b>111</b>	<b>311</b>	<b>255</b>	<b>118</b>	<b>302</b>	<b>247</b>	<b>1,580</b>	<b>2,360</b>	<b>2,135</b>	<b>2,980</b>	<b>11,544</b>

#### Stormwater 30-Year Capital Expenditure 2024-2054



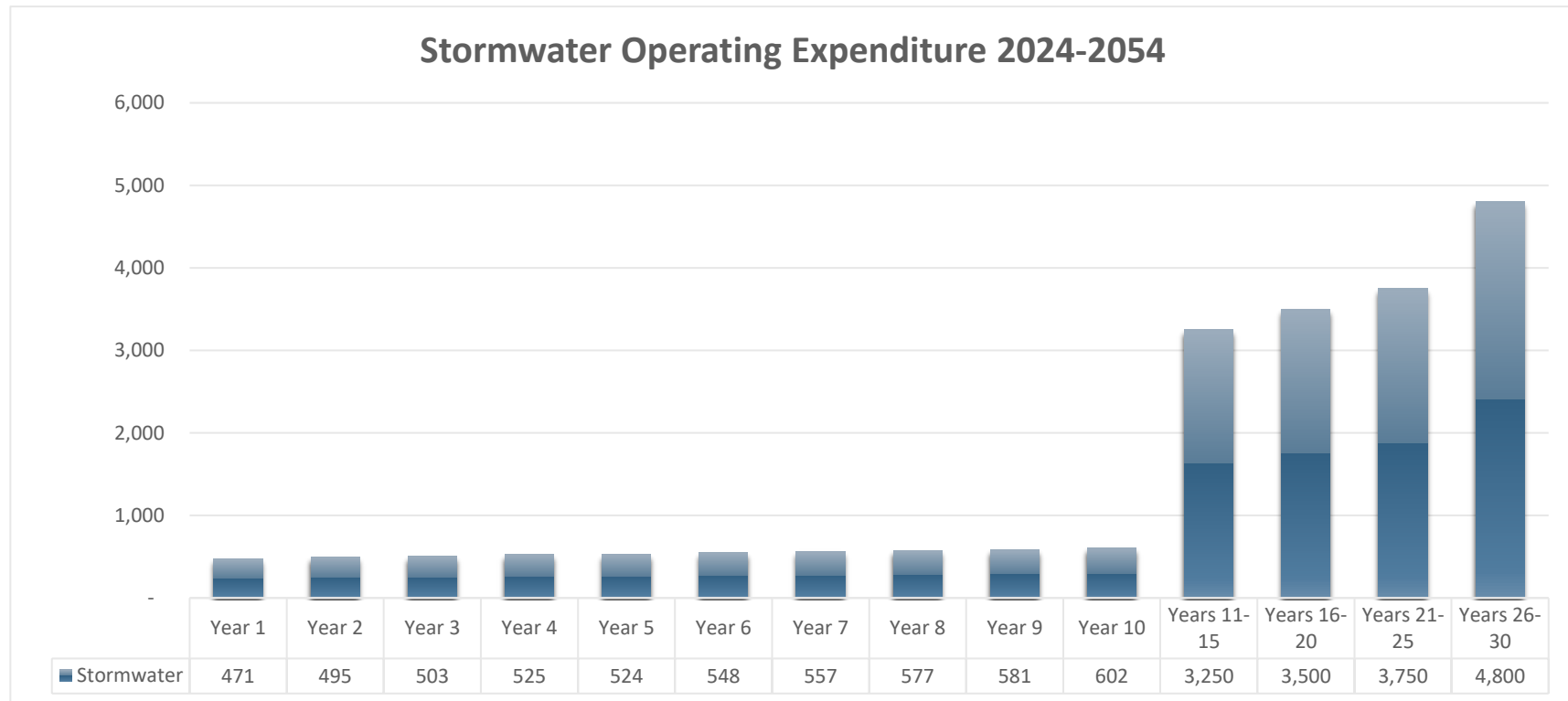
#### Stormwater 30-Year Capital Expenditure 2041-2054



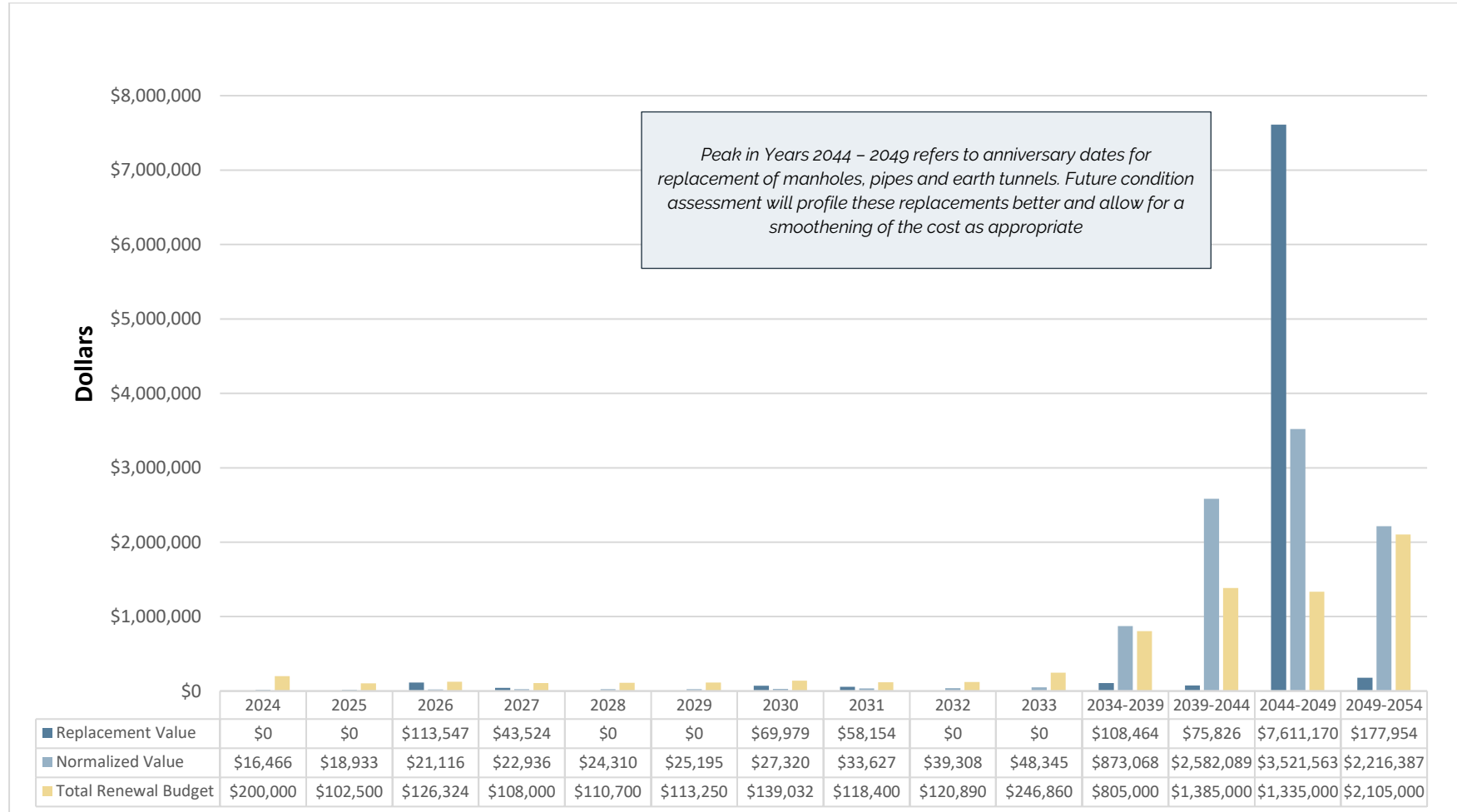


### 30 –Year Operating Expenditure – Stormwater

Year	1	2	3	4	5	6	7	8	9	10	11-15	16-20	21-25	26-30	Total
	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034-39	2039-44	2044-49	2049-54	
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
<b>Stormwater</b>	<b>471</b>	<b>495</b>	<b>503</b>	<b>525</b>	<b>524</b>	<b>548</b>	<b>557</b>	<b>577</b>	<b>581</b>	<b>602</b>	<b>3,250</b>	<b>3,500</b>	<b>3,750</b>	<b>4,800</b>	<b>20,871</b>



### 30 –Year Stormwater Replacement Profile - Reticulation



**Legend:**

*Replacement value: The total amount to spend on replacement based on Council's Asset Management System data;*

*Normalised Value – Total minimum budget recommended for spending to ensure the entire replacement programme is delivered in the long-term.*

*Total Renewal Budget – The optimum budget the Council has determined to spend to optimise the asset and service delivery*